Validation of the Meaning in Life Questionnaire in an African context

L Temane
21214085

Dissertation (article format) submitted in partial fulfilment of the requirements for the degree Master Scientia in Clinical Psychology at the Potchefstroom Campus of the North-West University

Supervisor: Prof IP Khumalo
Co-Supoervisor: Prof MP Wissing

November 2012

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

Validation of the Meaning in Life Questionnaire in an African context

L. Temane

21214085

Dissertation (article format) submitted in partial fulfilment of the requirements for the degree

Magister Scientia in Clinical Psychology at the North-West University, Potchefstroom

Campus, South Africa

Supervisor: Prof. I. P. Khumalo

Co-supervisor: Prof. M. P. Wissing

December 2012

Table of Contents

Acknowledgements

It would be without grace if I did not give thanks to God (the most gracious and most merciful) for his favour, love and faith in me. *Te Deum laudamus...*

I wish to express, a special and most heartfelt word of appreciation to the following individuals with whose assistance this project might have been impossible:

- To my father, Michael, whose wisdom and guidance have led me tirelessly to this point. To my mother, Mmatshidiso, whose upbringing and warmth stay with me still and remind of the importance of seeking meaning in life.

- To my sister, whose strength (often unseen) inspires me to expand upon my professional, social and emotional comforts.

- To my supervisor, Itumeleng P. Khumalo, your eternal drive and critique saw this work through to this point.

- To my co-supervisor, Marie P. Wissing, for your knowledge in the field and guidance.

- To the extended Temane family, your support could not go unnoticed. Especially to beloved aunt, Annie, who reminded me always to find passion (even in the seemingly) in the mundane. To my dear cousin Dineo, for always reminding me of my ambitions.

- And finally to my girlfriend (and best friend), Pholly, whose faith in me continues to inspire. Without your belief in me, this process would have been more painful and less enlightening, I thank you.

In haste, I may have omitted the names of people who were very helpful to me, I do not undermine their assistance or their support. *Gratias tibi.*

Summary

Validation of the Meaning in Life Questionnaire in an African Context

Keywords:

Cross-cultural; Meaning in Life Questionnaire, psychometric properties, South Africa, validation

In psychology and other related fields, the study of meaning in life has shown a re-emergence of scientific interest (e.g. Hicks & King, 2009; Ho, Cheung & Cheung, 2010; Steger, Oishi & Kashdan, 2009; Wong, 2011). The recent increase in interest may be attributed to the links made to positive psychological and health outcomes, such as: psychological strengths, subjective well-being and hope amongst others (Diener, 2000; Diener & Ryan, 2009; Fredrickson, 2000; Snyder, 2002; Ungar, 2008, 2011). Research has also shown that a lack of meaning in life has been linked to negative psychological outcomes (Steger et al., 2006; Zika & Chaimberlain, 1992). Whilst authors agree that meaning in life is important the conceptualisation of meaningfulness has been conflicted (Auhagen, 2000). More recently Steger and his colleagues (2006) have conceptualised that meaning in life consists of two inter-dependent constructs; namely the presence of meaning in life and the search for meaning in life.

The presence of meaning in life is defined as "the extent to which people comprehend, make sense of and see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission or overarching aim in life"; and the search for meaning in life refers to the "degree to which people are trying to establish and/or augment their comprehension of meaning in life, significance and purpose" (Steger et al., 2006). Based on this conceptualisation Steger et al. (2006) have developed the MLQ (Meaning in Life Questionnaire) with two separate but interrelated constructs; the Presence of

Meaning in life (5-items) and the Search for Meaning in life (5-items). The items of the measure are measured on a 7-point Likert-scale where participants are required to state their agreement with statements ranging from 1 (Absolutely untrue) to 7 (Absolutely true). The aim of this study was to investigate the psychometric properties of the Meaning in Life Questionnaire (Steger et al., 2006) as a measure of the Search for and Presence of Meaning in life so as to validate the scale in an African context. In an endeavour to validate this scale a multicultural group of students from the North-West University in South Africa (n=326) recruited by their lecturers, completed a set of questionnaires. Most of the participants were female (n=243, 74.5%), while male participants made up 24.5% of the sample. The results of this study are in support of the scale's reliability and validity in an African context. Confirmatory factor analysis confirms the goodness of fit of the scale. The two factor structure was favoured. In conclusion, future research should also investigate the measurement equivalence of the MLQ on the basis of language (see Hambleton & Zenisky, 2011; Van de Vijver & Leung, 2011). Measurement equivalence and item response theory studies may provide evidence on whether there are cross-cultural and language differences in how participants interpret and respond to the MLQ items. One might also assess relationships between meaning in life and positive functioning indicators in this sample.

Word count: 494

Opsomming

Bekragtiging van die Betekenis van Lewe vraelys in 'n Afrika-konteks

Sleutelwoorde:

Betekenis van lewe vraelys, Multikultureel, , psigometriese eienskappe, Suid-Afrika, bekragtiging

In sielkunde en ander verwante velde, het die studie oor die betekenis van lewe opnuut weer wetenskaplike belangstelling geprikkel (bv. Hicks & King, 2009; Ho, Cheung & Cheung, 2010; Steger, Oishi & Kashdan, 2009; Wong, 2011). Die onlangse verhoogde belangstelling kan aan die koppeling wat tussen positiewe psigologiese en gesondheidsuitkomste gemaak word, toegeskryf word. Voorbeelde hiervan is onder andere: psigologiese sterkpunte, subjektiewe welstand en hoop (Diener, 2000; Diener& Ryan, 2009; Fredrickson, 2000; Snyder, 2002; Ungar, 2008, 2011). Navorsing het ook aangetoon dat 'n gebrek aan betekenis in die lewe aan negatiewe psigologiese uitkomste gekoppel is (Steger et al., 2006; Zika & Chaimberlain, 1992). Terwyl outeurs saamstem dat betekenis in die lewe belangrik is, is die konseptualisering van betekenisvolheid egter teenstrydig (Auhagen, 2000). Meer onlangs het Steger en sy kollegas (2006) gekonseptualiseer dat betekenis in die lewe uit twee interafhanklike boustene bestaan; naamlik die teenwoordigheid van betekenis in die lewe en die soeke na betekenis in die lewe.

Die teenwoordigheid van betekenis in die lewe word gedefinieer as "die mate waarin mense verstaan, sin maak van en betekenis in hul lewens sien, te same met die mate waarin hulle ervaar dat hulle 'n doel, missie of oorkoepelende doel in die lewe het". Die soeke na betekenis in die lewe verwys na die "mate waarin mense probeer om hul begrip van betekenis in die lewe, betekenisvolheid en doel vas te stel en/of aan te vul" (Steger et al., 2006). Op grond van hierdie konseptualisering het Steger et al. (2006) die BLV (Betekenis in die Lewe

Vraelys) met twee afsonderlike, maar verwante boustene ontwikkel; naamlik die Teenwoordigheid van Betekenis in die lewe (5-items) en die Soeke na Betekenis in die lewe (5-items). Die items word op 'n 7-punt Likert-skaal gemeet waar daar van deelnemers verwag word om hul ooreenstemming met die stellings aan te dui – die skaal wissel van 1 (Absoluut onwaar) tot 7 (Absoluut waar). Die doel van hierdie studie was om die psigometriese eienskappe van die Betekenis van die Lewe Vraelys (Steger et al., 2006) as 'n maatstaf van die Soeke na en Teenwoordigheid van betekenis in die lewe te ondersoek, sodat die skaal in 'n Afrika-konteks bekragtig kan word. In 'n poging om hierdie skaal te bekragtig het 'n multikulturele groep studente van die Noordwes-Universiteit in Suid-Afrika (n = 326) wat deur hul dosente gewerf is, 'n reeks van vraelyste voltooi. Meeste van die deelnemers was vroulik (n=243, 74.5%), terwyl die manlike deelnemers 24.5% van die groep uitgemaak het. Die resultate van hierdie studie ondersteun die skaal se betroubaarheid en geldigheid in 'n Afrika-konteks. Bevestigende faktoranalise bevestig die betroubaarheid of goeie passing van hierdie skaal. Die tweefaktorstruktuur was bevoordeel. Ten slotte, moet toekomstige navorsing ook ondersoek na die metingsekwivalensie van die BLV, op die basis van taal, instel (sien Hambleton & Zenisky, 2011; Van de Vijver& Leung, 2011). Metingsekwivalensie en itemresponsteorie-studies kan bewys lewer op die vraag of daar multikulturele en taalverskille, in hoe deelnemers die BLV items interpreteer en daarop reageer, is. Mens kan ook die verhoudings tussen betekenis in die lewe en positiewe funksioneringsaanwysers in hierdie monster bepaal.

Woordtelling: 534

1. Declaration by the Student

I, the undersigned, hereby declare that **Validation of the Meaning in Life Questionnaire in a South African context** is my own original work and that I have not previously submitted it in its entirety or in part at any university for a degree.

…………………………………………….   …………………………..

Signature   Date

(L. Temane)

2. Declaration by the Supervisor

I, the undersigned, hereby declare that this dissertation in article format was prepared under my supervision and I confirm that it meets all academic criteria for the process of award of academic degree.

………………………………………………   ………………………..

Signature   Date

(Prof. I. P. Khumalo)

3. Preface

3.1. Article format

This dissertation was done in article format as indicated by rule A.7.5.4.3 of the General Academic Rules of the North-West University.

3.2. Selected Journal

The target journal for publication is the Journal of Psychology in Africa. A longer version of the manuscript is handed in for examination. The manuscript that will be submitted to the Journal of Psychology in Africa will be a shortened version, in accordance with the journal's guidelines.

The referencing style and editorial approach for this manuscript is in line with the prescriptions of the Publication Manual (6th edition) of the American Psychological Association (APA), except where the requirements of the Journal for Psychology in Africa differs and the journal's guidelines were followed.

For the purpose of the dissertation the pages were numbered consecutively. However, the manuscript will be numbered starting from page 1 for submission to the journal.

3.3. Permission from co-authors

A letter signed by the co-authors giving authorisation for use of this manuscript for the purpose of submission for a M.A. Degree follows on the next page.

Letter of Permission

We, the co-authors, hereby give consent that Lesego Temane, first author, may submit the manuscript *Validation of the Meaning in Life Questionnaire in a South African Context* for the purpose of a dissertation. It may also be submitted to *Assessment* for review.

_____   _____

Prof. I. P. Khumalo   Prof. M. P. Wissing

Co-author and Supervisor   Co-author and Co-supervisor

4. Author Guidelines and Manuscript

Validation of the Meaning in Life Questionnaire in a South African Context

4.1. Instructions to authors

Target journal: *Journal of Psychology in Africa*

The **Journal of Psychology in Africa** includes original articles, review articles, book reviews, commentaries, special issues, case analyses, reports, special announcements, etc. Contributions should attempt a synthesis of local and universal methodologies and applications. Specifically, manuscripts should:

1) Combine quantitative and qualitative data, 2) Take a systematic qualitative or ethnographicapproach,3)Use an original and creative methodological approach, 4) Address an important but over-looked topic, and 5) Present new theoretical or conceptual ideas. Also, all papers must show an awareness of the cultural context of the research questions asked, the measures used, and the results obtained. Finally the papers should be practical, based on local experience, and applicable to crucial development efforts in key areas of psychology.

Editorial policy

Submission of a manuscript implies that the material has not previously been published, nor is it being considered for publication elsewhere. Submission of a manuscript will be taken to imply transfer of copyright of the material to the publishers, Elliott & Fitzpatrick. Contributions are accepted on the understanding that the authors have the authority for publication. Material accepted for publication in this journal may not be reprinted or published, Elliott & Fitzpatrick. The Journal has a policy of anonymous peer review. Papers will be scrutinised and commented on by at least two independent expert referees or consulting editors as well as by an editor. The Editor reserves the right to revise the final draft of the manuscript to conform to editorial requirements.

Manuscripts

Manuscripts should be submitted in English, French, Portuguese or Spanish. They should be typewritten and double-spaced, with wide margins, using one side of the page only. Manuscripts should be submitted to the Editor-in-Chief, Journal of Psychology in Africa, Professor Elias Mpofu, PhD., CRC, Associate Professor, Faculty of Health Sciences, University of Sydney, Cumberland Campus, East Street, PO Box 170 Lidcombe NSW 1825, Australia, email: e.mpofu@usyd.edu.au. We encourage authors to submit manuscripts via e-mail, in MS Word, but we also require two hard copies of any e-mail submission. Before submitting a manuscript, authors should peruse and consult a recent issue of the Journal of Psychology in Africa for general layout and style. Manuscripts should conform to the publication guidelines of the latest edition of the American Psychological Association (APA) publication manual of instructions for authors.

Manuscript format

All pages must be numbered consecutively, including those containing the references, tables and figures. The typescript of manuscripts should be arranged as follows:

Title: This should be brief, sufficiently informative for retrieval by automatic searching techniques and should contain important key-words (preferably <10 words).

Author(s) and Address(es) of author(s): The corresponding author must be indicated. The author's respective addresses where the work was done must be indicated. An e-mail address, telephone number and fax number for the corresponding author must be provided.

Abstract: Articles and abstracts must be in English. Submission of abstracts translated to French, Portuguese and/or Spanish is encouraged. For data-based contributions, the abstract

should be structured as follows: Objective—the primary purpose of the paper, Method – data source, subjects, design, measurements, data analysis, Results – key findings, and Conclusions – implications, future directions. For all other contributions (except editorials, letters and book reviews) the abstract must be a concise statement of the content of the paper. Abstracts must not exceed 120 words. It should summarize the information presented in the paper but should not include references.

Referencing: Referencing style should follow APA manual of instructions for authors.

References in text: References in running text should be quoted as follows: (Louw & Mkize, 2004), or (Louw, 2004), or Louw (2000, 2004a, 2004b), or (Louw & Mkize, 2004), or (Mkize, 2003; Louw & Naidoo, 2004). All surnames should be cited the first time the reference occurs, e.g., Louw, Mkize, and Naidoo (2004) or (Louw, Mkize, & Naidoo, 2004). Subsequent citations should use et al., e.g. Louw et al. (2004) or (Louw et al., 2004). 'Unpublished observations' and 'personal communications' may be cited in the text, but not in the reference list. Manuscripts accepted but not yet published can be included as references followed by 'in press'.

Reference list: Full references should be given at the end of the article in alphabetical order, using double spacing. References to journals should include the author's surnames and initials, the full title of the paper, the full name of the journal, the year of publication, the volume number, and inclusive page numbers. Titles of journals must not be abbreviated. References to books should include the authors' surnames and initials, the year of publication, the full title of the book, the place of publication, and the publisher's name. References should be cited as per the examples below:

Appoh, L. (1995). The effects of parental attitudes, beliefs and values on the nutritional status of their children in two communities in Ghana (Unpublished master's thesis). University of Trondheim, Norway.

Peltzer, K. (2001). Factors at follow-up associated with adherence with directly observed therapy (DOT) for tuberculosis patients in South Africa. Journal of Psychology in Africa, 11, 165-185.

Sternberg, R. J. (2001, June). Cultural approaches to intellectual and social competencies. Paper presented at the Annual Convention of the American Psychological Society, Toronto, Canada.

Cook, D. A., & Wiley, C. Y. (2000). Psychotherapy with members of the African American churches and spiritual traditions. In P. S. Richards & A. E. Bergin (Ed.), Handbook of psychotherapy and religiosity diversity (pp. 369-396). Washington, DC: American Psychological Association.

Tables: Tables should be either included at the end of the manuscript or as a separate file. Indicate the correct placement by indicating the insertion point in brackets, e.g., <Insert Table 1 approximately here>. Tables should be provided as either tab-delimited text or as a MS Word table (One item/cell). Font for tables should be Helvetica text to maintain consistency.

Figures/Graphs/Photos: Figures, graphs and photos should be provided in graphic format (either JPG or TIF) with a separate file for each figure, graph or photo. Indicate the correct placement by indicating the insertion point in brackets, e.g., <Insert Figure 1 approximately here>. Provide the title for the item and any notes that should appear at bottom of item in the manuscript text. Items should be cropped to avoid the appearance of superfluous white space

around items. Text on figures and graphs should be Helvetica to maintain consistency. Figures must not repeat data presented in the text or tables. Figures should be planned to appear to a maximum final width of either 80 or 175 mm. (3.5 or 7.0"). Complicated symbols or patterns must be avoided. Graphs and histograms should preferably be two-dimensional and scale marks provided. All lines should be black but not too heavy or thick (including boxes). Colour only in photos or colour sensitive graphic illustrations. Extra charges will be levied for colour printing.

Text: 1. Do not align text using spaces or tabs in references. Use on of the following: (a) use CTRL-T in Word 2007 to generate a hanging indent or (b) MS Word allows author to define a style (e.g., reference) that will create the correct formatting. 2. Per APA guide- lines, only one space should follow any punctuation. 3. Do not insert spaces at the beginning or end of paragraphs. 4. Do not use colour in text.

Lead authors will receive a complimentary issue of the journal issue in which their article appears. Reprints in PDF format can be purchased from the publishers, Elliott & Fitzpatrick. The Journal does not place restriction on manuscript length but attention is drawn to the fact that a levy is charged towards publication costs which is revised from time to time to match costs of production. Instructions for remitting the publication levy are provided to lead or corresponding authors by the Editorial Assistant of the journal.

Instructions to authors are available at: http://www.elliottfitzpatrick.com

4.2. Manuscript

Validation of the Meaning in Life Questionnaire in a South African Context

Lesego Temane*, Itumeleng P. Khumalo, Marié P. Wissing.

Department of Psychology, North-West University, Potchefstroom, South Africa

*Corresponding author:

Itumeleng P. Khumalo, Optentia Research Programme, North-West University (Vaal-Triangle Campus), Vanderbijlpark, South Africa.

E-mail: Tumi.Khumalo@nwu.ac.za

Validation of the Meaning in Life Questionnaire in an African Context

Abstract

The aim of this study was to investigate the psychometric properties of the Meaning in Life Questionnaire (MLQ) in a South African sample. A multi-cultural group of undergraduate students (N=326) completed the MLQ and other measures. The results report descriptive statistics, reliability, inter-item correlations, construct and convergent validity. Internal consistency investigations present satisfactory reliability indices for both the Presence of Meaning (MLQ-P) and Search for Meaning (MLQ-S) sub-scales. The theoretically intended two factor structure was supported by the data. The MLQ-P was associated with mental health, satisfaction with life, sense of coherence and spiritual well-being; whereas the MLQ-S was associated with depression. The findings of this study present the opportunity for furthering empirical investigation into meaning in life in an African context.

Abstract word count = 122

Keywords: Cross-cultural; Meaning in Life Questionnaire, psychometric properties, South Africa, validation.

Validation of the Meaning in Life Questionnaire in an African context

Literature in psychology and related fields shows a re-emergence of scientific interest in the study of meaningfulness (e.g. Hicks & King, 2009; Ho, Cheung & Cheung, 2010; Leontiev, 2013; Steger, Oishi & Kashdan, 2009; Wong, 2011). The importance of meaning in life is demonstrated by both theoretical grounding (Frankl, 1963, 1965; Maddi, 1967; Steger, 2012; Wong, 2012) and empirical findings (e.g. Brassai, Piko, & Steger, 2011; Cohen & Cairns, 2013; Schnell, 2009) linking it to socio-demographic and environmental antecedents and health outcomes. This growing interest in the study of meaning in life has occurred together with an interest in other positive constructs, psychological strengths and processes such as subjective well-being (Diener, 2000; Diener & Ryan, 2009), positive emotions (Fredrickson, 2000), hope (Snyder, 2002), and resilience (Ungar, 2008, 2011) among others. In eudaimonic well-being models meaning in life is a constituting dimension or component. Three examples are Ryff's (1989) multidimensional model of psychological well-being, Waterman et al.'s (2010) eudemonic identity theory, and the sense of coherence model of Antonovsky (1987, 1993). It is thus apt to point out that "[f]ew mysteries have captured the human imagination as persistently as meaning in life" (Hicks & King, 2009, p.638).

Benefits of Meaning in Life

Numerous empirical studies have shown the benefits of meaning in life through positive associations with well-being indicators and the inverse with indicators of ill-being and psychopathology. A Turkish study found that perceiving one's life to be meaningful is a significant predictor of subjective well-being (Doğan, Sapmaz, Tel, Sapmaz & Temizel, 2012). Similarly, Steger reported a positive association between meaning in life and life satisfaction (Steger, Kashdan & Oishi, 2008), and better well-being across life stages (Steger,

Oishi & Kashdan. 2009). A Chinese study also found a positive association between the pursuit of meaningful goals and domain specific satisfaction (Ho, Cheung, & Cheung, 2010). In the domain of work, Steger, Dik and Duffy (2012) found that people who engaged in work which they experienced as meaningful were more likely to report life satisfaction. Conversely, a lack of meaning in life has been associated with negative psychological outcomes (Dogăn et al., 2012). Theorists previously believed that the absence of meaning in life (Frankl, 1963; Maddi, 1967) could be a state of psychopathology. For example *existential neuroses* referred to a combination of boredom, apathy and aimlessness as symptoms of a meaningless life (Maddi, 1967). The absence of meaning has also been linked to a greater need for therapy. Meaning in life is negatively correlated with indices of psychopathology such as depression, anxiety (Steger et al, 2006), and negative affect (Zika & Chamberlain, 1992). In a study among Romanian adolescents, Brassai et al. (2011) found that meaning in life was a protective factor against ill-health.

Conceptualisation and measurement of meaning in life

Both the interest in and value of meaningfulness show a greater need for a clear conceptualisation and adequate of meaning in life as a construct. So far, a great variation in the definition and description of meaning in life is found. Hicks and King (2009) observed that although there is great agreement that meaning in life is important, there remains no consensus regarding its definition and operationalisation. According to them, what is found in the literature allows meaning in life many connotations, including goal pursuit and satisfaction, life comprehension and sense of connectedness and coherence. Schnell's (2009) assertion on the clarity of conceptualisation and operationalisation captures this essence of the position: "If meaningfulness is assumed to be a specific quality of experience, not

exchangeable for interest in life, satisfaction with life, or absence of depression, a clean assessment of the construct is needed" (p. 484).

Furthermore, Hicks and King (2009) placed doubt on the task of developing an operational definition of meaning in life which they refer to as "this lofty construct" (Hicks & King, 2009, p.641). Nevertheless, a number of measures for meaning in life have existed before Steger's meaning in life questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006), which continue to be developed and validated. Many studies have used the Life Regard Index (LRI: Crumbaugh & Maholick, 1964), Purpose in Life test (PIL: Battista & Almond, 1973; Debats, 1990), and Personal Meaning Index (PMI) as measures of meaning. Each one has a different angle or emphasis on an aspect or description of meaning. For example, the LRI measured the extent of seeking and fulfilling meaning in life (Reker, 1992, 2005); the PIL assessed the degree to which people experienced purpose in life (Battista & Almond, 1973); and the PMI was a measure of life goal achievement, life mission and sense of direction, order and reason for existence, and logical integration and consistency in one's understanding of him/herself, others and life (Reker, 2005). In a recent study in South Africa De Klerk et al. (2009) explored the psychometric properties of the LRI among white collar workers in six organisations of different industries. Their data did not support the intended two factor structure of Framework and Fulfilment, instead the researchers deleted two items and found good fit for a uni-dimensional factor structure using the remaining 26 items.

More recently, while instruments such as the Sources of Meaning and Meaning in life Questionnaire (SoMe; Schnell, 2009) are developed and used, others such as the Seeking of Noetic Goals Test (SONG; Crumbaugh, 1977) are being rediscovered (e.g. Schelenberg, Baczwaski, & Buchanan, 2013). The SoMe is based on a hierarchical model of meaning consisting of five levels whereby whereas the higher levels are an integration of the lower

ones (Schnell, 2004, 2009). Meaning in life is at the apex of this hierarchy and represents the most abstract and complex level of the model, and is drawn from one's global evaluation of life (Schnell, 2009). Schnell (2009) defines meaningfulness as "a fundamental sense of meaning, based on an appraisal of one's life as coherent, significant, directed and belonging" (p. 487), and the SoMe allows respondents to report their sources of meaning out of the possible 26 sources. The SONG is unique in a sense that it was developed explicitly as a measure of motivation to discover meaning, and as a complement to the PIL (see Schulenberg et al., 2013).

Steger et al. (2006) identified measures of meaning as the one shortcoming in the meaning in life literature. The problems included vague construct conceptualisation, inconsistent factor structure, item content tapping on other constructs, poor criterion-related validity, the exclusion of the search for meaning component, and poor distinction between presence of meaning and sources of meaning. Steger et al (2006) and Schnell (2009) seem to be in agreement on the limitations they observed in the measurement of meaning over the years. With these previous measures, some of the item content seemed to be confounded with, and tapping on other psychological variables and indices of subjective well-being (Schnell, 2009; Steger et al., 2006). Steger et al. (2006) also noticed that the theoretically intended factor structures were often not supported by empirical findings. Finally the omission and neglect of the search for meaning component by other measures has been a serious shortfall (Steger et al., 2006).

Based on the humanistic psychology literature, Steger (2009, 2012; Steger et al., 2006) came to understand meaning in life as presence of and search for meaning in life: "the sense made of, and significance felt regarding, the nature of one's being and existence" (Steger et al., 2006, p.81). Meaning consists of a cognitive element, which is the comprehension of

one's life as meaningful, and a motivational one which refers to how that understanding is augmented with one's life's aim (Steger, 2012). The presence of meaning is "the extent to which people comprehend, make sense of and see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission or overarching aim in life" (Steger, 2009, p. 682). This conceptualisation dovetails with Wong's (2012) meaning model. The search for meaning component is, however, unique to Steger's model and refers to the degree to which people are trying to establish and/or augment their comprehension of meaning in life, significance and purpose (Steger, 2009). As if to simplify the matter, Steger and Kashdan (2013) paint a picture of presence as the destination and search as the journey.

The conceptualisation of search for meaning in life and the presence of meaning in life as separate constructs has served as an improvement in a number of ways. First, a clear distinction between meaning in life and other psychological constructs immediately emerges. Second, the inclusion of the search for meaning as a separate yet related dimension in addition to the presence of meaning aligns this conceptualisation to theoretical frameworks of meaning in life by Frankl (1963; 1965) as based on the idea of man's innate search for meaning in his life. This model also considers meaning in life as a balanced construct with cognitive, affective and motivational elements. As such, meaning in life as derived through comprehension and purpose is a pivotal aspect of human life, and found to be important in numerous domains of psychological functioning: fostering well-being, resolving psychological distress, and cultivating a sense of spiritual connectedness (Steger, 2012).

Meaning in life questionnaire (MLQ)

The MLQ was then developed as an operationalisation of meaning in life as conceptualised by Steger and thus an alternative measure to the scales mentioned earlier. It

has been applied else-where elsewhere and found to have good psychometric properties and a robust ability to study the dynamics of meaning in its interaction with other psychological constructs. Doğan and colleagues (2012) used the MLQ to investigate the association between meaning in life and subjective well-being among Turkish university students, found that both search for and presence of meaning predicted SWB, with meaning in life accounting for 34% of the variance in SWB. Two other studies independently examined the dynamics and interactions of search for and presence of meaning with psychosocial well-being and functioning (see Cohen & Cairns, 2012; Dezutter, 2013). Interestingly, a shorter format (6 items) of the scale has also been used. Steger and Samman (2012) explored its psychometric properties among a nationally representative sample of Chilean households and found satisfactory reliability and validity. The application of the MLQ in diverse samples and its contribution to cross-cultural studies was recommended by Steger et al. (2006).

Cross-cultural transportation and adaptation of measurement

It is generally accepted that the validity and reliability of an instrument for use in a new group or context are not a given and must be tested (Clark & Watson, 1995; Comrey, 1988; Hambleton & Zenisky, 2011; Simms, 2008; Van de Vijver & Leung, 2011). In their endeavour to validate the LRI in South Africa, De Klerk et al. (2009, p.316) noted that "cultural differences may affect responses to particular psychometric instruments". The reality is that with globalisation, there is an increasing need to transport and adapt measuring instruments for use in different cultures and countries. Other scales that have been transported and adapted which include language translation for some, in the South African context, with or without adjustments to item content and inclusion or factor structure are: the satisfaction with life scale, sense of coherence questionnaire, affectometter-2 (Wissing et al., 2010), the Mental health Continuum –Short Form (Keyes, et al., 2008), Strengths Inventory (Khumalo,

Wissing & Temane, 2008; Van Eeden, Wissing, Dreyer, Park, & Peterson, 2008), and the questionnaire for eudaemonic well-being (Schutte, Wissing, & Khumalo, 2013).

Literature on the study of meaning in life in cross-cultural contexts is an emerging area of importance. There is new evidence of the study of meaning in life in various socio-cultural contexts such as Japan (Steger et al., 2008), Korea (Ju, Shin, Kim, Hyun & Park, 2013), Eastern Europe (Dogăn et. al., 2012) and Portugal (Simões, Oliviera, Lima, Viera and Nogueira 2010). However, no studies are found in literature which addresses the psychometric properties of the MLQ in an African context. Highlighting the importance of this study for furthering meaning in life research in the scope of cross-cultural. Authors are in agreement that culture is important as it provides an overarching guide about how people make sense of their life (Beosch, 1991; Stroink & De Ciccio, 2011) and derives meaning from events. Thus, people differ in the degree to which they contemplate and seek meaning in life (Mascaro & Rosen, 2008). A study of the measurement of meaning in life in an African group is an important endeavour to provide valid and reliable tools to expand research of the construct.

Aim of the study

The present study is therefore concerned with an exploration of psychometric properties of the MLQ in a multi-cultural group of South African students. The availability of a meaning in life measure for an African population can be considered an important contribution to the field of positive psychology, and the study of meaning in life in particular. It is expected that for the scale to be deemed reliable both its subscales will yield Cronbach's alpha coefficients of between .70 and .90 (Streiner, 2003). A demonstration of validity is expected from a replication of the theoretically intended factor structure, and the positive

association with well-being for presence of meaning and a moderate negative association between search for meaning and indices of positive well-being, as well as the inverse for both sub-scales. Clark and Watson (1995), Comrey (1988) and Simms (2008) give extensive reviews and guidelines regarding the development and validation of measuring instruments in psychology. Clark and Watson (1995) emphasize the importance of the uni-dimensionality of scales; indicating that correlations which are similar in value and densely grouped together are an indication that a sub-scale consistently measures a single construct or element of a construct. The work of Comrey (1988) and Simms (2008) state states that the development of a scale must include the validation thereof. The aim of this study abides by that guideline.

Method

Participants and setting

A convenient sample of a multicultural group of 326 students from a university in South Africa participated in cross-sectional survey. They were recruited via their lecturers. Most of the participants were female (n = 243, 74.5%). Male participants made up 24.5% of the sample. Three people did not indicate their gender. Although 95% of the sample was between the ages of 18 and 28 years, there were 14 individuals who indicated their age as being between 29 and 54 years. The sample had an average age of 21 years (SD = 4.08), with a skewness of 4.44 (SE = .14) and kurtosis of 25.00 (SE = .27). Six people did not indicate their age. Four options enquiring about home language were given to the respondents: English, Afrikaans, Setswana and other. The majority of the participants indicated to speak "other" (179, 54.9%), which could be any of the other eleven official languages spoken in South Africa. Respondents who indicated English as their home language were 60 (18.4%), those who indicated Setswana were 61 (18.7%), and those who indicated Afrikaans were 22

(6.7%). Four people did not respond to the home language enquiry. All participants in this study completed the English (language of tutoring) version of the MLQ. 204 (62.6 %) of the participants reported that they regularly practised religion, while 18 (5.5% said that did not practise religion at all and 101 (31%) practised occasionally.

Measures

The English battery of measuring instruments completed by participants consisted of: The MLQ (Steger et al., 2006), Mental Health Continuum Short-Form (Keyes, 2002; Keyes et al., 2008), Patient Health Questionnaire (Kroenke et al., 2001), Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), Spiritual Well-being Scale (Ellison, 1983; Ellison & Smith, 1991), and Sense of Coherence questionnaire (Antonovsky, 1987, 1993).

Meaning in Life Questionnaire (MLQ: Steger et al., 2006). The MLQ consists of ten items as an operational representation of the meaning in life construct by Steger et al. (2006) as consisting of two separate but interrelated constructs; the Presence of Meaning in life (5-items) and the Search for Meaning in life (5-items). The items are measured on a 7-point Likert-scale where participants are required to state their agreement with statements ranging from 1 (Absolutely untrue) to 7 (Absolutely true). Scores on either sub-scale range from 7 to 35 whereas higher scores indicate the presence of meaning or the search for meaning in life. Steger et al. (2006) reported Cronbach's alpha coefficients of between 0.82 to 0.86 for the MLQ-Presence scale and 0.86 to 0.87 for MLQ-Search for a student sample. Evidence of the reliability and validity of this scale has been reported in Korean (Ju, et al., 2013), Japanese (Steger, et al., 2008), Portuguese (Simões et. al.2010), Turkish (Dogăn et. al., 2012) and Romanian (Brassai, et al., 2012) samples. No literature could be identified reporting on the reliability and/or the validity of the MLQ in an African Context.

Mental Health Continuum Short-Form (MHC-SF: Keyes, 2002; Keyes et al., 2008). The MHC-SF is a 14 item self-report instrument which measures positive mental health by means of three dimensions: Emotional well-being (3 items), Social well-being (5 items), and Psychological well-being (6 items). Positive mental health represents the top end of the well-being spectrum, with low scores showing languishing and high scores indicative of flourishing. This measure employs a 6-point scale. Keyes et al. (2008) demonstrated the validity of the MHC-SF in a Setswana-speaking sample and reported a Cronbach's alpha coefficient of 0.74 for the total scale score. In the current study, Cronbach's alpha coefficients were .77 for the Emotional Well-Being subscale, .72 for the Social Well-Being subscale, and .79 for the Psychological Well-Being subscale.

Patient Health Questionnaire – (PHQ-9: Kroenke et al., 2001). The PHQ-9 is a 10 item self-report depression measure based on the nine depressive symptoms corresponding to the DSM-IV (TR) criteria (Kroenke & Spitzer, 2002) to determine diagnosis and severity of uni-polar depressive symptoms. The scale is scored on a four point frequency response style. The PHQ-9 has been found to have a Cronbach's alpha of 0.89 (Kroenke et al., 2001). In a recent South African study, satisfactory internal consistency reliability as indicated by a Cronbach's alpha of 0.81 was found (Khumalo et al., 2010). In the current study the Cronbach's alpha reliability coefficient was .82.

Satisfaction with Life Scale (SWLS: Diener et al., 1985). The SWLS is a self-report scale used to report the degree of perceived general satisfaction with life. This construct refers to the cognitive component of one's evaluation of subjective well-being. The SWLS consists of five items measured on a 7-point scale. Test-retest reliability study yielded results of a 0.82 index, and a Cronbach's alpha-reliability index of 0.87 (Diener et al. 1985). Wissing et al. (2010) who translated the SWLS into Afrikaans and Setswana also found it to be

reliable and valid for use in South Africa. In the current study a Cronbach's alpha of .74 was found for the PHQ-9.

Spiritual Well-being Scale (SWS: Ellison, 1983; Ellison & Smith, 1991). The SWS is a 20-item measure of the two dimensions of Spirituality which measure Religious Well-being, and Existential Well-being. There are a few studies which attest to the validity and reliability of the scale (Ellision & Smith, 1991; Mickley, Soeken & Belcher, 1992) presenting Cronbach's alpha coefficients of between 0.78 and 0.84 for the total scale. A South African study found the SWS to be in an internal reliability index of 0.92 for the total scale score in a predominantly white group and 0.88 for a predominantly black group (Temane & Wissing, 2006). Cronbach alpha coefficients in the present study were .89 for the Religious Well-Being subscale, and .85 for the Spiritual Well-Being subscale.

Sense of Coherence (SOC-29: Antonovsky, 1987, 1993). The present study implemented the 29-item version of the SOC, using a seven-point semantically anchored response format. Although the SOC is intended as a uni-dimensional scale, it includes three components: comprehensibility, manageability and meaningfulness. A review of a number of empirical studies (Antonovsky, 1993) showed that the SOC had good to excellent internal consistency reliability. Internal reliability indices of 0.78 to 0.93 were reported in a number of studies, and test-retest reliability indices of 0.56 to .096 have been reported. The SOC has been found to be valid in Setswana-speaking populations as shown for by Cronbach's alpha coefficients of 0.88 and 0.76 (Temane & Wissing, 2006). The SOC was found to have a Cronbach's alpha coefficient of .82 in the current study.

Procedure and ethical considerations

Participants were recruited from full-time undergraduate classes at a South African university via their lecturers. The participants completed informed consent forms prior to voluntarily commencing with responding to the questionnaires. Completion of the questionnaires took place in the lecture halls, under the supervision of the researchers and with the assistance of trained fieldworkers who were graduate students in Psychology. The current study took place within the FORT-3 research project (Wissing, 2008) which was granted ethical approval by the North-West University Ethics (NWU 00002-07-A2).

Data Analysis

In line with the aim of the study, psychometric properties indicative of the reliability and validity of the MLQ in the target sample were investigated. Analyses for the descriptive statistics and reliability, construct validity, and convergent validity are outlined (cf Clark & Watson, 1995; Pallant, 2011; Simms, 2008).

Construct validity and factor structure. The operational definition of meaning in life according to Steger (Steger, 2009; Steger et al., 2006) stipulates that MLQ-Search and MLQ-Presence are two independent subscales with moderate correlation and different patterns of association with other well-being indices. Structural validity as proposed in the operational definition was examined using item-level confirmatory factor analysis. In this case, confirmatory factor analysis with a restriction for two factors was conducted using direct oblimin rotation while assuming the independence of the MLQ-Search and MLQ-Presence scales. The two factor solution was also tested using structural equation modelling (Byrne, 2009; Kline, 2011) in AMOS. The alternative factor structure was a uni-dimensional solution. The indices of fit to be reported are Chi square (X^2) , Goodness of fit index (GFI), Browne-Cudeck Criterion (BCC), Normed fit index (NFI), Incremental fit index (IFI),

Tucker-Lewis Index (TLI), Root Mean Square of approximation (RMSEA), Akaike's

Information Criterion (AIC), and the Chi square degrees of freedom ratio (X^2/df).

Descriptive statistics and reliability. Descriptive statistics of the MLQ-Search and

MLQ-Presence, and other measures were subsequently computed. The range and mean

values of the scores and their standard deviations, and skewness and kurtosis values were

reported. Skewness and kurtosis are measures of symmetry and peakedness of distribution

respectively (see Pallant, 2011). Internal consistency reliability was reported using

Cronbach's alpha coefficient which indicates the average correlation of items in a scale

(Streiner, 2003). A Cronbach's alpha value of 0.70 and above is indicative of good reliability

(Nunnally, 1978; Streiner, 2003). The Spearmen inter-item and item-total correlations will

also be computed as a demonstration of internal consistency.

Convergent validity. The correlation patterns of the MLQ-S and MLQ-P and other

measures of well-being and ill-being were determined to ascertain convergent validity. The

positive well-being indices are: spiritual well-being (Ellison, 1983), satisfaction with life

(Diener et al., 1985), sense of coherence (Antonovsky, 1993) and positive mental health

(Keyes, 2002; Keyes et al., 2008). The measure of depression (Kroenke et al., 2001)

represented an index of ill-being. The two sub-scales were correlated with each other.

Positive or negative and significant correlations with medium to high effect size are to be

viewed as indicative of convergent validity.

<div align="center">

Results

</div>

Descriptive statistics

Mean scores and standard deviations, and their skewness and kurtoses values for the MLQ-Presence and MLQ-Search are reported in Table 1. For the MLQ-Presence, item level mean scores ranged between 4.79 (item 6) and 5.52 (item 9), and for the MLQ-S scores between 4.89 (item 10) and 5.65 (item 2). At scale level, the MLQ-Presence attained a mean score of 25.70 (*SD*=6.156) and MLQ Search 26.76 (*SD*=6.607). All skewness values were negative and ranged between -0.57 (item 4) and -1.37 (item 2). This is indicative of a score distribution leaning to the higher values. Kurtosis values which demonstrate the distribution peakedness ranged between -0.52 and 0.99. No specific pattern of descriptive statistics could distinguish the MLQ-Presence and MLQ-Search.

< Table 1 about here >

Internal consistency reliability

Internal consistency reliability was examined using Cronbach's alpha coefficients. Inter-item and item total correlations for dimensionality of the MLQ-Presence and MLQ-Search were also computed. The Cronbach's alpha values of 0.85 for MLQ-P and 0.84 for MLQ-S show good reliability. Furthermore, internal consistency was examined by way of inter-item (Table 2) and item-total (Table 1) correlations. Firstly, from Table 1, the two scales, MLQ-P and MLQ-S were negatively associated (r = - .199, significant to the .01 level). Secondly, the MLQ-P items were positively correlated with the MLQ-P total score but negatively correlated with the MLQ-S total score. A similar pattern is observed for MLQ-S items scores. Inter-item correlations give an idea of coherence among items measuring the same latent variable. In this study, all the MLQ-S items are positively correlated with each other, ranging from .45 to .60, and all the MLQ-P items are positively correlated to each other ranging from .43 to .65. Items of MLQ-P, namely MLQ1 and MLQ9 are negatively

correlated to all items of MLQ-Search. For the others, the picture is not that simple. MLQ4 (Presence) is negatively correlated with 2, 3, 8 and 10, but not 7. Items 5 and 6 are not significantly correlated with items 2, 3 and 7 of Search. It can be derived from these results that the MLQ indeed measures the same but not a totally coherent construct. This is consistent with the theoretical underpinnings and the intended operational definition of meaning in life (Steger, 2009; Steger et al., 2006).

< Table 2 about here >

Construct validity

Confirmatory factor analysis was used to examine the factor structure of the MLQ as a scale consisting of two independent factors, MLQ-S and MLQ-P. Results of the factor structure as indicated by factor loadings (Table 3) and measurement model (Table 4) are reported. Maximum likelihood extraction with direct oblimin rotation was used for CFA. Results show a clear factor structure comprising of two factors: MLQ-S (Factor 1) and MLQ-P (Factor 2). As expected, items 2, 3, 7, 8, and 10 loaded on the MLQ-S factor, with factor loadings of between 0.694 (item 2) and 0.788 (item 3). MLQ-S explained 37.60% of the variance, with an eigenvalue of 3.76, and communalities of its items ranging between 0.428 and 0.530. Items 1, 4, 5 (factor loading = .821), 6, and 9 (factor loading = .571) loaded on the second factor (MLQ-Presence). This factor explained 26.71% of the variance, with an eigenvalue of 2.67, and communality values between 0.349 and 0.572.

< Table 3 about here >

As shown in Table 4, the goodness of fit indices supported the two factor model. The one-dimensional model was the less superior one of the two, indicating that a uni-dimensional

construct of meaning in life was of poor structure. The two factor model attained a smaller

BCC, RMSEA and chi square values, and had NFI, IFI, TLI, and CFI above .90.

< Table 4 about here >

Convergent validity

The correlation between MLQ-S and MLQ-P was computed. Previous research had

found the two to be moderately negatively correlated with different patterns of associations

with other indices of well-being (Steger et al., 2006; Steger et al., 2009). In the present study,

MLQ-S and MLQ-P had a Pearson correlation of -.199, significant to a .01 level. As shown in

Table 5, positive indices were: life satisfaction (Diener et al., 1985), sense of coherence

(Antonovsky, 1987, 1993), positive mental health (Keyes, 2002; Keyes et al., 2008), and

spiritual well-being (Ellison, 1983). Depression (Kroenke et al., 2001) was an indicator of

psychopathology. Theoretically, spiritual well-being and sense of coherence as indices of

eudaemonic well-being, ought to be more closely related to meaning in life. MLQ-P

correlated positively and significantly with them although only showing a correlation

coefficient of .20 with religious well-being. Similarly, these indices of eudaemonic well-

being were negatively correlated to MLQ-S, but not for Religious well-being which had a

positive but not significant correlation coefficient. All other measures of well-being were

positively and significantly correlated with MLQ-P, and negatively or not correlated with

MLQ-S. Depression was negatively correlated with MLQ-P and positively and significantly

correlated with MLQ-S. These results are evidence of convergent validity for the measures of

presence of and search for meaning in life... However, the MLQ-S was not correlated with

indices of well-being, including satisfaction with life and as eudaemonic well-being, as is the

case in the literature (Steger et al., 2006); neither was the MLQ-P correlated with the indices of depression.

< Table 5 about here >

Discussion

The aim of this study was to investigate the psychometric properties of the Meaning in Life Questionnaire (Steger et al., 2006) as a measure of the search for and presence of meaning in life so as to validate the scale in a South African context. This process entailed examining the factor structure as an indication of construct validity, and examining inter-scale correlations as a show of convergent validity. It was expected that a two-factor structure of the MLQ would be supported by the data. Descriptive statistics are also reported which include mean scores, standard deviations, kurtoses and skewness investigations as well the inter-sub-scale correlations. The findings that the scale's psychometric properties were satisfactory support the a priori expectation. The sample who participated in the study was a multicultural group, of whom only 18.4% had English as a Home Language. The English version of the MLQ was found to be reliable and valid for use in this group.

Mean scores of the two meaning in life sub-scales

Descriptive statistics are reported here as a demonstration of the score distribution and dispersion. The sample of students in the current study had higher scores in both the MLQ-P and MLQ-S scales as compared to Japanese and American samples (of approximately the same age; i.e. 20.4 years old) in a previously mentioned study (Steger et al., 2008). A validation study (Doğan et al., 2012) (with a sample mean age of 21.43) shows that participants scored higher on the MLQ-P (M = 27.41; SD = 5.88) rather than the present

African sample, but lower on the MLQ-S (M = 22.98; SD = 7.42). The higher scores on MLQ-S rather than the MLQ-P as found in the current group of students, is in line with findings from previous research which found that younger persons in relation to adults and older people tend to score higher on Search (Steger et al., 2008; Brassai et al., 2012).

Internal consistency reliability

According to Clark and Watson (1995) and Streiner (2003) the range for adequate internal consistency is between .70 and .90. The MLQ proved to be reliable in this sample, with satisfactory reliability coefficients for both the MLQ-P and the MLQ-S subscales. The MLQ-P and the MLQ-S being negatively correlated showed that the sub-scales measure different yet relayed elements of meaning in life. These findings are aligned to the theoretical conceptualisation of meaning in life (Steger et al., 2006; 2009). However, such correlations are not sufficient to explain the complex relationship between the Presence of meaning and Search for meaning scales. This complexity is demonstrated through the different relational patterns of the two dimensions with other indices of functioning and health (Steger & Kashdan, 2013).

Construct validity

Confirmatory factor analysis revealed a two factor model of meaning in life to have better fit, than the one factor model, consistent with Steger et al.'s (2006) conceptualisation and operationalisation of meaning in life. Numerous studies have provided evidence for the presence of two interdependent sub-constructs in meaning in life (Steger et al., 2006, Steger et al., 2008; Doğan et al., 2012). Whilst studies have advanced the knowledge that meaning in life consists of these two constructs, it seems that the relationship between the two is more complex (Dezutter et al., 2013 Steger & Kashdan, 2013). Our findings are in line with the

findings by Steger (2009; Steger et al., 2006) that meaning in life comprises two interdependent factors, MLQ-P and MLQ-S. The high factor loadings by the items and the 64.42% of the cumulative variance being explained by the two sub-scales in the total measurement also attest to the coherence of the items in measuring the intended construct. In addition, this was supported by a measurement model from AMOS where a two factor structure showed better fit.

Convergent validity

The MLQ also showed good convergent validity in the current sample. The MLQ-P subscale was positively correlated with indices of positive mental health, subjective well-being and dimensions of spirituality; and is negatively correlated with the presence of depression. This is consistent with previous findings of the subscale (Steger et al., 2006; Doğan et al., 2012). The current study found that the MLQ-P was also strongly associated with existential well-being, and moderately associated with religious wellbeing, which are both indices of spirituality. Steger et al. (2006) also correlated the MLQ-P subscale and measures of religious engagement/commitment. The experience of one's life as meaningful is believed to be elementary to the experience of well-being and spirituality (Crumbaugh and Maholick, 1964; King, Hicks, Krull, & Del Gaiso, 2006) in a number of domains of one's life (Ho et al., 2010).

The MLQ-P and MLQ-S sub-scales correlate positively with different constructs (Steger et al., 2006, Steger et al., 2008, Ho et al., 2010), indicating that they measure different elements of meaning. In the current study, the MLQ-Search scale was positively correlated with depression and negatively correlated with well-being measures. Brassai et al. (2012) point out that the search for meaning in life may be a promoting factor in the development of

healthy behaviours in adolescents. Steger, Oishi and Kesebir (2011) further our understanding of the positive correlation between the presence of meaning in life and life satisfaction. They argue that the relative experience of one's life as meaningful is moderated by the extent to which one is searching for meaning in life. This is the global trend of the search for meaning in life construct (Steger et al., 2006; Steger et al., 2008; Ho et al., 2010; Doğan et al., 2012) found in empirical research. Frankl (1965) described individuals with a lack of meaning as suffering from an existential frustration; Maddi (1998) likened meaninglessness to an apathetic and aimless life which could be synonymous with the lack of wellbeing experienced by one. Steger (2009) describes such individuals as in process of augmenting their own meaning. The significance of presenting the convergent validity of scales lies in the continuous endeavour to ensure that the underlying structure of the constructs is aligned to its theoretical underpinnings.

Limitations

The present study is not without limitations. The first refers to the participation of a sample of undergraduate university students who are not necessarily representative of the general population in South Africa. Before the findings of this study can be generalised similar studies would need to be conducted with specific African language groups, as well as different, more heterogeneous cultural and language multicultural groups in (South) Africa. A second short-coming is that whilst we are well aware of the presence of two separate factors in the construct, based on literature (Steger et al., 2006), the current research was not sufficient to supplement knowledge of the complex underlying relationship between the search for and the presence of meaning in life; only that it reiterates that the constructs are moderately negatively correlated.

Conclusion and Recommendations

In summation meaning in life is becoming an important aspect of measuring optimal functioning. This study provides a validated instrument for the further exploration of the construct in this group in the scope of well-being, spirituality and health. Future research should also investigate the measurement equivalence of the MLQ on the basis of language (see Hambleton & Zenisky, 2011; Van de Vijver & Leung, 2011). Measurement equivalence and item response theory studies may provide evidence on whether there are cross-cultural and language differences in how participants interpret and respond to the MLQ items. Simms (2008) has encouraged the use of IRT-based methods in scale development and validation to investigate item functioning. One might expand on validity investigations by using criterion-related validity and also explore discriminant validity. This would involve investigations into the concurrent and predictive validity of psychological measures. The measuring instrument, being available as validated in the current study, is a needed contribution for the evaluation of meaning by counselling psychologists who may be concerned with the promotion and maintenance of meaningful living among their clients and patients (see Steger et al., 2006). The idea that meaning in life is universal is an underlying reason for the continued interest in meaning in life in cross-cultural settings. Findings of this study support Steger et al.'s (2006) conceptualisation of meaning in life and their empirical findings of the scale.

References

Antonovsky, A. A. (1987). *Unravelling the Mystery of Health: How people manage stress and stay well*. San Francisco: Jossey–Bass Publishers.

Antonovsky, A. A. (1993).The Structure and properties of the Sense of Coherence scale. *Social Science and Medicine*, *36*, 725 – 733. doi:10.1016/0277-9536(93)90033-Z.

Battista, J., & Almond, R. (1973). The development of meaning in life. *Psychiatry*, *36,* 409-427.

Beosch, E. E. (1991). Symbolic action theory and cultural psychology. Berlin: Springer.

Brassai, L., Piko, B. F. & Steger, M. F. (2012). Existential attitudes an eastern European adolescents problem and health behaviours: Highlighting the role of the search for meaning. *The Psychological Record*, *62*, 719-734.

Brassai, L., Piko, B. F., & Steger, M. F. (2011). Meaning in Life: Is it a protective factor for adolescents' Psychological health. *International Journal of Behavioural Medicine*, *18*, 44-51.

Byrne, B. M. (2009). Structural equation modelling with AMOS: Basic concepts, applications and programming. CRC Press.

Clark, L. A., & Watson D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, *7*(3), 309-319.

Cohen, K., & Cairns, D. (2012). Is searching for meaning in life associated with reduced subjective well-being? Confirmation and possible moderators. *Journal of Happiness Studies, 13*, 313-331. doi: 10.1107/s10902-011-9265-7.

Comrey, A. L. (1988). Factory analytic methods of scale development in personality and

    clinical psychology. *Journal of Consulting and Clinical Psychology*, *56*(5), 754-761.

    doi: 10.1037/0022-006X.56.5.754.

Crumbaugh, J. C. & Maholick, L. T. (1964). An experimental study in experientialism: The

    psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical*

    Psychology, *20,* 200-207.

Crumbaugh, J. C. (1977). The seeking of noetic goals test (SONG): A complementary scale

    to the Purpose in Life test (PIL). *Journal of Clinical Psychology*, *33*(3), 900-907.

De Klerk, J. J., Boshoff, A. B., & van Wyk, R. (2009) Measuring meaning in life in South

    Africa: validation of an instrument developed in the USA. *South African Journal of*

    Psychology, *39,* 314-325.

Debats (1990). The Life Regard Index: Reliability and validity. *Psychology Reports, 67*(1),

    27-34.

Dezutter, J., Waterman, A. S., Schwartz, S. J., Luyckx, K., Beyers, W., Meca, A., Kim, S. Y.,

    Whitborne, S. K., Zamboanga, B. L., Lee, R. M., Hardy, S. A., Forthun, L. F. Ritchie,

    R. a., Weisskirch, R. S., Brown, E. J., & Caraway, S. J. (2013). Meaning in Life in

    Emerging Adulthood: a Person-Orientated Approach. *Journal of Personality*, 1-12.

    doi:10.1111/jopy.12033.

Diener, E., Emmons, R. A. Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life

    Scale. *Journal of Personality and Social Psychology*, *49*, 71-75.

Doğan, T., Sapmaz, F., Tel, F. D. Sapmaz, S., & Temizel, S. (2012). Meaning in life and

    subjective well-being among Turkish university students. *Procedia – Social and*

    Behavioural Sciences, *55,* 612-617. doi:10.1016/j.sbspro.2012.09.543.

Ellison, C. W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of*

    Psychology and Theology, *11*(4), 330-340.

Ellison, C. W., & Smith, J. (1991). Toward an integrative measure of health and well-being.

    Journal of Psychology and Theology, *19(*1), 35-48.

Frankl, V. E. (1963). *Man's search for meaning: an introduction to logotherapy*. New York:

    Vintage Books.

Frankl, V. E. (1965). *The doctor and the soul: from psychotherapy to logotherapy*. New

    York: Vintage Books.

Harmbleton, R. K. & Zenisky, A. L. (2011). Translating and adapting tests for cross-cultural

    assessments. *Cross-cultural research methods in Psychology*, 46-70.

Hicks, J. A. & King, L. A. (2009). Positive mood and social relatedness as information about

    meaning in life. *The Journal of Positive Psychology*, *96*(2), 473. doi:

    10/1080/17439760903271108.

Ho, M. Y., Cheung, F. M., & Cheung, S. F. (2010). The role of meaning in life and optimism

    in promoting well-being. *Personality and individual Differences*, *48*, 658- 663. doi:

    10.1016/j.paid.2010.01.008.

Ju, H., Shin, J. W., Kim, C., Hyun, M., & Park, J. (2013). Mediational effect of meaning in

    life on the relationship between optimism and well-being in community elderly.

Archives of Gerontology and Geriatrics, *56,* 309-313.

http://dx.doi.org/10.1016/j.archger.2012.08.008.

Keyes, C. L. M. (2002). The Mental Health Continuum: From languishing to flourishing in

life. *Journal of Health and Social Research, 43*, 207-222.

Keyes, C. L. M., Wissing, M. P., Potgieter, J. C., Temane, Q. M., Kruger, A., & Van Rooy,

S. (2008). Evaluation of the Mental Health Continuum–Short Form (MHC–SF) in

Setswana-Speaking South Africans. *Clinical Psychology and Psychotherapy*, *15*,

181–192. doi: 10.1001/ccp572.

Khumalo, I. P., Wissing M. P., Temane, Q. M. (2008). Exploring the validity of the VIA-

Inventory of Strengths in an African context. *Journal of Psychology in Africa, 18*(1),

133-142.

Khumalo, I. P., Temane, Q. M., & Wissing, M. P. (2010). Development and initial validation

of the General Psychological Well-being Scale (GPWS) in an African context.

Journal of Psychology in Africa, *20*(1), 13-22.

King, L. A., Hicks, J. A., Krull, J. L. & Del Gaiso, A. K. (2006). Positive Affect and the

experience of Meaning in Life. *Journal of Personality and Social Psychology*, *1*, 179-

196. doi:10.1037/0022-3514.90.1.179.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd Ed.). New

York: The Guilford Press.

Kroenke, K., & Spitzer, R. (2002). The PHQ-9: A new depression diagnostic and severity

measure. *Psychiatric Annals*, *32*(9), 509-515.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ–9: Validity of a brief

depression severity measure. *Journal of General Internal Medicine*, *16*, 606–613.

Leontiev, D. A. (2013). Positive psychology in search for meaning: An introduction. *Journal of Positive Psychology*, *8*(6), 457-458. Doi:10.1080/17439760.2013.830766.

Maddi, S. R. (1967). The existential neurosis. *Journal of Abnormal Psychology*, *72,* 311-325.

Masacro, N. & Rosen, D. H. (2008). Assessment of Existential meaning and its longitudinal relations with depressive symptoms. *Journal of Social and Clinical Psychology*, *27*(6), 576-599.

Mickley, J.R. Soeken, K., & Belcher, A. (1992). Spiritual well-being, religiousness and hope amongst women with breast cancer. *Journal of Nursing Scholarship, 24*(4), 267-272.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Pallant, J. (2011). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows* (4th ed.). Berkshire, United Kingdom: McGraw Hill Open University Press.

Reker, G. T. (1992). *Manual of the Life Attitude Profile-Revised.* Peterborough, ON: Student Psychologist Press.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069. doi:10.1037/0022-3514.57.6.1069.

Schnell, T. (2004). *Implitze Religiosität – Zur Psychologie des Lebenssinns.* Lengerich: Pabst Science Publishers.

Schnell, T. (2009). The Sources of Meaning and Meaning in Life Questionnaire (SoMe): Relations to demographics and well-being. *The Journal of Positive Psychology*, *4*(6), 483-499. doi: 10.1080/17439760903271074.

Schulenberg, S. E., Barzwaski, B. J., & Buchanan, E. M. (2013). Measuring search for

    meaning: A factor-analytic evaluation of the seeking of noetic goals test (SONG).

    Journal of Happiness Studies, doi: 10.1007/s10902-013-9446-7.

Simms, L. J. (2008). Classical and modern methods of psychological scale construction.

    Social and Personality Psychology Compass, 2(1), 414-433. doi: 10.1111/j.1751-

    9004.2007.00044.x

Simões, A., Oliviera, A. L., Lima, M. P. Viera, C. M. C., & Nogueira, S. M. (2010)

    Instrument to evaluate the meaning of life (Abstract). *Psicologia Educação Cultura,

    14*(2), 247-268.

Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of well-

    being, psychopathology, and spirituality. In P. T. P. Wong (Ed.), *The human quest for

    meaning: Theories, research and applications* (pp. 165-184). New York, NY:

    Routledge.

Steger, M. F. (2009). Meaning in life. In S. J. Lopez & C. R. Snyder (Ed.) *The Oxford

    Handbook of Positive Psychology (2nd Ed.)* (pp. 679-687). Oxford, UK: Oxford

    University Press.

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and

    Meaning Inventory (WAMI). *Journal of career Assessment*, *20*(3), 332-337. doi:

    10.1177.1069072711436160.

Steger, M. F. & Frazier, P. (2005). Meaning in Life: One link in the chain from religiousness

    to Well-being. *Journal of Counselling Psychology*, *4*, 574-582. doi: 10.1037/0022-

    0167.52.4.574.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006) The Meaning in Life Questionnaire: Assessing the presence and search for meaning in life. *Journal of Counselling Psychology*, *53*, 80-93. doi:10.1037/0022-0167.53.1.80.

Steger, M. F. & Kashdan, T. (2013). The unbearable lightness of meaning: Well-being and unstable meaning in life. *The Journal of Positive Psychology*, *8*(2), 103-115. doi: 10.1080/17439760.2013.771208.

Steger, M. F., & Kashdan, T. (2007). Stability and Specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies*, *8,* 161-179. doi: 10.1007/s10902-006-9011-8.

Steger, M. F., Kashdan, T. Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for Meaning in Life: Personality, Cognitive style, and the Dynamic between seeking meaning and experiencing meaning. *Journal of Personality, 72*(2), 199-228. doi:10.1111/j.1467-6494-2007.00484.x.

Steger, M. F., Kashdan, T., & Oishi, S. (2008). Being good by doing good: Daily eudaimonic activity and well-being". *Journal of Research in Personality*, *42*(1), 22-42. doi:10.1016/j.jrp.2007.03.004.

Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in Japan and the united States: Levels and correlates of meaning in life. *Journal of research in Personality*, *42,* 660-678. Doi:10.1016/j/jrp/2007.09.003.

Steger, M. F., Oishi, S., & Kashdan, T. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology*, *4*(1), 43-52. doi: 10.1080/17439760802303127.

Steger, M. F., Oishi, S., & Kesebir, S. (2011). Is life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgements. *The Journal of Positive Psychology*, *6*(3), 173-180. doi:10.1080/17439760.2011.569171.

Steger, F. M., & Samman, E. (2012). Assessing meaning in life on an international scale: Psychometric evidence for the meaning in life questionnaire-short form among Chilean households. *International Journal of Wellbeing, 2*(3), 182-195. doi:10.5502/ijw.v2.i3.2.

Streiner, D. L. (2003). Starting at the beginning: An introduction to Coefficient Alpha and internal consistency. *Journal of Personality Assessment*, *80* (1), 99-103.

Stroink, M., & De Ciccio, T. (2011). Culture, religion and the underlying value dimensions of the metapersonal self-construal. *Mental Health, Religion and Culture*, *14*(9), 917-934.

Temane, Q. M. & Wissing, M. P. (2006). The role of spirituality as a mediator for psychological well-being across different contexts. *South African Journal of Psychology*, *36*, 587-597.

Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work*, *38*, 218-235. doi: 10.1093/bsjw/bc1343.

Van de Vijver, F. J. & Leung, K. (2011) Equivalence and bias: A review of concepts, models, and data analytic procedures. *Cross-cultural research methods in psychology,* 17-45. http://dx.doi.org/10.1017/CBO9780511779831.003.

Wang, M & Dai, X (2008). Chinese Meaning in Life Questionnaire Revised in college students and its reliability and validity test (Abstract). *Chinese Journal of Clinical Psychology, 15*(5), 459-461.

Waterman, A. S. (1993). Two concepts of Happiness: Contrasts of personal expressiveness (Eudaimonia) and Hedonic Enjoyment. *Journal of Personality and Social Psychology, 4*, 678-691.

Waterman, A. S. (2008). Reconsidering happiness: a eudaimonsit perspective. *The Journal of Positive Psychology*, *4*, 234-252. doi: 10.1080/17439760802303002.

Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Agocha, V. B., Kim, S. Y., Donnellan, M. B. (2010). The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, *5*(1), 41-61. doi: 10.1080/17439760903435208.

Wissing, M. P. (2008). The prevalence of levels of psychosocial health: Dynamics and relationships with biomarkers of (ill) health in South African social contexts (FORT3). NRF research project – protocol, NUW, Potchefstroom.

Wissing, M. P., Thekiso, S. M., Stableberg, R., Van Quickelberg, L., Choabi, P., Moroeng, C., Nienaber, A., Temane, Q. M., Vorster, H. H. (2010). Validation of three Setswana measures for psychological wellbeing. *South African Journal of Industrial Psychology, 36*(2), Art. #860, 8 pages. DOI: 10.4102?sajip.v36i2.860.

Wong, P. T. P. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology*, *52,* 69-81.

Wong, P. T. P. (2012). Toward a dual-systems model of what makes life worth living. In P. T. P. Wong, (Ed.) (2012). *The human quest for meaning: Theories, research and applications*. New York: Routledge.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and

psychological well-being. *British Journal of Psychology*, *83,* 133-145.

Table 1

Meaning in life questionnaire (MLQ) descriptive statistics at item level correlations (n=326)

Variable	M	SD	Min.	Max.	Skewness	Kurtosis	Item – subscale correlation	
							MLQP	MLQS
MLQ1	5.21	1.39	1	7	-0.76	0.49	.765**	-.121*
MLQ2	5.65	1.70	1	7	-1.37	0.99	-.114*	.770**
MLQ3	5.46	1.62	1	7	-1.09	0.41	-.092	.808**
MLQ4	4.96	1.50	1	7	-0.57	-0.16	.831**	-.116*
MLQ5	5.26	1.41	1	7	-0.77	0.26	.835**	-.150**
MLQ6	4.79	1.56	1	7	-0.52	-0.36	.812**	-.101
MLQ7	5.39	1.54	1	7	-1.05	0.77	-.025	.768**
MLQ8	5.40	1.58	1	7	-1.05	0.51	-.207**	.791**
MLQ9	5.52	1.88	1	7	-1.06	-0.13	.748**	-.272**
MLQ10	4.89	1.93	1	7	-0.77	-0.52	.812**	-318**
MLQS	26.76	6.61	5	35	-0.99	0.81	-.199**	1
MLQP	25.70	6.16	5	35	-0.74	0.24	1	.

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Table 2

Meaning in Life Questionnaire item and sub-scale correlations (N=326)

	MLQ1	MLQ2	MLQ3	MLQ4	MLQ5	MLQ6	MLQ7	MLQ8	MLQ9	MLQ10	MLQP	MLQS
MLQ1	1											
MLQ2	-.05	1										
MLQ3	-.07	.60**	1									
MLQ4	.58**	-.07	-.03	1								
MLQ5	.59**	-.09	-.06	.65**	1							
MLQ6	.52**	-.04	-.002	.63**	.64**	1						
MLQ7	-.01	.45**	.57**	.02	-.02	.04	1					
MLQ8	-.12*	.47**	.49**	-.11*	-.14*	-.17**	.59**	1				
MLQ9	.43**	-.18**	-.17**	.49**	.49**	.45**	-.10	-.25**	1			
MLQ10	-.21**	.51**	.55**	-.24**	-.27**	-.20**	.48**	.60**	-.34**	1		
MLQS	-.121*	.770**	.808**	-.116*	-.510**	-.101	.768**	.791**	-.272**	.812**	1	
MLQP	.765**	-.114*	-.092	.831**	.835**	.812**	-.025	-.207**	.748**	-.318**	-.199**	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Table 3

Confirmatory factor analysis of the meaning in life Questionnaire; maximum likelihood; direct oblimin (N=326)

Variable	F1: MLQ-Search	F2: MLQ-Presence	Comm.
MLQ2	.694	.	.428
MLQ3	.788	.	.530
MLQ7	.731	.	.457
MLQ8	.711	.	.497
MLQ10	.707	.	.519
MLQ1	.	.714	.445
MLQ4	.	.818	.556
MLQ5	.	.821	.572
MLQ6	.	.790	.528
MLQ9	.	.571	.349
Eigen value	3.76	2.67	.
% variance explained	37.60	26.71	.

MLQ = Meaning in Life Questionnaire

Table 4

Summary of fit indices for Confirmatory Factor Analyses for the one and two factor models (N=326)

Latent model	X²	*Df*	p.	BCC	NFI	IFI	TLI	CFI	RMSEA	AIC	X² / *df*
Unidimensional	657.839	35	.000	719.941	.530	.544	.272	.537	.234	717.839	18.795
Two factors	97.386	34	.000	134.554	.930	.954	.924	.953	.076	159.386	2.864

Note: X^2 = Chi square; *df* = degrees of freedom; GFI = Goodness of fit index; BCC = Browne-Cudeck Criterion; NFI = Normed fit index; IFI = Incremental fit index; TLI = Tucker-Lewis Index; CFI = Comparative fit index; RMSEA = Root Mean Square of approximation; AIC = Akaike's Information Criterion; X² / *df* = Chi square degrees of freedom ratio.

Table 5

Scale mean scores and inter-scale correlations (N=326)

	Mean scores		Correlations	
Variable	Mean	SD	MLQP	MLQS
MHC-EWB	10.33	2.81	.46**	-.16**
MHC-SWB	12.65	5.06	.39**	.01
MHC –PWB	22.70	4.93	.62**	-.06
MHC	45.70	10.67	.59**	-.07
SWLS	23.29	5.81	.53**	-.20**
SWBS-ExWB	47.42	7.88	.62**	-.12*
SWBS-RWB	52.39	8.80	.20**	.04
SWBS	99.83	13.76	.48**	-.04
PHQ-9	10.27	5.65	-.34**	.20**
SOC	130.94	20.32	.54**	-.17**

Note: MHC = Mental Health Continuum; MHC-EWB = Mental Health Continuum – Emotional Well-being; MHC-SWB = Mental Health Continuum-Subjective Well-being; MHC-PWB = Mental Health Continuum-Psychological well-being; SWLS =Satisfaction with Life Scale; SWBS-ExWB =Spirituality Well-being scale-Existential Well-being scale; SWBS-RWB = Subjective Well-being scale-Religious well-being; PHQ-9 =Patient Health Questionnaire; SOC = Sense of Coherence.