LIFE-MEANING, PSYCHOLOGICAL HEALTH, AND WELL-BEING

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Thesis submitted in partial fulfillment of the requirements for the Doctorate of Clinical Psychology

School of Psychology and Psychiatry
Monash University, Australia

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# Table of Contents

General declaration .......................................................................................................................... iii  
Copyright notice 1 .......................................................................................................................... iv  
Copyright notice 2 .......................................................................................................................... v  
List of publications included in thesis ......................................................................................... vi  
List of abbreviations ................................................................................................................... vii  
Abstract ......................................................................................................................................... 1  
Chapter 1: General introduction ................................................................................................. 3  
Chapter 2: Paper 1. Concept analysis of meaning in the psychological and health-related literatures ................................................................................................................................. 7  
  Contextual information ............................................................................................................... 7  
  Declaration for publication .......................................................................................................... 9  
  Reprint of submitted manuscript ............................................................................................... 10  
  Contextual information ............................................................................................................ 89  
  Declaration for publication ....................................................................................................... 91  
  Reprint of submitted manuscript ............................................................................................. 92  
  Contextual information ........................................................................................................... 130  
  Declaration for publication ....................................................................................................... 132  
  Reprint of submitted manuscript ............................................................................................. 133  
Chapter 4: General discussion ....................................................................................................... 174  
  Advances in the conceptualisation of meaning ...................................................................... 174  
  The causal function of meaning in psychological health ....................................................... 176  
  The relevance of meaning to both psychopathology and well-being .................................. 177  
  Conclusion .................................................................................................................................. 180  
Bibliography ................................................................................................................................. 182  
Appendices .................................................................................................................................. 186  
  Appendix A: Recruitment material ......................................................................................... 187  
  Appendix B: Explanatory statements and consent form ......................................................... 191  
  Appendix C: Measures ............................................................................................................ 196
General declaration

In accordance with Monash University Doctorate Regulation 17/ Doctor of Philosophy and Master of Philosophy (MPhil) regulations the following declarations are made:

I hereby declare that this thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

This thesis includes three unpublished publications. The core theme of the thesis is the relationship between meaning-in-life and psychological health. The ideas, development and writing up of all the papers in the thesis were the principal responsibility of myself, the candidate, working within the Department of Psychology and Psychiatry under the supervision of Professor David Clarke and Dr Dianne Vella-Brodrick.

The inclusion of co-authors reflects the fact that the work came from active collaboration between researchers and acknowledges input into team-based research.

In the case of chapters 2, 3, and 4 my contribution to the work involved the following:

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<td>3</td>
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<td>Submitted</td>
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I have renumbered sections of submitted or published papers in order to generate a consistent presentation within the thesis.

Signed:

Elliot Gerschman
27th January 2011
Copyright notice 1

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List of publications included in thesis

(in order of appearance in thesis)


List of abbreviations

DASS  Depression Anxiety Stress Scales
ITT   Intention to treat
LAP-R Life Attitude Profile Revised
LRI   Life Regard Index
MDI   Major Depression Inventory
MLM   Meaningful Life Measure
MLQ   Meaning in Life Questionnaire
N-ITT Non-intention to treat
PANAS Positive and Negative Affect Schedule
PIL   Purpose in Life test
PPT   Positive psychotherapy
PVS   Personal Views Survey
PWB   Psychological well-being
RCT   Randomised controlled trial
SOC   Sense of Coherence scale
SoMe  Sources of Meaning and Meaningfulness Questionnaire
SONG  Sources of Noetic Goals test
SPWB  Scales of Psychological Well-being
STAI  State-Trait Anxiety Inventory
SWB   Subjective well-being
SWLS  Satisfaction With Life Scale
Abstract

The overall aim of this thesis is to investigate the relationship between meaning in life and psychological health, including both psychopathology and well-being. In particular, the hypothesised salutary effect of meaning on psychological health was explored. Initially, concept analysis (Walker & Avant, 1995) was used to clarify the definition of meaning and its underlying attributes through a systematic review of the psychological and health-related literatures (Paper 1). A keyword search using PsychINFO, MEDLINE, CINAHL, and Web of Science yielded 151 relevant sources, including journal articles, books, and book chapters. The most frequently cited attributes of meaning were collated and their validity was critically evaluated with reference to theoretical and empirical considerations as well as hypothetical case analyses. Meaning was defined as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning motivational, cognitive, affective, and behavioural domains as well as various emergent properties. Ten attributes were identified, including motivation for meaning, meaningful goals, purpose, values, meaningful attitudes, evaluations of meaning-fulfillment, meaningful affect, meaningful behaviour, internal integration, and external integration. Thereafter, the relationship between meaning and psychological health was reviewed in order to assess the degree to which conceptual models and causal hypotheses are substantiated by empirical findings (Paper 2). Preliminary evidence supported a salutary effect of meaning on both psychopathology and well-being. Various limitations were outlined, including ambiguity and lack of consensus in the conceptualisation and measurement of meaning, the need to assess bidirectionality in the relationship between meaning and psychological health, and issues in the design of empirical studies. Recommendations encompassed the use of integrative conceptualisations of meaning and corresponding multidimensional measures as well as improved methodological designs. Finally, a randomised controlled trial of a meaning-in-life
group workshop \( (n = 23) \) in comparison to a non-intervention control \( (n = 21) \) was conducted using a non-clinical adult population (Paper 3). The workshop consisted of six 75-90 minute weekly sessions held consecutively over six weeks. Topics included psychoeducation about meaning, values clarification, meaningful behaviour scheduling, meaningful goals pursuit, infusing mundane activities with meaning, and meaning-based coping. Results indicated: (a) improvements in crisis of meaning but not meaningfulness or purpose in life; (b) no significant improvement in measures of hedonic well-being (i.e., life-satisfaction, positive affect, and negative affect); (c) significant improvements for some aspects of eudaimonic well-being (i.e., environmental mastery and positive relations with others) but not others (i.e., autonomy, personal growth, and self-acceptance); and (d) improvements in depression, anxiety, and stress. Improvements in psychological health and well-being were largely mediated by reductions in crisis of meaning, thereby supporting the theorised salutatory effect of meaning on psychological health. Although this intervention did not address the effect of meaning on clinical psychopathology, the cumulative research findings, taking into account the review of meaning and psychological health (Paper 2), provide preliminary evidence for a salutatory, causal effect of meaning on both psychopathology and well-being. Accordingly, the development, application, and investigation of meaning-based therapeutic techniques appears to be a worthwhile pursuit for the treatment of psychopathology and the enhancement of well-being. Moreover, these findings contribute an integrative conceptualisation of meaning and its underlying attributes that has implications for future measurement and empirical research on meaning.

**Keywords:** Meaning-in-life, purpose, personal meaning, well-being, positive psychology
Chapter 1: General introduction

The overall aim of this thesis is to investigate the relationship between meaning in life and psychological health. In particular, the hypothesised salutatory effect of meaning on psychological health was explored. Moreover, psychological health was broadly defined so as to include both psychopathology and well-being, the latter referring to positive aspects of psychological health that amount to more than the mere absence of psychological disorders (Keyes, 2006). This objective was accomplished through three research papers investigating independent but complementary areas pertaining to meaning and psychological health. These involved a concept analysis of meaning (Paper 1), an empirical literature review on the relationship between meaning and psychological health (Paper 2), and a randomised controlled trial of a meaning-in-life group workshop (Paper 3).

In exploring the link between meaning and psychological health, a valid definition of meaning was required. A cursory review of the literature, however, revealed problems relating to the conceptualisation of meaning as a psychological construct. Existing definitions tend to be vague, ambiguous, and inconsistent (Damon, Menon, & Bronk, 2003; Debats, 1999; Hodges, 2009; Krause, 2009). Moreover, the concept of meaning is inherently abstract and elusive (Chamberlain & Zika, 1988; Feldman & Snyder, 2005; Lyon & Younger, 2005).

Therefore, the first paper aimed to clarify the definition of meaning and its underlying attributes by systematically reviewing the psychological and health-related literatures. This was accomplished using concept analysis (Walker & Avant, 1995), a qualitative research technique designed for theory construction which enables the clarification and redefinition of a concept that remains unclear despite an existing body of theoretical literature. These efforts yielded in an integrative conceptualisation of meaning, defined as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning
motivational, cognitive, affective, and behavioural domains as well as various emergent properties. A total of 10 attributes were identified, including *motivation for meaning*, *meaningful goals*, *purpose*, *values*, *meaningful attitudes*, *evaluations of meaning-fulfillment*, *meaningful affect*, *meaningful behaviour*, *internal integration*, and *external integration*.

Following this conceptual analysis of meaning, the *second paper* aimed to critically review the psychological literature on the relationship between meaning and psychological health, including both well-being and psychopathology. Various theorists have proposed hypotheses concerning this relationship, many of which purport a salutatory, causal effect of meaning upon psychological health (e.g., Frankl, 1985, 1988; Seligman, Rashid, & Parks, 2006; Weisskopf-Joelson, 1968). However, the relationship between meaning and psychological health has been conceived in various ways, for example: lack of meaning as an aetiological factor in psychopathology (Frankl, 1959, 1972; Maddi, 1967, 1998), meaning as a moderator of effective coping and stress resistance (Frankl, 1985; Fry, 1989; Wong, 1998), and meaning as an attribute of well-being (Ryff, 1989a, 1989b).

These theoretical positions are dispersed throughout the psychological literature. An initial aim of this paper was therefore to collate and summarise these conceptual models and hypotheses, thereby providing a framework against which to evaluate the available empirical research. The second and primary objective of the paper was to critically review the empirical literature in order to assess the degree to which conceptual models and hypotheses are substantiated by empirical findings. Finally, several limitations within the literature were outlined together with recommendations for overcoming them.

Based on this literature review, it was concluded that there exists preliminary evidence to support the hypothesised effect of meaning on both well-being and psychopathology. Amongst the limitations and recommendations that were outlined, the relevance of the new integrative conceptualisation of meaning emerging from the *first paper*...
was emphasised as a means to improve the empirical measurement of meaning while providing potential targets for manipulation in experimental studies.

Another important issue that was addressed involved limitations in the design of empirical studies on meaning, including an overreliance upon cross-sectional data which is insufficient for making causal inferences. Only a small number of longitudinal and experimental studies on the relationship between meaning and psychological health have been conducted, thereby limiting the capacity to confidently assess the hypothesised causal impact of meaning. Amongst existing experimental studies, methodological problems included the absence of valid controls and randomisation procedures, insufficient explanations concerning the role of meaning within the intervention, use of inadequate measures to assess meaning, and the absence of mediation analyses to investigate the underlying mechanisms of change.

The third paper was designed to partially overcome some of these limitations in exploring the causal relationship between meaning and psychological health. This was achieved by conducting a randomised controlled trial of a meaning-in-life group workshop (n = 23) in comparison to a non-intervention control (n = 21) using a non-clinical adult population. The workshop consisted of six 75-90 minute weekly sessions held consecutively over six weeks. Topics included psychoeducation about meaning, values clarification, meaningful behaviour scheduling, meaningful goals pursuit, infusing mundane activities with meaning, and meaning-based coping.

Results indicated: (a) improvements in crisis of meaning but not meaningfulness or purpose in life; (b) no significant improvement in measures of hedonic well-being (i.e., life-satisfaction, positive affect, and negative affect); (c) significant improvements for some aspects of eudaimonic well-being (i.e., environmental mastery and positive relations with others) but not others (i.e., autonomy, personal growth, and self-acceptance); and (d)
improvements in depression, anxiety, and stress. Furthermore, a mediation analysis was conducted to determine whether predicted changes in psychological health were mediated by post-intervention improvements in meaning. Findings revealed that improvements in psychological health and well-being were largely mediated by reductions in crisis of meaning. These results were interpreted in support of the theorised salutary effect of meaning on psychological health.
Chapter 2: Paper 1. Concept analysis of meaning in the psychological and health-related literatures

Contextual information

Originally, the primary focus of this thesis concerned the relationship between meaning and psychological health. The adoption of an operational definition of meaning was required in order to facilitate the empirical assessment of meaning and the investigation of its relationship with psychological health. An initial review of the meaning literature, however, led to the unexpected observation that there is a lack of consistency in the way that meaning is defined and measured. Moreover, these definitions often conflict with one another and differ in their basic assumptions. For example, Frankl (1985, 1988) proposed a more philosophical and cosmic view of meaning that is thought to exist objectively and which must be discovered, whereas Yalom (1980) suggested that existential maturity involves the capacity to construct a personal and subjective sense of meaning within a world that is devoid of any objective or ultimate meaning. In addition, a considerable degree of conceptual overlap was evident between conceptualisations of meaning and related concepts, such as goals (Wong, 1998), coping (Park & Folkman, 1997; Thompson & Janigian, 1988), and well-being (Ryff, 1989a, 1989b).

Hence, it became evident that the field of meaning is in need of clarification concerning the very conceptualisation of this construct. This led to a comprehensive and systematic analysis of the literature on meaning, spanning the last century. This effort was guided by a qualitative methodology known as concept analysis (Walker & Avant, 1995). In keeping with this methodology, wider sources of relevant information were incorporated within the analysis, including the health-related, medical, and nursing literatures. This review was exhaustive, incorporating every relevant article identified within these diverse literatures. Therefore, this paper, initially conceived as a necessary prelude to the subsequent research
objectives, soon became a central focus in its own right that contributes substantially to the literature on meaning. Moreover, the integrative conceptualisation developed within this paper is likely to guide subsequent empirical research concerning the relationship between meaning and psychological health.
## Declaration for publication


### Declaration by candidate

The nature and extent of my contribution to the work was the following:

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The following co-authors contributed to the work:

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<tr>
<td>David Clarke</td>
<td>Feedback on study design and draft manuscript</td>
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<tr>
<td>Dianne Vella-Brodrick</td>
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The undersigned hereby certify that:

1. the above declaration correctly reflects the nature and extent of the candidate’s contribution to this work, and the nature of the contribution of each of the co-authors.
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3. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
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Concept analysis of meaning in the psychological and health-related literatures

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Abstract

This study aimed to clarify the concept of meaning by systematically reviewing the psychological and health-related literatures using the technique of concept analysis (Walker & Avant, 1995). A keyword search using PsychINFO, MEDLINE, CINAHL, and Web of Science yielded 151 relevant sources, including journal articles, books, and book chapters. The most frequently cited attributes were collated and their validity was critically evaluated with reference to theoretical and empirical considerations as well as hypothetical case analyses. Meaning was defined as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning motivational, cognitive, affective, and behavioural domains as well as various emergent properties. A total of 10 attributes were identified, including motivation for meaning, meaningful goals, purpose, values, meaningful attitudes, evaluations of meaning-fulfillment, meaningful affect, meaningful behaviour, internal integration, and external integration. This integrative conceptualisation of meaning serves to ameliorate the prevailing conceptual confusion and inconsistency within the field. Moreover, it has the capacity to stimulate novel lines of research, including the development of enhanced meaning questionnaires and the specification of targets for therapeutic change in meaning interventions.

Keywords: Meaning in life, purpose, personal meaning, well-being, positive psychology
Concept analysis of meaning in the psychological and health-related literatures

The topic of meaning both predates and exceeds the scope of modern psychology. Beliefs and conceptions regarding the nature, origin, and purpose of the universe were promulgated by ancient civilisations in the form of mythology, religion, and philosophy. Such beliefs remain prevalent amongst various religious traditions spanning the Western, Middle Eastern, and Far Eastern regions. Distinguished philosophers over the last two millennium have also proposed theories regarding the final ends that endow life with significance, setting the stage for a distinct field on the “meaning of life” which has emerged in the last 50 years (Metz, 2002).

Meaning in the psychological literature

Against this backdrop of theological and philosophical orientations, the field of psychology has contributed a uniquely psychological conceptualisation of meaning. Rather than embracing dialectical and philosophical modes of reasoning in an attempt to define a priori the content of life's meaning, psychological models place a greater emphasis on the phenomenological and experiential aspects of meaning. This involves the investigation of psychological mechanisms that underlie the experience of meaning and their relevance for psychological health.

The assimilation of meaning into the mainstream of psychological thought has involved a gradual process. The initial impetus involved the pioneering efforts of Viktor Frankl (e.g., 1985, 1986, 1988) as well as several other existentially oriented psychologists in delineating the nature of meaning and its interaction with psychopathology (e.g., Maddi, 1967; May, 1956; Yalom, 1980). The empirical measurement of meaning through a series of first generation (e.g., Battista & Almond, 1973; Crumbaugh, 1977; Crumbaugh & Maholick, 1964; Reker & Peacock, 1981) and second generation (e.g., Morgan & Farsides, 2009a; Wong, 1998a) scales provided preliminary support for these theoretical models. Moreover,
several therapeutic approaches have been developed that place a primary focus on meaning (e.g., Frankl, 1958, 1967a; Wong, 1998b; Yalom, 1980) or incorporate meaning-based interventions within broader therapeutic frameworks (e.g., Eifert & Forsyth, 2005; Fava, Rafanelli, Cazzaro, Conti, & Grandi, 1998; Seligman, Rashid, & Parks, 2006; Wilson & Murrell, 2004; Zettle, 2007).

Conceptual advances within several independent areas of psychology have also substantiated the pervasive impact of meaning on psychological health. In particular, meaning-making has been conceptualised as integral to the process of coping (Janoff-Bulman & Frantz, 1997; Park & Folkman, 1997; Thompson & Janigian, 1988). The emerging field of positive psychology has also been instrumental in articulating the conceptual relevance of meaning in relation to goal-constructs (Emmons, 2003, 2005; Little, 1998), happiness (Seligman, 2002), and models of well-being and positive mental health (Keyes, et al., 2008; Ryff, 1989a, 1989b, 1995; Ryff & Keyes, 1995).

Despite these advances, meaning research remains constrained by a lack of consensus regarding the definition of meaning. Conceptualisations of meaning tend to be vague, ambiguous, and inconsistent (Damon, Menon, & Bronk, 2003; Debats, 1999; Hodges, 2009; Krause, 2009). Rather than reflecting methodological flaws, this lack of clarity may result from the inherently abstract and elusive nature of meaning (Chamberlain & Zika, 1988; Feldman & Snyder, 2005; Lyon & Younger, 2005). Additionally, meaning is a broad and multidimensional construct that that overlaps with various related constructs, including goals (Wong, 1998b), well-being (Ryff, 1989a, 1989b, 1995; Ryff & Keyes, 1995), happiness (Peterson, Park, & Seligman, 2005; Seligman, 2002), hope (Feldman & Snyder, 2005; Halama, 2003), spirituality (Newlin, Knafl, & Melkus, 2002; Sessanna, Finnell, & Jezewski, 2007; Vachon, Fillion, & Achille, 2009), coping (Fife, 1994; Park & Folkman, 1997; Thompson & Janigian, 1988), and demoralization (Clarke & Kissane, 2002). One approach
to addressing these issues involves using factor analysis to extract the underlying components from existing meaning measures (Morgan & Farsides, 2009a). This method, however, fails to assess both the conceptual validity of the conceptualisations of meaning underlying the scales and whether these conceptualisations are accurately reflected within scale items.

**Framework**

Psychological conceptualisations of meaning cannot be divested of their philosophical, theoretical, and methodological assumptions. Therefore, it is important to make these underlying assumptions transparent. The current analysis adopts a phenomenological approach to the conceptualisation of meaning, which assumes that meaning is both multidimensional and phenomenologically accessible.

The multidimensional nature of meaning has been widely acknowledged (Chamberlain & Zika, 1988; Orbach, Iluz, & Rosenheim, 1987; Reker & Peacock, 1981) and underlies the development of meaning measures that incorporate multiple subscales (e.g., Antonovsky, 1993; Battista & Almond, 1973; Little, 1998; Morgan & Farsides, 2009b; Reker & Peacock, 1981; Wong, 1998a). This assumption of multidimensionality is axiomatic to the classification of meaning in terms of multiple attributes.

An emphasis on the experiential nature of meaning is fundamental to all psychological models. This orientation assumes that meaning is phenomenologically accessible and individually perceived (Auhagen, 2000; Battista & Almond, 1973; Crumbaugh & Maholick, 1964; Langle, 2003; Lyon & Younger, 2005; Reker, 2000; Reker & Chamberlain, 2000a). In many cases, however, the parameters that define the scope of meaning’s phenomenology are demarcated according to particular philosophical assumptions or orientations.

Broadly speaking, two over-arching perspectives have been delineated which correspond to a higher-order and lower-order meaning. The former is associated with the
qualities of being absolute/objective (i.e., exists independent of human perception), cosmic/philosophical (i.e., based on meta-physical assumptions), and able to be discovered (Frankl, 1958, 1966b, 1972, 2000; Mascaro, Rosen, & Morey, 2004). In contrast, the latter is typically described as relative/subjective (i.e., represents an individual or human construction that does not correspond with any absolute or objective truth), terrestrial (i.e., pertains to tangible/empirical reality rather than a meta-empirical realm), and subject to individual construction (Baird, 1985; Battista & Almond, 1973; Bugental, 1965; Debats, 1998; Yalom, 1980). Although various integrative perspectives have been espoused (e.g., Baird, 1985; Frankl, 1966b; Reker & Wong, 1988), these tend to incorporate aspects of each approach without adequately accounting for mutually exclusive assumptions. Indeed, arbitrating between these conflicting perspectives may well lie beyond the purview of psychology.

These philosophical issues can be circumvented, however, through a broad application of the phenomenological approach that emphasises the psychological processes underlying the experience of meaning. The content of meaning thereby becomes amenable to direct empirical investigation rather than being contingent upon a priori philosophical speculation. For example, the pursuit of personal growth would not necessarily be classified as meaningful according to self-transcendent, existential models (e.g., Frankl, 1959). A phenomenological approach, in contrast, might begin by specifying goals as an important mechanism of meaning. Thereafter, the frequency of growth-oriented goals in various populations and their perceived degree of meaningfulness could be assessed empirically.

Battista and Almond (1973) argued that a process-oriented and phenomenological approach is able to assimilate a broad range of meaning content. However, their justification of this approach based on the assumption that meaning is relative appears somewhat perplexing and unnecessary. While this stance purports to incorporate any content provided that it is subjectively construed as meaningful by the individual, the very assumption of
relativity undermines the validity of any content that does not conform with this philosophical perspective. In contrast, we adopt the position that a phenomenological methodology does not require the assumption that meaning is relative. Instead, such an approach is justified when the phenomenology of meaning is itself the primary point of interest. Moreover, a phenomenological methodology has the potential to integrate the field of meaning and thereby facilitate research efforts that are not impeded by divisive philosophical orientations.

A useful framework for exploring the psychological mechanisms underlying the phenomenology of meaning involves the identification of structural components. Several structural models have differentiated between motivational (e.g., goals and incentives), cognitive (e.g., beliefs and interpretations), affective (e.g., positive affect), and behavioural (e.g., value-congruent actions) components of meaning (Reker & Wong, 1988; Wong, 1998b, 2010b). The adjective "structural" is not intended in an anatomical sense. The components of meaning reflect psychological processes or capacities rather than anatomical structures within the brain and body, although the former operate via the latter. While providing a valuable starting point, these structural models require further clarification and elaboration in light of the available literature.

**Method**

This study aimed to clarify the definition of meaning and its concomitant properties through a comprehensive and systematic review of the psychological and health-related literatures. This was achieved using concept analysis, a qualitative research technique designed for theory construction which enables the clarification and redefinition of a concept that remains unclear despite an existing body of theoretical literature (Walker & Avant, 1995).
Despite the logical and sequential nature of the procedure, the process was iterative in the sense that earlier steps were often revised in light of information deriving from later ones. Search terms, data sources, and criteria for article selection were specified to guide the systematic review of the scientific literature. An attempt was made to determine all of the uses of the term meaning. Initially, this involved a semantic analysis of the term meaning with reference to various dictionaries. Subsequently, the scientific uses within the psychological and health-related literatures were identified. Some uses were evaluated as central and retained while others were deemed peripheral or unrelated and hence discontinued from further exploration.

The primary analysis involved the determination of the critical attributes of meaning. Attributes refer to defining characteristics that are frequently associated with and facilitate broad insight into a concept (Walker & Avant, 1995). This process was guided by two key techniques. First, the most frequently cited attributes were collated and their validity was critically evaluated with reference to theoretical and empirical considerations. Second, several hypothetical cases were constructed, including a model case (i.e., incorporates all the attributes), borderline case (i.e., contains most attributes but not all or differs substantially in one attribute), related case (i.e., contains some but not all attributes and is used to distinguish the concept from the network of surrounding concepts), and contrary case (i.e., demonstrates what the concept is not). These cases are not merely illustrative; rather, their purpose is to enable the corroboration of previous findings and the clarification of any ambiguous attributes. For example, if the manipulation or deletion of a proposed attribute deems the case non-representative of the construct, this suggests that the adjusted attribute is critical.

**Search Terms**

The psychological and health-related literatures commonly employ a range of terms to describe meaning-based constructs. Based on our prior familiarity with the literature, we
selected the following search terms: meaning in life, meaning of life, life meaning, purpose in life, life purpose, purpose of life, sense of coherence, global meaning, situational meaning, personal meaning, and existential meaning. These search terms were entered simultaneously as a single keyword search string into each electronic database.

Data Sources

In order to cover the psychological, medical, nursing and allied-health, and scientific literatures, the following databases were selected: PsychINFO, MEDLINE, CINAHL, and Web of Science. The initial database search yielded 2,246 articles from PsycINFO (1806 to August Week 4 2009), 1,383 articles from MEDILINE (1950 to Present with Daily Update), 617 articles from CINAHL (Plus), and 824 articles from Web Of Science (databases=SCI-EXPANDED, SSCI). All articles were imported into a single Endnote file. After deleting 1,018 duplicates, a total of 3,653 articles remained. Abstracts were then examined to determine the relevance of each article. In ambiguous cases, the article itself was retrieved and reviewed.

Article Selection

The following inclusion criteria were developed in order to select articles for the concept analysis: (a) language - English; (b) publication type - journal article, book chapter, or book; and (c) content - conceptual, qualitative, or quantitative articles that address the concept of meaning as a primary focus and which contain information relevant to the attributes of meaning. Following the initial database search, additional articles were incorporated within the analysis either based on our prior familiarity or because they appeared relevant in light of their citation within retrieved articles. A total of 151 articles were included in the final concept analysis.

Results

Semantic Analysis
A dictionary search for the word *meaning* (1882, n.d.-a, n.d.- b, n.d.- c, n.d.- d, n.d.- e, n.d.- f, n.d.- g, n.d.- h, n.d.- i, n.d.- j) was conducted using several distinguished as well as popular online English dictionaries. Three major uses were evident: (a) the linguistic or semantic content, definition, or connotation of a word or sentence; (b) the inner significance, importance, purpose, or underlying truth of something; and (c) a motive, intention, goal, purpose, or end that is either intended by a person or interpreted by others as their intention. In addition, a subtheme within the second category involving an explicitly psychological connotation was apparent: “Something which gives one a sense of purpose, value, etc., esp. of a metaphysical or spiritual kind; the (perceived) purpose of existence or of a person's life. Freq. in the meaning of life” (Meaning, n.d.-g).

**Uses**

Various uses of the term *meaning* as well as related variants (e.g., *purpose*) were evident within the psychological and health-related literatures. The concepts that most accurately reflected the psychological construct of meaning under analysis were variously termed *search for meaning* (Frankl, 1985) *meaning in life* (Steger, Frazier, Oishi, & Kaler, 2006), *purpose in life* (Crumbaugh & Maholick, 1964; Ryff, 1995), *personal meaning* (Wong & Fry, 1998), *existential meaning* (Reker & Chamberlain, 2000b), and *life-purpose* (Hodges, 2009).

In contrast, some variations evident within the literate were more applicable within the context of coping. These included global meaning, situational meaning, meaning making, and *meaning as outcome* (Park & Folkman, 1997), *found meaning* and *implicit meaning* (Thompson & Janigian, 1988), *search for meaning in negative events* (Skaggs & Barron, 2006), *sense of coherence* (Antonovsky, 1987, 1993), and *hardiness* (Kobasa, 1979; Maddi, 1998).
Various terms were identified that represent states of meaninglessness. These included *meaninglessness, existential frustration, existential vacuum, and noogenic neurosis* (Frankl, 1988), *existential neurosis* and *existential sickness* (Maddi, 1967, 1998), and *anxiety of meaninglessness* (Ruffin, 1984). These conceptualisations of meaninglessness reflect a conceptually distinct construct that amounts to more than the polar opposite of meaning. Consequently, they were not incorporated within the analysis.

Finally, some conceptualisations of meaning were context specific. These included *experience of meaning in suffering* (Steeves & Kahn, 1987), *meaning in illness* (Fife, 1994, 1995), *meaning in cancer* (Lee, Cohen, Edgar, Laizner, & Gagnon, 2004), *meaning for the chronically ill* (Lukas, 1998), *meaning in heart disease* (Skaggs, et al., 2007), and *finding meaning in caregivers of persons with Alzheimer's disease* (Farran & Kuhn, 1998). These constructs reflect contextually relevant qualities that are too narrow for the current analysis.

**Attributes**

The analysis yielded a total of 10 attributes of meaning. These were grouped into five superordinate categories: motivational, cognitive, affective, behavioural, and emergent. The motivational attributes included *motivation for meaning* and *meaningful goals*. The cognitive attributes encompassed *purpose, values, meaningful attitudes, and evaluations of meaning-fulfillment*. The affective and behavioural attributes were comprised of *meaningful affect* and *meaningful behaviour*, respectively. The emergent attributes involved *internal integration* and *external integration*. Meaning was defined as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning motivational, cognitive, affective, and behavioural domains as well as various emergent properties. The hierarchical structure of these attributes is depicted in Figure 1 and their definitions are outlined in Table 1.

<Insert Figure 1 about here>
Motivational attributes.

Motivation for meaning.

The notion of a motivation for meaning represents a key attribute that has been widely acknowledged within the meaning literature (e.g., Frankl, 1985, 1988; Reker & Wong, 1988; Ryff, 1995; Wong, 1998b, 2010b). Nevertheless, various conceptual issues pertaining to this motivation are in need of further clarification. Although this motivation is based on Frankl's (1958, 1959, 1966a, 1966b, 1967a, 1967b, 1972, 1985, 1988) notion of a will to meaning, subsequent theorists have contributed significantly to the conceptualisation of this construct. We have therefore employed the term motivation for meaning in order to differentiate the product of these combined efforts from Frankl's original formulation. Although some of Frankl's assumptions have been subjected to empirical scrutiny (e.g., various dimensions of the motivation for meaning and the self-transcendence hypothesis), others are less amenable to empirical verification (e.g., the view that meaning represents a potentially latent motivation and its purported location within a trans-psychological dimension).

Various nuanced dimensions of the motivation for meaning have been proposed. Frankl's (1958, 1959, 1966a, 1966b, 1967a, 1967b, 1972, 1985, 1988) initial formulation of the will to meaning denotes a general orientation towards meaning and purpose that is assumed to represent a primary, universal motivation. Similarly, Wong (1998b, p. 406) defined the will to meaning (also described as a quest for meaning) as "a forward thrust toward purposefulness and significant life goals... [that] is guided by the cognitive system, and is expressed in activities of commitment and goal striving". A fundamental aspect of this motivation involves the search for meaning (Frankl, 1985). Crumbaugh (1977, p. 900) operationally defined this search in terms of "the strength of motivation to find meaning in life." More recently, Steger, Kashdan, Sullivan and Lorentz (2008, p. 200) defined the
search for meaning 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.” This search suggests either that an individual currently lacks meaning altogether or that they are seeking some novel, additional, or deeper meaning despite the fact that a degree of meaning is already present.

Conceptual accounts of the search for meaning portray a conflicting relationship with psychological health (see Steger, et al., 2008, for discussion). Although Frankl (1958) asserted that a lack of meaning can cause emotional frustration, he depicted the very search for meaning as an intrinsically human question rather than a sign of disease. In contrast, other theorists have construed the search for meaning as symptomatic of psychological dysfunction (Baumeister, 1991; Klinger, 1998). This ambiguous relationship may derive to some extent from the fact that several antecedent factors that elicit a search for meaning, such as a prior lack of meaning (Weisskopf-Joelson, 1968) or traumatic life events (Skaggs & Barron, 2006), would themselves be expected to exert a detrimental effect upon well-being. Therefore, it is not surprising that an individual's search for meaning is sometimes indicative of dysfunction, especially at later life stages (Steger, Oishi, & Kashdan, 2009). However, this does not mean that the search for meaning is itself unhealthy; rather, such a search is often instigated by unhealthy situations. Nevertheless, empirical evidence suggests that the search for meaning often fails to lead to its presence (Steger, et al., 2008). Indeed, meaning centred therapies such as logotherapy (Crumbaugh, 1971; Frankl, 1958, 1967a, 1967b, 1986) are based on the presumption that professional therapeutic assistance is relevant in aiding the individual’s search for meaning.

Another relevant but neglected component of the motivation for meaning involves the ongoing motivation to fulfil meaning. Within Frankl's conceptual writings he intimated but did not elaborate upon the presence of two related processes: finding and fulfilling meaning.
Specifically, Frankl (1967b, p. 140) depicted the will to meaning in terms of "the fact which reveals itself to a phenomenological analysis, namely, that man is basically striving to find and fulfill meaning and purpose in life." Elsewhere, Frankl (1959, p. 161) emphasised the latter facet involving "man's striving to fulfill as much meaning in his existence as possible, and to realize as much value in his life as possible." The notion of a motivation to fulfil meaning would appear to represent, primarily, an individual's ongoing motivation to implement some meaning concerning which they are already aware. Crumbaugh (1971, p. 377) operationally defined an aspect of this motivation as it relates to goal pursuit in terms of "the degree to which the subject looks toward the future for fulfillment of life goals."

Similarly, this motivation for meaning-fulfillment is related to the degree of commitment with which an individual pursues their goals, values, or perception of life's meaning (Battista & Almond, 1973; Orbach, et al., 1987). Further research regarding this motivation toward meaning-fulfillment as well as its relationship to other dimensions of meaning (e.g., the search for meaning) is critical in order to facilitate a broader understanding of the motivation for meaning.

An important perspective regarding the motivation for meaning concerns the view that it can sometimes involve a latent or subconscious state. Frankl (1985) asserted that although the will to meaning is ordinarily manifest within a person's conscious awareness, it is presumed to exist - albeit in a "state of latency" (p. 127) - even within individuals who lack this perception. In outlining Frankl's therapeutic approach, Crumbaugh (1971) maintained that the search for meaning is often indirect and unconscious. Similarly, Wong (1997) depicted the will to meaning as a latent motivation that is often suppressed by such concerns as survival, pleasure seeking, and the pursuit of power. In contrast, theorists who define meaning and purpose as a conscious motivation observe that not all individual's exhibit an underlying sense of purpose (McKnight & Kashdan, 2009; Rubenstein, 1961).
Although this assumption has only seldom been addressed within the psychological literature, its implications are important. In particular, Frankl (1972, 1985, 1986) theorised that the failure to fulfil this latent motivation plays an etiological role in psychopathology. The assumption that the motivation for meaning represents a potentially latent variable is difficult to validate empirically. Phenomenological methodology, by definition, concerns itself only with the experiential aspects of meaning and is therefore unable to effectively address this assumption. Indeed, the notion of an unconscious search for meaning would suggest that explicit measures of this search are at best limited. Further efforts to develop testable hypotheses are therefore required in order to provide verification for this assertion.

Another important proposition is that the motivation for meaning is characterised by a self-transcendent quality (Damon, et al., 2003; Frankl, 1959, 1966a, 1972, 1985; Fry, 1998). This perspective is also fundamental to the somewhat broader claim that the motivation for meaning is located within a noetic, as opposed to psychological, dimension (Crumbaugh, 1977; Fabry, 1998; Frankl, 1958, 1988; Wong, 1998c). The noetic dimension has been defined as the inspirational and aspirational aspects of the mind which are characterised by a self-transcendent orientation towards higher or non-material concerns (Crumbaugh, 1977). Similarly, Wong (1989) construed the noetic dimension in terms of the overlap between an individual's spiritual and psychological capacities. This assertion was initially proposed by Frankl (1988) in an attempt to counterbalance and rehumanise the allegedly reductionist and deterministic psychological perspectives that were prevalent at the time, including Behaviourism, Freudian psychoanalysis and Adlerian psychology. According to the noetic perspective, the motivation for meaning involves a genuine striving that is directed outward and for the sake of something or someone external to the individual, such as a cause, another person, or God. Viewed from a psychological perspective, in contrast, this self-transcendent quality becomes obscured and meaning adopts the semblance of a drive, need, or unconscious
instinct that needs to be reconciled or satisfied in order to maintain internal homeostasis (Frankl, 1959, 1966a, 1988).

Several theorists have subjected this self-transcendence proposition to empirical analysis (e.g., O'Connor & Chamberlain, 1996; Reker, 1994; Reker & Wong, 1988). Methodologically, this requires independent conceptualisations of both meaning and self-transcendence; subsequently, their relationship can be explored. Reker and Wong (1988) proposed the dimension of depth as an operational measure of self-transcendence that involves four levels: (a) self-preoccupation with hedonistic pleasure and comfort; (b) personal growth, creativity, and self-actualisation; (c) altruism, service to others, and dedication to larger societal or political causes; and (d) values that transcend individuals and encompass cosmic meaning and ultimate purpose. Employing this methodology, the postulate that an individual's degree of personal meaning will increase as a function of depth has received preliminary empirical support in a sample of 360 young, middle aged, and older adults (Reker, 1994). Nevertheless, current measures of depth are hindered by methodological shortcomings and novel conceptualisations of self-transcendence are therefore required (O'Connor & Chamberlain, 1996). Consistent with the phenomenological perspective, we have not relied on philosophical reasoning to classify self-transcendence as a critical attribute of meaning. Rather, we consider self-transcendence as an important dimension of meaning that warrants further empirical investigation.

The assumption that meaning is located within a noetic dimension is more contentious. Three broad stances are evident within the psychological literature: (a) the noetic proposition; (b) reductionist psychological perspectives; and (c) non-reductionist psychological perspectives. Several theorists (e.g., Crumbaugh, 1977; Fabry, 1998; Wong, 1998c) concur with Frankl (1958, 1988) who theorised that meaning is located within a trans-psychological, noetic dimension (e.g., Crumbaugh, 1977; Fabry, 1998; Wong, 1998c).
In contrast, reductionist psychological perspectives construe meaning as a need or product of evolutionary biology. Several theorists (e.g., Baumeister, 1991; Sommer & Baumeister, 1998; Wong, 1997) have conceptualised meaning as a basic human need. Wong (1997) argued that the motivation for meaning entails three primary needs for meaning: (a) the need to make sense of human existence through the discovery of ultimate meanings; (b) the need to make sense of events through construing specific meanings; and (c) the need to create personal meanings. Klinger (1998) adopted an evolutionary perspective whereby meaning represents an inbuilt orientation toward purposive behaviours and goal striving that is common to all zoological organisms and which has evolved within humans together with the human intellect. Functionally, this disposition toward purposiveness serves as a cognitive filter through which events are processed in terms of their relevance to the perceiver's goals.

Finally, some theorists have adopted a non-reductionist psychological perspective on meaning without embracing the noetic postulate. This orientation is compatible with various psychological frameworks, including cognitive, humanistic, existential, and positive psychological approaches. In particular, positive psychologists tend to reject the psychoanalytic and behaviourist views that meaning arises from basic needs and defence mechanisms or conditioning processes; rather, such capacities as purpose, morality, and spirituality represent normative and authentic psychological processes (Damon, et al., 2003). The orientation toward meaning and purpose has been conceived as a distinctly human capacity (Emmons, 2005) that represents a defining feature of positive human functioning (Ryff, 1995; Ryff & Keyes, 1995; Ryff & Singer, 1998). These perspectives have reconceptualised the psychological dimension in a more humanistic light, thereby negating the need to posit a separate noetic dimension in order to avoid reductionist accounts of meaning. Ultimately, the adoption of one framework over another is primarily a function of the theorist's personal preference and perspective. Given that neither framework is
compelling on purely scientific grounds, we have not incorporated the noetic proposition as a defining attribute of meaning.

Goals.

Goals represent the most frequently cited attribute of meaning (Auhagen, 2000; Battista & Almond, 1973; Emmons, 2003; Feldman & Snyder, 2005; Hodges, 2009; Klinger, 1998; Little, 1998; McKnight & Kashdan, 2009; Morgan & Farsides, 2009b; Park & Folkman, 1997; Ryff, 1989a, 1989b; Sommer & Baumeister, 1998; Van Dyke & Elias, 2007; Wong, 1998b, 2010b). Research into goal-constructs spans diverse areas of psychological inquiry, including cognitive, personality, and motivational domains (Austin & Vancouver, 1996) as well as positive psychology (Emmons, 2003). Goals are commonly defined as “internal representations of desired outcomes” (Karoly, 1999, p. 270; see Austin & Vancouver, 1996; Emmons, 2003, for similar definitions). However, various nuanced conceptualisations of goal-related constructs have been proposed. Personal action constructs (PAC units), for example, incorporate several related goal-constructs such as personal projects (Little, 1998), current concerns (Klinger, 1998), personal strivings (Emmons, 2003), and life tasks (Cantor, 1990) that differ in terms of the extent to which they are regulated by internal or external factors (Little, 1998).

Goals are complex constructs that encompass motivational, cognitive, self-regulatory, affective, and behavioural processes (Austin & Vancouver, 1996; Karoly, 1993). Nevertheless, goals are often conceptualised as a motivational construct (Emmons, 2003; Little, 1998). This relates to their primary motivational function as mechanisms that activate and coordinate volitional behaviour (Karoly, 1993). Accordingly, theories of meaning have classified goals as a motivational rather than cognitive component of meaning (Reker & Wong, 1988; Wong, 1998b, 2010b). While a comprehensive outline of the structure, process, and content of goals is beyond the scope of this analysis (see Austin & Vancouver, 1996;
Karoly, 1999, for reviews), several aspects of goals that are directly relevant to meaning warrant elucidation.

Although goal-constructs constitute a central attribute of meaning they are not synonymous with meaning. Not all goals are meaningful; indeed, some goals are relatively superficial, shallow, and have little capacity to facilitate life meaning (Emmons, 2003). If at all, such goals may be considered meaningful merely in the sense of representing personally salient strivings that are ordinarily characterised by deliberate selection, volitional consent, and intentional pursuit. This minimalist approach has been differentiated from a maximalist perspective wherein goals constitute sources of major significance in people's lives (Little, 1998). It would seem that only the latter perspective is directly applicable to the psychological construct of meaning. Therefore, it is critical to differentiate the properties that qualify goals as meaningful in the maximalist sense. Two potential avenues include subjective and functional perspectives on goal meaningfulness.

The observation that goals vary in their degree of perceived meaningfulness has been addressed empirically from a subjective perspective. Noting that goal content is at best a fallible indicator of meaning, Little (1998) has advocated for the direct and systematic investigation of individual’s appraisals of personal projects on dimensions of meaning (e.g., appraisals of importance value-congruency, enjoyment, absorption, and self-identity). Alternatively, optimal meaning may require specific goal profiles along a cluster of relevant dimensions; for example, a combination of effective balance and successful pursuit of core projects (Little, 1998).

Goal meaningfulness may also be considered from a functional perspective. In particular, goals act as intermediaries that harness and give concrete expression to both values (Feldman & Snyder, 2005; Krause, 2004, 2009) and purpose (McKnight & Kashdan, 2009). Additionally, goals provide a sense of order, structure, and direction to life, thereby
contributing a subjective sense of meaning, purpose, and worthwhileness (Baird, 1985; Feldman & Snyder, 2005; Park & Folkman, 1997; Reker & Wong, 1988; Shapiro, 1976). Thus, a functional perspective would suggest that goals are meaningful when they are congruent with and facilitate an individual's values and purposes. It may be valuable to investigate whether these functional properties account for variations in subjective perceptions of goal meaningfulness.

**Cognitive attributes.**

*Purpose.*

The concept of *purpose* refers to a teleological mode of cognition that involves perceptions, attributions, or beliefs regarding some underlying intention, reason, or desired effect (Bering, 2003; Thompson & Janigian, 1988). This notion is purportedly the most representative of everyday conceptions of life-meaning (Sommer & Baumeister, 1998). This cognitive formulation contrasts with some theorists who have defined purpose in terms of goal striving and motivational processes (e.g., Atkinson, 1987; Byron & Miller-Perin, 2009; Damon, et al., 2003; McKnight & Kashdan, 2009; Park & Folkman, 1997; Rubenstein, 1961). Instead, we posit a multifaceted relationship between purpose and goals: (a) goals represent a potential source for cognitive attributions of purpose, (b) purpose is sometimes represented in terms of specific goals, and (c) purpose functions interactively with motivational processes by guiding the content and pursuit of meaningful goals. Furthermore, we propose three key dimensions of purpose that give structure to the relevant themes in the literature: *beholder, source, and ontological frame.*

An individual's cognitive representation of purpose presupposes the existence of a beholder within whom this intention originates. In other words, whose purpose is it? Several potential entities have been enumerated within the literature. Baumeister (1998) suggested that purpose involves an individual's belief that they are here for a reason. This reason may
be self-chosen, divinely ordained, or assigned by society. Similarly, Bering (2003) delineated a cognitive model of existential attribution whereby people intuitively process events as being intentionally caused by some abstract agency, either of a theistic (e.g., God) or non-theistic (e.g., fate or immanent justice) nature. Frankl (1966b) asserted that purpose resides within the world itself or specific situations therein. Alternatively, several theorists have conceived of purpose in terms of individual goal-striving (Atkinson, 1987; Damon, et al., 2003; Park & Folkman, 1997; Reker, 1994; Thompson & Janigian, 1988).

Three major sources of purpose have been identified: beliefs, goals, and narratives. Beliefs represent cognitive content (e.g., opinions, assertions, or propositions) that are regarded as true and valid despite the absence of comprehensive knowledge or absolute certainty. When the content of an individual's beliefs relates to conceptions of purpose, they serve as a source of teleological understanding. Such beliefs may derive from religious, spiritual, philosophical, cultural, or idiosyncratic perspectives (Debats, 1998; Sommer & Baumeister, 1998).

Cognitive representations of personal goals are likewise instrumental in engendering a sense of purpose (Reker, 2000). Central to this capacity is the temporal dimension that is inherent within goal striving. Present behaviours are imbued with a sense of purpose by virtue of the future-oriented goals toward which they are directed (Sommer & Baumeister, 1998). When such strivings extend across considerable portions of the lifespan they instil a sense of directedness that links past, present, and future (Reker, 1994). This propensity becomes even more accentuated with regard to goals that are superordinate, distal, stable, and generalised (Damon, et al., 2003; Rubenstein, 1961). Damon et al (2003) further asserted that in order for goals to contribute a sense of purpose they must be subjectively meaningful and contribute toward the world beyond the self.
Narratives, too, constitute an important source of purpose. As with goals, their capacity to engender purpose is a function of their inherent temporal dimension. Specifically, the preservation of the temporal sequence of events renders personal narratives as an optimal form of mental representation that is conducive to perceptions of purpose (Sommer & Baumeister, 1998). Narratives thereby provide a mechanism through which to construe life in view of some future-oriented purpose, desired outcome, or state of affairs (Atkinson, 1987; Sommer & Baumeister, 1998). Similarly, stories enable individual's to frame life within a valuable context (Baird, 1985). Stories may be personal, shared by larger social units (e.g., families or companies), or theological in nature (e.g., the Biblical narrative). Moreover, redeeming stories provide a framework within which even intense suffering can be endowed with meaning (Baird, 1985).

Another important dimension concerns the ontological frame of reference in relation to which purpose is construed. Several related taxonomies are evident within the literature. Frankl (1985, 2000) distinguished between meaning-of-the-moment and suprêmeaning (also called ultimate meaning). The former refers to specific meanings within life (e.g., opportunities for meaning that are inherent within specific situations), while the latter represents a more all-encompassing or cosmic meaning that applies to life or the universe as a whole (e.g. religious and spiritual perspectives). Paralleling this distinction, Reker and Wong (1988) differentiated between elemental meaning (which is derived through a bottom-up process from activities, quests, and goals that are contained within life) and holistic meaning (representing a total meaning or ultimate purpose that confers meaning upon human life through a top-down process). A similar distinction was proposed by Park and Folkman (1997) in their attempt to integrate the literature on coping. Situational meaning refers to the appraised meaning or interpretation of specific events, whereas global meaning represents a more generalised set of deeply held assumptions, beliefs, and perspectives about
the nature of reality. Bering (2003) delineated three existential tiers of meaning that pertain exclusively to a teleological purpose. These involve experience (events that occur to and have a direct impact upon the individual), events (occurrences in the external environment that do not directly impact the individual but which are interpreted as a personal communicative message for the individual), and existence (meaning that is attributed to the self as a metarepresentational entity). Bering (2003) also noted that teleological analysis is applicable in relation to the grand scheme of things (Existence with a capital E), although this level was not formally included as an existential tier.

These related perspectives have not previously been synthesized within the literature. Therefore, we propose a parsimonious yet comprehensive hierarchical classification system involving existence, self, and events. The superordinate level of existence refers to ascriptions of purpose in relation to the totality of existence. Typically, this involves religious beliefs, spiritual convictions, or philosophical perspectives regarding a purpose that is purported to underlie the creation or existence of the universe (Auhagen, 2000; Fabry, 1998; Frankl, 1958, 1985; Reker & Wong, 1988; Wong, 1998b). Reflecting this superordinate level, Mascaro and Rosen (2008, p. 580) defined spiritual meaning as the "belief that life or some force of which life is a function has a purpose, will, or way in which individuals participate".

The intermediate level of self involves the ascription of purpose by an individual to their own life. Such conceptions tend to be global and generalised, pertaining to the individual's life as a whole. Individuals may construe this purpose as being conferred from above (e.g., by God or a higher power) or motivated from within (e.g., self-generated goals). Regardless of the origin, this purpose is often characterised by a high degree of intensity and centrality such that it may be construed as a life task (Frankl, 1959, 1966b), life aim (McKnight & Kashdan, 2009), or mission in life (Reker, 1994). Some existential
psychologists refer to the supposition that meaning applies uniquely to each individual (Frankl, 1958, 1959, 1966b, 1972; Kotchen, 1960).

The subordinate level of events involves people's teleological understanding of occurrences within their own life or the world at large. Bering (2003) outlined the tendency for individuals to intuitively process events as being caused by some unobservable, intentional agency. Thompson and Janigian (1988) asserted that people construe events as meaningful when they appear to possess some underlying purpose or reason for being. This purpose is often perceived as a function of the extent to which the event facilitates important goals. According to existential theorists, teleological representations of events encompass perceived opportunities for meaning fulfillment that are inherent within particular situations (Fabry, 1998; Frankl, 1972) or which emerge from person-situation interactions (Kotchen, 1960; Langle, 2003).

An important application at the intersection of the literatures on coping and meaning involves the human capacity to find purpose within negative life events (Fife, 1994, 1995; Park & Folkman, 1997; Reker, 2000; Reker & Wong, 1988; Rudolph & Steins, 1998; Skaggs & Barron, 2006; Sommer & Baumeister, 1998; Thompson & Janigian, 1988; Wong, 1991). Wong (1991, 1998; see also Rudolph & Steins, 1998) suggested that people often react to negative life events by adopting the role of a lay philosopher in making existential attributions regarding the underlying purpose for the crisis situation. Moreover, religious coping provides an avenue for making positive reappraisals of traumatic events within the context of divine intentionality (Park, 2005). For example, religious beliefs facilitate theistic causal attributions and provide explanations regarding the potential benefits that may accrue from suffering. Although the meaning-based coping technique of benefit finding (Helgeson, Reynolds, & Tomich, 2006; Park & Folkman, 1997) is thought to enable individuals to maintain a sense of purpose in the face of situations that threaten this perception (Sommer &
Baumeister, 1998), it would appear that this capacity is lacking somewhat when the focus is on the utility, rather than the intentionality, underlying an otherwise negative event.

**Values.**

Values have frequently been incorporated within conceptualisations of meaning (Auhagen, 2000; Baumeister, 1991; Frankl, 1966b; Fry, 1998; Hodges, 2009; May, 1956; Reker, 2000; Reker & Wong, 1988; Wong, 1997, 1998b, 2010b). The psychological literature has given rise to multiple, sometimes disparate, conceptualisations of values as constructs that are either motivational (e.g., motives or incentives), cognitive (e.g., value schemas), or both (Atkinson, 1966; Feather, 1995; Klinger, 1977; Wigfield & Eccles, 1992). This has led to a degree of ambiguity with regard to the structural classification of values within theories of meaning. Although values have been classified as a motivational component of meaning (Reker & Wong, 1988; Wong, 1998b, 2010b), their integrated function within the cognitive meaning system has been acknowledged (Wong, 1998b). Specifically, values guide the process through which individuals determine what is valuable and worth striving for (Reker, 2000; Wong, 1998b). This function is reflected within Schwartz and Bilsky's (1987) definition of values as trans-situational, hierarchical representations of desirable end states or behaviours that guide the selection and evaluation of behaviours and events. We consider this cognitive, meaning-orienting function as central to values and therefore classify them as a cognitive attribute of meaning.

Values also pertain to the moral domain. Specifically, values incorporate appraisals along the dimension of goodness and badness (Feather, 1995) and thereby function as central agents in moral judgement and moral reasoning (Blasi, 1980). Accordingly, *moral standards* have been conceptualised as the knowledge and internalisation of moral norms and conventions that are jointly informed by universal moral laws and culturally specific proscriptions (Tangney, Stuewig, & Mashek, 2007). Although morality is often defined in
terms of objective criteria such as behaviours that are consistent with social expectations or externally defined moral norms, the necessity of an accompanying subjective component has been acknowledged (Blasi, 2005). Thus, an individual must act upon their moral standards specifically because they are perceived as morally correct, rather than due to some other motivation or natural spontaneous tendency. This presupposes an individual's understanding, acceptance, and conviction regarding the validity of their moral standards (Blasi, 1980).

This emphasis on the subjective dimension of morality is consistent with a phenomenological approach to meaning. Theorists have debated concerning whether or not morality constitutes a critical feature of meaning. It has been argued that meaning requires an objective moral component whereby it is deemed morally constructive according to normative social standards (Baird, 1985). In contrast, *purpose* has been conceptualised as a sense of directedness or goal-orientation that is conceptually distinct from the dimension of morality (Damon, et al., 2003). According to the latter perspective, purpose is not necessarily moral. Rather, the superaddition of an objective moral dimension (as defined by particular criteria; see Colby & Damon, 1992) generates a novel, hybrid construct (i.e., *noble purpose* or *ignoble purpose*). Similarly, measures assessing the depth of meaning fail to discriminate the degree to which such meaning is moral; thus, an independent measure of the morality of meaning has been advocated as a complimentary measure when using meaning as an indicator of mental health (Ebersole, 1998).

Aside from the fact that delineating precise criteria for objective moral standards is an arduous task that probably lies beyond the scope of psychology, the phenomenological approach to meaning itself favours the subjective perspective. This does not imply moral relativism. Rather, it acknowledges the observation that people derive a sense of meaning from having and acting in accordance with moral standards. In contrast, activities that are incongruent with an individual's own moral standards are not likely to be perceived by that
individual as meaningful. Thus, we define values as cognitive representations of standards or criterion that determine the content of meaning, including goals, behaviours, and moral standards.

**Attitudes.**

Various researchers have identified the central role of attitudes in relation to meaning (Auhagen, 2000; Frankl, 1958; Hodges, 2009; Langle, 2003; Wong, 1998b). Conceptualisations of attitudes within the social psychology literature have evolved to represent cognitive evaluations of an object that are based on beliefs, feelings, and/or past behaviour (Zanna & Rempel, 1988). Not all attitudes, however, are meaningful. The factors that qualify a given attitude as meaningful have not been adequately delineated within the literature. We propose a functional perspective whereby attitudes are meaningful to the extent that they are aligned with or express an individual's goals, values, or purposes. The meaning literature has yielded a brief, non-exhaustive list of particular attitudes that have the propensity to serve this function, including optimism, hope, acceptance, enthusiasm, engagement, courage, and viewing life or life events as a challenge. Such attitudes may range from generalised, dispositional, and automatic to volitional and situation-specific.

Several attitudes have particular relevance to meaning within the context of human suffering. Frankl (1958) identified the broad notion of *attitudinal values* which involves the realisation of meaning through the attitude that one adopts. Frankl depicted such attitudes as being within an individual's volitional control and articulated their relevance for meaning primarily within the context of unavoidable suffering. Anecdotal and theoretical descriptions within the psychological literature of individuals who exhibit this capacity emphasise such characteristics as remarkable coping abilities, courage, dignity, heroism, acceptance, and the ability to identify an underlying purpose behind suffering (Feldman & Snyder, 2005; Frankl, 1958; Lukas, 1998; Wong, 1998c).
Beyond its manifestation as an attitudinal value, the construct of *courage* is conceptually related to meaning according to several contemporary psychological models. While typically conceptualised as a decision to act in spite of potential threat or risk, several theories predicate courage upon meaning (e.g., Finfgeld, 1999; O'Byrne, Lopez, & Petersen, 2000; Shelp, 1984; Woodard, 2004). Such theories assert that courage must be directed toward some meaningful, noble, or altruistic purpose, the lack of which would render such behaviour as mere risk-taking. Conceptual models have also identified values as a key factor that promotes courage (Finfgeld, 1995, 1999), while perceived threats may foster the clarification of one's values (Finfgeld, 1999).

The closely related constructs of *hardiness* (Kobasa, 1979) and *sense of coherence* (Antonovsky, 1987, 1993) represent dispositions or global orientations that have been associated with meaning, especially within the context of coping (Auhagen, 2000; Korotkov, 1998; Maddi, 1998; Sullivan, 1993). Hardiness (Kobasa, 1979) involves three components: *control* (i.e., the belief that one can influence or control events within one's experience), *commitment* (i.e., the ability to feel deeply involved or committed to life activities), and *challenge* (i.e., the construal of change as a challenge that can promote development). Sense of coherence (Antonovsky, 1987, 1993) likewise involves three intertwined components: *comprehensibility* (i.e., the belief that life events are structured, predictable, and explicable), *manageability* (i.e., the perception that one possesses the necessary skills and resources to meet the demands of living), and *meaningfulness* (i.e., the perception of life demands as challenges that are worthy of investment and engagement). Despite considerable overlap between the components of these two constructs, subtle but important distinctions have been elucidated (Sullivan, 1993).

Although not all of the respective components of hardiness and sense of coherence are directly related to meaning, several aspects warrant mention. Notably, both commitment and
meaningfulness involve attitudes that view life and its daily activities as imbued with value, meaning, and purpose and thus worthy of active participation and energy investment. Additionally, both constructs, like attitudinal values, impact upon coping. Although neither represent coping techniques per se, their important function in fostering resistance and adaptation to stress becomes salient specifically within the context of coping (Antonovsky, 1993). Moreover, the manner in which they facilitate coping is intimately linked with meaning. The meaningfulness component of sense of coherence involves the tendency to interpret demands as challenges that are worthy of investment. This capacity represents a function of meaning because an individual is more likely to interpret life demands and problems as challenges and to invest energy in their amelioration when they occur within life domains that are perceived as meaningful (Sullivan, 1993). The challenge component of hardiness similarly involves the capacity to interpret stressors not as threats, but as challenges that have the potential to spur growth and wisdom (Maddi, 1998; Maddi & Khoshaba, 1994).

More broadly speaking, the construct of hardiness has been conceptualised as a concretised formulation of existential courage (Maddi, 1998, 2004). Existential theory asserts that meaning is constructed through the ubiquitous experience of decision-making, which is characterised by two opposing orientations: future-oriented decisions (involving novel, uncharted directions) and past-oriented decisions (involving restricting oneself to prior, familiar directions). Each direction entails potential advantages and disadvantages. Future-oriented decisions are thought to engender meaning; however, they involve ontological anxiety (i.e., the inherent unease, uncertainty, and vulnerability that accompanies change). Past-oriented decisions involve a degree of safety and familiarity; however, continuously choosing the past may lead to ontological guilt (i.e., nagging feelings of missed opportunities and the accompanying experience of stagnation, boredom, and meaninglessness). The suggested solution to this entanglement is to developed an attitude of
hardiness, which is thought to provide the requisite existential courage to manage ontological anxiety while charting out unfamiliar, meaningful pathways.

Meaningful attitudes also apply beyond the context of suffering and coping. In particular, optimism and hope represent two complementary, goal-oriented constructs that have been linked with meaning (Feldman & Snyder, 2005; Hodges, 2009). Optimism (Scheier & Carver, 1985) represents a broad-ranging, cognitive disposition involving "generalized expectations of the occurrence of good outcomes in one's life" (p. 239). Hope (Snyder, et al., 1991), in contrast, involves a relatively focused emphasis on personal efficacy in the form of goal-directed cognitions concerning pathways thinking (i.e., the perceived capacity to find routes to desired goals) and agency thinking (i.e., the requisite motivations to use those routes). This theoretical distinction is supported by empirical studies demonstrating that optimism and hope represent related but distinct latent constructs that have differential relationships with various psychological variables, including well-being components, coping strategies, and self-efficacy (Bryant & Cvengros, 2004; Gallagher & Lopez, 2009; Magaletta & Oliver, 1999).

The assertion that hope represents a sub-component of meaning, as can be inferred with regard to optimism, is based on their common linkage to goal pursuit (Feldman & Snyder, 2005). Goals are central to meaning, while optimism and hope represent important goal-directed constructs. The link between hope and meaning is further supported by high inter-correlations (Halama, 2003; Snyder & Feldman, 2000), single factor loadings (Feldman & Snyder, 2005; Halama, 2003), and shared variance as demonstrated by partial mediation of one another in predicting both depression and anxiety (Feldman & Snyder, 2005). Moreover, optimism has variously been depicted as the basis of future meaning (Peacock & Reker, 1982; Reker & Wong, 1988), a meaning-enhancing strategy (Wong, 1998c) and a mediator of the effect of meaning on well-being (Ho, Cheung, & Cheung, 2010). Additionally, an
optimistic attitude may assume spiritual significance when experienced in the form of trust or reliance upon divine or spiritual agency (Finfgeld, 1999).

**Evaluations of meaning-fulfillment.**

The capacity to evaluate one's progress in fulfilling meaning and purpose in life has been identified as an important component of meaning (Battista & Almond, 1973; Wong, 2010b). Battista and Almond (1973) defined *fulfillment* as the perception that an individual has fulfilled, or is in the process of fulfilling, some meaningful perspective on life or set of life-goals. This entails a cognitive-evaluative process characterised by self-evaluations along an internally generated scale. Similarly, Wong (2010b) conceptualised *evaluation* as the affective component of meaning, which involves self-regulatory evaluations concerning the level of satisfaction pertaining to either specific situations or life as a whole. Compared to Battista and Almond's notion of fulfillment which emphasises the fulfillment of meaning, Wong's concept of evaluation encompasses broad-ranging assessments of life-satisfaction that are not exclusive to meaning.

Although such evaluations are often self-initiated, several questionnaires that assess the presence and experience of meaning reflect, and in fact precipitate, this process (Crumbaugh & Maholick, 1964; Schnell & Becker, 2006; Steger, et al., 2006; Steger, et al., 2008). Similarly, the *accomplished life* subscale of the Meaningful Life Measure (MLM; Morgan & Farsides, 2009a) assesses the perception that personal goals are being achieved or fulfilled (Morgan & Farsides, 2009b). Factor analytical and multitrait-multimethod matrix (MTMM) studies have confirmed that evaluations concerning the degree to which meaning is present constitute a distinct construct from the search for meaning (Reker & Cousins, 1979; Steger, et al., 2006).
The classification of evaluations of meaning-fulfillment as a critical attribute of meaning is justified in light of several factors. From a phenomenological perspective, meaning is considered incomplete when unaccompanied by a subjective sense of satisfaction (Baird, 1985). Moreover, a positive self-evaluation in terms of meaning-fulfillment has implications for psychological health and well-being. Fulfilling one's life goals or meaning framework is considered more crucial for psychological and existential well-being than the mere presence of such a framework; while conversely, the presence of a meaning framework may produce stress or other deleterious effects on psychological well-being if unaccompanied by the perception that one is fulfilling this framework (Debats, 1998). Consistent with this assertion, empirical findings (e.g., Debats, 1996; Shek, 1992) demonstrate that the fulfillment subscale of the Life Regard Index (LRI; Battista & Almond, 1973) is better than framework subscale in predicting both positive well-being (e.g., happiness and self-esteem) and negative well-being (e.g., depression, anxiety, and psychological distress). Moreover, fulfillment has been identified as a factor in lay people's implicit theories of meaning (Wong, 1998a).

Theorists have associated evaluations of meaning-fulfillment with the affective component of meaning (Battista & Almond, 1973; Debats, 1998; Wong, 2010b). We suggest that this represents a misclassification deriving from the conflation of cognitive-evaluative and affective processes. Satisfaction and fulfillment are amongst the most frequently cited examples of the affective component of meaning (Battista & Almond, 1973; O'Connor & Chamberlain, 1996; Reker & Wong, 1988; Wong, 1989, 1998b, 2010b). However, satisfaction and fulfillment arguably represent cognitive evaluations rather than affective experiences. This is consistent with the widely accepted conception of satisfaction with life as the cognitive, rather than affective, dimension of subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993).
This confusion may result from the propensity for cognitive evaluations of meaning-fulfillment to be accompanied by affective states. This process may be bi-directional in nature.

Consistent with the theory that self-regulatory evaluations about goal achievement elicit emotional reactions (Carver, 2006; Carver & Scheier, 2000b), evaluations regarding successful or unsuccessful attempts to implement meaning may trigger pleasant or unpleasant affective states, respectively. Conversely, global evaluations of meaning-fulfillment may be partially informed by appraisals over time regarding the frequency, intensity, or valence of affective experiences of meaning. This accords with the view that emotions function as a barometer for the degree of meaningfulness experienced by an individual (Wong, 1997). Accordingly, we define evaluations of meaning-fulfillment as cognitive evaluations regarding the extent to which an individual has fulfilled, or is in the process of fulfilling, his or her goals, values, and purposes.

**Affective attributes.**

**Meaningful affect.**


An important theoretical question concerns whether affect constitutes an attribute or consequence of meaning. Some theorists describe positive affective states such as happiness,
pleasure, and gratification as causal outcomes of meaning-fulfillment (Frankl, 1966a, 1988; O'Connor & Chamberlain, 1996; Rubenstein, 1961; Ryan, Huta, & Deci, 2006; Wong, 1998b). Various meaning-related processes are thought to precipitate such emotions, including the pursuit and attainment of goals as well as purpose-oriented beliefs and evaluations (Frankl, 1966a; O'Connor & Chamberlain, 1996; Rubenstein, 1961; Wong, 1998b). According to some models, however, these accompanying emotional experiences are conceived not merely as outcomes, but as defining features of an affective component of meaning (e.g., Reker & Wong, 1988; Wong, 1998b). This affective component is considered so crucial that its absence is thought to compromise the very experience of meaning, even despite having purposes from an intellectual vantage point (Baird, 1985; Rubenstein, 1961; Wong, 1998b).

The apparent paradox that results from this simultaneous depiction of the affective component as both a consequence and attribute of meaning may be more semantic than substantive. Given the widely-accepted conceptualisation of meaning as a multi-dimensional construct, it is possible that the affective dimension often results from other structural sub-components while itself remaining an integral component (Reker & Wong, 1988; Wong, 1998b). Moreover, from a functional perspective these emotional experiences may feed back into and influence other aspects of meaning. For example, pleasant affective experiences and various moral emotions serve to regulate, reinforce, and promote meaningful behaviour.

Meaning is typically associated with positive emotions, which are considered an inevitable by-product of meaningful living (Wong, 1998b). Theorists incorporate within the affective dimension such emotions as happiness, excitement, enthusiasm, contentment, and gratification (Chamberlain & Zika, 1988; Morgan & Farsides, 2009b; Rubenstein, 1961; Wong, 1998b). Although satisfaction and fulfillment are frequently associated with meaning (e.g., Battista & Almond, 1973; Wong, 1998a, 1998b), we suggest that these represent
cognitive evaluations rather than affective states. The centrality of positive emotions to meaning is supported by several studies employing factor analysis with multiple measures of meaning (Chamberlain & Zika, 1988; Dufton & Perlman, 1986; Morgan & Farsides, 2009a). These findings, however, probably reflect the theoretical models upon which questionnaire items were based. Therefore, additional methods of empirical validation are required.

A fundamental consideration that is surprisingly absent from the literature concerns the factors that render a given emotion as meaningful. Positive emotions do not always occur within a meaningful context and therefore cannot be considered as synonymous with meaning. Instead, we propose that affective states acquire meaning through their functional interaction with other structural components of meaning. This may include emotions that result from, promote, or co-occur with other meaning-based processes. The affective uplift that accompanies altruistic behaviour, for example, may be phenomenologically associated with the experience of meaning. Moreover, an individual may attempt to elicit happiness because it empowers him or her to engage more successfully in the pursuit of important goals. Additionally, individual's may value particular emotions and perceive them as intrinsically or contextually meaningful. For example, an individual may believe that love is a meaningful emotion and therefore attempt to cultivate the conditions that elicit this feeling within particular interpersonal relationships. This functional definition, however, does not preclude the importance of investigating particular emotions that commonly occur in relation to meaning.

An important corollary to this functional perspective is that an emotion need not be positive in order to qualify as meaningful. Rather, both pleasant and unpleasant affective states can be associated with meaning provided that they serve a meaningful function. Hence, the affective component of meaning is comprised of meaningful affect, not positive affect per se. This affords the necessary scope to incorporate within the affective dimension
various emotions outlined within the literature that, while meaningful, may also be experienced, at least temporarily, as unpleasant. In particular, Frankl (1966a, 1985) described a state of constructive tension, termed noodynamics, which derives from the gap between an individual's current versus potential achievements. Such feelings of tension and distress possess a motivational quality that can reorient an individual toward meaning. Frankl considered this constructive form of tension as indispensible for well-being. In this light, feelings of frustration and disappointment following one's perceived failings can similarly be considered as meaningful, provided that they function to spur renewed efforts at meaning actualisation.

Moral emotions constitute another candidate for inclusion within the affective dimension of meaning, despite their lack of representation within existing conceptualisations. Moral emotions do not necessarily possess an intrinsic meaning. Rather, they are meaningful by virtue of their role in the promotion of moral functioning. Moral emotions are central to the process of moral regulation (Sheikh & Janoff-Bulman, 2010) and mediate the link between moral standards, moral decisions, and moral behaviours (Tangney, et al., 2007). An important mechanisms through which moral emotions promote long-term moral functioning involves their role as natural reinforcers of prosocial behaviour. Negatively valanced moral emotions serve as punishments for value-incongruent behaviour, whereas positively valanced moral emotions function as rewards for value-congruent behaviour. Additional mechanisms that are specific to particular emotions have been outlined below. Although not all moral emotions promote moral functioning, a broad range of theoretical and empirical literature suggests that this capacity extends to the majority of moral emotions (see Tangney, et al., 2007 for a review). Moral emotions can be categorised in terms of their valence (e.g., positive versus negative), orientation (e.g., self versus other), and function (e.g., reactions to suffering). Several important moral emotions and their meaning-enhancing functions are
outlined below. This list, however, should not be considered exhaustive as ongoing research is likely to uncover additional moral emotions.

Among the negative moral emotions that have been investigated, guilt and righteous anger exhibit the greatest propensity to facilitate meaning. Guilt has been defined as distress that follows a negative evaluation of a specific behaviour. Notwithstanding the role of maladaptive patterns of guilt in depression, research suggests that normative, everyday experiences of guilt serve an adaptive function in the promotion of moral behaviour, while producing few negative consequences (Tangney, et al., 2007). In particular, guilt facilitates enhanced interpersonal relationships, reparative actions, empathy, constructive strategies for managing anger, and subsequent moral behaviour (Baumeister, Stillwell, & Heatherton, 1994; Sheikh & Janoff-Bulman, 2010; Tangney, et al., 2007). In contrast to adaptive experiences of guilt that are directed toward specific negative behaviours, the notion of shame denotes negative evaluations that have been generalised to the global self (Sheikh & Janoff-Bulman, 2010; Tangney, et al., 2007; Tracy & Robins, 2004). Experiences of shame are largely maladaptive and thus exhibit limited capacity to serve a meaningful role in moral functioning. Complementing the moral-reinforcing properties of guilt, righteous anger involves indignation upon witnessing a perpetrator's violation of moral standards. Righteous anger represents an other-focused, negatively valanced emotion that can promote bystanders to rectify injustice through morally corrective action (Tangney, et al., 2007).

Although research into moral emotions has traditionally focused on those with negative valencies, the positive psychology movement has provided impetus for the exploration of positive moral emotions such as moral pride, gratitude, and elevation. Moral pride entails pleasant affect regarding one's morally upright behaviour. This positively valanced, self-directed moral emotion facilitates conformity to social standards by rewarding moral behaviour and inhibiting impulses to behave immorally (Mascolo & Fischer, 1995;
In contrast to the adaptive experience of pride which is directed toward specific behaviours, the notion of *hubris* has been employed to differentiate a potentially maladaptive form of pride that is directed toward the global self, paralleling the distinction between guilt and shame (Lewis, 1992; Tangney, et al., 2007).

Several other-directed, positive moral emotions are also relevant to meaning. *Gratitude* refers to appreciation felt in response to the benevolence of others. This emotion serves three morally relevant functions: (a) it is elicited in response to the perception that one has benefited from the moral actions of another (moral barometer function); (b) it motivates subsequent prosocial behaviour in the recipient toward both the benefactor and others (moral motive function); and (c) when expressed, it promotes further prosocial behaviour by the benefactor (moral reinforcer function) (McCullough, Kilpatrick, Emmons, & Larson, 2001). A prospective avenue of research that is particularly relevant to meaning concerns religious and spiritual expressions of gratitude toward God or a higher power (Emmons & Crumpler, 2000; McCullough, et al., 2001). Another important moral emotion is that of *elevation*, which has been conceptualised as pleasant affectivity in response to the observation of other people’s virtuous behaviour or acts of moral beauty. Elevation engenders a sense of openness and connectedness to others, altruistic intentions, and motivations for self-improvement (Haidt, 2003).

**Behavioural attributes.**

**Meaningful behaviour.**

Although the important role of behaviour has long been acknowledged in the meaning literature, the emergence of a distinct behavioural component in structural models has lagged somewhat. Frankl (1958, 1966b) emphasised the role of *creative values* whereby an individual can actualise meaning through activities that contribute toward the world. Similarly, Maddi (1967, 1998) delineated a behavioural component in his model of existential
neurosis/sickness; however, this syndrome is representative of meaninglessness rather than meaning.

In contrast, various subsequent conceptualisations did not incorporate an independent behavioural component. The absence of this dimension within Battista and Almond's (1973) conceptualisation of positive life regard led to the call for further investigation into the validity of a potential actional factor (Debats, 1998). Although early structural formulations (e.g., Reker & Wong, 1988; Wong, 1998b) acknowledged the relevance of a behavioural dimension, this was subsumed within the motivational component of meaning in light of the natural tendency for goal striving to be manifest through behaviour.

Auhagen (2000) identified a constellation of action-oriented theories that emphasise the meaningful structure and function of behaviour across various levels, including single actions, superior action tendencies, and broader socio-cultural contexts. However, these approaches consist largely of goal-related theories that do not adequately differentiate between motivational and behavioural aspects of meaning. These processes were demarcated, however, in Wong's (2010b) reformulation of earlier structural models, which posits an independent behavioural component - termed responsible action - that consists of actions, reactions, solutions, and reparations that are appropriate, right, and value-congruent.

Inherent within the existing descriptions of meaningful behaviour is an implicit functional prerequisite that distinguishes meaningful from ordinary activities. Frankl's (1958, 1966b) depiction of creative values, for instance, implies that creative acts must contribute in some way toward the improvement and betterment of society. Moreover, Wong's (2010a, 2010b) behavioural component underscores the need for meaningful activities to be congruent with an individual's purpose, values, and moral standards. This pattern underlies the need for a coherent functional definition of meaningful behaviour. Thus, we define
meaningful behaviour as activities that express or facilitate an individual's goals, values, or purposes.

This functional perspective also qualifies as meaningful a diverse range of activities spanning a variety of life domains. The capacity to confer meaning upon diverse activities derives from the superordinate nature of goals, values, and purposes which tend to encompass and coordinate a range of hierarchically subordinate, shorter-range, and more concrete strivings and activities (Carver & Scheier, 1991; Park & Folkman, 1997). For example, the apparently mundane activity of shopping for groceries can adopt a heightened level of meaning when it is perceived as an opportunity to realise higher-order values and goals such as caring for the health and well-being of one's family members.

An illustration of this capacity that has received recent attention involves the sanctification of strivings (Mahoney, et al., 2005). Theistic sanctification involves the perception that a divine Being plays a role in a particular striving; for example, the striving involves God's presence, reflects God's will, or enables one to experience God. Non-theistic sanctification, in contrast, involves the ascription of transcendent qualities such as sacred, holy, heavenly, blessed, or spiritual to strivings without direct mention of a divine Being. Although strivings that explicitly involve religion or spirituality are the most likely to be perceived as sanctified, perceptions of sanctification may extend even to strivings that are not overtly religious or spiritual in nature, such as working on a marriage or helping others who are less fortunate. Within a US sample of 150 adults, the sanctification of strivings extended to such domains as altruistic activity, family life, and existential concerns, and to a lesser extent, self-development, work, and financial affairs (Mahoney, et al., 2005).

Despite the endless list of activities that could potentially qualify as meaningful under a functional definition, empirical studies have highlighted various sources that are commonly associated with meaning (e.g., Debats, 1999; DeVogler & Ebersole, 1981; O'Connor &
Chamberlain, 1996). Although the identification of sources of meaning is an individual, subjective process, several methodological approaches have converged on a proposed taxonomy of four major sources: achievement/work, relationships/intimacy, religion/spirituality, and self-transcendence/generativity (Emmons, 2003, 2005). The relationship/intimacy category corroborates Frankl's (1958, 1966b) assertion that meaning can be experienced through love, relationships, and encounters with other people. The domain of religion/spirituality involves behavioural expressions such as meditation, prayer, and religious rituals. The category of self-transcendence/generativity incorporates behavioural expressions of altruism, such as volunteering, helping behaviour, and charitable behaviour. Each of these domains, however, could potentially be pursued for non-meaningful purposes, such as financially motivated work, self-serving relationships, extrinsic religiosity, and egocentric giving. Therefore, these sources represent a useful, though fallible, guide to the content of meaningful behaviour. The underlying intention, as conveyed by the functional perspective, remains paramount.

**Emergent attributes.**

**Internal integration.**

The concept of *internal integration* involves the functional interaction between (and within) structural components of meaning. We have developed a model to depict the functional interaction inherent within the meaning system, which includes core, peripheral, and regulatory dimensions as illustrated in Figure 2.

<Insert Figure 2 about here>

The *core dimension* involves various motivational and cognitive components that function harmoniously with one another. Specifically, the motivation for meaning triggers a search for values and purpose, which in turn, serve as a cognitive filter that determines the content of meaning in the form of concretised goals (Feldman & Snyder, 2005; Krause, 2004,
Diverse modes of integration are also evident within the goal component itself, including *organismic integration* (Deci & Ryan, 1991), *self-concordance* (Sheldon & Elliot, 1999), *systemic integrity* (McGregor & Little, 1998), *systemic integration* (Sheldon, Kasser, Smith, & Share, 2002), *vertical coherence*, and *horizontal coherence* (Sheldon & Kasser, 1995). Purpose similarly exhibits a degree of internal integration whereby cognitive perceptions at various ontological frames tend to be consistent with and influence one another (Park & Folkman, 1997; Thompson & Janigian, 1988; Wong, 1998b).

The *peripheral dimension* of meaning encompasses the affective and behavioural attributes. These components are considered to be relatively external in the sense that they are typically guided by and result from the motivational and cognitive dimensions (Reker & Wong, 1988; Wong, 1998b, 2010b). Most notably, values and goals serve to coordinate and direct meaningful behaviours (Karoly, 1993; Krause, 2004, 2009; Oishi, et al., 1998). Functional integration between the peripheral components is manifest via a bidirectional process: the pursuit and successful behavioural implementation of meaningful goals engenders meaningful emotions (Frankl, 1966a, 1972, 1988; Wong, 1997, 1998b), while meaningful affective states (e.g., moral emotions) serve to reinforce and promote meaningful behaviour (Sheikh & Janoff-Bulman, 2010; Tangney, et al., 2007).

The *regulatory dimension* involves evaluations of meaning-fulfillment, which serve a regulatory role within the meaning system (Wong, 2010b). The capacity to engage in self-regulatory evaluations about goal achievement functionally links goal pursuit, affect, and behaviour (Carver, 2006; Carver & Scheier, 2000a, 2000b). Specifically, deviations from the evaluated degree of goal fulfillment in relation to a desired reference value may produce changes in goal pursuit (e.g., adjustments, disengagement, or substitutions), affect (e.g.,
positively or negatively valanced emotion), and behaviour (e.g., increased efforts or coasting).

Although not all goals are meaningful, we suggest that this evaluative process extends to efforts to actualise meaning. Self-regulatory evaluations concerning meaning-fulfillment may involve the appraisal of meaningful behaviours and emotions in regard to a criterion value that is informed by an individual's meaningful goals, values, and purposes. For example, somebody who values and pursues work-related goals may assess that although their objectives have been met in behavioural terms they have not experienced the expected emotional uplift, thereby precipitating a reprioritisation of values or alterations in the goal content. Alternatively, positive appraisals concerning one's search for meaning may reduce the motivation to find meaning while increasing the motivation to fulfil meaning and initiating the development of meaningful goals. This regulatory function of evaluations of meaning-fulfillment requires further investigation.

Various manifestations of integration are thus evident within the meaning system. From a phenomenological perspective, however, the most salient aspect of this integration involves the harmony between core and peripheral elements of the meaning system. Such integration is present to the degree that an individual's motivation for meaning, purposes, values, and meaningful goals find behavioural and affective expression. For the integrated individual, meaning represents more than just a detached, armchair philosophy; rather, meaningful goals, values, and purposes serve as a practical guide to daily living. Moreover, this integration is also manifested in the emotional sphere. Langle (2003) depicted the sense of harmony between inner experience and outer action in terms of the correlation between an individual's deepest and purest emotions with their intentions, plans, and decisions for action. This integration between affect and behaviour (or behavioural intentions) is phenomenologically experienced as an inner consent or an inwardly felt or spoken "yes".
Hence, the meaning system has the capacity to harmonise various aspects of psychological functioning in the pursuit of meaning. This constitutes a form of psychological integration that revolves around the axis of meaning.

**External integration.**

Several theorists have also described various manifestations of *external integration* that emerge from the interaction between a person and their environment. Rather than representing independent or opposing thrusts, external integration constitutes an extension of internal integration into the surrounding world. Some theorists have described a state of unity that encompasses the individual, their actions, and the object or situation to which they are relating (Auhagen, 2000). This capacity is not an outgrowth of behaviour per se; rather, a specific mode of behaviour is required to facilitate this sense of integration. According to Weisskopf-Joelson (1968), the integration between an individual's inner psychological world and the external environment is dependent on behaviour that is authentic in the sense that it is derived from inner guidelines rather than mere external goals and activities. Langle (2003) added that a gestalt-like experience of meaning emerges from the correlation between inner and outer reality when an individual considers their personal abilities and potentials in relation to the demands, needs, and possibilities within the world. This gestalt perception is also thought to characterise an individual's discovery of meaning within a situation (Frankl, 1965, 1966b, 1967a).

**Case Analyses**

**Model Case.**

Suzanne, 36, is a devoted wife of 10 years and mother of three young children. She holds strong, altruistic, and family-oriented values. She believes that her personal mission in life involves running a soup kitchen to assist the needy in her neighbourhood. She is strongly motivated to succeed in this task, investing significant time and effort. She adopts an
optimistic attitude towards life, enabling her to persevere with important goals despite occasional challenges and setbacks. Suzanne truly feels that she is living up to her values. This elicits feelings of joy, happiness, and a sense of integrity. She is grateful for the opportunity to devote her skills to benefit others.

Commentary: Suzanne demonstrates all the attributes of meaning. She is highly motivated in her endeavours to fulfil meaning and has a clear conception of her individual purpose, embodied in her goal of running the soup kitchen. Her optimistic attitude enables her to actualise meaning by persevering in valuable goals. She evaluates herself as largely fulfilling her meaningful life ambitions, which produces positive emotions. She also exhibits a sense of integrity: internally, her personality revolves around meaning and her inner values, goals, and sense of mission are reflected in her emotions and behaviours; externally, she applies her talents to meet the needs of those in her community, as guided by her inner values.

Borderline Case.

Graig, 55, is a partner in a renowned law firm that has a reputation for upholding highly valued moral principles. The firm frequently represents the rights of minorities and those experiencing discrimination and undertakes a percentage of annual cases pro bono. Graig was largely responsible for cultivating this ethical company ethos. His motto has long been, "Do good without seeking reward; you'll be all the happier and the reward just might catch you in the end!" Greg is highly regarded by his colleagues and friends. He has also successful implemented many important life goals. Nevertheless, he evaluates his life as deeply unfulfilling and experiences an inner emptiness, somewhat of a mid-life crisis. He grows his hair long and purchases a motorbike; but the discontent continues.

Commentary: Greg exhibits many of the properties that are central to meaning. He possesses strong values and meaningful goals, which he implements successfully. His
altruistic attitude toward life is evidenced by his personal motto. Those who know him would probably evaluate his life as rich in meaning. Nevertheless, Greg, himself, does not subjectively evaluate his life as meaningful. The affective uplift that often accompanies meaningful goal pursuit is also missing. There appears to be some disconnection between his emotional experience and life activities. His deepest emotions do not accord with his behaviour. Is such a life meaningful? To a degree, yes - Greg does after all believe in the validity of his values and principles and implements them for altruistic reasons. Yet the emotional and evaluative aspects of meaning are lacking, as is a sense of internal integration. Accordingly, this constitutes a borderline case.

**Related Case.**

Karl, 60, is an accomplished scientist and renown professor. Drawing upon his expert knowledge of physics, biology, and statistics, Karl is cognisant of the underlying order and coherence that characterises many components of the universe, including the forces that govern astronomical, biological, physical, and sub-atomic realms. Karl is informed by his doctor that that he has cancer. His initial reaction is one of shock, disbelief, and denial. "How could this happen? Why me?" he questions. He experiences this threatening news as an abrogation of the order and coherence that he normally associates with life. Over the next few weeks Karl's perspective gradually shifts. Informed by his understanding of the underlying intracellular processes, he begins to view this disease as a challenge that is treatable and manageable rather than an insurmountable threat to life. He also acknowledges his genetic predisposition to this form of cancer which he failed to proactively manage through regular checkups. Considering the pros and cons of various treatment regimes, he adopts a holistic approach involving both chemotherapy and complementary medicine. Recognising the need to revise his goals, he arranges a yearlong sabbatical from his university work. Over the coming months he is surprised to discover that his relationship
with his wife and family have enhanced. He resolves henceforth to prioritise family time over work.

Commentary: This case represents a good example of meaning within the context of coping (see Park & Folman, 1997). Karl’s global meaning consists of beliefs regarding the order and coherence underlying many aspects of the universe as well as work-related goals. Initially, he appraises his illness as threatening and inconsistent with his global perception of order and coherence. This incongruence leads to meaning-making attempts, involving causal and selective incidence attributions concerning why he contracted the illness. He reappraises the situation as a challenge to be overcome, thereby bringing it into coherence with his global meaning. Various changes are also evident within his global meaning framework, including his reprioritisation of values and revision of goals. He also views his enhanced relationship with his wife and family as a benefit that has accrued from his illness. These lasting changes to his global meaning constitute positive examples of meaning as outcome.

Nevertheless, a vital ingredient is missing that differentiates this case of meaning-based coping from the psychological construct of meaning: namely, purpose. Karl does not attribute any deeper purpose or intention to the order and coherence that he perceives throughout the universe; it is simply an empirical observation, a description of how the world appears. His attempts to understand why he contracted cancer do not include existential considerations regarding its underlying purpose. Similarly, the resulting benefits are not viewed as intentional, but as unintended side-effects that happen to be beneficial. Despite the presence of work and family related goals, there is insufficient evidence to suggest that Karl's life is imbued with significant meaning. This case illustrates that the construct of meaning in the context of coping is dissimilar to psychological meaning as hereby conceived. Moreover, of the various forms of understanding, only a teleological understanding - whether on the
level of existence, an individual's personal life, or specific situations - is representative of psychological meaning.

**Contrary Case.**

Mia, 17, is on the streets again. Desperate and hopeless, she turns to prostitution to feed her heroin addiction. She has no vision in life, no long-term goals. Nor is she distressed by this; she is rather indifferent. Life on the streets places her in a vulnerable position, but one that is preferable to the abuse at home. She lacks any stable interpersonal relationships. Life is about survival and another quick hit of heroin. She might even die from it; and she doesn't care. "Perhaps suicide is a preferable?" she muses. "What's the point of it all? Why go on when there is so much pain?" Following a third attempted suicide Mia awakes in the emergency ward. "I can't even get this right!" she laments.

Commentary: Mia's cases represents the antithesis of a life rich in meaning. Bereft of meaningful goals (other than feeding her addiction) she detests her life to the point of suicide. Will she one day find meaning in her tragic experience? It is difficult to predict. Currently, however, her subjective perception of life is filled only with emptiness and meaninglessness.

**Discussion**

In light of the vague, ambiguous, and inconsistent conceptualisations of meaning within the psychological and health-related literatures, the method of concept analysis (Walker & Avant, 1995) was employed to clarify the critical attributes of meaning. The semantic uses of the term meaning were analysed within both linguistic and scientific contexts. Base on a systematic review of 151 articles, books, and book chapters, meaning was defined as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning motivational, cognitive, affective, and behavioural domains as well as various emergent properties. A total of 10 attributes were identified as presented in Table 1.
The semantics of "meaning" in linguistic and scientific contexts

A semantic analysis of the word meaning was conducted using several distinguished as well as popular online English Dictionaries. The following connotations were identified: (a) semantics, (b) inner significance, (c) intention, and (d) psychological purpose. These themes corroborate yet extend Klinger's (1998) prior etymological analysis of meaning. Klinger, however, identified an additional connotation of meaning quo understanding based upon a philosophical analysis. Specifically, “meaning is a matter of human understanding, regardless of whether we are talking about the meaning of someone’s life, the meaning of a historical happening, or the meaning of a word or sentence” (Johnson, 1987, p. 176).

In light of these diverse connotations, it is not surprising that the psychological construct of meaning is broad, multifaceted, and subject to multiple conceptualisations as well as conceptual confusion. It is noteworthy that several dictionaries incorporated an explicitly psychological connotation of meaning as it relates to values, spirituality, and both individual and global perceptions of purpose. The connotation of meaning as intention is also pertinent to psychological conceptions as it conveys the idea of goals and purpose.

Various uses of the term meaning (as well as several related phrases) were similarly identified within the psychological and health-related literatures. These included the following themes: (a) psychological meaning, (b) meaning-based coping, (c) syndromes of meaninglessness, and (d) contextual applications of meaning. The category of psychological meaning was the most representative of the construct under analysis. The most common and useful terms employed to depict this construct included meaning in life (e.g., Steger, et al., 2006), purpose in life (e.g., Crumbaugh & Maholick, 1964; Ryff, 1995), and personal meaning (e.g., Wong & Fry, 1998). The phrase purpose in life denotes the teleological and goal-directed properties of meaning, whereas meaning in life possesses comparatively broader connotations. The notion of personal meaning is also useful because it highlights the
phenomenological and experiential aspects that are central to psychological
categorisations. A more consistent vocabulary would facilitate better organisation and
integration of the meaning literature.

Several uses of meaning were identified that represented related albeit distinct
concepts. In particular, meaning-based models of coping encompass various forms of
comprehension that include but are not limited to teleological attributions (Park & Folkman,
1997; Thompson & Janigian, 1988). The use of the word meaning to denote such processes
as perceptions of purpose, order, coherence, benevolence, justice, and various appraisal
processes probably derives from the semantic connotation of meaning quo understanding.
This trend extends to several mainstream psychological conceptualisations of meaning that
are not exclusively coping-oriented (e.g., Reker, 1994, 2000; Reker & Wong, 1988). These
models incorporate within the cognitive component of meaning the cognisance of order,
coherence, and purpose. Although linguistically appropriate, this broad usage of the term
meaning to refer to varied, non-teleological forms of comprehension has produced an inflated
conceptual overlap between traditional psychological models of meaning and meaning-based
coping theories. Case analysis, however, suggests that only understandings relating
specifically to purpose are intrinsic to the psychological construct of meaning (see Related
Case). Applications of meaning to specific contexts (e.g., suffering) and illnesses (e.g.,
chronic illness, cancer, heart disease, and Alzheimer's disease) demonstrated similar overlaps
with coping-based theories of meaning and were considered too narrow for the current
analysis.

The relationship between meaning and coping deserves further attention. A clearer
conceptualisation of psychological meaning that is devoid of non-teleological modes of
understanding is required in order to clarify this relationship. Rather than assimilating the
broad notion of meaning-based coping into psychological models of meaning, it may be more
accurate to view successful coping as a potential consequence of meaning (Frankl, 1959; Mascaro & Rosen, 2006; Wong, 1997). Additionally, traumatic life events can serve as a potential antecedent to deepened levels of meaning (Skaggs & Barron, 2006). Some degree of conceptual overlap may remain, however, regarding appraisals of the purpose underlying stressful life events, which constitute both an aspect of meaning and a specific coping strategy (Park, 2005).

The notion of meaninglessness was excluded from the current analysis because it represents a distinct construct that exists on a different continuum from meaning. Syndromes such as existential neurosis/sickness (Maddi, 1967, 1998), existential vacuum and noogenic neurosis (Frankl, 1988) reflect negative psychological health. These conditions consist of symptoms such as boredom and apathy that amount to more than the mere absence of positively defined attributes of meaning. In contrast, meaning is generally conceived as a positive dimension of psychological well-being (e.g., Ryff, 1989a, 1989b, 1995). An absence of meaning does not necessarily imply the presence of clinical manifestations of meaninglessness (Schnell, 2010). Further conceptual clarification and integration of syndromes indicative of meaninglessness is required.

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conceptual clarification and integration of syndromes indicative of meaninglessness is required.

**The relation of meaning attributes to structural models**

The attributes of meaning derived from the current analysis were categorised in terms of motivational, cognitive, affective, behavioural, and emergent properties. This organisational framework possess important similarities as well as differences in comparison with other structural models (e.g., Reker & Wong, 1988; Wong, 1998b, 2010b). Unlike earlier tripartite models that subsumed behaviour within the motivational component (Reker & Wong, 1988; Wong, 1998b), these findings support Wong's (2010b) subsequent differentiation an independent behavioural dimension. Nevertheless, we have significantly expanded upon this behavioural component, resulting in a broad, phenomenological, and functional conceptualisation.

The identification of emergent processes represents a novel development unrepresented within previous structural models. The functional interrelationships inherent within the attribute of internal integration are not merely an epiphenomenon; rather, they represent a distinct form of psychological integration around the axis of meaning that is phenomenologically salient. Similarly, the individual's meaningful interaction with his or her outer environment results in an emergent sense of harmony or external integration. The validation of these emergent properties as definitive attributes of meaning awaits independent corroboration by theorists within the field. Qualitative and quantitative methods are likely to facilitate this process.

The distinction between the current analysis and other structural models (e.g., Reker & Wong, 1988; Wong, 1998b, 2010b) is further accentuated in relation to the psychological processes represented within each superordinal category. These mechanisms have undergone significant restructuring, clarification, and elucidation within the current analysis. Several
attributes were recategorised under different superordinal domains. In particular, the current model differentiated between cognitive-evaluative processes and pure affective states. The former was reclassified as a cognitive attribute (i.e., evaluations of meaning-fulfillment) whereas the latter served as the basis for a reformulated affective dimension (i.e., meaningful affect). In addition, purpose and values were categorised as cognitive rather than motivational processes.

The current analysis served to refine and clarify the attributes of meaning. The construct of meaning overlaps with various processes such as goals, values, attitudes, evaluations, affect, and behaviour. Rather than simply integrating these diverse mechanisms within the conceptualisation of meaning, only features integral to meaning were included. This involved the identification of key functional processes that qualify such mechanisms as meaningful. Moreover, the current formulation of cognitive attributes is more concise and parsimonious than other structural models which incorporate wide-ranging processes like beliefs, expectations, schemas, worldviews, making sense of situations, self-concepts, understanding other people, and effective communication (Reker & Wong, 1988; Wong, 1998b, 2010b).

Toward a functional definition of meaning

A notable trend within the current analysis involved the use of functional definitions for a range of attributes. These functional relationships served to qualify various psychological processes as meaningful. A model describing this functional interaction between elements of the meaning system is depicted in Figure 2. This model suggests that core cognitive-motivational mechanisms drive peripheral affective-behavioural processes, which are, in turn, linked to the core dimension via a regulatory feedback loop consisting of evaluations of meaning-fulfillment. Consistent with this functional model, mechanisms such as attitudes, emotions, and behaviours are considered meaningful by virtue of their capacity
to express or facilitate other components, particularly core processes including meaningful goals, values, and purpose. These functional relationships are the hallmark of internal integration - an emergent property of meaning. Without clear content-based criteria for determining the meaningfulness of these psychological processes, their functional role in facilitating the core meaning components is paramount.

Nevertheless, the meaning system is not devoid of underlying substance. Meaning would appear futile if each attribute derived its relevance merely by facilitating yet another attribute. The inherent pattern of circularity within the meaning system, however, culminates in and directs itself toward the importance of meaning's content. This content is apprehended primarily through the attributes of purpose and values and gives substance to the entire meaning system. Given the explicitly phenomenological orientation adopted within the current conceptualisation, no specific criteria have been applied to the content of meaning beyond that of an individual's subjective appraisal. In other words, the current conceptualisation of meaning has not been aligned a priori with particular meaning content. Such content is not irrelevant; nor is all content presumed to possess an equivalent capacity to promote meaning. Rather, the content of meaning may be conceptualised as a specific property amenable to direct empirical investigation in connection with such attributes as purpose, values, meaningful goals, and meaningful behaviour.

This process-oriented conceptualisation could potentially assimilate a plethora of psychological processes that in some way facilitate meaning. It could be argued, for example, that executive functioning capacities located within the frontal lobes are vital for the planning and execution of meaningful goals and behaviours. Language abilities similarly constitute a set of psychological processes that facilitate cognition and communication, both being central to meaning. The potential list of psychological processes that facilitate expressions of meaning is endless. Meaning could simply be defined as any psychological
process that facilitates values, purposes, or goals that are subjectively construed as meaningful.

Notwithstanding this possibility, the specific attributes identified within the current analysis have been highlighted due to their capacity and propensity to serve as vehicles for meaning. They represent specific processes that can be effectively explored, measured, and even targeted in specific interventions aimed to facilitate meaning. The specification of these attributes is therefore pragmatic as it facilitates the underlying aims that drive the scientific exploration of meaning. Future decisions regarding the incorporation (or exclusion) of additional meaning attributes should consider their scientific usefulness and practicality.

Limitations, strengths, and future directions

The current analysis is not without limitations. The methodology of concept analysis is only capable of capturing the conceptualisation of a construct within the literature at a given moment in time (Walker & Avant, 1995). Given the changing nature of concepts over time, this conceptualisation should be re-evaluated to integrate future developments within the literature. Furthermore, concept analysis provides only a guideline to facilitate the systematic analysis of a concept. Nevertheless, the results reflect the subjective perspective of the authors.

In particular, the current analysis has been guided by various assumptions and approaches as outlined within the framework section. A decidedly phenomenological approach to the conceptualisation of meaning has been adopted. This represents only one of several potential approaches. For example, comparatively philosophical or spiritual approaches to the conceptualisation of meaning are possible (e.g., Frankl, 1988; Mascaro, et al., 2004). It would be interesting to compare various conceptualisations of meaning in terms of their differential effects on psychological health. Is it the phenomenological aspect of meaning that is central to psychological health or is another aspect more influential, such as
self-transcendence, morality, or spirituality as defined by conceptually based, objective criteria?

Another factor that has influenced the current conceptualisation is the adoption of a structural model that differentiates between motivation, cognition, affect, and behaviour. Some theorists view this division as simplistic and artificial, arguing instead for an integrated conceptualisation of motivation, cognition, and affect (e.g., Bickhard, 2000, 2003; Linnenbrink, 2006). These integrative models emphasise the process rather than substance of mental activity. The application of this framework to conceptualisations of meaning would emphasise the key functional processes while de-emphasising their compartmentalisation into specific structural categories. Such an approach could easily assimilate psychological processes that traverse several structural domains. It may be somewhat limiting to conceive of such processes as goals, values, and purpose in terms of a single structural category to the exclusion of others.

Notwithstanding these limitations, the current analysis contributes substantially to the scientific literature on meaning. Amongst its strengths, the proposed conceptualisation: (a) largely ameliorates the prevailing conceptual confusion around the concept of meaning; (b) integrates diverse approaches to meaning that have impeded progress within the field; (c) enables direct, empirical investigation of meaning's content; (d) incorporates a functional model that has the potential to guide future investigation regarding the interrelationships and direction of influence between various components of meaning; and (e) has the capacity to guide intervention strategies by specifying an array of attributes that represent potential targets of therapeutic change. The development of effective meaning interventions is predicated upon a clear conceptualisation of meaning and its concomitant processes.

The current analysis also has the capacity to stimulate several valuable areas of research. In particular, the proposed conceptualisation of meaning constitutes the
groundwork for the development of a multidimensional measure to assess each attribute of meaning independently. Such a measure could provide valuable information about the interconnection between various meaning attributes as well as their differential relationship with diverse aspects of psychological health. Moreover, such a scale would be particularly useful as an outcome measure for meaning interventions while also possessing the ability to assess the underlying mechanisms of change within existing or novel meaning-based therapeutic techniques.

Research on meaning has only recently entered into the mainstream of psychology. Clear conceptualisations are important in order to further this trend. The current analysis represents one such attempt which, it is hoped, will enable a better understanding of meaning’s relevance for psychological health while bolstering efforts to develop effective meaning interventions.
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http://existentialpsychology.org/index.php?option=com_content&task=view&id=37&Itemid=1


Figure 1. Hierarchical representation of meaning attributes.
### Definitions of the Attributes of Meaning

<table>
<thead>
<tr>
<th>Definition</th>
<th>Motivational attributes</th>
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<tr>
<td>Motivation for meaning</td>
<td>An orientation toward meaning that consists of two related motivational thrusts: (a) a search for some novel, additional, or deeper meaning that may or may not already be present to some degree (motivation to find meaning); and (b) an ongoing motivation to implement some meaning concerning which an individual is already aware (motivation to fulfil meaning).</td>
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<tr>
<td>Meaningful goals</td>
<td>A primarily motivational process involving the activation and coordinate of volitional behaviours in accordance with internal representations of desired outcomes that are: (a) congruent with and facilitate an individual's values and purposes; and/or (b) subjectively appraised as meaningful.</td>
</tr>
<tr>
<td>Cognitive attributes</td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>A teleological mode of cognition that involves perceptions, attributions, or beliefs regarding some underlying intention, reason, or desired effect.</td>
</tr>
<tr>
<td>Values</td>
<td>Cognitive representations of standards or criterion that determine the content of meaning, including goals, behaviours, and moral standards.</td>
</tr>
<tr>
<td>Meaningful attitudes</td>
<td>Cognitive orientations toward life or specific situations that are aligned with or express an individual's goals, values, or purposes.</td>
</tr>
<tr>
<td>Evaluations of meaning-fulfillment</td>
<td>Cognitive evaluations regarding the extent to which an individual has fulfilled, or is in the process of fulfilling, his or her goals, values, or purposes.</td>
</tr>
<tr>
<td>Affective attributes</td>
<td></td>
</tr>
<tr>
<td>Meaningful affect</td>
<td>Positively or negatively valanced affective states that result from, promote, or co-occur with other meaning components, or which are subjectively perceived as intrinsically or contextually meaningful.</td>
</tr>
<tr>
<td>Behavioural attributes</td>
<td></td>
</tr>
<tr>
<td>Meaningful behaviour</td>
<td>Activities that express or facilitate an individual's goals, values, or purposes.</td>
</tr>
<tr>
<td>Emergent attributes</td>
<td></td>
</tr>
<tr>
<td>Internal integration</td>
<td>The functional interaction between (and within) structural components of meaning; particularly, the integration between core (i.e., motivational and cognitive) and peripheral (i.e., affective and behavioural) elements of the meaning system.</td>
</tr>
<tr>
<td>External integration</td>
<td>A sense of harmony - often associated with a gestalt-like perception - that emerges from the meaningful interaction between an individual and his or her environment.</td>
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</tbody>
</table>
Figure 2. Functional representation of the meaning system.

Contextual information

The literature review on the relationship between meaning and psychological health fills a significant gap in the psychological literature. The view that meaning facilitates psychological health is frequently promoted within the psychological literature on the basis of conceptual models such as that of Frankl (1985, 1986, 1988) without sufficient corroborating evidence from empirical studies. Even when relevant empirical studies are cited in support of such theories, the conclusions drawn from these studies cannot be considered as comprehensive or authoritative. Furthermore, no prior review has addressed the question of causation. This review was unique in that it provided the first critical analysis of the relationship between meaning and psychological that addressed causal hypotheses. Moreover, this relationship was evaluated in light of diverse aspects of psychological health, including both well-being and psychopathology.

Addressing this need, Paper 2 involved a review of the psychological literature on the relationship between meaning and psychological health. This review encompassed two key areas: (a) the conceptual literature; and (b) the empirical literature. The review of the conceptual literature did not aim to critically evaluate the existing theories. Rather, its purpose was to collate and summarise the available theories in order to provide a broad conceptual framework, including a range of theoretical hypotheses, with which to evaluate the empirical literature. The empirical literature, in turn, critically evaluated the available psychological research in order to determine the extent to which conceptual theories are empirically substantiated.

The conceptualisation of meaning outlined within Paper 1 could not be used as a guiding framework with which to evaluate the relationship between various attributes of
meaning and psychological health. The reason for this is that there is currently no available measure with which to operationally define this integrative conceptualisation. Moreover, existing measures neither conform to the specific definitions of the meaning attributes, nor cover the full scope of these attributes, particularly, the behavioural and emergent properties of meaning. Nevertheless, the utility of using this integrative conceptualisation of meaning and the need to develop a corresponding multidimensional measure was outlined within the literature review as a key recommendation for overcoming the often vague, inconsistent, and diverse measures that pervade, and sometimes obscure, the literature.
Declaration for publication


Declaration by candidate

The nature and extent of my contribution to the work was the following:

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<th>Nature of contribution</th>
<th>Extent of contribution (%)</th>
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<td>Initiation of publication, instigator of ideas, conducted literature review, prepared the draft manuscript, incorporated other authors comments in final manuscript, prepared and submitted for publication.</td>
<td>90%</td>
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The following co-authors contributed to the work:

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<tr>
<td>David Clarke</td>
<td>Feedback on draft manuscript</td>
</tr>
<tr>
<td>Dianne Vella-Brodrick</td>
<td>Feedback on draft manuscript</td>
</tr>
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Candidate's Signature | Date

Declaration by co-authors

The undersigned hereby certify that:

1. the above declaration correctly reflects the nature and extent of the candidate’s contribution to this work, and the nature of the contribution of each of the co-authors.
2. they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
3. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
4. there are no other authors of the publication according to these criteria;
5. potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
6. the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

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Meaning-in-life and psychological health: A conceptual and empirical review

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Abstract

The relationship between meaning and psychological health has not previously been reviewed with respect to causal hypotheses. The current paper fills this gap by critically reviewing this relationship in light of various conceptual models; most notably, the view that meaning has a salutatory causal effect upon psychological health. Furthermore, this review encompasses meaning's relationship with broad-ranging aspects of psychological health, including both well-being and psychopathology. Following an overview of key psychological definitions of meaning, the paper reviews both the conceptual and empirical literature in order to assess the degree to which conceptual models and hypotheses are substantiated by empirical findings. Several limitations inherent within this literature are then outlined together with a range of recommendations for overcoming them. It is concluded that there exists preliminary evidence to support the hypothesised effect of meaning on both well-being and psychopathology.

*Keywords:* Meaning-in-life, purpose, psychological health, well-being, psychopathology, positive psychology
Meaning-in-life and psychological health: A conceptual and empirical review

The topic of meaning-in-life is germane to such disciplines as philosophy, theology, and spirituality. Nevertheless, a poignant factor underlying the assimilation of this construct within mainstream psychology involves its purported relationship with psychological health. In the wake of Viktor Frankl's (e.g., 1985, 1986, 1988) pioneering efforts, various psychologists have attempted to outline the nature of meaning and its relevance to both well-being (e.g., Keyes, et al., 2008; Ryff, 1989b) and psychopathology (e.g., Frankl, 1972, 1986; Maddi, 1967; Yalom, 1980). Furthermore, the development of several generations of meaning scales (e.g., Battista & Almond, 1973; Crumbaugh & Maholick, 1964; Morgan & Farsides, 2009a; Reker & Peacock, 1981; Wong, 1998a) has facilitated the empirical investigation of this relationship.

This growing body of literature is in need of a comprehensive and critical review. Pinquart (2002) conducted the only existing meta-analysis on the relationship between meaning and psychological health. This analysis, however, is limited in several respects. First, it is confined to the experience of meaning in old age. Second, it focuses exclusively on cross-sectional studies and therefore does not address the question of causation. Third, it employs only two measures of psychological health: positive affect and depression. In order to stimulate research on meaning, a critical analysis is required that addresses causal hypotheses and which encompasses wide-ranging dimensions of psychological health. In particular, the purported salutatory effect of meaning on psychological health (e.g., Frankl, 1985, 1986, 1988) requires examination.

This paper aims to critically review the relationship between meaning and psychological health in light of causal hypotheses. An overview of key psychological definitions of meaning is first presented. Thereafter, the theoretical underpinnings, psychological models, and hypotheses that inform this body of research are reviewed. Then,
the degree to which these conceptual models and hypotheses are substantiated by empirical research findings is evaluated. Finally, several limitations inherent within the literature are delineated and recommendations to further this area of research are provided.

**Psychological definitions of meaning**

There is no consensus in the psychological literature concerning the definition of meaning. Rather, an array of conceptualisations and corresponding measures have been proposed. The term *meaning* will be used throughout this paper as an umbrella term to denote a constellation of related constructs such as *meaning in life*, *purpose in life*, and *personal meaning*.

The earliest systematic conceptualisation of meaning involved Frankl's (1959, 1967) notion of a *will to meaning*, referring to the motivation to find and fulfil meaning and purpose in life, as assessed by the Purpose in Life test (PIL; Crumbaugh & Maholick, 1964). This construct has been associated with various philosophical assumptions, including its purportedly self-transcendent nature (Frankl, 1966; Fry, 1998) and location in a trans-psychological or *noetic* dimension (Fabry, 1998; Frankl, 1958, 1988; Wong, 1998c).

In contrast, Battista and Almond (1973) proposed the construct of *positive life regard* as a relativistic, process-oriented conceptualisation of meaning that consists of two related components. *Framework* involves having a meaningful perspective on life or set of life-goals, whereas *fulfillment* entails the perception that one is fulfilling this framework. This construct is assessed by the Life Regard Index (LRI; Battista & Almond, 1973; Debats, 1998).

Ryff (1989a, 1989b) defined *purpose in life* in terms of the presence of goals, beliefs, and a sense of directedness, as assessed by the Scales of Psychological Well-being (SPWB). More recently, Morgan and Farsides (2009a, 2009b) developed the Meaningful Life Measure
(MLM) based on the identification of five latent constructs underlying popular meaning measures: purposeful life, principled life, valued life, exciting life, and accomplished life.

Several researchers have distinguished between nuanced dimensions of meaning. Steger, Kashdan, Sullivan, and Lorentz (2008) differentiated the presence of meaning from the search for it. The former reflects the extent to which people have already found meaning in their lives, whereas the latter represents people's attempts to establish or augment their understanding of the meaning and purpose of their lives. These constructs are assessed by the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006).

Schnell (2010) argued that meaningfulness (i.e., appraisals of life as coherent, significant, directed, and belonging) and crisis of meaning (i.e., appraisals of life as frustratingly empty, pointless, and lacking meaning) represent relatively independent dimensions that can co-occur without reciprocal variation. These constructs are assessed by the Sources of Meaning and Meaningfulness Questionnaire (SoMe; Schnell, 2009, 2010; Schnell & Becker, 2006).

Several structural models have also been proposed that differentiate between motivational, cognitive, affective, and behavioural components of meaning (Reker & Wong, 1988; Wong, 1998b, 2010). According to Wong's (2010) PURE model, meaning entails four components: purpose (i.e., goals, directions, incentive objects, values, aspirations, and objectives), understanding (i.e., a sense of coherence, making sense of situations, understanding one's identity as well as other people, and effective communication), responsible action (i.e., appropriate reactions and actions, doing what is right, finding the right solutions, making mends, and value-congruent actions), and evaluation (i.e., assessing levels of satisfaction or dissatisfaction with a situation or life as a whole).

Building upon these models, Gerschman, Clarke, and Vella-Brodrick (submitted) conducted a systematic and comprehensive analysis of the concept of meaning in the
psychological and health related literatures. Adopting a phenomenological orientation, they defined meaning as a multidimensional construct that consists of motivational, cognitive, affective, behavioural, and emergent properties. Their analysis distilled 10 critical attributes of meaning, as defined in Table 1. These attributes represent psychological mechanisms that function interactively within the broader meaning system, which consists of core (i.e., motivational and cognitive), peripheral (i.e., affective and behavioural), and regulatory (i.e., evaluations of meaning-fulfillment) dimensions. This model provides an integrative framework for existing conceptualisations of meaning.

<Insert Table 1 about here>

The conceptual relationship between meaning and psychological health

Various theories and hypotheses have been proposed concerning the relationship between meaning and psychological health. These perspectives encompass diverse aspects of psychological health, including both well-being and psychopathology. Specifically, meaning has been conceptualised as both an antecedent and attributes of well-being. In relation to psychopathology, lack of meaning has been postulated as both an aetiological factor and symptom, while the presence of meaning is considered to possess protective and therapeutic functions.

Meaning and well-being

Well-being refers to positive aspects of psychological health that amount to more than the mere absence of psychopathology (Keyes, 2006). Literature on well-being has been broadly classified according to two conceptually distinct, but overlapping approaches: the hedonic approach defines well-being in terms of human happiness, whereas the eudaimonic approach focuses on realising one’s fullest potential (Ryan and Deci, 2001). Hedonic well-being is conventionally defined in terms of subjective-well-being (SWB), which involves life-satisfaction, frequent positive affect, and infrequent negative affect (Diener & Lucas, 1999).
Amongst the dominant formulations of eudaimonic well-being is Ryff's (1989a, 1989b) model of *psychological well-being* (PWB) which involves six dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Moreover, there is an emerging tendency for researchers to adopt an integrated approach that incorporates features of both hedonic and eudaimonic well-being (e.g., Keyes, et al., 2008; Tennant, et al., 2007).

**Meaning as an antecedent of well-being.**

Meaning has been conceptualised both as an antecedent and attribute of well-being. The former premise was first articulated within the psychological literature by Frankl (1959, 1966, 1972, 1988), although its genesis has been traced to such utilitarian philosophers as John Stuart Mill (1873) and Bertrand Russel (1930) (see Ryff & Singer, 2008 for review). Frankl conceptualised both happiness and self-actualisation as consequences of meaning fulfillment. Moreover, he considered efforts to bypass meaning and focus directly on the pursuit of happiness or self-actualisation not merely as ineffective, but as manifestations of a frustrated motivation for meaning. Similarly, Wong (1998a) suggested that meaning plays a major role in the maintenance of positive mental health.

**Meaning as an attribute of well-being.**

Drawing upon Frankl's (e.g., 1985) exposition regarding the psychological relevance of meaning, Ryff (1989a, 1989b, 1995; see also Ryff & Keyes, 1995; Ryff & Singer, 1998, 2008) championed the view that meaning constitutes a central criterion of well-being. Accordingly, she incorporated *purpose in life* as one of six key dimensions of PWB. Similarly, Seligman (2002) conceptualised meaning as a distinct orientation toward happiness, which combines with pleasure and engagement to constitute what Peterson, Park, and Seligman (2005) define as the *full life*. These conceptualisations of meaning as both an antecedent and attribute of well-being are not necessarily mutually exclusive. Given the
multidimensional nature of well-being, it is possible that meaning represents a distinct component of well-being while simultaneously functioning to promote other aspects of well-being.

**Meaning and psychopathology**

The conceptual relationship between meaning and psychopathology is multifaceted. Four central positions have been articulated: (a) lack of meaning constitutes an aetiological factor in psychopathology; (b) lack of meaning can precipitate various clinical syndromes that are characterised by a sense of meaninglessness but which are distinct from standard forms of psychopathology; (c) the presence of meaning represents a protective factor in psychopathology; and (d) the enhancement of meaning is effective in the alleviation of psychopathology.

*Lack of meaning as an aetiological factor in psychopathology.*

The view that lack of meaning plays an aetiological role in psychopathology is central to Frankl's (1985, 1986) theory concerning the deleterious effects of a lack of meaning. This process is portrayed as gradual, indirect, and often insidious. Initially, an individual's failure to actualise his or her will to meaning is thought to result in a state of *existential vacuum* that is phenomenologically manifest via the symptoms of boredom and apathy. Thereafter, the individual may attempt vicariously - albeit not necessarily consciously - to fill this inner void by turning to more trivial pursuits such as the striving for pleasure, money, or power. Although such pursuits are not necessarily pathological, they can sometimes underlie psychological problems; for example, when the striving for pleasure leads to addiction or when the striving for power leads to violence.

While acknowledging that not all cases of psychopathology can be traced to a lack of meaning, Frankl (1959) nevertheless asserted that the existential vacuum represents a context within which psychological problems can become rampant. As such, lack of meaning
represents a potential predisposing factor in psychopathology. Frankl (1985) included depression, addiction, and aggression amongst the psychological problems that may be caused, in part, by a lack of meaning. Moreover, he outlined the role of meaninglessness in such disorders as anxiety, depression, obsessive-compulsiveness, and schizophrenia (Frankl, 1986). In particular, he suggested that symptoms of anxiety and depression may become intensified as a result of the perception that an individual's ideals, goals, or life task are unattainable. Seligman, Rashid and Parks (2006) similarly postulated that a lack of meaning plays a causal role in depression.

*Meaninglessness as a distinct form of psychopathology.*

Paralleling the view that meaning represents a unique component of positive well-being, several theorists have delineated conceptualisations of meaninglessness as a clinical syndrome that is distinct from typical forms of psychopathology. Specifically, Frankl (1959, 1972) suggested that severe levels of existential frustration can precipitate clinically significant symptomology in the form of a noogenic neurosis. Similarly, Maddi (1967, 1998) conceptualised existential sickness as a unique class of disorders involving meaninglessness, of which three types have been specified: vegetativeness, nihilism, and adventurousness. Each of these syndromes involves a unique pattern of cognitive, affective, and behavioural symptoms, with varying expressions of meaninglessness comprising the respective cognitive components.

*Meaning as a protective factor in psychopathology.*

Several theorists have construed meaning as a protective factor in psychopathology. This perspective was first delineated by Frankl (1985) who asserted that a strong orientation toward meaning constitutes a protective factor in psychopathology, particularly suicide. Moreover, he outlined the potentially life-saving effect of meaning under extreme conditions such as for prisoners of war and concentration camps victims (Frankl, 1959). This protective
function also represents a corollary of Frankl's (1959) theory concerning the deleterious effects of the existential vacuum, since possessing meaning negates the presence of this predisposing factor.

A central mechanisms that is presumed to underlie this relationship involves the function of meaning in the process of coping and stress resistance. Wong (1998b) crystallised this position in the form of a coping/stress moderation hypothesis, whereby meaning is thought to moderate effective coping and stress resistance. Similarly, Fry (1989) conceptualised meaning as a mediator that reduces the impact of negative life events and stress on both psychological and physical well-being. Additionally, meaning-making has been conceptualised as integral to the coping process itself (Park & Folkman, 1997; Thompson & Janigian, 1988).

**Meaning as a therapeutic factor in the alleviation of psychopathology.**

Meaning has also been conceived as a therapeutic factor in the treatment and alleviation of psychopathology. Frankl's (1958, 1959, 1967, 1986, 1988) logotherapy employs meaning-centred interventions such as existential analysis for several purposes, including (a) a primary treatment for disorders of meaninglessness, (b) a complementary treatment for various psychological problems, and (c) an acute treatment that is selectively applied in particular scenarios such as suicide prevention. Similarly, positive psychotherapy (PPT; Seligman, et al., 2006) employs meaning-based interventions such as the use of signature strengths to benefit others (alongside techniques aimed at facilitating pleasure and engagement) as an integral component in the treatment of psychopathology.

Novel theoretical explanations regarding the interaction between meaning and psychopathology have facilitated the development of innovative meaning interventions. Weisskopf-Joelson (1968) contended that mental health can be more easily attained as a by-product of meaningful goals rather than as an explicit goal. A similar approach has been
adopted within Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999) whereby direct efforts to alleviate psychopathology via attempts at emotional regulation are thought to maintain a dysfunctional cycle of experiential avoidance. Efforts to redirect the goal of therapy toward broadband outcomes such meaningful living are thought to circumvent this self-perpetuating cycle and enable the alleviation of psychopathology to flow as a welcome but unintended by-product (Eifert & Forsyth, 2005). Additionally, values interventions have been applied within ACT as a means to motivate and guide the selection of activities and targets for behavioural activation and exposure (Eifert & Forsyth, 2005; Wilson & Murrell, 2004; Zettle, 2007).

**Review of empirical studies on meaning and psychological health**

Empirical findings support a robust association between meaning and diverse aspects of well-being. Meaning has been associated with superior levels of hedonic well-being, as demonstrated by positive correlations with happiness (Kafka & Kozma, 2002; Steger, Oishi, & Kashdan, 2009), positive affect (Chamberlain & Zika, 1988b; Steger, et al., 2009; Zika & Chamberlain, 1992), and life-satisfaction (Bronk, Hill, Lapsley, Talib, & Finch, 2009; Chamberlain & Zika, 1988b; Kafka & Kozma, 2002; Schnell, 2009; Steger, et al., 2009; Zika & Chamberlain, 1992) and an inverse correlation with negative affect (Chamberlain & Zika, 1988b; Steger, et al., 2009; Zika & Chamberlain, 1992). Moderate to large effect sizes have frequently been obtained for these correlations.

Meaning is also positively correlated with various indices of eudaimonic well-being. Several studies (e.g., Kafka & Kozma, 2002; Kashdan & Steger, 2007; Morgan & Farsides, 2009b; Steger, et al., 2008) have employed Ryff's (1989a, 1989b) SPWB to demonstrate a moderate relationship between meaning and various PWB components, including self-acceptance, positive relations with others, autonomy, environmental mastery, and personal growth. Furthermore, meaning has been associated with superior levels of hope (Halama &

Conversely, empirical findings indicate that low meaning is related to more severe levels of psychopathology and poorer psychological functioning. This relationship is consistent across a range of variables, including general psychological distress (Debats, Vanderlubbe, & Wezeman, 1993; Schulenberg, 2004; Zika & Chamberlain, 1992), depression (Debats, et al., 1993; Ho, Cheung, & Cheung, 2010; Mascaro & Rosen, 2006; Wang, Lightsey, Pietruszka, Uruk, & Wells, 2007), anxiety (Debats, et al., 1993; Fahlman, Mercer, Gaskovski, Eastwood, & Eastwood, 2009; Ho, et al., 2010), suicidal ideation (Heisel & Flett, 2004; Wang, et al., 2007), agoraphobia (Debats, et al., 1993), somatisation (Debats, et al., 1993), sleep disturbance (Debats, et al., 1993), hostility (Debats, et al., 1993), neuroticism (Steger, et al., 2008), boredom (Fahlman, et al., 2009), hopelessness (Wang, et al., 2007), alienation (Ho, et al., 2010), and social maladjustment (Ho, et al., 2010; Schulenberg, 2004).

Pinquart (2002) conducted a meta-analysis involving 70 studies on meaning in middle and old age. Findings revealed a strong positive association between meaning and positive affect ($k = 23, N = 3,616, r = .47, p < .001$) and a strong inverse association between meaning and depression ($k = 14, N = 1,916, r = -.46, p < .001$). Based on the binomial effect size display, 73.5% of individuals with above average positive affect and 73% with below average depression also possessed above average levels of meaning. Age moderated the relationship
between meaning and depression, with middle age adults demonstrating a stronger association than older adults.

This association between meaning and superior psychological health is robust across a range of variables. In particular, such findings have been demonstrated across multiple meaning scales (Debats, et al., 1993; Morgan & Farsides, 2009b; Schnell, 2009; Steger, et al., 2009; Zika & Chamberlain, 1992), varying ages throughout the lifespan (Bronk, et al., 2009; Pinquart, 2002; Rathi & Rastogi, 2007; Reker, 1994; Steger, et al., 2009), different nationalities and racial groups (Halama & Bakosova, 2009; Ho, et al., 2010; Holmes & Hardin, 2009; Pan, Wong, Joubert, & Chan, 2007, 2008), and in both clinical and non-clinical populations (Debats, et al., 1993; Heisel & Flett, 2004; Mascaro & Rosen, 2008).

Several well-designed longitudinal studies provide support for a causal effect of meaning on psychological health. Two studies have investigated this causal hypothesis within non-clinical populations. In a longitudinal analysis on 191 undergraduate psychology students (mean age = 18.8 years), Mascaro and Rosen (2005) found that baseline measures of explicit meaning (LRI-R-framework; Debats, 1998) and implicit meaning (Personal Meaning Profile [PMP]; Wong, 1998a) each predicted prospective levels of depression, trait hope, and state hope, two months later after controlling for baseline levels and Big-5 personality factors.

These results were partially replicated in a comparatively larger study by Mascaro and Rosen (2008) on 395 undergraduate students (mean age = 19.01). Existential meaning was operationally defined in terms of the common factor underlying personal meaning (LRI-framework), implicit meaning (PMP), and spiritual meaning (Spiritual Meaning Scale [SMS]; Mascaro, Rosen, & Morey, 2004). Structural equation modeling involving latent cross-lagged panel analysis was used to examine the reciprocal relationship between meaning and depression over two months. Baseline levels of meaning predicted subsequent levels of
depression. Specifically, lower meaning predicted small increases in depression whereas higher meaning predicted small reductions in depression. In contrast, depression did not predict prospective levels of meaning. These studies provide initial support for a causal influence of meaning on both depression and hope within a non-clinical population.

Two longitudinal studies have investigated the effect of meaning on psychological health within clinical populations. In a longitudinal study on 105 mental health patients with non-psychotic disorders, Debats (1996) found that pre-treatment levels of meaning predicted post-treatment levels of psychiatric symptoms and happiness after controlling for baseline levels. Similarly, Park (2003) found that baseline levels of meaning predicted the outcome of an 18-day inpatient pain management program using a sample of 74 chronic pain patients. Despite similar pre-treatment levels of pain, patients with higher baseline meaning experienced reduced levels of pain, depression, and physical disability compared to those with lower initial meaning. Better outcomes were also experienced by patients who reported a positive change in life meaning as a result of chronic pain compared to those who experienced either no change or negative change. These studies suggest that meaning plays a causal role in the alleviation of psychopathology and chronic pain.

Further evidence for the causal impact of meaning on psychological health is derived from several studies that have employed experimental designs. Breitbart et al (2010) conducted a randomised controlled trial comparing the efficacy of an 8-week Meaning Centred Group Psychotherapy (MCGP) program based on logotherapy in comparison to supportive group psychotherapy (SGP) in a sample of 90 patients with advanced tumor cancers. The MCGP group experienced comparatively greater improvements in spiritual well-being (including both meaning/peace and faith subscales) at posttest. Although repeated measures ANOVA failed to reveal any comparative improvements in measures of psychological health (including depression, hopelessness, desire for death, optimism, and
anxiety), matched t-tests before and after treatment demonstrated moderate improvements for the MCGP group in anxiety and desire for death at 2-month follow-up. In contrast, the SGP group did not experience any significant post-treatment improvements in measures of psychological health.

Using a quasi-experimental design, Lapierre, Dube, Bouffard, and Alain (2007) compared the efficacy of a workshop designed to facilitate meaningful personal goals to a non-intervention control in a sample of 21 retirees (aged 50-65) experiencing suicidal ideation. The experimental group experienced comparative improvements in depression, hope, goal realisation, serenity, flexibility, and positive attitude toward retirement. Several limiting factors, however, are noteworthy. First, randomisation procedures were not employed. Second, the role of meaning within the intervention is unclear. Interventions based on facilitating personal goals should not automatically be considered as meaning-based interventions since personal goals may vary in terms of their perceived degree of meaningfulness. Third, comparative improvements in meaning within the experimental group did not reach significance, despite a trend in this direction (p = .058). While goal-based meaning interventions appear promising, future studies should clarify the precise role of meaning beyond that of ordinary goal pursuit.

Westerhof, Bohlmeijer, Beljouw, and Margriet (2010) conducted a randomised controlled trial of a life review intervention (involving 12 two-hour sessions) aimed at enhancing personal meaning and thereby alleviating depression in a group of 171 older adults compared to a minimal intervention control group consisting of a brief educational video. The life review group experienced moderate comparative improvements in both meaning and depression at posttest. At 9-months follow-up, these improvements remained significant for depression but not for meaning. Furthermore, increases in meaning during the intervention predicted declines in depression at posttest and 9-months follow-up and mediated the effect
of the intervention on depression. Nevertheless, the face validity of the meaning scale (SELE; Dittmann-Kohli & Westerhof, 1997) appears questionable in relation to traditional psychological conceptualisations of meaning.

The therapeutic effectiveness of meaning is also supported by the incorporation of meaning-based interventions within several broader therapeutic approaches, including ACT, PPT, and well-being therapy (WBT; Fava, 1999; Fava & Ruini, 2003). A range of studies support the efficacy of ACT in treating various psychological disorders, including depression (Zettle & Hayes, 1986; Zettle & Rains, 1989), obsessive-compulsive disorder (Twohig, Hayes, & Masuda, 2006), alcohol dependence (Heffner, Eifert, Parker, Hernandez, & Sperry, 2003), substance abuse (Hayes, et al., 2004), chronic pain (McCracken, Vowles, & Eccleston, 2005), psychosis (Bach & Hayes, 2002), and borderline personality disorder (Gratz & Gunderson, 2006). Preliminary findings also support the efficacy of PPT in alleviating depression (Seligman, et al., 2006). Similarly, initial support has been demonstrated for WBT in the treatment, relapse prevention, and reduction of residual symptoms of a range of affective disorders (Fava, Rafanelli, Cazzaro, Conti, & Grandi, 1998; Fava, et al., 2005; Moeenizadeh & Salagame, 2010). These therapeutic approaches, however, simultaneously target additional core process other than meaning, such as acceptance and defusion (ACT), pleasure and engagement (PPT), and psychological well-being (WBT). Consequently, the effectiveness of these approaches cannot exclusively be attributed to meaning.

Overall, the available longitudinal and experimental studies on meaning are consistent with the hypothesised salutary effect of meaning on both well-being and psychopathology. Given the limited number of studies, however, such findings should be considered preliminary.

Meaning as a mediator and moderator of psychological health
Meaning has been identified as both a mediating and moderating factor in relation to psychological health. In particular, meaning plays a mediating role in the relationship between religion and well-being. Related variables including faith, religiousness, intrinsic religiosity, and daily religious behaviours have been linked to such variables as well-being (Byron & Miller-Perrin, 2009; Steger & Frazier, 2005), life-satisfaction (Chamberlain & Zika, 1988b; Steger & Frazier, 2005), optimism (Steger & Frazier, 2005) and anxiety toward the dying and death of self (Hui & Fung, 2009) via the mediating influence of meaning.

Several studies are consistent with the proposed function of meaning as a stress buffer. Meaning was found to mediate the link between perceived stress and life-satisfaction (Wallace & Lahti, 2004). Similarly, acculturative stress was related via the mediating role of meaning to life-satisfaction (Pan, Wong, Joubert, et al., 2008), positive affect (Pan, Wong, Chan, & Joubert, 2008), and negative affect (Pan, et al., 2007). Mascaro and Rosen (2006) found that spiritual meaning (SMS), but not personal meaning (LRI-R-framework), moderated the relationship between daily stress and depression. Specifically, stress was strongly associated with depression only for individuals with low spiritual meaning; stress was unrelated to depression, however, for individuals with high spiritual meaning. Moreover, meaning was found to moderate the relationship between perceived stress and avoidant coping (Halama & Bakosova, 2009). These studies, however, rely on cross-sectional data. Hence, further analysis of the mediating and moderating function of meaning is required using longitudinal and experimental designs.

**Limitations and recommendations**

Despite a growing research interest in meaning and its connection with psychological health, several methodological limitations constrain this body of research. These issues encompass (a) problems is the conceptualisation and measurement of meaning, (b) a lack of focus on potential bidirectionality in the relationship between meaning and psychological
health, and (c) limitations pertaining to the design of empirical studies. In the following section these limitations are elucidated and recommendations for overcoming these issues are offered.

**Conceptualisation and measurement issues**

Research on meaning and psychological health is impeded by problems pertaining to the conceptualisation and measurement of meaning. Conceptualisations of meaning tend to be vague, ambiguous, and inconsistent (Damon, Menon, & Bronk, 2003; Debats, 1999; Hodges, 2009). This difficulty derives in part from the complex and multidimensional nature of meaning (Chamberlain & Zika, 1988a; Orbach, Iluz, & Rosenheim, 1987; Reker & Peacock, 1981). The use of inconsistent and vague conceptualisations to inform the development of empirical meaning scales threatens their content and construct validity.

Another salient obstacle concerns the lack of consensus regarding a standard conceptualisation or definition of meaning. This dilemma has filtered through to the level of operationalisation and measurement, giving rise to multiple scales that assess divergent components of meaning. These dimensions include the presence of meaning (MLQ-presence; SoMe-meanfulness), the search for meaning (MLQ-search; SONG), crises of meaning (SoMe-crisis), having a cognitive meaning framework (LRI-framework), fulfilling one's cognitive meaning framework (LRI-fulfillment), spiritual dimensions of meaning (SMS), and the presence of goals, beliefs, and a sense of directedness (SPWB-purpose in life). Such measures have expanded traditional conceptualisations of meaning and generated valuable research findings. Nevertheless, they have also complicated the task of organising and comprehending the meaning literature. Given the potential for differential relationships between these diverse aspects of meaning and psychological health, caution is required when attempting to integrate the results of studies that employ different scales to assess meaning.
A prospective solution to these issues involves the development of new measures based on structural (e.g., Reker & Wong, 1988; Wong, 1998b, 2010) or integrative (e.g., Gerschman, et al., submitted) conceptualisations of meaning. Such models integrate diverse aspects of meaning within a coherent and parsimonious framework. Unfortunately, no measures have been developed that are explicitly derived from these models. Table 1 outlines the relationship between several key meaning scales and the underlying attributes of meaning according to Gerschman et al. (submitted). Although available measures encompass the majority of these attributes, they rarely conform with the precise definitions of the respective meaning attributes. Moreover, existing measures do not encompass the full scope of these attributes, particularly the behavioural and emergent properties. This disparity represents a significant gap in the meaning literature. Accordingly, the development of multidimensional measures that are informed by integrative conceptualisations of meaning is critical in order to facilitate a more accurate assessment of the multifaceted relationship between meaning and psychological health.

**Bidirectionality in the relationship between meaning and psychological health**

The majority of conceptual models and empirical studies address only the proposed effect of meaning upon psychological health. Scarce attention has been payed to the potential influence of psychological health on meaning. Nevertheless, Pinquart (2002) emphasised that this relationship may be bi-directional in nature.

Theoretically, it is conceivable that psychological health may serve as an enabling factor that affords individuals with the opportunity and capacity to pursue higher-order motivations directed toward meaning, while conversely, poor psychological health may impede an individual’s ability to experience meaning. In contrast, Frankl (1985) maintained that meaning is available not only despite suffering; rather, the very experience of suffering - which includes psychological suffering - can precipitate some of the deepest manifestations
of meaning. Indeed, this position is consistent with research on post-traumatic growth (Tedeschi & Calhoun, 1995, 2004). Additionally, both meaning and psychological health may share common sources such as social integration and competence (Pinquart, 2002).

Given these conflicting positions, it is important to explore not only the influence of psychological health on meaning but also the moderating factors and individual characteristics that account for the capacity for some people to thrive existentially despite poor psychological health. This issue of bidirectionality requires direct empirical investigation using longitudinal and experimental designs.

**Issues in the design of empirical studies**

Several methodological limitations hinder the empirical exploration of meaning and its relation to psychological health. The empirical literature is characterised by an overreliance upon cross-sectional designs. Such studies are inadequate for assessing the causal hypotheses concerning meaning's purported effect upon psychological health that dominate the theoretical literature. At best, cross-sectional designs indicate the likely presence of causal agents somewhere within the web of related constructs that connect meaning and psychological health. Longitudinal or experimental studies are required in order to examine the issue of causality. Only a small number of studies, however, have employed longitudinal or experimental designs.

Various methodological shortcomings are evident amongst the limited number of experimental studies on meaning and psychological health. These include the absence of valid controls and randomisation procedures (e.g., Lapierre, et al., 2007), both of which are critical for assessing causality. Moreover, some studies have not specified the manner in which the intervention relates to meaning. Goals-based approaches (e.g., Lapierre, et al., 2007), for example, cannot automatically be considered as meaning-based given that not all goal perceived as meaningful. Meaning interventions should therefore incorporate clear
rationales that outline the theoretical relevance of particular intervention strategies in relation to meaning.

The use of inadequate outcome measures of meaning has also characterised some studies (e.g., Westerhof, et al., 2010). In addition to the more general issue of using conceptually valid measures of meaning, the specific components of meaning that are being measured should reflect the aims of the intervention. Meaning interventions could be improved by targeting specific components of meaning. Structural models (e.g., Reker & Wong, 1988; Wong, 1998b; Wong, 2010) and integrative conceptualisations (Gerschman, et al., submitted) provide useful theoretical frameworks that can inform the selection of specific aspects of meaning for experimental manipulation, such goals, values, or perceptions of purpose. Empirical measures should be developed that are sensitive to and have the capacity to independently assess these targeted components of meaning. Moreover, interventions that target a set of meaning components should assess each component independently and their relative contribution toward the total efficacy of the intervention.

Another feature that is largely absent from experimental studies on meaning is the analysis of the underlying mechanisms of change. It should not be presumed that post-intervention improvements in psychological health are necessarily due to changes in meaning. It is possible that such interventions involve non-specific treatment effects or influence other variables that are unrelated to meaning (e.g., positive affect, social support, or hope) which account for a proportion of the intervention effect. Moreover, consistent with Frankl's (1985, 1986) account of the existential vacuum, interventions designed to reduce existential distress may improve psychological health by alleviating boredom, apathy, and maladaptive pursuits. These meditational hypotheses require direct investigation within the context of experimental designs.
In addition, various components of meaning (e.g., motivational, cognitive, affective, behavioural, and emergent processes) may have differential effects upon diverse aspects of psychological health. Future experimental studies should therefore assess the extent to which post-intervention effects on psychological health are mediated by changes in specific components of meaning as well as other theoretically relevant mediators.

**Conclusion**

There is a robust correlation between the presence of meaning and multiple indices of psychological health, including both aspects of well-being and psychopathology. Meaning has also been identified as a potential mediator and moderator of psychological health, especially in relation to the influence of both religiosity and stress. Furthermore, longitudinal and experimental studies provide preliminary evidence for a causal effect of meaning upon psychological health within both clinical and non-clinical populations. Given the limited number of well-designed longitudinal and experimental studies, however, this causal hypothesis requires further substantiation. The use of integrative conceptualisations (e.g., Gerschman, et al., submitted; Wong, 1998b, 2010) and corresponding multidimensional measures of meaning as well as and improved methodological designs is likely to provide further clarification regarding the potentially bi-directional relationship between meaning and psychological health.
References


### Table 1

**Definitions of Meaning Attributes and Related Scales**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Related scales</th>
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<tbody>
<tr>
<td><strong>Motivational attributes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Motivation for meaning</strong></td>
<td>MLQ-search; SONG.</td>
</tr>
<tr>
<td>An orientation toward meaning that consists of two related motivational</td>
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<td>thrusts: (a) a search for some novel, additional, or deeper meaning that</td>
<td></td>
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<td>may or may not already be present to some degree (motivation to find</td>
<td></td>
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<tr>
<td>meaning); and (b) an ongoing motivation to implement some meaning</td>
<td></td>
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<tr>
<td>concerning which an individual is already aware (motivation to fulfil</td>
<td></td>
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<tr>
<td>meaning).</td>
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<td><strong>Meaningful goals</strong></td>
<td>LAP-R goal seeking;</td>
</tr>
<tr>
<td>A primarily motivational process involving the activation and coordinate</td>
<td>LRI-framework; MLM-</td>
</tr>
<tr>
<td>of volitional behaviours in accordance with internal representations</td>
<td>purposeful life; SPWB-PIL.</td>
</tr>
<tr>
<td>of desired outcomes that are: (a) congruent with and facilitate an</td>
<td></td>
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<tr>
<td>individual's values and purposes; and/or (b) subjectively appraised</td>
<td></td>
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<tr>
<td>as meaningful.</td>
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<tr>
<td><strong>Cognitive attributes</strong></td>
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<tr>
<td><strong>Purpose</strong></td>
<td>LAP-R life purpose;</td>
</tr>
<tr>
<td>A teleological mode of cognition that involves perceptions, attributions,</td>
<td>MLM-purposeful life.</td>
</tr>
<tr>
<td>or beliefs regarding some underlying intention, reason, or desired effect.</td>
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<tr>
<td><strong>Values</strong></td>
<td>MLM-principled life.</td>
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<tr>
<td>Cognitive representations of standards or criterion that determine the</td>
<td></td>
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<tr>
<td>content of meaning, including goals, behaviours, and moral standards.</td>
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</tr>
<tr>
<td><strong>Meaningful attitudes</strong></td>
<td>LAP-R death acceptance; PVS III-R; SOC.</td>
</tr>
<tr>
<td>Cognitive orientations toward life or specific situations that are</td>
<td></td>
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<tr>
<td>aligned with or express an individual's goals, values, or purposes.</td>
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</tr>
<tr>
<td><strong>Evaluations of meaning-fulfillment</strong></td>
<td>LRI-fulfillment; MLM-</td>
</tr>
<tr>
<td>Cognitive evaluations regarding the extent to which an individual has</td>
<td>accomplished life; MLQ-presence; PIL; SoMe-meaningfulness.</td>
</tr>
<tr>
<td>fulfilled, or is in the process of fulfilling, his or her goals, values,</td>
<td></td>
</tr>
<tr>
<td>or purposes.</td>
<td></td>
</tr>
<tr>
<td><strong>Affective attributes</strong></td>
<td>MLM-exciting life.</td>
</tr>
<tr>
<td><strong>Meaningful affect</strong></td>
<td></td>
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<tr>
<td>Positively or negatively valanced affective states that result from,</td>
<td></td>
</tr>
<tr>
<td>promote, or co-occur with other meaning components, or which are</td>
<td></td>
</tr>
<tr>
<td>subjectively perceived as intrinsically or contextually meaningful.</td>
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<tr>
<td><strong>Behavioural attributes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Meaningful behaviour</strong></td>
<td></td>
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<tr>
<td>Activities that express or facilitate an individual's goals, values, or</td>
<td></td>
</tr>
<tr>
<td>purposes.</td>
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Table 1

Continued

<table>
<thead>
<tr>
<th>Definition</th>
<th>Related scales</th>
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<tr>
<td><strong>Emergent attributes</strong></td>
<td></td>
</tr>
<tr>
<td>Internal integration</td>
<td></td>
</tr>
<tr>
<td>The functional interaction between (and within) structural components of meaning; particularly, the integration between core (i.e., motivational and cognitive) and peripheral (i.e., affective and behavioural) elements of the meaning system.</td>
<td></td>
</tr>
<tr>
<td>External integration</td>
<td></td>
</tr>
<tr>
<td>A sense of harmony - often associated with a gestalt-like perception - that emerges from the meaningful interaction between an individual and his or her environment.</td>
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</table>

**Note.** MLQ = Meaning in Life Questionnaire; SONG = Sources of Noetic Goals test (Crumbaugh, 1977); LAP-R = Life Attitude Profile Revised (Reker, 1991); LRI = Life Regard Index; MLM = Meaningful Life Measure; SPWB = Scales of Psychological Well-being; PVS III-R = Personal Views Survey III-R (Maddi & Khoshaba, 2001); SOC = Sense of Coherence scale (Antonovsky, 1987); PIL = Purpose in Life test; SoMe = Sources of Meaning and Meaningfulness Questionnaire.

Contextual information

The third paper involved a randomised controlled trial of a meaning-in-life group workshop using a non-clinical population. The principle aim of this paper was to investigate the purported salutatory effect of meaning on psychological health. Moreover, wide-ranging aspects of psychological health and well-being were investigated, including depression, anxiety, stress, hedonic well-being, and eudaimonic well-being.

This experimental study was informed by an initial review of the empirical literature on the relationship between psychological health and well-being (Paper 2). The design of this intervention served to address various methodological limitations inherent within the existing meaning literature. In particular, the randomised controlled design and use of mediation analysis were intended to address the question of causality. This contrasts with the overreliance upon cross-sectional data that pervades much of the meaning literature. Furthermore, a wide range of psychological measures was used, encompassing depression, anxiety, stress, eudaimonic well-being, and hedonic well-being. This enabled a broad analysis of meaning's causal effect upon various aspects of psychological health.

Due to practical considerations and time-constraints, however, this experimental study was designed prior to the commencement of the concept analysis of meaning (Paper 1). Consequently, the integrative conceptualisation of meaning and its underlying attributes could not be used to guide the definition of meaning, session content, and selection of outcome measures of meaning employed within the meaning intervention. In fact, the intervention even included a session on meaning-based coping which, although considered as central to meaning according to many theorists (e.g., Park & Folkman, 1997; Reker & Wong, 1988; Thompson & Janigian, 1988; Wong, 1998), was not included as an attribute of
meaning within the new conceptual analysis. Nevertheless, the relevance of this integrative conceptualisation was incorporated within the paper’s discussion section as a prospective means for improving subsequent intervention studies.
Declaration for publication


Declaration by candidate

The nature and extent of my contribution to the work was the following:

<table>
<thead>
<tr>
<th>Nature of contribution</th>
<th>Extent of contribution (%)</th>
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<tr>
<td>Initiation of publication, instigator of ideas, recruitment of participants, facilitation of workshops, data collection, data analysis, prepared the draft manuscript, incorporated other authors comments in final manuscript, prepared and submitted for publication.</td>
<td>90%</td>
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The following co-authors contributed to the work:

<table>
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<th>Name</th>
<th>Nature of contribution</th>
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<tr>
<td>David Clarke</td>
<td>Feedback on study design and draft manuscript</td>
</tr>
<tr>
<td>Dianne Vella-Brodrick</td>
<td>Feedback on study design and draft manuscript</td>
</tr>
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</table>

Candidate’s Signature

Date

Declaration by co-authors

The undersigned hereby certify that:

1. the above declaration correctly reflects the nature and extent of the candidate’s contribution to this work, and the nature of the contribution of each of the co-authors.
2. they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
3. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
4. there are no other authors of the publication according to these criteria;
5. potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
6. the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

Location(s) Monash university, School of Psychology and Psychiatry, Caulfield Campus

Signature 1

Date

Signature 2

Date
Meaning-in-life group workshop: A randomised controlled trial in a non-clinical population

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Abstract

This study aimed to investigate the hypothesised salutatory effect of meaning on psychological health. In a randomised controlled trial, the efficacy of a meaning-in-life group workshop (n = 23) was compared to a non-intervention control (n = 21) using a non-clinical adult population. Improvements in psychological health and well-being were hypothesised across posttest, 3-month, and 6-month follow-ups. Results indicated: improvements in crisis of meaning but not meaningfulness or purpose in life; no significant improvement in measures of hedonic well-being (i.e., life-satisfaction, positive affect, and negative affect); significant improvements for some aspects of eudaimonic well-being (i.e., environmental mastery and positive relations with others) but not others (i.e., autonomy, personal growth, and self-acceptance); and improvements in depression, anxiety, and stress. Mediation analysis demonstrated that improvements in psychological health and well-being were largely mediated by reductions in crisis of meaning. These findings support the hypothesised salutatory effect of meaning on psychological health.

Keywords: Meaning-in-life, purpose, well-being, positive psychology
Meaning-in-life group workshop: A randomised controlled trial in a non-clinical population

The construct of meaning has been assimilated into mainstream psychology through a gradual process. In the wake of Viktor Frankl's (e.g., 1985, 1986, 1988) pioneering efforts, theorists have addressed the link between meaning and psychological health from conceptual (e.g., Maddi, 1967; Ryff, 1989a, 1989b), empirical (e.g., Battista & Almond, 1973; Crumbaugh, 1977; Crumbaugh & Maholick, 1964; Morgan & Farsides, 2009; Reker & Peacock, 1981; Wong, 1998a) and therapeutic (e.g., Frankl, 1958, 1967a; Wong, 1998b; Yalom, 1980) perspectives.

**Psychological definitions of meaning**

Various definitions of meaning have been proposed. Frankl (1959, 1967a) depicted the will to meaning as a primary, universal motivation to find and fulfil meaning and purpose in life. Battista and Almond (1973) proposed the concept of positive life regard to convey a relativistic, process-oriented conceptualisation of meaning that involves having a framework (i.e., a meaningful perspective on life or set of life-goals) and sense of fulfillment (i.e., the perception that one is fulfilling this framework). Ryff (1989a, 1989b) defined purpose in life in terms of the presence of goals, beliefs, and a sense of directedness. Steger, Kashdan, Sullivan, and Lorentz (2008) differentiated the presence of meaning (i.e., the extent to which one has already found meaning) from the search for it (i.e., attempts to establish or augment one's understanding of the meaning). Schnell (2010) argued that meaningfulness (i.e., appraisals of life as coherent, significant, directed, and belonging) and crisis of meaning (i.e., appraisals of life as frustratingly empty, pointless, and lacking meaning) represent relatively independent dimensions that can co-occur without reciprocal variation.

Several structural models of meaning have differentiated between motivational, cognitive, affective, and behavioural components of meaning (Reker & Wong, 1988; Wong,
According to Wong's (2010) PURE model, meaning entails of four components: *purpose* (motivational), *understanding* (cognitive), *responsible action* (behavioural), and *evaluation* (affective). Gerschman, Clarke, and Vella-Brodrick (submitted) developed an integrative conceptualisation of meaning as a multidimensional, phenomenological construct consisting of a variety of psychological mechanisms spanning motivational, cognitive, affective, and behavioural domains as well as various emergent properties. This model delineates 10 key attributes of meaning, including *motivation for meaning*, *meaningful goals*, *purpose*, *values*, *meaningful attitudes*, *evaluations of meaning-fulfilment*, *meaningful affect*, *meaningful behaviour*, *internal integration*, and *external integration*.

**Meaning and psychological health**

Various theories depict the hypothesised relationship between meaning and psychological health. Meaning has been characterised, alternatively, as an antecedent and attribute of well-being. Specifically, meaning is thought to facilitate various dimensions of well-being, including happiness (Frankl, 1966, 1972, 1988) and self-actualisation (Frankl, 1959, 1988). Moreover, meaning has been conceptualised as a central criterion of psychological well-being (PWB; Ryff, 1989a, 1989b; Ryff, 1995; Ryff & Keyes, 1995; Ryff & Singer, 1998, 2008) and positive mental health (Keyes, et al., 2008).

Conversely, lack of meaning has been conceived as both an antecedent and attribute of psychopathology. Frankl (1985, 1986) depicted the *existential vacuum* - which is characterised by a sense of meaninglessness, boredom, and apathy - as an aetiological factor in such psychological conditions as depression, addiction, and aggression. Various clinical syndromes have also been identified that are characterised by a lack of meaning, including *noogenic neurosis* (Frankl, 1959, 1972) and several manifestations of *existential sickness*.
In contrast, the presence of meaning is thought to serve both protective
(Frankl, 1985, 1959) and therapeutic (Eifert & Forsyth, 2005; Frankl, 1967a, 1967b, 1986,
1988; Hayes & Strosahl, 2004; Seligman, Rashid, & Parks, 2006; Weisskopf-Joelson, 1968;
Zettle, 2007) functions in relation to psychopathology. Similarly, meaning is purported to
promote effective coping and stress resistance (Fry, 1989; Janoff-Bulman & Frantz, 1997;
Mascaro & Rosen, 2006; C. L. Park & Folkman, 1997; Thompson & Janigian, 1988; Wong,
1998b).

In a literature review of the relationship between meaning and psychological health,
Gerschman, Vella-Brodrick, and Clarke (submitted) concluded that existing empirical studies
support a salutatory effect of meaning on both psychopathology and well-being. In
particular, longitudinal studies demonstrate a causal impact of meaning on aspects of
psychopathology and well-being in both clinical (e.g., Debats, 1996; K. Park, 2003) and non-
clinical populations (e.g., Mascaro & Rosen, 2005, 2008). Similar findings have been
demonstrated in experimental studies on meaning (e.g., Breitbart, et al., 2010; Lapierre,
Dube, Bouffard, & Alain, 2007; Westerhof, Bohlmeijer, & Valenkamp, 2004).

Nevertheless, these findings should be interpreted as preliminary in light of several
factors. Only a few longitudinal and experimental studies on meaning and psychological
health have been conducted, thereby limiting the capacity to confidently assess the
hypothesised causal impact of meaning. Moreover, some of these experimental studies
possess methodological limitations such as the absence of randomisation procedures,
insufficient explanations concerning the role of meaning within the intervention, and the
absence of mediation analyses to investigate the underlying mechanisms of change
(Gerschman, Vella-Brodrick, et al., submitted). This study attempts to address these
limitations by providing a well-designed experimental study investigating the causal influence of meaning on psychological health.

**Aim and hypotheses**

The purpose of this study was to empirically investigate the theorised salutatory effect of meaning on psychological health. This was achieved through an experimental design involving a randomised controlled trial of a meaning-in-life group workshop in comparison to a non-intervention control in a non-clinical population. Diverse outcome measures were employed in order to explore meaning's relationship with various aspects of psychological health and well-being. It was hypothesised that the meaning group would demonstrate comparative improvements at posttest, 3-month, and 6-month follow-ups in subscales assessing meaning (i.e., meaningfulness, purpose in life, and crisis of meaning), hedonic well-being (i.e., life-satisfaction, positive affect, and negative affect), eudaimonic well-being (i.e., autonomy, environmental mastery, personal growth, positive relations with others, and self acceptance), and psychological health (i.e., depression, anxiety, and stress). Furthermore, it was hypothesised that the effect of the intervention upon psychological health would be mediated by changes in meaning.

**Method**

**Participants**

Selection criteria consisted of males and females of at least 18 years of age without any diagnosed psychological or psychiatric disorders. Furthermore, individuals were excluded from the study and referred to support services if they scored in the 'severe' range for either depression (i.e., MDI scores of 30 or above) or anxiety (i.e., STAI-trait scores of 47 or above). Following randomised assignment, the meaning group consisted of 23 participants (mean age = 34.0, SD = 14.2, range = 19-61) while the control group involved 21 participants.
(mean age = 30.6, SD = 10.7, range = 18-52). Participant demographics for each group are outlined in Table 1.

<Insert Table 1 about here>

**Design**

A 2 (group) × 4 (time) randomised controlled design was used. The two groups consisted of a group meaning-in-life workshop and a non-intervention control. Participants completed assessments at pre-intervention, post-intervention, 3-month, and 6-month follow-ups. The control group similarly completed questionnaires at each of these four time points, but did not attend any group sessions nor have any face to face contact with the researcher. Following the initial phone contact to confirm participation, the researcher corresponded with control participants via direct mail-out of questionnaires, with additional brief follow-up by e-mail for those participants who did not return their questionnaires within the expected time-frame. Randomisation was conducted using an on-line random sequence generator. The participant flow through the study is outlined in Figure 1.

<Insert Figure 1 about here>

**Procedure**

Ethics approval was provided by the Monash University ethics committee. The primary researcher, a doctoral student and provisional clinical psychologist, conducted all aspects of recruitment, randomisation, and facilitation of workshop sessions.

Recruitment involved a variety of methods and locations both within and outside of Monash University. Posters and pamphlets were set up in various locations at Monash University's Clayton and Caulfield campuses. Recruitment via a brief outline of the study and the distribution of pamphlets also took place prior to several lectures across different faculties (e.g., science, humanities, education, medicine, and economics) and campuses (e.g.,
Clayton and Caulfield). The study was also advertised through global emails to all Monash University students and staff. Outside of Monash University, recruitment involved the distribution of a brief study outline and request for participation using a number of internet-based interest groups and social networking sites (e.g., Get A Life). In addition, an advertisement was distributed via the Australian Psychological Society website and periodical newsletter. Interested individuals subsequently contacted the researcher and were mailed an explanatory statement, informed consent form, and an initial set of questionnaires.

All sessions took place at Monash University in the early evenings. Five participants who were randomised into the meaning group informed the researcher from the outset that they were unable to attend any sessions due to scheduling difficulties; although all agreed to complete the follow-up questionnaires. Three of these participants further agreed to read session material and attempt the personal assignments, as guided by the meaning journal, without attending sessions. The researcher emailed these participants at the beginning of each week to provide them with instructions and an opportunity to ask questions. They were also asked to confirm via email their completion of session material at the end of each week. As incentive to complete follow-up questionnaires, all control participants were provided with remuneration for their time in the form of vouchers to the value of $30 upon completion of the 6-month post-intervention questionnaires. The workshop group were not provided with remuneration as it was expected that the meaning workshop itself would be intrinsically rewarding and thereby motivate subsequent completion of questionnaires.

**Measures**

**Sources of Meaning and Meaningfulness Questionnaire (SoMe)**

The SoMe (Schnell, 2009, 2010; Schnell & Becker, 2006) is a 151-item inventory that encompasses three dimensions of meaning: (a) sources of meaning, (b) meaningfulness, and
(c) crisis of meaning. Only the meaningfulness and crisis of meaning subscales were administered within the current study. Each subscale includes five items (e.g., meaningfulness: "I think my life has a deeper meaning"; crisis of meaning: "I suffer from the fact that I don't see any point in life") that are rated on a six point scale ranging from 0 (strongly disagree) to 5 (strongly agree). In contrast to other popular meaning scales, the SoMe provides relatively clean conceptualisations of both meaningfulness and crises of meaning that are not confounded by items which tap psychological variables such as life-satisfaction, positive affect, depression, and boredom. Acceptable psychometrics have been demonstrated, including high short-term stability as well as adequate construct, content, discriminant, and incremental validity (Schnell, 2009, 2010; Schnell & Becker, 2006).

**Satisfaction With Life Scale (SWLS)**

The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a five item measure of global life satisfaction. Items (e.g., "I am satisfied with my life") are rated on a seven point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicate greater life satisfaction. Satisfactory validity and reliability have been demonstrated (Diener, et al., 1985; Pavot & Diener, 1993).

**Positive and Negative Affect Schedule (PANAS)**

The PANAS (Watson, Clark, & Tellegen, 1988) is a brief self-report measure involving two 10 item scales that assess positive and negative affect. Adjectives describing the activation of positive affect (e.g., active, alert, and enthusiastic) and negative affect (e.g., afraid, nervous, and upset) are rated on a five point scale ranging from 1 (very slightly or not at all) to 5 (extremely) within a variable time frame. A time period involving "the past few weeks" was selected in order to provide a relatively stable measure that is consistent with the time frames of other questionnaires within the current study. Good psychometrics have been
demonstrated (Watson, et al., 1988), including adequate reliability and validity within a non-clinical sample (Crawford & Henry, 2004).

**Depression Anxiety Stress Scales (DASS)**

The DASS (Lovibond & Lovibond, 1995) is a self-report measure designed to differentiate between syndromes of depression, anxiety, and stress. The stress scale from the DASS-21 short form was employed in the current study. The stress scale assesses difficulty relaxing, nervous arousal, irritability, agitation, over-reactivity, and impatience. It contains seven items (e.g., "I found it difficult to relax") that are rated on a four point scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). A time period entailing "the past two weeks" was used for the current study. Good psychometric properties have been demonstrated (Antony, Bieling, Cox, Enns, & Swinson, 1998; Lovibond & Lovibond, 1995), including adequate reliability and validity within a non-clinical sample (Henry & Crawford, 2005)

**Major Depression Inventory (MDI)**

The MDI (Bech, Rasmussen, Olsen, Noerholm, & Abildgaard, 2001) is a self-report measure that encompasses the entire spectrum of depression symptoms from both the DSM-IV and ICD-10. The scale contains a total of 12 items, only 10 of which are functional. Specifically, items 8 (feeling restless or subdued) and 10 (experiencing reduced or increased appetite) are subdivided into alternatives a or b, where only the highest score is considered. Items (e.g., "Have you felt low in spirits or sad?") are rated using a time frame spanning the last two weeks along a six point scale ranging from 0 (*at no time*) to 5 (*all of the time*). This measure can be used either diagnostically or as a severity measure. The latter method was adopted involving the calculation of a total score ranging from 0 to 50, with higher scores indicating greater symptom severity. Adequate internal and external validity have been
demonstrated when using the MDI as a severity measure (Olsen, Jensen, Noerholm, Martiny, & Bech, 2003).

**State-Trait Anxiety Inventory (STAI)**

The STAI (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) consists of two 20-item self-report measures assessing state (STAI-S) and trait (STAI-T) anxiety. Only the STAI-T subscale was employed in this study. The STAI-T includes 20 statements (e.g., "I feel nervous and restless") concerning how the respondent feels generally. Respondents rate the frequency of their feelings on a four point scale ranging from 1 (almost never) to 4 (almost always). Scores range from 20 to 80, with higher scores indicating more severe anxiety. The STAI-T subscale reflects many of the key symptoms of generalised anxiety disorder (GAD) (Rapee, 1991). Accordingly, the STAI-T has been widely used in clinical trials of GAD in which it has demonstrated adequate sensitivity to change (Fisher & Durham, 1999). The STAI possesses good psychometric properties (Antony, Orsillo, & Roemer, 2001; Spielberger, et al., 1983).

**Scales of Psychological Well-being (SPWB)**

The SPWB (Ryff, 1989a, 1989b; Ryff & Keyes, 1995) is a six scale measure of eudaimonic well-being that reflects a multidimensional model of positive human functioning. The subscales consist of autonomy (i.e. self-determination and independence), environmental mastery (i.e., mastery and competence in managing the environment), personal growth (i.e., continued development and the realisation of potentials), positive relations with others (i.e., having warm, satisfying, and trusting relationships), purpose in life (i.e., the presence of goals, beliefs, and a sense of directedness) and self-acceptance (i.e., a positive attitude toward the self). The nine item per scale version was used so as to provide a psychometrically valid measure without overburdening participants. The individual subscales were used as separate
outcome measures in light of their conceptual distinctiveness and to enable the investigation of meaning's impact upon a broad range of well-being components. Items are rated on a six point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Higher scores on each of the six subscales reflect greater levels of psychological well-being. Satisfactory validity and reliability have been demonstrated (Ryff & Keyes, 1995; Schmutte & Ryff, 1997).

**Change in meaning**

A single-item "change in meaning" question was incorporated within all questionnaires at posttest. Participants were requested to respond to the question "To what extent has your experience of meaning in your life increased or decreased over the last six weeks?" on a seven point scale ranging from 1 (decreased dramatically) to 7 (increased dramatically) with a midpoint of 4 (no change). This question was incorporated for exploratory purposes under the assumption that it might be more sensitive to small changes in meaning compared to the other meaning questionnaires. At posttest, the "change in meaning" item was positively associated with both SoMe Meaningfulness ($r(42) = .39, p = .009$) and SPWB Purpose in Life ($r(42) = .36, p = .017$) and inversely associated with SoMe Crisis of Meaning ($r(42) = -.36, p = .018$).

**Demographics**

A demographic questionnaire was administered at baseline which consisted of questions regarding age, gender, marital status, education, employment, and religious affiliation.

**Intervention**

The meaning-in-life group workshop consisted of six 75-90 minute weekly sessions held consecutively over six weeks. Sessions were designed for groups of 8-12 participants. The concept of meaning was approached from a phenomenological perspective whereby
participants' personal and subjective perceptions were emphasised. Accordingly, sessions focused on the process of pursuing meaning while leaving the content for individual's to decide. This approach was adopted in order to make the workshop accessible to a wide variety of individuals from various cultural backgrounds. The content of sessions involved a blend of psychoeducation about meaning, group discussion, group activities, and individual tasks. Participants were provided with meaning journals consisting various worksheets to be completed either in-session or as an out-of-session personal assignment as well as summaries of important information addressed within the sessions.

Sessions followed a generic structure beginning with a review and discussion of the previous week's personal assignment, the presentation of a life-challenge question (e.g., "My life feels empty and I am often bored.") to prompt discussion concerning the session topic, a group activity to facilitate engagement and insight (e.g., artwork, game, visualisation, or DVD exert), psychoeducation about meaning, individual activities, and the setting of personal assignments for participants to complete before the following session. The session content is outlined in Table 2.

<Insert Table 2 about here>

Treatment adherence for the workshop group was assessed via a brief checklist that was incorporated within the posttest questionnaire. Participants were expected to attend all six workshop sessions and to complete a total of six compulsory personal assignments following each session. The means and standard deviations were then calculated for the number of sessions attended ($M = 5.64, SD = 0.50$) and the number of personal assignments completed ($M = 5.09, SD = 1.22$), demonstrating a high levels of treatment adherence.

Results
Statistical analyses were conducted using PASW Statistics 18.0. The scores for two participants who did not return their 3-month follow-up questionnaires were estimated using the mean scores across all variables from their respective immediate post-intervention and 6-month follow-up data. Univariate outliers were truncated to one unit larger than the next most extreme score in the distribution. No consequential departures from normality were identified. Preliminary assumption testing revealed no serious violations. Bonferroni adjustments for multiple testing were applied. Specifically, the type I error rate of .05 was reduced to .025 in the case of related measures, including those assessing positive dimensions of meaning (e.g., SoMe meaningfulness and SPWB purpose in life) as well for anxiety and stress (e.g., STAI-trait and DASS stress). Both intention to treat (ITT) and non-intention to treat (N-ITT) analyses were performed. The means and standard deviations for each dependant variable across all time points are summarised in Table 3.

<Insert Table 3 about here>

<Insert Table 4 about here>

<Insert Table 5 about here>

The effectiveness of the meaning workshop was assessed by conducting a series of ANCOVAs across all post-intervention time points (i.e., immediate post-test, 3-month, and 6-month follow-ups) using the baseline scores for each respective dependant variable as the covariate. Table 4 indicates that the meaning workshop significantly changed participants' crisis of meaning scores for both ITT (3-month and 6-month) and N-ITT (post-test, 3-month, and 6-month) analyses, with partial eta squared values indicating predominantly large effect sizes. This suggests that the meaning workshop was effective in reducing participant's crises of meaning. The effects of the meaning workshop upon levels of meaningfulness and
purpose in life were not significant for both ITT and N-ITT analyses, although the trends are in the direction of enhanced meaning.

As an exploratory analysis, the single item "change in meaning" measure was used as an outcome variable in the expectation that it may be more sensitive to small changes in meaning. Independent-samples t-tests were conducted in order to evaluate the effect of the meaning workshop on participants change in meaning scores. Results indicate that the meaning workshop significantly increased meaning for both ITT \((t(42) = 3.36, p = .002,\) partial eta squared = .21) and N-ITT \((t(37) = 3.90, p < .001,\) partial eta squared = .29) analyses, with very large effect sizes. These finding should be interpreted cautiously given the limits of single item measures.

Table 4 further indicates that the meaning workshop produced the following significant effects upon psychological health variables: (a) reductions in stress at post-test (ITT and N-ITT; with large effect sizes); (b) a reduction in depression at post-test (N-ITT; with a medium to large effect size); (c) reductions in trait anxiety at post-test (ITT and N-ITT; with medium to large and large effect sizes, respectively); (d) increases in environmental mastery at post-test (N-ITT; with a medium to large effect size) and 6-month follow-up (ITT and N-ITT; with large effect sizes); and (e) increased positive relations with others at 3-month follow-up (ITT; with a medium to large effect size). The meaning workshop did not have a significant impact upon levels of life-satisfaction, positive affect, negative affect, autonomy, personal growth, and self acceptance across all time points for both ITT and N-ITT analyses.

In order to assess whether the effect of the meaning workshop upon components of psychological health was mediated by meaning, those ANCOVAs that previously attained significance were repeated after entering crisis of meaning scores at both baseline and follow-
up (corresponding to the time point of each respective dependent variable) as additional covariates. The crisis in meaning measure was selected for the mediation analysis because it was the only measure of meaning that demonstrated significant improvement. As indicated in Table 5, changes in crisis of meaning accounted for a substantial proportion of the original ANCOVAs as indicated by reduction in effect sizes ranging from 33% to 85%. Moreover, six out of the nine previously significant ANCOVAs no longer reached significance after controlling for crisis of meaning, thereby indicating full mediation. These results support a mediating role of crisis of meaning in the effectiveness of the meaning workshop on psychological health.

**Discussion**

This study explored the causal relationship between meaning and psychological health using a randomised controlled trial of a meaning-in-life group workshop. Improvements were hypothesised for all indices of psychological health and well-being across all follow-ups. The meaning group demonstrated comparative improvements in psychological health at various time points across a range of outcome variables. Specifically, results indicated: (a) improvements in crisis of meaning but not meaningfulness or purpose in life; (b) no significant improvement in measures of hedonic well-being (i.e., life-satisfaction, positive affect, and negative affect); (c) significant improvements for some aspects of eudaimonic well-being (i.e., environmental mastery and positive relations with others) but not others (i.e., autonomy, personal growth, and self-acceptance); and (d) improvements in depression, anxiety, and stress. After controlling for crisis of meaning, most of the improvements in psychological health were no longer significant. This suggests that the salutatory effect of the intervention upon psychological health was mediated by reductions in participants' levels of crisis of meaning.
The effectiveness of the meaning-in-life workshop on two positive dimensions of meaning was assessed. The SoMe-meaningfulness subscale represents the appraisals of life as coherent, significant, directed, and belonging while the SPWB-purpose in life subscale reflects the presence of goals, beliefs, and, a sense of directedness. Although neither of these subscales demonstrated significant changes, both reflected a positive trend towards improvement. In contrast, significant changes in meaning were found using the single item "change in meaning" measure. This item may be more sensitive to minor fluctuations in meaning because respondents are prompted directly to consider whether or not their level of meaning has decreased or increased over the past six weeks. However, it may also be more prone to social desirability effects and response bias relating to wanting to please the researchers.

In contrast to the scales assessing positive dimensions of meaning, the SoMe-crisis of meaning subscale demonstrated a statistically significant and robust improvement across time points. This suggests that the intervention was more successful at alleviating negative appraisals of life as meaningless and frustratingly empty than it was at engendering more positive perceptions. For the meaning group, crisis of meaning scores at the 6-month follow-up were reduced to an average total score of below one point in a scale that ranges from 0-25. Thus, floor effects may have precluded greater improvements which might be expected in a population characterised by more severe baseline levels of crisis of meaning.

It is interesting to consider which aspects of the intervention were most effective in alleviating participants' crises of meaning. Although most of the sessions focused on positive and proactive attempts to facilitate meaning through such techniques as values clarification, meaningful events scheduling, and meaningful goal pursuit, the final session focused explicitly on using meaning-based coping strategies for confronting challenging life events.
The relative contribution of these forward-looking versus reactive (i.e., coping-based) strategies is therefore unknown. Further investigation comparing a narrow range of targeted meaning interventions is required in order to uncover their differential effects upon diverse components of meaning.

The inability of the intervention to influence components of hedonic well-being is somewhat surprising in light of Frankl's (1959, 1966, 1972, 1988, 2000) theory that happiness constitutes an effect of meaning realisation. The most likely explanation for the failure to substantiate this hypothesis is the lack of significant improvement in positive dimensions of meaning. In other words, enhancing positive dimensions of meaning may facilitate happiness but the same relationship may not extend to the alleviation of crisis of meaning. Accordingly, this hypothesis requires further investigation in subsequent interventions wherein significant increases in positive dimensions of meaning are demonstrated. Additionally, the lack of significant results may in part be due to the fact that both positive and negative affect constitute state measures that may be overly sensitive to momentary fluctuations. The comparatively stable measure of life satisfaction, in contrast, approached significance at the 3-month follow-up (ITT; p = .07). Alternatively, it is possible that the process of reflecting upon what is meaningful produced a shift in participants' values away from hedonistic strivings aimed at self-centred pleasure and satisfaction. Furthermore, Frankl (1966, 1985) suggested that the pursuit of meaning can produce a constructive form of tension, termed noodynamics, which derives from the gap between an individual's current versus potential achievements and has a motivational effect in stimulating renewed efforts at meaning actualisation. Such feelings may have been elicited as a result of the intervention, thereby producing elevated levels of negative affectivity and dissatisfaction while masking any positive influence on hedonic well-being.
Mixed results were found for the effect of the intervention on components of eudaimonic well-being. Significant effects were demonstrated for both positive relations with others and environmental mastery. The significant improvement in positive relations with others for the meaning group is consistent with findings that relationships are frequently evaluated by individuals as one of the most important sources of meaning (e.g., De Vogler & Ebersole, 1980, 1981; Debats, 1999). Therefore, participants may have selected relationships as a life domain within which to focus their efforts at meaningful events scheduling and meaningful goal pursuit.

The significant effect of the meaning intervention upon environmental mastery may relate to the possibility that meaning realisation requires the ability to manage and manipulate complex environments. Such skills may have been fostered by workshop techniques focusing on the development, implementation, and assessment of meaningful goals as well as the brainstorming of barriers and potential solutions to the realisation of meaning across an array of significant life domains. For example, a participant experiencing prior difficulties in implementing health-related goals may have experienced greater success after systematically planning their efforts while applying problem solving techniques to existing or potential barriers. This increased efficacy in striving for personally meaningful goals may, in turn, facilitate heightened perceptions regarding one’s ability to manipulate and thus master the environment.

In contrast, the intervention did not significantly improve autonomy, personal growth, or self-acceptance. Autonomy relates to an individual's ability to independently determine and regulate their own behaviour (Ryff & Singer, 2008). This capacity is related to the process of pursuing self-concordant goals (Sheldon & Elliot, 1999; Sheldon, et al., 2004; Sheldon & Kasser, 1998), which emanate from genuine self-choice that is motivated by core
values or interests, in contrast with non-self-concordant goals, which are driven by externally or internally applied pressure. Although the intervention emphasised the importance of setting self-concordant goals, especially those that are congruent with personal values, improvements in autonomy were not detected. Similar improvements were predicted for personal growth in light of Frankl's (1959) assertion that the fulfilment of meaning engenders self-actualisation, which is conceptually related to and underlies the concept of personal growth (Ryff & Singer, 2008). These hypotheses, however, were not supported.

The conceptual link between meaning and self-acceptance is more ambiguous. Wong (1998a) identified self-acceptance as a component of lay people's prototypical perceptions of meaning. Similarly, Baumeister (1991) incorporated self-worth as a basic need for meaning. Nevertheless, such concepts appear to be related only tangentially to meaning and have thus been excluded from other important conceptualisations (Gerschman, Clarke, et al., submitted; Wong, 2010). While successful meaning pursuit might be expected to enhance self-esteem, self-acceptance incorporates the additional dimension of coming to terms with the negative aspects of one's self and past life (Ryff & Singer, 2008) which was not addressed explicitly within the meaning workshop. The relationship between meaning and components of eudaimonic well-being requires further investigation, particularly via meaning interventions that are effective in enhancing positive dimensions of meaning.

As expected, the meaning intervention resulted in significant improvements in depression, anxiety, and stress. This finding is consistent with the therapeutic role that has been accorded to meaning in the treatment and alleviation of psychopathology (e.g., Frankl, 1959; Seligman, et al., 2006) and the protective function of meaning in stress-resistance (Fry, 1989; Mascaro & Rosen, 2006; Wong, 1998b). It is possible that the effect of increased meaning on psychological health would be even stronger in a clinical population. This study,
however, demonstrates that even individuals experiencing sub-clinical levels of depression, anxiety, and stress can benefit from meaning-enhancing interventions.

A pertinent question concerns the requisite time for changes in meaning to translate into improvements in psychological health. Immediate improvements in meaning were expected given that meaning represented the primary outcome variable that was targeted within the intervention. Such improvements were observed for crisis of meaning at posttest and these changes remained significant at 3-month and 6-month follow-ups. The time required for changes in meaning to effect improvements in psychopathology and well-being, however, was uncertain. Therefore, several follow-up time points were incorporated within the study over a 6-month period in order to detect any delayed effects upon psychological health. Interestingly, a different pattern was observed for depression, anxiety, and stress as compared to positive aspects of well-being. The effect of the intervention upon depression, anxiety, and stress was immediate but transient, with significant results at posttest dropping off at 3-month and 6-month follow-ups. This suggests the need for booster sessions to prolong the salutatory influence of meaning upon depression, anxiety, and stress. In contrast, improvements in aspects of psychological well-being were relatively delayed. For the intention to treat analysis, positive relations with others became significant at the 3-month follow-up while environmental mastery reached significance at the 6-month follow-up.

Moreover, all components of psychological well-being demonstrated incremental increases in mean scores over time, thereby indicating a time-lag between changes in meaning and resultant effects on psychological well-being. Further investigation of this issue is required given that several of the psychological well-being components did not improve significantly in the current study.
A strength of the current study was the incorporation of a mediation analysis to assess the mechanism of change inherent within the meaning intervention. As a function of the randomised controlled design, any post-intervention improvements in psychological well-being would be presumed to have resulted from enhanced meaning as this was the sole focus within workshop sessions. Nevertheless, it is possible that the effectiveness of workshop sessions was bolstered due to various non-specific effects that are common within psychotherapy. However, mediation analysis revealed that a significant proportion of the intervention's effectiveness on psychological health variables was accounted for by improvements in crisis of meaning. Moreover, full-mediation was demonstrated for most outcome variables.

An important feature of the current study involved the use of a non-clinical population. Significant improvements in psychological health were found despite the use of a non-clinical sample which leaves less scope for improvement, especially in measures of depression, anxiety, and stress. This study corroborates previous research which suggests a causal effect of meaning upon both negative and positive aspects of psychological health within non-clinical populations (Mascaro & Rosen, 2005, 2008; Westerhof et al., 2010). Accordingly, there is scope for the incorporation of meaning-enhancing strategies within broader well-being interventions designed for such contexts as community health centres and workplaces. While meaning interventions are also likely to be effective within clinical populations, their impact may be enhanced through adaptations designed to meet the specific and contextual needs of particular populations. For example, Breitbart et al (2010) incorporated a focus on meaning and cancer in an intervention designed for patients with advanced tumor cancers. Augmenting future interventions by emphasizing the relevance of
meaning to such conditions as mental illness, depression, trauma and stress is therefore suggested.

Several limitations are inherent within the current study. Given the small number of participants, a question that could not be adequately addressed was that of experimentwise error. The analysis involved a large number of ANCOVAs. Jacobs (1976) recommended adjusting the experimentwise alpha level when using multiple independent statistical tests within a single study. However, this approach is excessively conservative and therefore inappropriate within the context of a pilot study involving a small number of participants. In order to mitigate this issue, Bonferroni adjustments were made where possible when testing for multiple outcome variables assessing the same or similar underlying constructs. Two instances were identified wherein such adjustments were relevant: (a) positive measures of meaning, and (b) anxiety and stress. The remaining outcome variables were conceptually distinct from one another thereby precluding the use of further Bonferroni corrections. Consequently, those results that only just reached significance - namely, depression (N-ITT, post-test) and positive relations with others (ITT, 3-month) - should be viewed with reservation and require confirmation in a larger study.

The effectiveness of the intervention may also have been limited by the group format. In a meta-analysis of positive psychology interventions aimed at enhancing well-being and alleviating depression, Sin and Lyubomirsky (2009) found that individual therapy was more effective than group-administered interventions. Accordingly, future studies should investigate the efficacy of meaning interventions within an individual therapy setting. In addition, all sessions were conducted by a single facilitator. Further replication of this intervention using a range of facilitators is required before these findings can be generalised across facilitators.
The current study adds support to causal hypotheses concerning the salutatory effect of meaning upon various aspects of psychological health. More specifically, this study demonstrates the effectiveness of meaning in improving depression, anxiety, stress, and aspects of eudaimonic well-being in a non-clinical population. There is scope for the development and improvement of meaning interventions for application in a range of settings and populations. Community centres, educational institutions, and workplaces are amongst the potential settings wherein meaning interventions might be useful, either administered independently or as integrated within more holistic well-being programs. Subsequent meaning interventions may benefit from using the attributes of meaning (Gerschman, Clarke, et al., submitted) as a guiding framework. In particular, session content could be tailored to target specific attributes of meaning (e.g., meaningful goals, values, purpose, meaningful attitudes, or meaningful behaviours). Furthermore, it would be interesting to investigate the differential role of these attributes in mediating the intervention's impact upon diverse components of psychological health.
References


Table 1

Demographic Characteristics of Participants

<table>
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<th>Variable</th>
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<th>Control (n = 21)</th>
</tr>
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<tr>
<td></td>
<td>n</td>
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</tr>
<tr>
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<td>De facto</td>
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<td>Christianity / Other</td>
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<td>Judaism</td>
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<td>No religion</td>
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<tr>
<td>Other</td>
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<td>4.3</td>
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</table>

Note. Values represent subsample sizes and percentages.
Enrolment

Assessed for eligibility (n = 53)

Excluded (n = 9)
- Not meeting inclusion criteria (n = 8) due to STAI-T scores ≥ 47
- Declined to participate (n = 1) due to overseas travel

Randomized (n = 44)

Allocation

Allocated to intervention (n = 23)
- Received allocated intervention (n = 18)
- Did not receive allocated intervention (n = 5) due to scheduling difficulties

Missing data at post-test (n = 0)

Missing data at 3-months (n = 1)
- Did not return questionnaire

Missing data at 6-months (n = 0)

Allocated to control (n = 21)
- Received allocated intervention (n = 21)
- Did not receive allocated intervention (n = 0)

Missing data at post-test (n = 0)

Missing data at 3-months (n = 1)
- Did not return questionnaire

Missing data at 6-months (n = 0)

Analysis

Intention to treat analysis
- Analysed (n = 23)
- Excluded from analysis (n = 0)

Non-intention to treat analysis
- Analysed (n = 18)
- Excluded from analysis (n = 5)

Intention to treat analysis
- Analysed (n = 21)
- Excluded from analysis (n = 0)

Non-intention to treat analysis
- Analysed (n = 21)
- Excluded from analysis (n = 0)

Figure 1. Participant flow through the study from enrolment to data analysis.
Table 2

Outline of Session Content

<table>
<thead>
<tr>
<th>Session content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1: Why is meaning so important?</strong></td>
</tr>
<tr>
<td>Main activity: Psychoeducation about meaning and psychological health. Assignment: Cost-benefit analysis of efforts to pursue meaning.</td>
</tr>
<tr>
<td><strong>Session 2: Tapping into meaning</strong></td>
</tr>
<tr>
<td>Main activity: Values clarification; evaluating meaning across various life domains and developing a personal values hierarchy. Assignment: Recording one's activities and their perceived degree of meaningfulness for an entire day.</td>
</tr>
<tr>
<td><strong>Session 3: Integrating meaning #1</strong></td>
</tr>
<tr>
<td>Main activity: Meaningful events scheduling; brainstorming and developing a list of personally meaningful activities across a range of important life domains. Assignment: Implementation of a selected meaningful activity.</td>
</tr>
<tr>
<td><strong>Session 4: Integrating meaning #2</strong></td>
</tr>
<tr>
<td>Main activity: Meaningful goals pursuit; evaluation, brainstorming, and development of a meaningful goal within an important life domain. Assignment: Implementation of a weekly action plan for a selected meaningful goal.</td>
</tr>
<tr>
<td><strong>Session 5: Infusing meaning into the mundane</strong></td>
</tr>
<tr>
<td>Main activity: Imbuing mundane activities with meaning by considering how they contribute toward the bigger picture of meaning within participants' lives. Assignment: Meaning-infusion technique; using a cue card to prompt reflection concerning the higher-order meaning, values, and life-domains toward which an activity contributes. Applied immediately prior to the implementation of a mundane activity five time during the following week.</td>
</tr>
<tr>
<td><strong>Session 6: Meaning-based coping</strong></td>
</tr>
<tr>
<td>Main activity: Learning and applying meaning-based coping strategies using a fictional scenario, including (a) benefit finding, (b) downward comparison, (c) seeing an event within a larger context, and (d) using a coping card as a reminder of any relevant benefits or insights derived from the previous techniques. Assignment: Application of meaning-based coping techniques to a personal, mildly to moderately distressing event or life challenge.</td>
</tr>
</tbody>
</table>
### Table 3

**Means and Standard Deviations of Dependent Variables by Time and Group**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time</th>
<th>Intention to treat</th>
<th>Non-intention to treat</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Workshop(^a)</td>
<td>Control(^b)</td>
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<tr>
<td></td>
<td></td>
<td>(M) SD</td>
<td>(M) SD</td>
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<tr>
<td>SoMe(^e)</td>
<td>Baseline</td>
<td>19.65 3.07</td>
<td>17.62 2.82</td>
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<tr>
<td>Meaningfulness</td>
<td>Posttest</td>
<td>19.43 3.81</td>
<td>17.86 3.38</td>
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<tr>
<td></td>
<td>3-month</td>
<td>19.65 2.82</td>
<td>17.52 4.09</td>
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<tr>
<td></td>
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<td>20.13 3.02</td>
<td>17.90 4.17</td>
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<tr>
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<td>3.38 3.34</td>
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<td>16.39 4.93</td>
<td>15.52 4.50</td>
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<td>10.91 7.65</td>
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<td></td>
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<td>Control</td>
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<tr>
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<td></td>
<td>M</td>
<td>SD</td>
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^a_n = 23. ^b_n = 21. ^c_n = 18. ^d_n = 21.  ^eSoMe = Sources of Meaning and Meaningfulness

Questionnaire. ^fSWLF = Satisfaction With Life Scale. ^gPANAS = Positive and Negative Affect Schedule. ^hDASS = Depression Anxiety and Stress Scale. ^iMDI = Major Depression (ICD-10) Inventory. ^jSTAI = Stait Trait Anxiety Index. ^kSPWB = Scales of Psychological Well-being.
<table>
<thead>
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<th>Non-intention to treat</th>
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<td>.403</td>
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<tr>
<td>SoMe$^a$</td>
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<td>5.02*</td>
<td>.031</td>
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<td>Crisis of Meaning</td>
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<tr>
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<td>0.98</td>
<td>.328</td>
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<tr>
<td></td>
<td>3-month</td>
<td>3.60</td>
<td>.065</td>
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<td></td>
<td></td>
<td>1.04</td>
<td>.314</td>
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<tr>
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<td>Posttest</td>
<td>2.11</td>
<td>.154</td>
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<tr>
<td>Negative Affect</td>
<td>3-month</td>
<td>0.21</td>
<td>.650</td>
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<tr>
<td></td>
<td></td>
<td>0.36</td>
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<td>PANAS$^c$</td>
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<td>Positive Affect</td>
<td>6-month</td>
<td>0.03</td>
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</tr>
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<td></td>
<td></td>
<td>0.11</td>
<td>.739</td>
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<td>DASS$^d$</td>
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<td>10.31**</td>
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<tr>
<td>Stress</td>
<td>3-month</td>
<td>3.15</td>
<td>.083</td>
</tr>
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<td></td>
<td></td>
<td>0.22</td>
<td>.645</td>
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<tr>
<td>MDI$^e$</td>
<td>Posttest</td>
<td>3.82</td>
<td>.058</td>
</tr>
<tr>
<td>Depression</td>
<td>3-month</td>
<td>3.03</td>
<td>.089</td>
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<tr>
<td></td>
<td></td>
<td>0.31</td>
<td>.580</td>
</tr>
<tr>
<td>STAI$^f$</td>
<td>Posttest</td>
<td>5.90*</td>
<td>.020</td>
</tr>
<tr>
<td>Trait</td>
<td>3-month</td>
<td>2.49</td>
<td>.122</td>
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<tr>
<td></td>
<td></td>
<td>0.23</td>
<td>.634</td>
</tr>
<tr>
<td>SPWB$^g$</td>
<td>Posttest</td>
<td>0.53</td>
<td>.470</td>
</tr>
<tr>
<td>Purpose In Life</td>
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<td>2.13</td>
<td>.152</td>
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<td></td>
<td></td>
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<td>Autonomy</td>
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<td></td>
<td></td>
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<td>.654</td>
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Table 4

Continued

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time</th>
<th>Intention to treat</th>
<th>Non-intention to treat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$F_{(1, 41)}$</td>
<td>$p$</td>
</tr>
<tr>
<td>SPWB$^g$</td>
<td>Posttest</td>
<td>2.32</td>
<td>.135</td>
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<tr>
<td>Environmental</td>
<td>3-month</td>
<td>0.16</td>
<td>.693</td>
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<tr>
<td>Mastery</td>
<td>6-month</td>
<td>6.83**</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>0.55</td>
<td>.462</td>
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<tr>
<td>Personal Growth</td>
<td>3-month</td>
<td>0.45</td>
<td>.507</td>
</tr>
<tr>
<td></td>
<td>6-month</td>
<td>1.79</td>
<td>.188</td>
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<tr>
<td>SPWB$^g$</td>
<td>Posttest</td>
<td>1.14</td>
<td>.293</td>
</tr>
<tr>
<td>Positive Relations</td>
<td>3-month</td>
<td>4.10*</td>
<td>.050</td>
</tr>
<tr>
<td>With Others</td>
<td>6-month</td>
<td>3.10</td>
<td>.086</td>
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<tr>
<td>SPWB$^g$</td>
<td>Posttest</td>
<td>0.56</td>
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<tr>
<td>Self-acceptance</td>
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<td>1.33</td>
<td>.256</td>
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<tr>
<td></td>
<td>6-month</td>
<td>0.31</td>
<td>.583</td>
</tr>
</tbody>
</table>

Note. ANCOVAs were performed for all post-intervention time points using the baseline scores for each respective measure as the covariate. $^a$SoMe = Sources of Meaning and Meaningfulness Questionnaire. $^b$SWLF = Satisfaction With Life Scale. $^c$PANAS = Positive and Negative Affect Schedule. $^d$DASS = Depression Anxiety and Stress Scale. $^e$MDI = Major Depression (ICD-10) Inventory. $^f$STAI = Stait Trait Anxiety Index. $^g$SPWB = Scales of Psychological Well-being.

*p ≤ .05. **p ≤ .01.
Table 5

Analysis of Covariance Before and After Entering Crisis of Meaning as Covariate

<table>
<thead>
<tr>
<th>Measure (time)</th>
<th>Before controlling for SoMe(^a) Crisis of Meaning</th>
<th>After controlling for SoMe(^a) Crisis of Meaning</th>
<th>% reduction in effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(F)</td>
<td>(p)</td>
<td>(\eta_p^2)</td>
</tr>
<tr>
<td><strong>Intention to treat(^b)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DASS(^c) Stress (posttest)</td>
<td>10.31</td>
<td>.003</td>
<td>.20</td>
</tr>
<tr>
<td>STAI(^d) Trait (posttest)</td>
<td>5.90</td>
<td>.020</td>
<td>.13</td>
</tr>
<tr>
<td>SPWB(^e) EM(^f) (6-month)</td>
<td>6.83</td>
<td>.012</td>
<td>.14</td>
</tr>
<tr>
<td>SPWB(^e) PRWO(^g) (3-month)</td>
<td>4.10</td>
<td>.050</td>
<td>.09</td>
</tr>
<tr>
<td><strong>Non-intention to treat(^b)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DASS(^c) Stress (posttest)</td>
<td>7.91</td>
<td>.008</td>
<td>.18</td>
</tr>
<tr>
<td>MDI(^i) Depression (posttest)</td>
<td>4.68</td>
<td>.037</td>
<td>.12</td>
</tr>
<tr>
<td>STAI(^d) Trait (posttest)</td>
<td>7.80</td>
<td>.008</td>
<td>.18</td>
</tr>
<tr>
<td>SPWB(^e) EM(^f) (posttest)</td>
<td>4.81</td>
<td>.035</td>
<td>.12</td>
</tr>
<tr>
<td>SPWB(^e) EM(^f) (6-month)</td>
<td>8.55</td>
<td>.006</td>
<td>.19</td>
</tr>
</tbody>
</table>

*Note.* Before controlling for crisis of meaning, the baseline scores for each respective measure comprised the covariates. When controlling for crisis of meaning, the crisis of meaning scores at both baseline and the corresponding time point to that of each respective dependent variable were entered as additional covariates. The percent reduction in effect sizes were calculated using the partial eta squared scores. \(^a\)SoMe = Sources of Meaning and Meaningfulness Questionnaire. \(^b\)For all measures and time points within the intention to treat analysis, \(df = 1, 41\) before controlling for crisis of meaning and \(df = 1, 39\) afterwards. \(^c\)DASS = Depression Anxiety and Stress Scale. \(^d\)STAI = Stait Trait Anxiety Index. \(^e\)SPWB = Scales of Psychological Well-being. \(^f\)EM = Envoronmental Mastery. \(^g\)PRWO = Positive Relations With Others. \(^h\)For all measures and time points within the non-intention to treat analysis, \(df = 1, 36\) before controlling for crisis of meaning and \(df = 1, 34\) afterwards. \(^i\)MDI = Major Depression (ICD-10) Inventory.

*\(p > .05\), indicating full mediation after controlling for crisis of meaning.
Chapter 5: General discussion

The following chapter provides an integration of the key themes, findings, and recommendations that emerged from the overall thesis, including all individual research papers. Key themes include: (a) advances in the conceptualisation of meaning; (b) the causal function of meaning in psychological health; and (c) the relevance of meaning for both psychopathology and well-being. Specific detail pertaining to individual studies has been incorporated within the preceding papers.

Advances in the conceptualisation of meaning

The cumulative research findings presented in this thesis outline the content, relevance, and potential application of a novel conceptualisation of meaning. The necessity of such a model derives from the vague, ambiguous, and inconsistent definitions of meaning that pervade the literature (Damon, et al., 2003; Debats, 1999; Hodges, 2009; Krause, 2009). This issue extends beyond mere theoretical relevance; rather, it critically affects the validity of empirical research as well as the development of therapeutic techniques for facilitating meaning. A clear definition of meaning is vital in order to guide empirical research and draw constructive conclusions concerning the relationship between meaning and psychological health. Many existing meaning questionnaires suffer from various limitations, including: (a) the use of conceptual models that integrate only particular components of meaning; (b) reliance upon theoretical and philosophical assumptions that are not universally accepted; and (c) the inclusion of characteristics that are overly broad and thereby confound the measurement of meaning with related constructs such as coping, spirituality, and subjective well-being.

Responding to these concerns, Paper 1 outlines an integrated conceptualisation of meaning that is based upon a systematic and exhaustive review of the literature, as guided by established qualitative research methodology (Walker & Avant, 1995). The utility of this
conceptual analysis derives not merely from the task of collating the most frequently recurring characteristics of meaning from the available literature, but in its critical analysis regarding the validity of these purported attributes. This distillation process resulted in the exclusion of some characteristics of meaning that are widely considered as central to this construct, such as meaning-based coping as well as broad applications of understanding that are not teleological in nature (Reker & Wong, 1988; Wong, 1998, 2010). The exclusion of such attributes is as important as the incorporation of novel attributes, as the former process serves to distinguish the construct of meaning from the constellation of surrounding concepts.

The incorporation, clarification, and extension of other attributes adumbrated within the literature also represents an important advancement. In particular, the trend toward a functional definition of meaning's attributes constitutes a key development that serves to replace *a priori* content-based criteria. By adopting a phenomenological and functional perspective, this conceptualisation facilitates the integration and unification of the field on meaning by circumventing the stagnation engendered by divisive philosophical positions. Moreover, it does not dismiss the relevance of specific meaning content; rather, it enables the empirical investigation of a wide range of meaning content as subjectively construed by individuals.

The relevance of this conceptualisation is also central to efforts to understand the relationship between meaning and psychological health. As outlined in the literature review in *Paper 2*, the current empirical literature on meaning is plagued by the use of inconsistent measures that pertain to different components or characteristics of meaning. This restricts the capacity to derive valid conclusions regarding meaning's relationship with psychological health. The integrative conceptualisation of meaning proposed in *Paper 1*, however, has the capacity to remedy this situation. Specifically, the conceptualisation of meaning in terms of its concomitant attributes enables a broad and theoretically grounded investigation of
meaning that highlights the potentially differential contribution of various attributes to psychological health.

Moreover, this model provides a framework that can inform the selection of specific targets for experimental manipulation in interventions designed to promote meaning. Attributes such as meaningful goals, values, purpose, and meaningful behaviour provide fruitful avenues for investigation. The conceptualisation of meaning in terms of these attributes also provides a prospective framework for measuring the efficacy of such interventions, including the analysis of underlying mechanisms of change.

Additionally, the functional model of the meaning system (see Paper 1) provides a useful guide for deriving causal hypotheses and designing empirical studies that aim to investigate the functional interrelationships between the attributes that comprise the meaning system. These functional relationships are hypothesised to be central to the impact of meaning on psychological health. In particular, the role of both internal and external integration in promoting psychological health deserves further attention.

In order to facilitate these empirical advances, the development of a meaning questionnaire that operationally defines this integrative conceptualisation of meaning, including its individual attributes, is required. Paper 1 lays the foundation for the development of such a questionnaire. This task, however, is beyond the scope of the current thesis. The authors eagerly encourage other researchers to embrace this important task as its potential advantages for the field of meaning are manifold. Given these potential benefits, the outlining of the theoretical groundwork for such a questionnaire constitutes one of the major accomplishments of the current thesis. The development of such a questionnaire is crucial to future investigations concerning the relationship between meaning and psychological health.

**The causal function of meaning in psychological health**
In exploring the relationship between meaning and psychological health, one of the core aims of the thesis is to investigate the causal hypothesis that meaning has a salutatory effect upon psychological health. This central hypothesis was addressed by the second and third papers. Specifically, Paper 2 reviewed the available empirical literature on the relationship between meaning and psychological health. This review emphasised the necessity of using longitudinal and experimental data to address this causal hypothesis. The available studies employing such designs do indeed support a causal effect of meaning on psychological health within both clinical and non-clinical samples. However, the limited number of such studies combined with the presence of various methodological shortcomings renders this finding as preliminary and in need of further substantiation.

Consequently, Paper 3 sought to corroborate the hypothesis that meaning enhances psychological health by providing a methodologically sound, empirical study with the capacity to assess causation. Under randomised controlled conditions, the efficacy of a meaning-in-life group workshop was compared to a non-intervention control using a non-clinical population. Furthermore, mediation analysis was used to assess the underlying mechanisms of change. Findings supported the positive effects of meaning on psychological health, with reductions in crisis of meaning mediating subsequent improvements in aspects of psychological health and well-being. However, not all aspects of meaning and psychological health were enhanced by the intervention, thereby indicating the need for further research.

Overall, Paper 2 and Paper 3 combine to support a salutatory effect of meaning upon psychological health. Nevertheless, further investigation is required. Future studies would benefit from employing larger sample sizes, improved scales for assessing meaning, and sound methodological designs that permit causal inferences. Further suggestions for enhancing prospective research on this topic are outlined in Paper 2.

The relevance of meaning to both psychopathology and well-being
An important objective of this thesis involves the exploration of meaning's relevance to both psychopathology and well-being. The field of well-being research, which is at the forefront of the positive psychology movement, has expanded traditional conceptualisations of psychological health quo the absence of psychopathology to embrace diverse aspects of positive functioning and psychological flourishing (Keyes, 2006). Hedonic (e.g., subjective well-being; Diener & Lucas, 1999), eudaimonic (e.g., psychological well-being; Ryff, 1989a; Ryff, 1989b), and integrative (e.g., Keyes, et al., 2008; Tennant, et al., 2007) conceptualisations of well-being have been proposed.

Traditionally, theories of meaning have addressed the relationship between meaning and psychopathology. For example, Frankl (1985, 1986) argued that in relation to psychopathology a lack of meaning represents an aetiological factor, while the presence of meaning constitutes both a protective factor and therapeutic factor. Moreover, Frankl (1986) outlined the role of lack of meaning in such disorders as anxiety, depression, obsessive-compulsiveness, and schizophrenia.

The early literature on meaning, however, predates the recent focus of positive psychology on well-being. Although Frankl (1959, 1966, 1972, 1988) proposed a causal link between meaning fulfillment and such well-being related constructs as happiness and self-actualisation, his publications predate the modern psychological focus, conceptual development, and terminology associated with well-being.

Therefore, this thesis attempted to explicate meaning's relevance to well-being in light of modern conceptualisations and terminology. Relevant psychological theories and empirical research relating meaning to both psychopathology and well-being were collated, summarised, and critically reviewed in Paper 2. This provides a much needed review of how meaning relates, both conceptually and empirically, to the full gamut of constructs that comprise psychological health. From a conceptual vantage point, the incorporation of
meaning as a component and criterion of well-being (Ryff, 1989a, 1989b) represents a powerful argument that underscores the intrinsic psychological value of meaning apart from its potential causal influence upon other components of psychological health. From an empirical perspective, cross-sectional studies demonstrate a consistent association between meaning and multiple aspects of both psychopathology and well-being, while longitudinal and experimental studies suggest that meaning plays a causal, salutary role in these relationships.

*Paper 3* expanded this research base by providing an experimental study that explored the proposed causal effects of meaning on depression, anxiety, and stress as well as both hedonic (e.g., frequent positive affect, infrequent negative affect, and life-satisfaction) and eudaimonic (e.g., self-acceptance, positive relations with others, autonomy, environmental mastery, and personal growth) well-being. While identifying a causal effect of meaning upon some aspects of psychological health and well-being, these findings were mixed. Specifically, a salutary causal effect of meaning was found in relation to environmental mastery and positive relations with others, both of which represent aspects of eudaimonic well-being. However, other components of eudaimonic well-being were not influenced by meaning, including autonomy, personal growth, and self-acceptance. Moreover, meaning did not significantly improve levels of hedonic well-being. Although *Paper 3* focused on subclinical levels of depression, anxiety, and stress, the conclusion that meaning improves psychopathology is drawn primarily from the review of meaning and psychological health in *Paper 2*. These findings underscore the need for further experimental research concerning the potential effects of meaning upon various aspects of psychological health and well-being.

Overall, this thesis provides preliminary empirical evidence for a salutary, causal impact of meaning upon at least some aspects of psychopathology and well-being. These findings suggest that meaning is as relevant to the conceptualisation and promotion of well-
being as it is to the understanding and treatment of psychopathology. Hence, the construct of meaning is relevant to both clinical psychology and positive psychology and future meaning research should explore both these domains. Additional research is required in order to fully understand these relationships and to harness the therapeutic functions of meaning.

**Conclusion**

The key objective of the overall thesis was to investigate the relationship between meaning and psychological health. This thesis provides a much needed review of this relationship, taking into account both conceptual models and empirical data. Furthermore, this review was supplemented by an experimental study involving a meaning-in-life group workshop. This intervention incorporated various design features that provide a model for subsequent research, including randomised controlled conditions, mediation analysis, and the use of diverse measures of psychological health and well-being. These cumulative research findings provide preliminary evidence for a salutatory, causal effect of meaning on psychological health, including both well-being and psychopathology. These findings require additional substantiation, along with the exploration of factors that mediate and moderate this relationship as well as alternative causal pathways (e.g., the effect of psychological health on meaning). Nevertheless, the efficacy of the meaning-in-life intervention in alleviating crises of meaning and engendering resultant improvements in aspects of psychological health and well-being demonstrates the potential therapeutic utility of meaning.

Another key outcome of this thesis involves the delineation of an integrative conceptualisation of meaning and its underlying attributes. This model has important implications that traverse both empirical and therapeutic domains. From an empirical perspective, this conceptualisation has the capacity to unite the field around an integrative, comprehensive, and parsimonious conceptualisation that emerges from a century of scientific reflection on the concept of meaning. Moreover, this model lays the groundwork for the
development of a conceptually valid, multidimensional measure for assessing the attributes of meaning that has the potential to stimulate novel lines of research. Such a measure is likely to facilitate a more accurate understanding of meaning's relationship with psychological health. From a therapeutic vantage point, this model provides a useful framework for designing focused interventions that target one or several of the underlying attributes of meaning, while providing the means to assess the efficacy of such interventions. Therefore, the current thesis contributes significantly to the field of meaning and demonstrates the centrality of meaning in relation to psychological health.
Bibliography


Appendices
Appendix A: Recruitment material
PARTICIPANTS WANTED FOR WELL-BEING RESEARCH

Hi all! I am seeking participants for my research on meaning-in-life, psychological health, and well-being as part of my Monash University Clinical Psychology doctoral thesis. I will be running an interactive workshop involving practical exercises aimed at facilitating personal meaning. Themes include:

Insight: Discover your personal meaning-in-life
Integration: Express your deepest values within your daily routine
Infusion: Extend meaning into the mundane aspects of life
Meaning-based Coping: Master techniques for confronting life’s challenges

The workshop involves six weekly 60-90 minute sessions, personal assignments between sessions and some questionnaires on psychological health and well-being. Day and evening sessions will be available from Clayton and Caulfield campuses. Some participants will be randomly assigned to a comparison group involving questionnaires but no workshop.

Selection criteria: Males and females 18+ without any diagnosed psychological or psychiatric disorders.

Contact me for further information:
E-mail: Elliot.Gerschman@med.monash.edu.au
Recruitment poster
PARTICIPANTS WANTED FOR
WELL-BEING RESEARCH

My name is Elliot Gerschman and I am investigating the link between meaning-in-life, psychological health, and well-being as part of my doctoral thesis in Clinical Psychology at Monash University. I hope to achieve this by running a series of well-being workshops focusing on personal meaning. I will also be measuring the effect of this workshop on some aspects of psychological health and well-being.

Based on recent psychological studies, this dynamic program is more than just a lecture series; it is an interactive discussion-based workshop involving practical exercises aimed at facilitating the personal discovery of meaning and its integration within daily living. The following themes will be covered:

*Insight* – DISCOVER YOUR PERSONAL MEANING IN LIFE

*Integration* – EXPRESS YOUR DEEPEST VALUES WITHIN YOUR DAILY ROUTINE

*Infusion* – EXTEND MEANING INTO THE MUNDANE ASPECTS OF LIFE

*Meaning-based Coping* – MASTER TECHNIQUES FOR CONFRONTING LIFE’S CHALLENGES

For statistical purposes, participants will be randomly assigned into one of two groups.

**Workshop Group:** • Attend six consecutive weekly 60-90 minute workshop sessions.
• Attempt personal assignments in between sessions.
• Complete a meaning-journal.
• Complete questionnaires on meaning-in-life, happiness, well-being, life events, anxiety, stress and depression. This takes 1-hour and will be required on four occasions.

**Comparison Group:** • Complete questionnaires on meaning-in-life, happiness, well-being, life events, anxiety, stress and depression. This takes 1-hour and will be required on four occasions.

All workshops are free. Day and evening sessions will be available at various locations in your area between March 2009 and July 2009.

**Selection criteria:** I am seeking male and female participants aged 18+ who have no known diagnosed psychological or psychiatric disorders.

To participate in this study email
Elliot.Gerschman@med.monash.edu.au
or call 0401496913
Appendix B: Explanatory statement and consent form
Explanatory statement

Title: Life-meaning, psychological health and well-being

Please keep this information sheet for your personal reference.

My name is Elliot Gerschman and I am conducting a research project towards a Doctorate in Clinical Psychology at Monash University. This means that I will be writing a thesis which is the equivalent of a small book, together with several short journal articles.

My research supervisors are Associate Professor David Clarke, a Psychiatrist at Monash Medical Centre, Clayton (MMCC) in the School of Psychology, Psychiatry and Psychological Medicine, and Dr Dianne Vella-Brodrick, a researcher and Senior Lecturer at Monash University in the School of Psychology, Psychiatry and Psychological Medicine.

The aim of this study is to investigate the link between meaning-in-life, psychological health, and well-being. In order to explore this relationship, I have designed a meaning-in-life workshop aimed at increasing participants’ experiences of meaning and purpose within their lives. I will also track the effect of this meaning-workshop on some aspects of psychological health and well-being. This research has the potential to be developed into a community-based program for facilitating well-being.

I am seeking male and female participants over the age of 18 who have no known diagnosed psychological or psychiatric disorders. Participants will be randomly assigned into two groups. The first group will participate in a meaning-workshop and will also be asked to complete some questionnaires. The second group will be asked to complete the same questionnaires but will not attend the meaning-workshop.

The meaning-workshop will consist of six weekly 90-minute sessions. These sessions will involve short presentations about current psychological perspectives on meaning, as well as interactive discussions and activities. Personal assignments (e.g., scheduling meaningful events) and a meaning-journal (involving exercises relating to workshop content) will be completed by individuals in between sessions. The sessions will take place both at Monash University Clayton campus and at Monash University Caulfield campus. Participants in the workshop group will be able to select which venue and time is suitable for them. The date for the workshops will be announced as soon as sufficient numbers of participants have joined the study.

All participants, whether selected for the workshop or not, will be asked to fill out a set of questionnaires about various aspects of psychological health and well-being, including meaning-in-life, happiness, psychological well-being, life events, anxiety, stress and depression. This set of questionnaires will take approximately 1-hour to complete, and will be mailed out at the following times: before the first workshop, after the final workshop, 3-months follow-up and 6-months follow-up. Pre-paid envelopes will be provided so that participants can conveniently post their completed questionnaires back to the researchers at Monash University.

Following the study, the group who did not participate in the workshop will be provided with a gift voucher to the value of $30 for their time plus a detailed meaning journal that will
outline step-by-step procedures for many of the activities performed in the workshop sessions. This is for the benefit of participants who did not attend the meaning workshop. Therefore, performance of these exercises is optional and no further results, data or contact will be required by the researchers.

This study is not expected to result in any levels of stress that are beyond participants’ normal everyday experiences. As a precautionary measure, however, any participant scoring in the severe range for depression or anxiety during the course of this study will be notified, asked to discontinue, and provided with information about psychological services to use at their own discretion. These details have been provided at the bottom of this form for any individuals who feel that they need professional assistance.

Various strategies will be utilised to protect the confidentiality of participants. All participants will receive a unique code so that the researchers can work with the questionnaire data without viewing the names of individual participants. The only exception to this is that if an individual scores in the severe range for anxiety or depression, as mentioned above, that individual’s name and contact details will be referred to in order to inform them. A report of the study may be submitted for publication in a medical or psychological journal, but individual participants will not be identifiable in such a report. Storage of the data collected will adhere to the University regulations and be kept on University premises in a locked cupboard or filing cabinet for 5 years.

Your participation in this study is entirely voluntary and you may withdraw from the study at any time.

If you have any queries or would like to be informed of the overall results following the study, please contact me by phone or e-mail using my details which are provided below. A summary sheet detailing the overall group findings will be made available.


details have been provided at the bottom of this form for any individuals who feel that they need professional assistance.

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<table>
<thead>
<tr>
<th>Should you have any complaint concerning the manner in which this research (Project Number: CF08/0170 – 2008000042) is conducted, please do not hesitate to contact the Monash University Standing Committee on Ethics in Research Involving Humans at the following address:</th>
</tr>
</thead>
</table>
| The Secretary  
The Standing Committee on Ethics in Research Involving Humans (SCERH)  
Building 3D  
Research Grants & Ethics Branch  
Monash University VIC 3800  
Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: scerh@adm.monash.edu.au |

Thank you.

Elliot Gerschman
Telephone:  
E-mail: Elliot.Gerschman@med.monash.edu.au
Below is a list of free or low cost counselling services. See details below for eligibility.

Monash University Counselling Service
The Monash University Counselling Service provides a free, professional and confidential psychological counselling service to all Monash students and staff.

Clayton campus
The drop in service is for those who have not seen a Monash University counsellor before. The location at Monash University Clayton Campus is the Union Building, 1st Floor, New Western Extension, above Student Employment Service.
The drop in times are as follows:
- 11.00am - 2.30pm Mondays, Tuesdays, Thursdays and Fridays
- 1.00pm - 2.30pm Wednesdays
- Telephone: (03) 9905-3156

Caulfield campus details:
Anyone wishing to make an appointment with a counsellor can phone or come to the service at any time during business hours. They will be seen within 24 hours by a duty worker who will find out what their concerns are and arrange for an appropriate referral to a university counsellor or external service as appropriate.
- Office hours: Monday to Friday, 9:00am to 5:00pm
- Location: Level 1, B Block. Enter either from the tunnel or Sir John Monash Drive
- Telephone: (03) 9903-2500

After Hours Telephone Counselling Service
An after hours telephone counselling service is available to students of Monash University. The service is provided by IPS Worldwide who are the current external provider of the Monash University Employee Assistance Program for staff.
The service is
- Available by calling (03) 9621-2600
- Provided by qualified and experienced psychologists
- Private and confidential
- Free
- Available from 6PM to 8AM, Monday to Friday
- Available from 6PM to 8:30PM, Saturday and Sunday

Bentleigh Bayside Community Health Service
Bentleigh Bayside Community Health Service is a non profit Community Health Service that receives funding from Federal, State and Local Government. Counselling is available at minimal cost to clients who live, work or study in the catchment area of the Kingston/Bayside and Glen Eira communities. Social Work and Psychological services are offered.
- Contact details:
- Telephone: 9575-5333
- Fax: 9579-3623
- Address: Gardeners Road, East Bentleigh, Vic 3165
- Hours: Monday to Friday 8:30am to 5:00pm
- Call during working hours to arrange appointment.

The Australian Psychological Society Ltd
The Australian Psychological Society website can be found at www.psychology.org.au. It contains links to some useful information about understanding and managing depression.
Click on the Find a psychologist link to search for a psychologist in your area and to access over 2,000 psychologists Australia wide, who are in private practice and provide services for a fee.
I agree to take part in the Monash University research project specified above. I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to:

1. I agree to complete questionnaires asking me about meaning-in-life, happiness, psychological well-being, life events, anxiety, stress and depression.

2. If I am selected to participate in the meaning-workshop, I agree to attend all six consecutive weekly 90-minute sessions, to attempt all personal assignments in between workshop sessions, and to complete a meaning-journal that will be provided for me at the first session.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the questionnaires for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

I understand that data from the questionnaires will be kept in a secure storage and accessible to the research team. I also understand that the data will be destroyed after a 5 year period unless I consent to it being used in future research.

In consenting to this study I certify that I am over 18 and currently have no known diagnosed psychological or psychiatric disorder.

Participant’s name: _______________________

Participant’s signature: ___________________

Date: ______________________
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<thead>
<tr>
<th>Measure</th>
<th>Abbreviation</th>
<th>Author(s)</th>
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<td>Contact Information</td>
<td></td>
<td>Constructed for <em>Paper 2</em></td>
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<tr>
<td>Demographic Questionnaire</td>
<td></td>
<td>Constructed for <em>Paper 2</em></td>
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<td>Sources of Meaning and Meaningfulness Questionnaire</td>
<td>SoMe</td>
<td>Schnell, 2009, 2010; Schnell &amp; Becker, 2006</td>
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<td>Satisfaction With Life Scale</td>
<td>SWLS</td>
<td>Diener, Emmons, Larsen, &amp; Griffin, 1985</td>
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<tr>
<td>Positive and Negative Affect Schedule</td>
<td>PANAS</td>
<td>Watson, Clark, &amp; Tellegen, 1988</td>
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<tr>
<td>Depression Anxiety Stress Scales</td>
<td>DASS</td>
<td>Lovibond &amp; Lovibond, 1995</td>
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<tr>
<td>Major Depression Inventory</td>
<td>MDI</td>
<td>Bech, Rasmussen, Olsen, Noerholm, &amp; Abildgaard, 2001</td>
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<tr>
<td>State-Trait Anxiety Inventory</td>
<td>STAI</td>
<td>Spielberger, Gorsuch, Lushene, Vagg, &amp; Jacobs, 1983</td>
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<td>Scales of Psychological Well-being</td>
<td>SPWB</td>
<td>Ryff, 1989a, 1989b; Ryff &amp; Keyes, 1995</td>
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<tr>
<td>Checklist</td>
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</table>
Contact Information

1. Full name: ______________________________

2. Postal address and post code:


3. Phone number: __________________________

4. E-mail address: __________________________

5. How would you prefer to be contacted by the researcher?

☐ Telephone

☐ E-mail

On the table below, please tick all the possible times that you think you will be available for workshop sessions if you are selected into that group. This will provide the researcher with an idea of participant availability. You do not have to commit to any of the times indicated below. The workshop facilitator will contact participants at some later date to discuss final arrangements about session times.

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<th>Evening</th>
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<tr>
<td>Friday</td>
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6. Do you have any additional comments about session times, such as preferences or difficulties?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Demographic Questionnaire

1. What is your current age in years? ______

2. What is your gender?
   □ Male
   □ Female

3. What is your present marital status?
   □ Never married
   □ Widowed
   □ Divorced
   □ Separated
   □ Married
   □ De facto

4. What is the highest level of education you have completed (tick only one answer)?
   □ Primary education not completed
   □ Completed primary education
   □ Completed secondary education
   □ Completed post-secondary vocation or technical training
   □ Completed university undergraduate or college bachelor degree
   □ Completed post-graduate degree or higher

5. Are you currently in the paid workforce?
   □ Yes, full-time
   □ Yes, part-time
   □ No, unemployed
   □ No, retired

6. What is your religious affiliation?
   □ Buddhism
   □ Christianity / Catholic
   □ Christianity / Protestant
   □ Christianity / Other
   □ Hinduism
   □ Islam
   □ Judaism
   □ No religion
   □ Other (please specify): -
      __________________________
Meaningfulness Questionnaire

Please answer the questions as honestly as possible. Note that there are no wrong or right answers. It is only your personal opinion that counts. To indicate your agreement or disagreement with the statements, use the scale below. Don’t skip any questions. If you can’t decide easily for an answer, tick the box closest to your estimation.

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<td>1</td>
<td>I think my life has a deeper meaning.</td>
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<tr>
<td>2</td>
<td>When I think about the meaning of my life I find only emptiness.</td>
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<td>3</td>
<td>I think that there is meaning in what I do.</td>
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<td>4</td>
<td>My life seems empty.</td>
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<td>5</td>
<td>My life seems meaningless.</td>
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<tr>
<td>6</td>
<td>I feel part of a bigger whole.</td>
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<td>7</td>
<td>I lead a fulfilled life.</td>
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<tr>
<td>8</td>
<td>I don't see any sense in life.</td>
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<tr>
<td>9</td>
<td>I suffer from the fact that I don't see any point in life.</td>
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<tr>
<td>10</td>
<td>I have a task in life.</td>
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</table>

strongly disagree   |   |   |   |   |   |   |   |   |   |strongly agree
The Satisfaction with Life Scale

Below are five statements that you may agree or disagree with. Circle the number that best describes your agreement or disagreement with each statement. Please be open and honest in your responding.

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<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
<td>1. In most ways my life is close to my ideal.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. The conditions of my life are excellent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>3. I am satisfied with my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. So far I have gotten the important things I want in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. If I could live my life over, I would change almost nothing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</table>
Positive and Negative Affect Schedule

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then circle the number that indicates how much you have felt this way during the past few weeks.

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<th>A little</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>56.</td>
<td>loathing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>57.</td>
<td>confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>58.</td>
<td>energetic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>59.</td>
<td>concentrating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>60.</td>
<td>dissatisfied with self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Stress Scale

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past two weeks. 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

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found myself getting upset by quite trivial things</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>2</td>
<td>I tended to over-react to situations</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>3</td>
<td>I found it difficult to relax</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>4</td>
<td>I found myself getting upset rather easily</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>5</td>
<td>I felt that I was using a lot of nervous energy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>6</td>
<td>I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>7</td>
<td>I felt that I was rather touchy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>8</td>
<td>I found it hard to wind down</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>9</td>
<td>I found that I was very irritable</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>10</td>
<td>I found it hard to calm down after something upset me</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>11</td>
<td>I found it difficult to tolerate interruptions to what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>12</td>
<td>I was in a state of nervous tension</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>13</td>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>14</td>
<td>I found myself getting agitated</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
The Major Depression Inventory

The following questions ask about how you have been feeling over the last two weeks. Please circle the number that best indicates how you have been feeling.

<table>
<thead>
<tr>
<th>How much of the time...</th>
<th>All of the time</th>
<th>Most of the time</th>
<th>More than half of the time</th>
<th>Less than half of the time</th>
<th>Some of the time</th>
<th>At no time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you felt in low spirits or sad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2. Have you lost interest in your daily activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. Have you felt lacking in energy and strength?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4. Have you felt less self-confident?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5. Have you had a bad conscience or feelings of guilt?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6. Have you felt that life wasn't worth living?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. Have you had difficulty in concentrating, e.g. when reading the newspaper or watching TV?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8. Have you felt very restless?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. Have you felt subdued?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. Have you had trouble sleeping at night?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11. Have you suffered from reduced appetite?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12. Have you suffered from increased appetite?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
### Scales of Psychological Well-Being

The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers. Circle the number that best describes your present agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>In general, I feel I am in charge of the situation in which I live.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>I am not interested in activities that will expand my horizons.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Most people see me as loving and affectionate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>I live life one day at a time and don't really think about the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>When I look at the story of my life, I am pleased with how things have turned out.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>My decisions are not usually influenced by what everyone else is doing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>The demands of everyday life often get me down.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9.</td>
<td>I don't want to try new ways of doing things – my life is fine the way it is.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Maintaining close relationships has been difficult and frustrating for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>I tend to focus on the present, because the future nearly always brings me problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>In general, I feel confident and positive about myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13.</td>
<td>I tend to worry about what other people think of me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>I do not fit very well with the people and the community around me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15.</td>
<td>I think it is important to have new experiences that challenge how you think about yourself and the world.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16.</td>
<td>I often feel lonely because I have few close friends with whom to share my concerns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17.</td>
<td>My daily activities often seem trivial and unimportant to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strongly Disagree</td>
<td>Moderately Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Moderately Agree</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>-------------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>18.</td>
<td>I feel like many of the people I know have gotten more out of life than I have.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19.</td>
<td>Being happy with myself is more important to me than having others approve of me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20.</td>
<td>I am quite good at managing the many responsibilities of my daily life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21.</td>
<td>When I think about it, I haven't really improved much as a person over the years.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22.</td>
<td>I enjoy personal and mutual conversations with family members or friends.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23.</td>
<td>I don't have a good sense of what it is I'm trying to accomplish in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24.</td>
<td>I like most aspects of my personality.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25.</td>
<td>I tend to be influenced by people with strong opinions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26.</td>
<td>I often feel overwhelmed by my responsibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27.</td>
<td>I have the sense that I have developed a lot as a person over time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28.</td>
<td>I don't have many people who want to listen when I need to talk.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29.</td>
<td>I used to set goals for myself, but that now seems like a waste of time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30.</td>
<td>I made some mistakes in the past, but I feel that all in all everything has worked out for the best.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31.</td>
<td>I have confidence in my opinions, even if they are contrary to the general consensus.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>32.</td>
<td>I generally do a good job of taking care of my personal finances and affairs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>33.</td>
<td>I do not enjoy being in new situations that require me to change my old familiar ways of doing things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>34.</td>
<td>It seems to me that most other people have more friends than I do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>35.</td>
<td>I enjoy making plans for the future and working to make them a reality.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>36.</td>
<td>In many ways, I feel disappointed about my achievements in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>37.</td>
<td>It's difficult for me to voice my own opinions on controversial matters.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Moderately Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Moderately Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>38. I am good at juggling my time so that I can fit everything in that needs to get done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>39. For me, life has been a continuous process of learning, changing, and growth.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>40. People would describe me as a giving person, willing to share my time with others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>41. I am an active person in carrying out the plans I set for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>42. My attitude about myself is probably not as positive as most people feel about themselves.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>43. I often change my mind about decisions if my friends or family disagree.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>44. I have difficulty arranging my life in a way that is satisfying to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>45. I gave up trying to make big improvements or changes in my life a long time ago.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>46. I have not experienced many warm and trusting relationships with others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>47. Some people wander aimlessly through life, but I am not one of them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>48. The past had its ups and downs, but in general, I wouldn't want to change it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>49. I judge myself by what I think is important, not by the values of what others think is important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>50. I have been able to build a home and a lifestyle for myself that is much to my liking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>51. There is truth to the saying you can't teach an old dog new tricks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>52. I know that I can trust my friends, and they know they can trust me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>53. I sometimes feel as if I've done all there is to do in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>54. When I compare myself to friends and acquaintances, it makes me feel good about who I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Change in meaning

Please circle the number that best approximates your response.

Q1. To what extent has your experience of *meaning* in your life increased or decreased over the last 6 weeks?

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Decreased dramatically</td>
<td>Decreased moderately</td>
<td>Decreased slightly</td>
<td>No change</td>
<td>Increased slightly</td>
<td>Increased moderately</td>
</tr>
</tbody>
</table>

Decreased dramatically
Decreased moderately
Decreased slightly
No change
Increased slightly
Increased moderately
Increased dramatically
Checklist

**INSTRUCTIONS:**
- Please tick the relevant boxes to indicate which sessions you attended and which personal assignments you completed.

<table>
<thead>
<tr>
<th>Session</th>
<th>Why Meaning Is So Important</th>
<th>Tapping Into Meaning</th>
<th>Integrating Meaning #1</th>
<th>Integrating Meaning #2</th>
<th>Infusing Meaning Into the Mundane</th>
<th>Meaning-Based Coping</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attended session</td>
<td>Completed personal assignment</td>
<td>Completed personal assignment</td>
<td>Completed optional personal assignment</td>
<td>Attended session</td>
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