Exploration of goals among adults in a matrix of presence of and search for meaning

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Mini-dissertation submitted in partial fulfilment of the requirements for the degree Master of Science in Positive Psychology at the North-West University

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Summary

Much research has been done investigating the associations between goals and individuals’ sense of meaning, but very little research has explored how presence of and search for meaning (Steger, 2012) are associated with people’s choice of goals. Exploring how goals and the reasons why they are pursued are associated with meaning among adults, may point to new possibilities for enhancing meaning in life. The aim of this study was therefore to explore how presence of and search for meaning are associated with people’s choice of goals and the motives directing their goals. In a mixed methods study, participants (N = 180) were quantitatively selected from South African data collected in a larger project according to the values of the first and third quartiles of the MLQ search and presence scores. In this way a matrix of four profile groups were formed: high search, high presence (HSHP); high search, low presence (HSLP); low search, high presence (LSHP); and low search, low presence (LSLP).

Thematic analysis of responses to semi-structured questions on life goals and the reasons for pursuing them revealed that levels of search for and presence of meaning are associated with the type of goals participants set for themselves. The HSHP profile group had a preference for relationship orientated goals. The HSLP profile group were inclined towards goals centred on work. Goals for the LSHP group were focused on goals related to personal well-being. The LSLP profile group was the only group with no discernible preference for a specific goal type, but was found to be heavily focused on positive affect as a reason to strive for goals.

Individuals with high levels of presence of meaning exhibited a sense of personal agency with regards to their goals, demonstrating a belief in their ability to take action and to reach their goals, and proved to value reciprocal relationships. Low levels of presence of meaning were associated with a focus on intrapersonal goals and less value attached to reciprocal relationships. Individuals with low levels of search for meaning tended to have a hedonic focus when it came to goals, preferring goals that increased their personal well-being.

The study reveals that goals and the reasons that people pursue their goals are associated with levels of presence of and search for meaning. Implications for interventions to increase psycho-social well-being are suggested.

Key words: meaning, goals, motivation, Meaning in Life Questionnaire, South Africa
Acknowledgements

Foremost I would like to thank Dr Lusilda Schutte for her unfailing dedication and support in this endeavour. Her guidance and expertise have been central to the completion and quality of this research study. It was a privilege and an absolute pleasure to have had her as my supervisor. I would also like to thank Prof Wissing for generously sharing her considerable expertise and professional advice, as well as Mrs Christelle Liversage for her valued input and support. I appreciate all the time and effort my supervising team offered towards the completion of this project.

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I would like to express my appreciation to the wonderful group of women who made up our MAPP class. Their strength of spirit and lively minds were an inspiration to me. A very big thank you also goes to my husband Manuel, without whose support this venture would have been near impossible. I would also like to thank my children for being my bedrock.
Preface

This mini-dissertation is submitted in article format as indicated in the 2018 General Academic Rules (A4.4.2 and A4.10.5) of the North-West University. It is submitted in partial fulfilment of the requirements for the Master of Arts degree in Positive Psychology, where the mini-dissertation accounts for 60 of the total 180 course credits. The manuscript in article style meets the requirements of the specific journal that was selected for submission, The Journal of Positive Psychology. Some exceptions are made for the purpose of the mini-dissertation, for example the length of the manuscript where the manuscript is currently longer than prescribed by the intended journal, as well as the use of 1.5 line spacing instead of double line spacing. The manuscript will be shortened and the line spacing changed before submission to the journal. For the purposes of this mini-dissertation, the page numbering of the mini-dissertation as a whole is consecutive. However, for journal submission purposes, the manuscript will be numbered starting from page 1.

The body of this mini-dissertation consists of three sections. Section 1 reflects the first stage of the research and the preparation for the main phase and manuscript (research proposal and ethics application form as approved by the relevant bodies). Section 2 contains the research report for examination in article format, and Section 3 highlights the conclusions and recommendations of the study.
Letter of Permission

Permission is hereby granted by the co-authors that this manuscript may be submitted by the first author for the purposes of a mini-dissertation.

The first author contributed to theme development, did the major part of the literature review, conducted the data analysis, interpreted the results, and did the major work for the discussion. She drafted the manuscript and incorporated suggestions from the co-authors into the manuscript. She took responsibility for the technical and language editing of the manuscript.

Dr. L. Schutte (Supervisor)

Prof. M. P. Wissing (Co-supervisor)

Ms. C. Liversage (Co-supervisor)
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Section 1

Background Orientation

This section reflects the first phase of the research process leading up to the manuscript as the main research report that will be presented in Section 2.

A literature exploration was conducted and a research proposal was developed that was approved firstly by a subject research group and secondly by the Scientific Committee of the Africa Unit for Transdisciplinary Health Research (AUTHeR). After approval of the proposal by AUTHeR’s Scientific Committee, ethical approval of the study was obtained from the Health Research Ethics Committee (HREC) of the North-West University, South Africa. The final documentation as it was approved by the relevant committees - apart from some minor technical editing - is included in this chapter. The addenda to the HREC application are not included in this chapter. The research proposal and ethics applications as approved by the relevant authorities are presented here. However, when the study was executed, the timeline presented in the proposal was adapted to attainable parameters in order to meet the rigorous research processes required.

Needless to say, there is an overlap between the research proposal and ethics application, as well as with parts of the manuscript in Section 2, since it is all based on the same research project in different phases. The manuscript contained in Section 2 is the final research report.
1.1 Approved protocol for this study

Cover Page for Research Proposal

School: AUTHeR

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Title of thesis/dissertation/mini-dissertation: Exploration of goals among adults in a matrix of presence of and search for meaning

Study leader/promoter: Dr L Schutte
Help-/co-leader/promoter | Ms C Liversage
---|---
Help-/co-leader/promoter | Prof MP Wissing
Number of times of submission of this protocol
1\(^{st}\) | X
2\(^{nd}\)
3\(^{rd}\)

Does this project fall under a greater umbrella project? | Yes | X
| No

**If yes, Ethical number of the umbrella project** | NWU-00002-07-A2

**Title of the umbrella project** | FORT3: The prevalence of levels of psychosocial health: dynamics and re biomarkers of (ill)health in South African social contexts

**Leader of the umbrella project** | Prof MP Wissing

**Specific aims of umbrella project where by this study links**
- To explore the meaning and manifestation of psychosocial well-being and its facets (e.g. meaning and goals) qualitatively in various South African ethnic groups (adolescents and adults)
- To quantitatively explore the prevalence of various levels of mental health of adolescents and adults in various areas, groups and contexts in South Africa

Will new data be collected? | Yes
| No | X

**Names of small group panel within the school/unit that approved this research protocol (before send to AUTHeR)**
1 | Dr. Angelina Wilson
2 | Dr. Antoinette van Staden
3 | Ms. Amanda Cromhout
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

Date of approval by above mentioned panel: March 2017
EXECUTIVE SUMMARY OF THE SUBSTUDY

Master of Arts in Positive Psychology – Pier Heynike

Exploration of goals among adults in a matrix of presence of and search for meaning

Problem statement
A gap in existing knowledge is identified regarding how presence of meaning and search for meaning are associated with people’s choice of goals. It is not known whether individuals’ levels of search for meaning and presence of meaning can be associated with the type of goals they set and the motives underlying their identified personal goals.

Objectives
To explore the goals and motives directing individuals’ goals as they relate to different meaning profiles.

Method
A secondary analysis of selected data sets from the FORT3 project (N = 812) will be utilised. A matrix of four groups of participants will be quantitatively distinguished based on values from the lower and upper quartiles of the MLQ search and presence scores. Responses to questions relating to goals will be thematically analysed and integrated with quantitative data.

Study Design
A mixed methods convergent parallel design was used for data-gathering. Quantitative and qualitative data will be sequentially analysed, related, and integrated in interpretation.

Expected outcome
That sources and motives underlying goals will differ among different meaning profiles.
Exploration of goals among adults in a matrix of presence of and search for meaning

Pier Heynike
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Proposal submitted for the degree Master of Arts in Positive Psychology
In the
Africa Unit for Transdisciplinary Health Research
Faculty of Health Sciences
North-West University
Potchefstroom Campus

Supervisor: Dr L. Schutte
Co-supervisor: Ms C Liversage
Co-supervisor: Prof M. P. Wissing
Introduction and Problem Statement

This study forms part of the FORT3 Research Project (The prevalence of levels of psychosocial health: Dynamics and relationships with biomarkers of (ill)health in South African social contexts) that focuses on exploring the prevalence of various levels of psychosocial well-being in different groups and contexts in South Africa, as well as the links between meaning, goals and other facets of psycho-social well-being. The present study will be a secondary analysis of existing data, and will explore goals as well as the reasons for pursuing these goals across a matrix of presence of and search for meaning in life. The scope of the present study falls under the FORT3 project and is considered an affiliated study of the FORT 3 project which has active ethics approval (NWU 00002-07-A2).

Much research has been done in the past that investigated the associations between goals and individuals’ sense of meaning. According to Park (2010), an individual’s global meaning (the system which individuals use to orientate themselves in life and through which they understand experiences) consists of goals as well as a personal sense of purpose. A sense of purpose is closely related to meaning, with some researchers considering purpose to be one dimension of meaning. Steger (2012) considers meaning to be made up of the two dimensions, namely (a) presence of meaning (the ability to make sense of one’s life and consider it meaningful) and (b) search for meaning (being driven by a sense of purpose to take action towards creating meaning). Yeager and Bundick (2009) found that scholars who had purposeful goals had higher meaning in life scores.

However, very little research has been done to explore how presence of and search for meaning are associated with people’s choice of goals. It is not known whether individuals’ levels of search for meaning and presence of meaning can be associated with the type of goals they set and the motives underlying their identified personal goals. For example, what motivates people low in search for meaning and presence of meaning to strive towards achieving goals? Exploring questions like these could add to our understanding of how goals, and the reasons they are important to individuals, relates to levels of meaning.
This study aims to qualitatively explore similarities and differences between four groups of people on the two dimensions of meaning (high search, high presence; high search, low presence; low search, high presence; low search, low presence) with regards to (i) types of goals, and (ii) reasons underlying the pursuit of these goals.

**Meaning in Life**

The concept of meaning in life dates back to Frankl (1946/1985), who argued that we create our own meaning by dedicating ourselves to a purpose; through enriching experiences; or through our attitude to suffering. Meaning in life can be approached from two perspectives: it is either thought to be composed of concrete criteria that can be measured objectively (Wong, 2011), or it is thought to be a subjective feeling that can only be judged from an individual’s perspective (Steger, Frazier, Oishi, & Kaler, 2006).

From the viewpoint of meaning being objectively measurable, it is believed that meaning is derived from sources of experience in our daily lives (Schnell, 2011; Steger et al., 2013). King and Hicks (2009) propose that there are two processes by which one can find meaning in one's life: meaning detection (when we feel that our life makes sense) and meaning construction (when we need to reassess our view of the world in order to make sense of our experiences). Leontiev (2013) points out that questions about what makes up a meaningful life invariably lead to the qualitative study of sources of meaning classified by types. According to Schnell (2011), meaning in life is enhanced by engaging with a variety of sources which are as diverse as possible, with those sources that support generativity contributing the most to a sense of meaning.

The subjective viewpoint on meaning posits that “lives may be experienced as meaningful when they are felt to have significance beyond the trivial or momentary, to have purpose, or to have a coherence that transcends chaos” (King, Hicks, Krull, & Del Gaiso, 2006, p. 180). Leontiev (2013) theorises that a feeling of meaningfulness is an emotional phenomenon that can be evaluated by scales such as the Meaning in Life Questionnaire (MLQ) (Steger et al., 2006). Models such as Wong’s PURE model, which identifies the structural components of meaning to be purpose, understanding, responsibility and enjoyment (Wong, 2010; Wong, 2011), aim to delineate the components that contribute to the experience of meaning.

Steger et al. (2006) argue for distinguishing between having meaning in life and searching for meaning in life. They posit that meaning in life is made up of two components: presence of meaning, which indicates how full of meaning an individual feels their life is, and search for meaning, which refers to how motivated an individual is to find meaning in their
life. They have shown (using factor analysis) that the two are independent of each other (Steger et al., 2006). In Steger, Oishi and Kashdan’s (2009) study across the lifespan in predominantly Western countries, a greater presence of meaning was found in later life stages and higher levels of search for meaning was found in the earlier life stages. A number of research studies have treated search for meaning and presence of meaning as independent dimensions (Crumbaugh, 1977; Steger et al., 2006; Steger, Kashdan, Sullivan, & Lorentz, 2008). Taking it one step further, Steger, Oishi, and Kesebir (2011) found that the interaction between these two distinct dimensions of meaning were instrumental to individuals’ perception of their satisfaction in life, thus paving the way for other researchers to investigate whether this interplay may have an effect on other well-being indicators and constructs.

Goals

Goals are the manifestation of our personal purpose (Emmons, 2005) and have been described as “internal representations of desired states, where states are broadly construed as outcomes, events, or processes” (Austin & Vancouver, 1996, p. 338). However, although goals have been examined from many perspectives, no integrative framework exists. Baumeister (2016) took huge steps towards laying the foundation for an integrative theory of motivation, comprehensively explaining the two pillars of motivation, namely (a) categorisation of the outcomes people want (goals) and (b) how individuals experience and act on their desires.

Goal orientation theories see individual choice and reasoning as the driving force for goal pursuit (Fowers et al., 2014). Early goal theorists postulated two types of goal orientations, namely (a) a mastery goal orientation, which is the aspiration to master new skills, and (b) a performance goal orientation, which is a desire to demonstrate competence and make a good impression (Kaplan & Maehr, 2007). Elliot (1999) distinguishes between approach and avoidance orientations for both mastery and performance goals. An approach orientation is focused on succeeding and an avoidance orientation is focused on avoiding failure (Kaplan & Maehr, 2007). Fowers, Mollica and Procacci (2010) suggest distinguishing between instrumental goal orientation (in which means and ends are separable) and its opposite constitutive goal orientation (in which the means and ends are inherently related).

Goal-directed behaviour requires contemplation of desired future goals, planning of strategies to attain them and anticipation of possible obstructions. Baumeister, Vohs, and Oettingen (2016) maintain that this future orientated process increases the meaningfulness of life. Snyder’s hope theory relates goals to hope, stating that hope rests on the synergy of goals (that which we wish to attain), pathways (the way in which we plan to attain our goal) and
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agency (our motivation to attain the goal) (Snyder et al., 1991). According to this theory, individuals’ hope is powered by the measure of belief one has in one’s own ability to find ways to reach one’s goals and the measure of belief one has in one’s own ability to move towards and finally reach goals.

Hofmann, Baumeister, Förster, and Vohs (2012) state that people with high levels of self-control ensure that they do not have to resist desires that conflict with their goals and values as often as most people by making sure that they avoid situations that cause motivational conflicts to arise. Baumeister and Vohs (2007) found that the role of motivation in self-regulation has been underestimated and that motivation can be used to override lack of willpower in situations where it has been depleted, if motivation is high enough. Self-regulation has an important part to play in this process of moving towards and reaching goals. Past theory (Baumeister, Vohs, & Tice, 2007) has suggested that there are four main elements to self-regulation: standards (self-regulation is used to ensure behaviour adheres to a previously defined standard); monitoring (one needs to keep track of the progress of the behaviour change process in order to make adjustments); willpower (the energy required to change, which can lead to ego depletion); and motivation (to regulate the self to achieve the goal). The authors postulate that these four elements need to be present in varying degrees in order for change to be effective.

Beliefs around personal goals also provide a motivational context and goals that are aligned with personal values are more meaningful. McGregor and Little (1998) found that goal integrity (“the extent to which participants appraise their personal projects as consistent with their values, commitments, and other important aspects of self-identity” (p. 496)) was positively correlated with meaning. Sheldon and Elliot (1999) maintain that the self-concordance of goals (how well they match a person’s values and interests) influences goal attainment in that individuals put more effort into working towards their goals and that they experience greater well-being upon goal-attainment when self-concordance is high. The reasoning being that self-concordant goals are more in line with the core self and not in any way reliant upon others.

Some research has attempted to organise types of goals into different categories. For instance, using cluster analysis, Chulef, Read, and Walsh (2001) came up with three categories of goals, namely (a) goals around family and intimate-relationships (includes goals associated with sex, marriage, and family); (b) goals related to interpersonal relationships (includes goals related to friendships, leadership opportunities, opportunities for giving back);
and (c) intrapersonal goals (includes goals around meeting personal needs, health, social awareness, career, personal growth, well-being, finances and safety).

According to Fowers et al. (2014), quantitative research done up until now on goals has been restricted in its ability to promote goal theory as it limits the chance of gaining new knowledge firstly by not allowing participants to freely choose goals, but rather to select goals from a list set by researchers; and secondly by the fact that the participants are asked to rank the listed goals to indicate their relative importance by a researcher designed ranking system, but this does not shed any light on the reasons why the participant find some goals more important or worthy than others. Qualitative research on goals has the advantage of conquering these limitations and offering the possibility of rich data in that it allows participants to provide their own goals and reasons for pursuing them. Previous studies using open-ended questions to explore goals and their importance to participants have produced rich and novel data (Dowson & McInerney, 2001; Levy, Kaplan, & Patrick, 2004; Yeager & Bundick, 2009). Kaplan and Maehr (2007) show how combining quantitative methods with qualitative methods in research on goals is of benefit as it can bring new knowledge to light, expand existing knowledge and clarify previous findings.

**Goals and Meaning**

The present study will contribute to an understanding of the relationship between goals and meaning. King et al. (2006) are of the opinion that a sense of meaning in life stems from the knowledge that one’s actions are dedicated to realising a chosen goal. According to Leontiev (2013) our actions are given meaning by the goals that drive them and our goals derive their meaning from the motivation that drives them. Ventegodt and Merrick (2012) are of the opinion that the absence of a sense of meaning in life will result in an individual’s lack of drive to act. From these statements we see that meaning and goals are seen to be entwined.

Reker (2000) maintains that a sense of meaning is the result of the perception that one’s life has coherence and purpose; as well as the process of striving for and attaining worthy goals and the sense of fulfilment that arises from reaching one’s goals. Klinger (2012) states that goal striving is one of the major factors influencing an individual’s sense of meaning. Most previous studies on the association between goals and meaning have explored the effect of goals on creating meaning in life in different situations (Emmons, Colby, & Kaiser, 1998; Vess, Rogers, Routledge, & Hicks, 2016; Wrosch, Scheier, Miller, & Carver, 2012). Although it is suspected that meaning influences goals, with researchers such as Griffith and Graham (2004) stating that “goals … persist, change, or are discarded according to … the individual’s interpretation of meaning” (p. 29), no empirical findings on the
correlation of meaning and the nature of goals could be found in the literature. This study aims to contribute towards exploring this correlation.

In particular, this study will explore the goals and motives directing individuals’ goals as they relate to different meaning profiles. There will be four patterns of profile groups based on the two dimensions of Steger’s model, namely presence of meaning and search for meaning (Steger et al., 2006). For example, what types of goals do people high in presence of meaning and low in search for meaning have? What motivates these individuals to achieve their goals?

**The present study**

This study will qualitatively explore how different configurations of presence of meaning and search for meaning within various people are related to goals and the reasons provided for these goals. Can distinct differences be found with regard to goals for the four different meaning profiles (high search, high presence; high search, low presence; low search, high presence; low search, low presence)? By exploring goals among adults in a matrix of presence of and search for meaning, the present study may contribute to understanding how goals and the reasons they are pursued relate to meaning and may thereby point to new possibilities for enhancing psycho-social well-being. The specific research question to be addressed in this study is thus: What are the most important goals cited by participants across the four quadrants of meaning (high search, high presence; high search, low presence; low search, high presence; low search, low presence), as well as their reasons for pursuing these goals? What, if any, are the similarities and differences with regards to the nature of goals and the reasons for pursuing these as experienced by participants in these four groups?

**Aim**

The aim of the present study is to qualitatively explore and compare the most important goals and the reasons underlying these identified goals (why it is important to the individual) for participants across a matrix of meaning in order to ascertain whether the content of people’s goals and their reasons for pursuing these goals are linked to profiles of meaning.

**Method**

Prior to describing the Method, we are aware that data gathering in the original FORT3 project did not comply with all of the current ethics requirements. In particular, the informed consent form was not as elaborate as what is currently required and the informed consent form was not handed to participants a week before participation. However, the FORT3 project obtained ethical approval from the relevant ethics committee and data were gathered
in accordance with all the rules at the time when the project was developed. Monitoring reports are completed and submitted on an annual basis as required by the Health Research Ethics Committee of the North-West University, which means that the FORT 3 project is active to allow for analysis of already gathered data. Data integrity is ensured by the Principal Investigator of the present study and the participants consented to what is done in this particular study. These matters were discussed with the Head of the Ethics Office and the Chair of the Health Research Ethics Committee of the North-West University, Potchefstroom Campus and it was clarified that the study is ethically acceptable. Details on the mentioned aspects will be explicated below.

**Research Design**

The FORT3 project investigated the prevalence of levels of psychosocial health and explored dynamics and relationships with biomarkers of (ill)health in South African social contexts by means of a cross-sectional survey design. Data were gathered simultaneously using various instruments including the Meaning in Life Questionnaire (MLQ) and the Eudaimonic-Hedonic Happiness Investigation (EHHI) instrument (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011), which includes open-ended questions on goals. Goals and motives for goals were simultaneously captured by two of the eight open-ended questions in the mixed methods EHHI instrument used in the original FORT3 study.

The current study will apply a mixed methods convergent parallel design (Creswell, & Plano Clark, 2011) to secondary data from the FORT3 project. Data from the MLQ and questions on goals and their motives from the EHHI instrument that were captured simultaneously will be analysed sequentially. In the first phase, quantitative data from the MLQ will be used to select subsamples of participants according to their scores on the two dimensions of meaning distinguished in this scale: Presence of Meaning and Search for Meaning. The sample will consist of participants who fall into combinations of the highest and lowest quartiles on the two dimensions, creating four patterns of profile groups: high search, high presence; high search, low presence; low search, high presence; and low search, low presence.
In the second phase (which will follow sequentially after the subsamples of participants have been selected in phase one), responses to the two structured open-ended questions on goals and their motives as contained in the EHHI measure will be thematically analysed for this subsample.

Participants

The data that will be used in this study were gathered as part of the FORT3 project. Postgraduate students acted as fieldworkers and collected data across South Africa according to the snowball method of selection. In particular, the field workers asked people they knew to refer possible participants who adhered to the inclusion criteria. The field workers followed up with these people who were included if adherence to the inclusion criteria was confirmed and if they provided written informed consent with it being made clear that participation was completely voluntary. Participants, in turn, referred other potential participants who adhered to the inclusion criteria for possible participation. Participants consisted of a multi-cultural adult South African non-probability sample ($N = 812$). Inclusion criteria were fluency in the English language; being 18 and above years of age; and currently being resident in South Africa. The present study will select participants from this larger data
set by identifying people who fall into the four quadrants of combinations of presence of and search for meaning (high search, high presence; high search, low presence; low search, high presence; low search, low presence) as described under Research Design and depicted in Figure 1.

Data Collection

Data were obtained as part of the original FORT3 research programme. The data were gathered between 2010 and 2014. Postgraduate students acted as fieldworkers and collected data across South Africa according to the snowball method of selection. Participation was completely voluntary and participants were free to withdraw from the study at any stage without consequence. Participants were provided with background on the research project. Volunteers who agreed to participate were given an informed consent form as well as the test battery by the fieldworker. The fieldworkers were trained in obtaining informed consent and acted as the independent persons who obtained the consent. The contact details of the researchers had been made available to give the volunteers the opportunity to pose questions. The participants completed the test battery in their own time and at a place of their convenience, returning it to the fieldworker upon completion. Since participants completed the test battery at a place of their convenience, the facilities can be considered available. We are aware that the newest ethical rules require participants to receive the informed consent form at least a week before participation. These prescriptions did not hold at the time of data gathering, and therefore the data gathering did not take place under these conditions. Since participants were allowed to complete the informed consent form and the test battery at home at a time of their convenience, it is reasonable to accept that they had sufficient time to consider participation.

In the present study, data will be selected for secondary analysis from the existing FORT3 data sets that included both the MLQ and EHHI measures and combined into one data set. Since the original data were captured anonymously, the data for this study will also be anonymous. A matrix of four groups of participants will be quantitatively distinguished based on values from the lower and upper quartiles of the MLQ search and presence scores: those high in search and high in presence; those high in search and low in presence; those low in search and high in presence; those low in search and low in presence. In preliminary analyses, it became evident that the low search, low presence group contains the least participants. Therefore the qualitative data from this quadrant will be analysed first. If data saturation is not reached by the time that the data from all participants that fell in the low search, low presence have been analysed, participants that fall within the lower tertile of both
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

presence of and search for meaning, and that have not yet been included in the study, will be randomly selected and their data analysed until data saturation is reached. The same number of participants will then be selected randomly from each of the other quadrants for data analysis (using a random number generator function in Excel). If data saturation is not reached in one of the other quadrants by the time that the selected number of participants has been included, participants will be added until data saturation has been reached in that quadrant. The same number of participants will then be added to all the other quadrants (using a random number generator in Excel) to ensure that the sample size in each of the quadrants is the same.

**Procedure**

The data used in this affiliated study were obtained as part of the original FORT3 research programme. Once it was ascertained that the participant understood the aim of the research as well as the ethical aspects, the committed participants were then asked to complete a written informed consent form as well as the test battery and return it to the fieldworkers. It was ensured that the data remain anonymous by assigning a unique identifier to each questionnaire and then separating the informed consent forms from the completed questionnaires before data capturing. The quantitative and qualitative data were therefore captured anonymously.

Due to the nature of the questions contained in the questionnaires, an emotional reaction might have been elicited from the participants. If this response was negative, the participant could ignore the question or otherwise withdraw from the study. Psychologists were however available for debriefing and referral should the need have arisen.

In order to protect the integrity of the data, access to all data is strictly controlled by the FORT3 principal investigator and collaborator (who is the supervisor of the present study). The hard copies of the data are stored on the NWU’s premises in locked cupboards with access controlled by the principal investigator and the collaborator of the FORT 3 study. The electronic data sets are stored on password protected computers and access is controlled by the principal investigator and collaborator.

For the current affiliated study, only data relevant to the MLQ and the EHHI instruments will be used for quantitative analysis; and only the qualitative responses of the selected participants from each of the four quadrants will be used in order to explore their responses to open-ended questions on goals.

Since participants gave consent for their responses to be used in the FORT3 project, in which all ethical guidelines were adhered to, and since the purpose of the present study is
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

aligned with the purposes of the FORT3 research programme and with what the participants consented to, no further consent needs to be sought. The student researcher will be supervised by the supervising team, which includes the principal investigator of the FORT 3 project, during data analysis. She will receive only the data relevant to the particular study electronically, with all data being anonymised. This electronic data will be stored on her password protected computer. After completion of her study, the student researcher will hand over the electronic data set with any notes made by her during the research to the supervising team, who will store it for six years after completion of the study and consequent dissemination opportunities (publications and congress presentations) and the data will be deleted from the student’s computer.

The data will be managed by the principal researcher of the FORT 3 study. The captured electronic data are stored on password secured computers to which access is only provided to authorised researchers. Any incidents that violate these stipulations will be reported to the FORT3 principal investigator.

**Measures**

In the FORT3 project a socio-demographic questionnaire and several measures of psycho-social well-being were administered. Questionnaires were administered in English. In the present affiliated study, only data from the following measures will be used:

**Socio-demographic questionnaire.** Participants were requested to provide socio-demographic information such as gender, age and level of education.

**The Meaning in Life Questionnaire (MLQ).** The MLQ (Steger et al., 2006) was used to determine search for meaning and presence of meaning in participants. These are represented by two subscales, each with 5 items which are rated on a 7-point Likert-type scale ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*). The Search for Meaning subscale (MLQ-S) measures the strength of an individual’s desire to find meaning and the Presence of Meaning subscale (MLQ-P) measures how full of meaning participants’ feel their lives are currently (Steger et al., 2008). The 10 items are all positively worded and positively scored except for item 9, which is reversed phrased and inversely scored. Steger et al., (2006) found that the MLQ scores were reliable (Cronbach α’s ranging between 0.82 and 0.88) among a multi-cultural sample of North American students. He found adequate test-retest stability over periods of a month to a year and could demonstrate discriminant validity and convergent validity for both the MLQ-P and the MLQ-S subscales.

According to Temane, Khumalo, and Wissing (2014), the MLQ showed good reliability (MLQ-P α = 0.85, MLQ-S α = 0.84), as well as good validity, in a multi-cultural
sample of South African undergraduate students. However, research done by Schutte, Wissing, Ellis, Jose and Vella-Brodrick (2016) showed that, although the MLQ displayed good psychometric properties in general, there were too many response categories; the reversed negated item garnered conflicting answers and the items on the presence of meaning subscale showed different functioning across countries for the majority of its items. They also found that the presence of meaning subscale showed poor targeting, with most of the participants gaining high scores.

**The Eudaimonic-Hedonic Happiness Investigation questionnaire (EHHI).** The EHHI questionnaire explores various facets of well-being and consists of eight questions. Two of these eight questions are open-ended questions on goals and the reasons for pursuing these goals. For purposes of the present affiliated study only responses to the two semi-structured questions on goals will be used. These questions are:

1. "Please list the three most important goals in your present life."
2. "For each of them, please specify why it is important, and how this importance is manifested."

**Data Analysis**

In the present study, data sets that included both the MLQ and EHHI measures will be selected from the existing FORT3 data and combined into one data set. Using IBM SPSS Statistics and Mplus, it will first be established whether the scores on the MLQ were valid and reliable for the particular sample. Specifically, confirmatory factor analysis will be conducted and reliability estimates will be calculated. If the scores are shown to be valid and reliable (which have been confirmed in preliminary analyses), data from the MLQ will be utilized to quantitatively create a matrix of four categories according to participants’ levels of presence of meaning in relation to search for meaning, selecting those in the mix of upper and lower quartiles on the two dimensions of meaning. Four groups will thus be formed: those high in search and high in presence; those high in search and low in presence; those low in search and high in presence; those low in search and low in presence. See the Data Collection section for a clear description of this step.

Qualitative thematic analysis as indicated by Braun and Clark (2006) will be conducted on the two open-ended questions contained in the EHHI for the participants of the four groups. The thematic analysis will be conducted by the student researcher and a co-coder, who will be required to sign a confidentiality agreement form. They both received training in thematic analysis as part of their master’s degree. An inductive approach will be taken and themes will be identified at the semantic level. The coders will familiarise
themselves with the data; generate initial codes; group the codes together according to emergent themes; review the themes to determine whether they accurately represented the ideas in the data and whether anything has been missed; define the themes; and generate a report. In order to limit bias and increase the trustworthiness of the findings, the researcher and the co-coder will do the qualitative data analysis independently from each other, and will afterwards discuss their results until they reach consensus. If they do not reach consensus, the supervising team will be involved in further discussions on points where the coders disagreed. These results will be reviewed and audited by the study supervising team which includes experienced researchers who have output on the topic covered and methodology used. The results regarding people’s goals across the matrix of meaning will then be compared for similarities and differences and the findings will be linked to existing findings and theories.

Reliability of the quantitative data

The reliability index (e.g., Cronbach’s alpha) and confirmatory factor analysis fit indexes (including the comparative fit index and root mean square error of approximation) will be calculated for this scale as observed in the current data set using IBM SPSS Statistics and Mplus.

Trustworthiness of the qualitative data

Since the quality of qualitative research depends on how the data have been gathered and analysed, every effort will be made to ensure the trustworthiness of the qualitative component by adhering to Guba’s constructs for trustworthiness, namely (a) credibility (in deference to accuracy and validity); (b) transferability (in deference to applicability in other contexts); (c) dependability (in deference to repeatability of findings); and (d) confirmability (in deference to neutrality of findings) (Guba, 1981).

Credibility.

Accuracy: The quality and accuracy of the data is supported by only having selected participants 18 and above years of age, as per the inclusion criteria of the FORT3 project. This criterion enhances the probability of sufficient cognitive and reflective abilities for the participant to provide accurate data on the questions posed.

Reflexivity: The student researcher and the co-coder will analyse the data independently, both making a concerted effort to keep an open mind and not allow their own world view to cloud the process, simultaneously keeping a record of their thoughts, experiences and reflections during the process of thematic analysis.
**Peer review:** The research results will be reviewed and audited by the study supervising team which includes experienced researchers who have output on the topic covered and methodology used.

**Structural coherence:** It has been shown in previous studies (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013; Delle Fave et al., 2011) that the data gathered by using the open-ended questions in the EHHI instrument were rich and relevant. These studies used an international data set, which included data from South Africa, and thus suggests that similarly rich and relevant data could be expected in the present study. The qualitative data will be analysed in an iterative interactional process to ensure that the findings are trustworthy.

**Transferability.** In support of transferability, the participants of the FORT3 project were selected in a way that allowed for good variability in the data set; the participants were described accurately and in detail; and the research process was delineated in detail. A limitation is, however, that the sample only included South African participants; only participants from a certain segment of the population (e.g., not including participants who do not have secondary education); and has not been randomly selected, which means that other segments of the population could be under represented. To ensure that the degree to which findings are transferable is clear, the sample’s demographic characteristics will be described in detail.

**Dependability.** Dependability will be established in a number of ways. Firstly, the student researcher and the co-coder will conduct the thematic analysis independently. Secondly, the student researcher will provide the co-coder with a work protocol for data analysis. The student researcher and the co-coder will discuss their findings in an iterative process until consensus has been reached. If consensus cannot be reached, the supervising team will be included in the discussion until consensus has been reached. The supervising team will monitor and audit the process and review the results of the thematic analysis.

**Confirmability.** In order to ensure that the study findings are consistent and unbiased, an audit trail of the process of qualitative analysis, covering the steps and motivation for decisions, will be kept. A work protocol for the thematic analysis will be provided to the co-coder. The student researcher and the co-coder will analyse the data independently, both making a concerted effort to keep an open mind and not allow their own world view to cloud the process, simultaneously keeping a record of their thoughts, experiences and reflections during the process of thematic analysis. These notes will be used to enhance the discussions held around themes and categories. The generated themes will then be compared to existing theory in order to link new knowledge or insights with existing findings.
Although Guba’s constructs give us a very solid base from which to work to ensure methods and practices that deliver trustworthy qualitative research, the conversation around what contributes to good qualitative research has since broadened its scope. Applying Tracy’s (2010) criteria for evaluating research to this affiliated study, the following additions can be made to the above:

**Worthy topic.** The subject of meaning in life and striving is deeply relevant to all individuals.

**Resonance.** Care will be taken to represent the insights from the interpretation of the qualitative data in a way that ensures maximum possible impact on the reader. The hope is that the reader will be able to relate to the insights gained on the association between meaning and goals and carry the knowledge over into their own lives.

**Significant contribution.** The study intends to contribute to the body of existing knowledge by generating novel research and hopes to perhaps even create a sense of curiosity for future research, since it investigates a little explored topic.

**Ethical considerations**

One of the aims of the FORT3 project was to explore the dynamics of levels of mental health (on pathogenic and fortigenic continuums), and in various socio-demographic contexts. The present affiliated study will be a secondary analysis of a selected data set from the FORT3 project with the aim of exploring the dynamics between meaning, as measured by the MLQ, and goals. The aim of the present affiliated study is thus aligned with the aims of the FORT3 project.

The research proposal for the current affiliated study will be reviewed by a small group of experts in the field and then by the scientific panel of the Africa Unit for Transdisciplinary Health Research (AUTHeR). Once the scientific panel has approved the protocol, ethical approval for the present study will be obtained from the Health Research Ethics Committee of the North-West University, Potchefstroom, South Africa, which is registered with the National Health Research Ethics Council of South Africa. As detailed below, every effort will be taken to ensure the integrity of the data and the research process.

**Ethics approval.** This study forms part of the FORT3 project that was approved by the Ethics Committee of the North-West University, with project number NWU 00002-07-A2 (The Ethics Approval Certificate will be included in the ethics application.)

The principal investigator of the FORT3 project has approved the use of data from the FORT3 project in the present affiliated study. (The letter of permission from the principal investigator will be included in the ethics application.)
Protocol of the FORT3 project.

Recruitment of participants. The snowball method was used to recruit participants that adhered to the inclusion criteria. No incentives were offered for participation. Postgraduate students were trained in the administration of psychosocial well-being measures and, under the supervision of the researchers, acted as fieldworkers. It was explained to all participants that their responses would be used anonymously for analyses; that their participation was completely voluntary; and that they were free to withdraw from the study at any stage without consequence. No coercion took place. The fieldworker also explained the possible emotional repercussions, as well as the possible indirect benefits of participation. Participants had the opportunity to pose any questions regarding the study to the principal investigator and research team.

Once it was ascertained that the participant understood the aim of the research as well as the ethical aspects, they were given time to decide whether they wanted to participate in the study. If they confirmed that they were willing to join the study, they were asked to complete a consent form and thereafter the test battery, after which they handed the completed questionnaires back to the field workers. As participants completed the questionnaires at a time and place of their convenience, they were allowed as much time as they needed to consider their decision to take part in the study. Psychologists were available for debriefing and referral should the need have arisen. The fieldworkers returned each participants documents to the researchers, who then separated the consent forms from the completed questionnaires before data capturing in order to ensure the participants’ anonymity.

Informed consent. As stipulated above, postgraduate students who were trained in the administration of psychosocial well-being measures acted as fieldworkers and ensured that each participant completed an informed consent form prior to participation.

Data integrity and storing of the data. In order to protect the integrity of the data, access to all data is controlled. The collected consent forms and answer sheets are stored in locked offices on the premises of the North-West University. The captured electronic data are stored on password secured computers to which access is only provided to authorised researchers who are monitored by the principal researcher of the FORT 3 study.

Risks and benefits. Due to the nature of the questions contained in the questionnaires, an emotional reaction might have been elicited from the participants. If this response was negative, the participant could ignore the question or otherwise withdraw from the study. Psychologists were however available for debriefing and referral should the need have arisen.
Since the content of the questionnaires focused mainly on positive mental health, the risk involved for participants in this study was deemed minimal.

There were no direct benefits for the participants, but the test battery created an opportunity to reflect on the meaning, goals and relationships in their lives. It also provided them with the opportunity to contribute to the scientific knowledge of psychosocial well-being in the particular South African context, with the research project hoping to use this knowledge to improve the well-being and quality of life of people. Since the risks were minimal, the potential benefits were deemed to outweigh the potential risks.

**Protocol and methodology of the present affiliated study.** Every effort will be taken to ensure the integrity of the data as well as the research process of the present affiliated study and the present affiliated study will adhere to the application of the ethical guidelines of the ethical framework as approved by the Ethics Committee of the North-West University for the FORT 3 project.

The aim of the present affiliated study is aligned with the aims of the FORT3 project. In the present study, data sets that included both the MLQ and EHHI measures will be selected from the existing FORT3 data and combined into one data set. Qualitative analysis will then be applied to the responses of these participants to the two open-ended questions on goals contained in the EHHI. All data will be captured anonymously using only the unique identifier and participants will in no way be identified during the analysis or reporting of the current affiliated study.

**Recruitment of participants.** For the current affiliated study, only data relevant to the MLQ and the EHHI instruments will be selected for quantitative analysis.

**Informed consent.** Since the aim of the present study is aligned with the aim of the study as stipulated on the informed consent form, no further consent needs to be sought from participants.

**Data integrity.** The student researcher and co-coder will be granted access to just the relevant variables in the original electronic data set of the FORT 3 project in order to carry out the analyses under the supervision of the supervisors and principal investigator. For the time period of this study, the student will have the relevant data on her own computer, which will be password protected. Once that study has been completed, the student will delete the data from her computer. More details are presented under the “Monitoring of the research” section below.
Risks and benefits. No additional risks are associated with the present affiliated study and the potential benefits remain the same. The potential benefits are deemed to outweigh the potential risks.

Competence of researchers. The study’s supervisor, Dr L. Schutte, has a PhD in Psychology and an M.Sc. in Statistics, with experience in statistical consulting and is a registered Clinical Psychologist. She has been the co-supervisor of three students who have undertaken research on a similar topic that utilised a similar methodology. The first co-supervisor, Ms C. Liversage, has an M.A. degree in Positive Psychology and has undertaken research on a similar topic that utilised a similar methodology to that of the student researcher. The second co-supervisor, Prof M. P. Wissing, is a Research Professor with a wealth of experience and output in the field, which includes outputs that relate to the topic and use the methodology of this study; she has a PhD in Psychology and is a registered Clinical Psychologist. The co-coder, Ms A. Cromhout, holds an M.A. degree in Positive Psychology and is currently doing a research internship in AUTHeR where she had been involved in the coding of qualitative data. The student researcher has a B.Sc. (Hons) in Applied Mathematics and has completed all course work for her M.A. degree in Positive Psychology. She received training in research methods and thematic analysis in the taught modules of her degree. The team is thus deemed competent to deal with the psychological and academic content of the study.

Dissemination of findings. The findings will be submitted for publication in a scientific and recognised journal in the field.

Monitoring of the research. The study leader, co-study leader and assistant study leader (who is the principal investigator of the larger study to which this study is affiliated) will assure that the approved protocol is complied with and research is done in an ethical manner by the student researcher.

The data integrity was and will be ensured as follows: The quantitative data were captured by Statistical Consultation Services who captures data twice and check for any discrepancies, where after the electronic data set was sent to the FORT3 principal investigator (PI). The PI collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data were captured by three research interns who were trained to do the capturing of the qualitative data and who signed confidentiality agreement forms. The interns checked each other’s capturing to ensure that capturing was done correctly. The capturing was done on computers that are placed within a locked office on the premises of the North-West University and the data were locked in cupboards in that office for the duration
of data capturing. After data capturing, the hard copies of the questionnaire were moved to cupboards in a locked office of the North-West University where they are stored. Access to the hard copies of the data is monitored by the PI and study leader. The data were removed from the computers of the data capturers. The captured data were sent to the FORT3 PI. The study leader (a collaborator of the FORT 3 study), who is a statistician who is competent and experienced in data management, merged the quantitative and qualitative data which was then sent to and checked by the PI. The PI as well as the study leader of the present study keeps the electronic data on password-protected computers to ensure the integrity of the data. Should the need arise to share the full data set with another person to assist with the data analyses (e.g., a statistical consultant from Statistical Consultation Services), the data set as stored on the computers of the PI and the study supervisor will be sent to the relevant person who will, from his professional obligation, also safeguard the data integrity. The student researcher and co-coder will be granted access to just the relevant variables in the original electronic data set of the FORT 3 project in order to carry out the analyses under the supervision of the supervisors and principal investigator. For the time period of this study, the student and co-coder will have the relevant data on their own computers, which will be password protected. Once that study has been completed, the student and co-coder will delete the data from their computers.

The statistical analyses and identification of the particular subset of participants that should be included in this particular study, will be done by the study supervisor, Dr L. Schutte, who is a statistician and competent in doing such analyses. The qualitative data analysis will be done by the student researcher and co-coder, and monitored by the supervising team who are experienced in this kind of analysis.

**Budget and Funding**

The data for this project were gathered as part of the FORT3 project and thus there will be no costs related to data gathering. This research study will be partly funded by a bursary from The National Research Foundation (NRF), administered by AUTHeR of the North-West University: Potchefstroom Campus. Any costs not covered by the bursary will be funded by the student herself. The researcher accepted the terms and conditions prescribed by the NRF and signed adherence to them in the presence of two witnesses. The grant holder acknowledges that opinions, findings and conclusions that will be expressed in this study will support the research of the authors and that the NRF will accept no liability whatsoever in this regard. The following preliminary costs are estimated:
Table 1

Estimated research costs

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**Publishing**

The results of this study will be presented in article format, and the manuscript submitted to the Journal of Positive Psychology.

**Format**

The research report will be according to the one-article format (as indicated in rule A4.4.2.9) for dissertations and will be as follows:

*Title page*

*Acknowledgements*

*Summary (with key words)*

*Table of contents*

*Preface*

*Letter of permission (from co-authors)*

*Declaration of no-plagiarism*

*Section 1: Background and orientation*

*Section 2: Manuscript for examination*

  *Author guidelines from journal for manuscripts (instructions to authors)*

*Manuscript*

*Title page*

*Abstract*
Introduction / Literature review / Problem statement and aim

Method

• Research design
• Participants
• Measures
• Procedure
• Ethical Considerations
• Data Analysis

Results

Discussion

References

Section 3: Conclusion

Research Timeline

Table 2

Research Schedule 2017

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<td>Submission of name to AUTHeR scientific panel</td>
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References


Klinger, E. (2012). The search for meaning in evolutionary goal-theory perspective and its clinical implications. In P. P. Wong, P. P. Wong (Eds.), *The human quest for...*


1.2 Approved HREC application

Faculty of Health Sciences Ethics Office for Research, Training and Support
health-sciences.ac.za/healthethics

HREC Health Research Ethics Committee (REC-130913-037)

Standard Full Ethics Application Form
to apply for the approval of single or larger health and health-related scientific projects involving human participants and biological samples of human origin for research or education/training

HREC 01-01a, version Nov 2016

CONFIDENTIAL! This document contains confidential information that is intended exclusively for the applicant(s), the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences of the North-West University and the designated reviewers. Should this document or parts thereof come into your possession in error, you are requested to return it to the HREC without delay or destroy it. Unauthorised possession, reading, studying, copying or distribution of this material, or any other form of abuse, is illegal and punishable.

NWU Ethics Number: (issued upon 1st submission)

Click or tap here to enter text.

Instructions and recommended path for the completion of your application:

a. The research proposal forms the base document that is evaluated in conjunction with this application form. This application form gives the researcher the opportunity to expand on specific ethical issues required for approval.

b. All applicants complete § 0, 2, 3, 4, 5 and 7.

c. Select and complete the research-specific sub-sections from § 6 as applicable to the specific requirements of your study (utilise the table of contents).

d. Ensure that a proposal that has been approved by an appropriate Scientific/Research Proposal Committee is attached to the application form as well as proof of its approval according to the standardised template (see § 4.1).

e. Also attach an executive summary of the study (see § 0).

f. The applicants should ensure that a copy of the informed consent form for approval, that has been compiled according to the informed consent template and checklist supplied by the Faculty of Health Sciences Ethics Office for Research, Training and Support, is submitted with the ethics application form.
g. Any questionnaires or interview schedules that will be used in the completion of the study have to be attached
h. Any advertisements that will be used in the study have to be attached
i. Attach any permission letters received from governing bodies.
j. Attach any contracts with collaborators/sponsors.
k. For applications of collaborative studies being conducted on more than one site, it is required that copies of the proposal and the informed consent forms from all centres involved in the study are included with the application.
l. Attach a 2-page narrative CV for each of the researchers involved in the study.
m. Liaise with the appropriate officials and colleagues mentioned in § 0, complete and sign a printed copy.
n. Submit scanned copies of the signed pages.
o. Include copies of proof of ethics training for all researchers involved in the study (not older than three years).
p. Submit the completed Ethics Application Form (with all the required attachments) via e-mail to Ethics-HRECAppl@nwu.ac.za.
q. All required documentation (as previously outlined) should be attached separately to the aforementioned e-mail as indicated in point p.
r. Applicants must please ensure that all required finalised documents as indicated above are included with the application. **No additional attachments or version correction(s) will be accepted.** If this does occur and the application was incomplete then it will have to be resubmitted with the application form and all the required attachments which could mean that the application may miss the deadline for the closing of the agenda for the HREC meeting.

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1. SECTION 1: STUDY IDENTIFICATION

Provide the necessary descriptions below to identify this study application:

1.1 Full, descriptive title of the study

Exploration of goals among adults in a matrix of presence of and search for meaning.

1.2 Name of the Study Leader/Primary investigator NB! Not the student's name

Dr L. Schutte

1.3 Name and Surname of the Student (if applicable)

Pier Heynike

1.4 Student number

26716623

1.5 Discipline e.g. Consumer sciences

Positive Psychology

1.6 Type of study

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1.7 In this study use is made of

Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be marked as “Yes”.

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<td>Mixed method</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>Other e.g. program evaluation</td>
<td></td>
<td>☒</td>
</tr>
<tr>
<td>Filed privileged information (e.g. medical files) or stored biological samples of human origin (e.g. samples collected for another study or medical diagnosis)</td>
<td></td>
<td>☒</td>
</tr>
</tbody>
</table>
1.8 Envisaged commencement and completion date of the study

More information
Here you can indicate the expected commencement and ending dates of the study, which may be anything from a day to a few years. The full expected duration of the study must be filled in below. Even if the expected duration of the study is uncertain, you can still make an estimate here and report the progress with the annual report. Ensure that the commencement date is at least a few weeks after the date of the HREC meeting at which your application is to be reviewed. The HREC will only grant ethics approval for a one year period. If the study should take longer, a monitoring report requesting permission for continuation must be submitted to the HREC two months before the expiry of the study.

<table>
<thead>
<tr>
<th>Commencement Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/06/01</td>
<td>2018/12/31</td>
</tr>
</tbody>
</table>

2. SECTION 2: STUDY CLASSIFICATION

Complete every option of all the questions in this section. This section is used to classify your study and select suitable reviewers.

2.1 Name of the Ethics Committee handling the application

Health Research Ethical Committee of the North-West University

2.2 Dates of applications

Fill in below the date of the first submission and revised submission (of applicable) of this ethics application

<table>
<thead>
<tr>
<th>Date of first application</th>
<th>Date of revise application (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017/05/17</td>
<td>Click here to enter a date.</td>
</tr>
</tbody>
</table>

2.3 Version number

Fill in the number of times this application has been submitted.

| Version | 1 |

2.4 Estimated risk level

Please indicate the estimated risk level of the research by using the two risk level tables indicated for adult human participants or children/incapacitated adults.

Estimated risk level for adult human participants

| Minimal risk | ☒ |
Medium risk

High risk

**Estimated risk level for children/incapacitated adults**

- No more than minimal risk of harm (negligible risk)
- Greater than minimal risk but provides the prospect of direct benefit for the child/incapacitated adult
- Greater than minimal risk with no prospect of direct benefit to the child/incapacitated adult, but a high probability of providing generalizable knowledge

### 2.5 Context of the Study

Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”.

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific Research</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study falls within a research entity</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Study falls outside a research entity</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Study includes postgraduate students (e.g. master’s or doctorate)</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Study includes contract work</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td><strong>Education and training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. undergraduate practicals)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For staff of the North-West University</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>For students (undergraduate or postgraduate learners)</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>For other learners (not associated with University)</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

### 2.6 This study encompasses aspects that require additional ethical explanation

Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”. If a specific option is marked please complete the corresponding section in Section 6.

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerable participants</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Infection, genetic modification and commercialisation of cell and tissue lines</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>Activity</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Use of drugs / medicines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of drug delivery systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of food, fluids or nutrients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of radio-active substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of toxic substances or dangerous substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring instruments and questionnaires that need psychometric interpretation</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Possible impact on the environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any other aspect of potentially ethically sensitive nature (specify below)</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Other aspects (specify)
Not applicable
2.7 For this study the following persons will be included in the study team

Fill in the number concerned with ALL options. Ensure that the participant numbers in this table correspond with the individuals indicated in Section 3.1, 3.2 and 3.4.

More information
The **study leader** is generally viewed as the individual who takes the final responsibility for all aspects of the study e.g. study leader or principle investigator. The **study supervisor** is generally the individual responsible for the day-to-day management of the study.

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>Only for research studies</td>
<td></td>
</tr>
<tr>
<td>Study Leader (e.g. study leader/principal investigator)</td>
<td>1</td>
</tr>
<tr>
<td>Study supervisor (day to day manager)</td>
<td>0</td>
</tr>
<tr>
<td>Co-workers (researchers of the North-West University)</td>
<td>2</td>
</tr>
<tr>
<td>Co-workers (researchers outside the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Co-workers (postgraduate students of the North-West University)</td>
<td>1</td>
</tr>
<tr>
<td>Assistants/field workers</td>
<td>1</td>
</tr>
<tr>
<td>Only for education and training (e.g. undergraduate practicals)</td>
<td></td>
</tr>
<tr>
<td>Educator</td>
<td>0</td>
</tr>
<tr>
<td>Co-workers (lecturers of the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Co-workers (lecturers outside the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Students (undergraduate learners of the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Students (postgraduate learners of the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Other learners (not associated with the North-West University)</td>
<td>0</td>
</tr>
<tr>
<td>Assistants/field workers</td>
<td>0</td>
</tr>
<tr>
<td>Sponsors</td>
<td>1</td>
</tr>
<tr>
<td>Other members of the study team not mentioned above (specify)</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>
2.8 The following professional supervisory persons are involved in this study (may in no way be directly part of the research team)

<table>
<thead>
<tr>
<th>Researcher / Supervisor</th>
<th>Number</th>
<th>Researcher / Supervisor</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisory Doctor</td>
<td>0</td>
<td>Supervisory Psychologist</td>
<td>0</td>
</tr>
<tr>
<td>Supervisory Nurse</td>
<td>0</td>
<td>Supervisory Pharmacist</td>
<td>0</td>
</tr>
<tr>
<td>Supervisory Psychiatrist</td>
<td>0</td>
<td>Supervisory Social worker</td>
<td>0</td>
</tr>
</tbody>
</table>

Other supervisory person (specify)
Not applicable

I hereby declare that the above information in “Section 2: Study Classification” is complete and correct and that I did not withhold any information.

Yes ☒ No ☐

Remember to save your document regularly as you complete it!
# 3. Section 3: Detail of Study Leader/Principal Investigator, Co-Workers and Supervisors

## 3.1 Details of Study Leader/Principal Investigator

<table>
<thead>
<tr>
<th>Surname</th>
<th>Full Names</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schutte</td>
<td>Lusilda</td>
<td>Dr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NWU Campus</th>
<th>Faculty</th>
<th>Research entity/School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potchefstroom</td>
<td>Health Sciences</td>
<td>AUTHeR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position</th>
<th>University No.</th>
<th>Professional Registration (body &amp; category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Lecturer</td>
<td>13012584</td>
<td>HPCSA Clinical Psychologist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone</th>
<th>NWU-box or Postal Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>Home</td>
</tr>
<tr>
<td>018 299 1104</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

**E-mail Address**

lusilda.schutte@nwu.ac.za

- Please attach the two-page narrative CV of the study leader

---

**More information**

**NB!** A 2-page CV in a narrative format, giving a brief overview of:
- a researcher’s qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years)

---

## 3.2 Details of Study Supervisor

Is the Study Leader also the study supervisor?
(Please mark with X in the appropriate box.)

**More information**

Where the Study Leader is not physically present or consistently available and where supervision of the research activities is necessary, a suitable researcher/lecturer may be


**EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING**  

---

**designated as study supervisor.** The study supervisor is part of the study team.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

If “Yes”, this part can be left blank.  
If “No” (i.e. if the Study Leader is not the Study Supervisor) give details below.

<table>
<thead>
<tr>
<th>Surname</th>
<th>Full Names</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NWU Campus</th>
<th>Faculty</th>
<th>Research entity/School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position</th>
<th>University no.</th>
<th>Professional Registration (body &amp; category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone</th>
<th>NWU-box or Postal Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>Home</td>
</tr>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

E-mail Address  
Click here to enter text.

[PLEASE ATTACH THE TWO-PAGE NARRATIVE CV OF THE STUDY SUPERVISOR]

**More information**

**NB!** A 2-page CV in a narrative format, giving a brief overview of:

- a researcher’s qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years) (if applicable)

---

3.3 Professional Supervisors

This section is completed if applicable and mentioned in Section 2.8.

**More information**

Professional supervisor does not refer to the study leader or the study supervisor. In all cases where medical emergencies may possibly arise, the physical presence of a doctor and a registered nurse is required. For the drawing of blood samples (e.g. diet manipulation...
and similar studies) the presence of a registered nurse is sufficient.

Name and qualifications of all supervisory professional persons

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualifications</th>
<th>Professional Registration</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

(Type one name per row, or type “Not applicable” if there is no supervisory person. In last table cell, click on [tab] to add another row)

[PLEASE ATTACH THE TWO-PAGE NARRATIVE CV OF THE PROFESSIONAL SUPERVISOR/S]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:
- a researcher’s qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years) (if applicable)

3.4 Other Members of the Study Team

Names, qualifications, professional registration and functions of all the other co-workers (researchers, postgraduate students in the case of a research study, or lecturers (in the case of training) and assistants/field workers who form part of the study team) should be indicated. The information given in this table should correspond with the number of team members given in Section 2.7 (Add extra rows to the table if required.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualifications</th>
<th>Professional Registration</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Liversage</td>
<td>MAPP</td>
<td></td>
<td>Co-supervisor</td>
</tr>
<tr>
<td>M.P. Wissing</td>
<td>D.Phil., Drs. Phil.</td>
<td>HPCSA Clinical Psychologist</td>
<td>Co-supervisor</td>
</tr>
<tr>
<td>P Heynike</td>
<td>BSc Hons</td>
<td></td>
<td>Student</td>
</tr>
<tr>
<td>A Cromhout</td>
<td>MAPP</td>
<td></td>
<td>Co-coder</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “none” if there is no other team member.

[PLEASE ATTACH A TWO-PAGE NARRATIVE CV FOR ALL THE MENTIONED RESEARCH TEAM MEMBERS IN THIS SECTION]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:
- a researcher’s qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years)
3.5 Conflict of Interests and Sponsors (if applicable)

Declare with full details any conflict of interests that any member of the study team or professional supervisor (see § 3.1, 3.2, 3.3 and 3.4) might have.

<table>
<thead>
<tr>
<th>Name of Researcher</th>
<th>Complete description of the conflict and how it will be managed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there is no member of the study team or professional supervisor with a conflict of interest.

Give full details of all sponsors of the study.

<table>
<thead>
<tr>
<th>Name of Sponsor</th>
<th>Contact Details</th>
<th>Affiliation &amp; Contribution</th>
<th>Nature &amp; Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Research Foundation</td>
<td>Meiring Naudé Road Brummeria, Pretoria Tel: +27 (0)12 481 4000</td>
<td>Monetary bursary towards study fees.</td>
<td>R10 000 awarded for 2017.</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there are no sponsors. Add extra rows to the table if required.

Is any participant in the study directly or indirectly involved with one or more of the sponsors or the researchers? Give full details.

<table>
<thead>
<tr>
<th>Name of Participant</th>
<th>Association with Sponsor/Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there are no such participants. Add extra rows to the table, if required.

Does any member of the study team receive any form of remuneration or other benefits from the sponsor(s), either directly or indirectly? Give full details.

<table>
<thead>
<tr>
<th>Name of Team Member</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof M.P. Wissing</td>
<td>Principal investigator for the FORT3 project which is partly funded by the NRF.</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there are no such team members. Add extra rows to the table if required.
3.6 Collaborations (if applicable)

Declare with full details all collaboration agreements, e.g. with researchers or lecturers from another institution, national or international, who will be working on a defined section of the study.

<table>
<thead>
<tr>
<th>Name of Collaborator</th>
<th>National/International (Indicate which)</th>
<th>Full Description of functions and responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there are no contractors. Add extra rows to the table, if required.

3.7 Contractual agreements (if applicable)

Declare with full details all contractual agreements (e.g. with team members, collaborators and sponsors) on the study. Please note: A copy of any contractual agreements must be submitted to the Health Research Ethics Committee, together with the submission of this application. Add extra rows to the table, if required.

<table>
<thead>
<tr>
<th>Name of Contractor</th>
<th>Full Description of the agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Note: Type one name per row, or type “Not applicable” if there are no contractors. Add extra rows to the table, if required.

[PLEASE ATTACH ALL CONTRACTUAL AGREEMENTS]

3.8 Confidentiality

Note: Other people involved in the research that could pose a risk to confidentiality should sign confidentiality agreements e.g. transcribers and co-coder/s.
3.9  Indemnity

Note: If people are involved in the research as part of the research team but are not as staff on the payroll of the university or by contract on the payroll of the university, they will not be covered by the insurance of the university and have to sign an indemnity form.

4.  SECTION 4: RESEARCH PROPOSAL AND SCIENTIFIC COMMITTEE APPROVAL

4.1  Executive summary and research proposal

Executive summary of the study

Provide an executive summary (maximum 150 words) of the study in the following format:

- brief problem statement (approx. 3 sentences)
- aims and objectives of the study
- study design and method

A gap in existing knowledge is identified regarding how presence of meaning and search for meaning are associated with people’s choice of goals. It is not known whether individuals’ levels of search for meaning and presence of meaning can be associated with the type of goals they set and the motives underlying their identified personal goals.

The aim of this research is to explore the goals and motives directing individuals’ goals as they relate to different meaning profiles.

A secondary analysis of data from the FORT3 project (N = 812) will be utilised. A mixed methods convergent parallel design was used for data-gathering. For this study, quantitative and qualitative data will be sequentially analysed, related, and integrated in interpretation. A matrix of four groups of participants will be quantitatively distinguished based on values from the lower and upper quartiles of the Meaning in Life Questionnaire search and presence scores. Responses to open-ended questions relating to goals will be thematically analysed and integrated with quantitative data.

Proposal

Note: For each study a descriptive proposal has to be submitted and is used as the main document for evaluation. The proposal should reflect the ethics of the research throughout. Attach a proposal approved by the Scientific/Proposal Committee of your research entity.

[ATTACH THE RESEARCH PROPOSAL]

Scientific/Proposal Committee approval

This study should have been reviewed and approved by a Scientific/Proposal Committee.
More information
The proposal needs to be approved by a Scientific/Proposal Committee before it will be reviewed by the HREC. The HREC relies on the scientific expertise of this committee regarding the evaluation of the scientific merit and design of the study.

<table>
<thead>
<tr>
<th>Yes ☒</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Name of formal Scientific/Proposal Committee: AUTHer</td>
</tr>
<tr>
<td></td>
<td>Title, initials and surname of all the members of Scientific/Proposal Committee present during the review.</td>
</tr>
<tr>
<td></td>
<td>Prof P Bester</td>
</tr>
<tr>
<td></td>
<td>Dr L Kruger</td>
</tr>
<tr>
<td></td>
<td>Mrs L Wyma</td>
</tr>
<tr>
<td></td>
<td>Date of approval: 2017/04/21</td>
</tr>
<tr>
<td>No ☐</td>
<td>Reason: Not applicable</td>
</tr>
</tbody>
</table>

Letter confirming approval of protocol
The HREC has to have proof of confirmation of approval by the Scientific/Proposal Committee.

[ATTACH CONFIRMATION OF APPROVAL OF THE STUDY PROPOSAL BY THE SCIENTIFIC/PROPOSAL COMMITTEE ON THE MANDATED TEMPLATE.]

Remember to save your document regularly as you complete it!

5. SECTION 5: ADDITIONALLY REQUIRED INFORMATION ABOUT ETHICAL IMPLICATIONS OF THE RESEARCH NOT PROVIDED IN THE PROPOSAL

Note: The information contained in this section is additional to what is contained in the proposal.

5.1 What will be expected of participants during data gathering?

What will be expected of participants during data gathering e.g. a one hour interview, venepuncture, needle prick, etc.

More information
Highlight what participants will be expected to do and what will be done to them, and how long it will take? This includes aspects such as procedures, sample collections and methods of information gathering and what the probable associated experience of participants will be. Provide particular details on any step that might violate privacy e.g. having to undress. This section supports you in the completion of the section in the informed consent form entitled, “What will your responsibilities be?”

Participants were asked to complete a selection of questionnaires with reference to psychosocial well-being, which took approximately 30 minutes to complete. Although the
questionnaires relate to well-being, some items could evoke emotional responses from participants. Therefore, debriefing was available if any participants needed it. Such participants would have been given the telephone numbers of counsellors or psychologists who were requested to assist the participants, but none of the participants indicated such a need.

5.2 Risks and precautions

Name and explain all the possible risks for all procedures that the participants might experience during the research. Use the template at the back of the approved risk level descriptor document to guide you into identifying all the possible types of risk as well as the probability and magnitude of harm. Ensure that you also include reference to various biological sampling techniques e.g. venepuncture, buccal swabs, etc. By completing this section it will help you to answer the two sections on “Are there risks involved in your taking part in research?” and “What will happen in the unlikely event of some form of harm occurring as a direct result of your taking part in this research study?” in the informed consent form.

<table>
<thead>
<tr>
<th>Risks (e.g. physical, psychological, social, legal, economic, dignitary and community)</th>
<th>Precautions (when describing these precautions be clear on how they will mitigate all the identified risks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>Although the questionnaires relate to positive well-being, there is a possibility that some items could evoke emotional responses such as emotional catharsis from participants. Other possible responses could be boredom or fatigue. Participants were given the opportunity to obtain contact details of qualified professionals to provide debriefing should they feel the need. However, no participant indicated a need for debriefing.</td>
</tr>
</tbody>
</table>

5.3 Benefits for participants

Describe 1) the potential direct benefits that the study might hold for the individual participants; or 2) the indirect benefits that the study holds for society at large or for the researchers and the organisations/institutions they are working for, through the knowledge gained. By completing this section it will help you to answer the section on “Will you benefit from taking part in this research” in the informed consent form.

<table>
<thead>
<tr>
<th>Direct benefits for participants</th>
<th>Indirect benefits for society at large or for the researchers/institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>There were no direct benefits for the participants, but the test battery created an opportunity to reflect on the meaning, goals and relationships in their lives.</td>
<td>This affiliated study may promote a comprehensive understanding of goals, why they are important and how they link to meaning profiles, contributing to theory at a knowledge level, and on a practical level to the facilitation of well-being via goal development and motivation interventions. These interventions may be used to contribute to well-being in South Africa in</td>
</tr>
</tbody>
</table>
5.4 Risk/benefit ratio analysis

The overall benefits should, in general, always outweigh the risks, for a study to be considered ethical. If this is not the case, there needs to be a strong justification as to why research ethics approval should be given.

| Benefit outweighs the risks | ☒ |
| Risks outweigh the benefit | ☐ Justify: Not applicable |

5.5 Facilities

Describe the place(s) and facilities in detail where the study will be implemented. This description is applicable to both institutions and the community. Also describe the availability of measures to handle emergencies in an applicable manner and how this will be executed.

Participants could complete the questionnaires in their own time at a place convenient to them. All participants were given the opportunity to obtain contact details of qualified professionals to provide debriefing if needed.

5.6 Legal authorisation

Describe in detail which bodies must grant legal authorisation for this study (e.g. Department of Health, Medicine Control Council, etc.). Mention whether authorisation has already been obtained, with reference to attached proof, or how you will go about getting authorisation before the study commences.

Conditional approval will be granted to obtain this authorisation but the study cannot commence before the HREC has received the final documents.

Not applicable

[PLEASE UPLOAD ALL DOCUMENTS INDICATING LEGAL AUTHORISATION]

5.7 Goodwill permission /consent

Describe in detail what interest group representatives must give permission for this study (e.g. community leaders, church leaders, tribal chiefs or other). Also mention whether permission has already been obtained, with reference to attached proof, or how you will go about getting permission before the study commences.

Conditional approval will be granted until proof of goodwill permission has been granted but the study cannot commence before the HREC has received the final documents.

Not applicable

[PLEASE UPLOAD ALL LETTERS OF GOODWILL PERMISSION]

5.8 Criteria for participant selection and recruitment
Describe in full which inclusion and exclusion criteria will be used to select participants and justify each of your choices. If you include one of the following in your exclusion/inclusion criteria, the need for it in the research has to be justified i.e. race or ethnic origin, person’s health or sex life, a person’s inherited characteristics or biometric information. Ensure that your exclusion criteria are not merely the opposite of the inclusion criteria.

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion criteria of the FORT3 study:</td>
<td>FORT3 study:</td>
</tr>
<tr>
<td>Secondary education; fluency in the English language; being 18 and above years of age; and currently resident in South Africa.</td>
<td>The criterion of secondary education was applied to increase the likelihood that participants had a good comprehension of the measures. Sufficient fluency in English enhanced the likelihood that participants were able to interpret and complete the questionnaires. Being 18 and above years of age enhances the probability of sufficient cognitive and reflective abilities for the participant to provide accurate data on the questions posed. The criterion of being a South African resident ensured that participants function within the South African context (similar data we collected in other countries as part of a collaborative multi-country study which has comparative aims. The present study will only include the South African data.)</td>
</tr>
<tr>
<td>Inclusion criteria of the affiliated study:</td>
<td>Affiliated study:</td>
</tr>
<tr>
<td>The present study will select participants from this larger data set by identifying people who fall into the four quadrants of combinations of presence of and search for meaning (high search, high presence; high search, low presence; low search, high presence; low search, low presence). See Figure 1 on p 12 of the Research Proposal to illustrate this.</td>
<td>In order to explore whether there is a link between goals and profiles of meaning, participants who clearly fall into one of each of the four meaning profiles relevant to this study had to be selected. To this end participants’ scores on the Meaning in Life Questionnaire will be used to select subsamples of participants falling into combinations of the highest and lowest quartiles on the two dimensions, creating four patterns of profile groups: high search, high presence; high search, low presence; low search, high presence; and low search, low presence.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exclusion criteria</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/a</td>
<td>N/a</td>
</tr>
</tbody>
</table>

5.9 Participant recruitment
Recruitment of human participants must take place within a specified time frame/schedule (i.e. specified starting and ending date) and cannot continue indefinitely. Explain how you will go about recruiting the participants.

More information
This process should take place in such a way that the participants do not feel intimidated by the process or implicitly "bribed", but decide absolutely voluntarily to participate. It should be fair and equitable. Include aspects of community entry e.g. advertisements, community advisory boards and the use of gatekeepers and mediators etc.

The data that will be used in this study were gathered as part of the FORT3 project. Participants consisted of a multi-cultural adult South African non-probability sample \((N = 812)\). Data for the FORT3 study were obtained by postgraduate students who acted as fieldworkers under supervision of the researchers after they were trained in the administration of psycho-social well-being measures. A nonprobability method of recruiting participants was used, where the fieldworkers identified people within their communities who adhered to the inclusion criteria. These people were invited by the fieldworkers to participate in the study, without using any coercion, pressure or manipulation. These people were also asked, if possible, to identify other potential participants from their communities who fitted the inclusion criteria and might be interested in participating in the study. The contact details were then given to the fieldworker, who followed up these references. Prior to handing the informed consent form or research battery to participants, the field workers checked that participants adhered to the inclusion criteria of FORT3. This snowball method of sampling allowed for accessing participants who adhered to the inclusion criteria of the study and assisted in adding diversity to the sample, which made it the sampling method of choice.

It was explained to all participants that their responses would be used anonymously for analyses; that their participation was completely voluntary; and that they were free to withdraw from the study at any stage without any consequences to them. No coercion took place and no incentives were offered for participation. The fieldworker also explained the possible emotional repercussions, as well as the possible indirect benefits of participation.

Once it was ascertained that the participant understood the aim of the research as well as the ethical aspects, they were given time to decide whether they wanted to participate in the study. The participants were allowed as much time as they wished to decide whether they wanted to participate and access to the researchers were ensured by providing the participants with the contact numbers of the principal investigator and research team in case they wanted to ask questions. If they confirmed that they were willing to join the study, they were asked to complete a consent form and thereafter the test battery at a time and place of their convenience, after which they handed the completed questionnaires back to the field workers. Participants were given the opportunity to obtain contact details of qualified professionals to provide debriefing should they feel the need. The fieldworkers returned each participant’s documents to the researchers, who then assigned a unique identifier to each questionnaire and separated the informed consent forms from the completed questionnaires before data capturing in order to ensure the participants’ anonymity.

In the present study, data will be selected for secondary analysis from the existing FORT3 data set that included both the Meaning in Life Questionnaire (MLQ) and open-ended questions combined into one data set. A matrix of four groups of participants will be quantitatively distinguished based on values from the lower and upper quartiles of the MLQ search and presence scores: those high in search and high in presence; those high in search and low in presence; those low in search and high in presence; those low in search and low in presence. In preliminary analyses, it became evident that the low search, low presence group contains the least participants. Therefore the qualitative data from this quadrant will be analysed first. If data saturation is not reached by the time that the data from all participants that fell in the low search, low presence quadrant have been analysed, participants that fall within the lower tertile of both presence of and search for meaning, and
that have not yet been included in the study, will be randomly selected and their data analysed until data saturation is reached. The same number of participants will then be selected randomly from each of the other quadrants for data analysis. If data saturation is not reached in one of the other quadrants by the time that the selected number of participants has been included, participants will be added until data saturation has been reached in that quadrant. The same number of participants will then also be added to all the other quadrants to ensure that the sample size in each of the quadrants is the same.

5.10 Informed consent (consent, permission, assent and dissent)

The focus in this section is on a detailed informed consent process description. According to law all participants must be fully informed about the implications and risks associated with participation in the study.

More information

How will you go about contacting them and explaining the study and accompanying implications to all participants? Ensure that participants are aware that participation in the research is voluntary and that they may withdraw from the study at any time. Where research is not carried out in participants’ mother tongue, explain how you will go about conveying the information in an understandable manner. Where participants are not literate, a witness should be involved in obtaining informed consent. Be clear on who will obtain the informed consent (independent person) and how the researcher will be included to explain the research and answer questions. Discuss the role of the independent person. For your convenience you can use the template for informed consent as well as the accompanying checklist. Be clear on your description of the use of consent, permission, assent and dissent. For minors ensure that parental permission and child assent or adolescent consent (where applicable) is obtained for all participants.

Participation in the FORT3 project was completely voluntary and participants were free to withdraw from the study at any stage without consequence. Participants were informed about the aim and purpose of the research; what the data would be used for; and how it would be stored, both verbally by the trained fieldworkers and in writing. The participants could ask questions of the field worker or the researchers, whose contact details had been made available. Volunteers who agreed to participate were given an informed consent form by the fieldworker, who acted as the mediator and the independent person who obtained the consent. Participants could complete the questionnaires in their own time at a place convenient to them, returning it to the fieldworker upon completion. We are aware that the newest ethical rules require participants to receive the informed consent form at least a week before participation. These prescriptions did not hold at the time of data gathering, and therefore the data gathering did not take place under these conditions. Since participants were allowed to complete the informed consent form and the test battery at a place and time of their convenience, it is reasonable to accept that they had sufficient time to consider participation. Participants who decided to participate in the study submitted the written consent forms separately from the anonymously completed questionnaires in sealed envelopes to the field workers in order to ensure privacy and anonymity. The field workers handed the sealed envelopes to the researchers.

Since participants gave consent for their responses to be used in the FORT3 project, in which all ethical guidelines were adhered to, and since the aim of the present study was aligned with the aims of the FORT3 research programme, no further consent needed to be sought for the affiliated study.

[PLEASE UPLOAD YOUR INFORMED CONSENT FORM FOR APPROVAL AND THE INFORMED CONSENT CHECKLIST]
5.11 **Incentives and/or remuneration of participants**

Is any form of incentive and/or reimbursement offered to the participants? If “Yes”, describe it in full in terms of *what, how, where, when, how much, terms and conditions*, etc. Remember to work according to the TIE principle (time, inconvenience, expenses e.g. transport and meals). If no remuneration is offered, *justify why this is not the case* (Please mark with X in the relevant block and provide details).

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☒</td>
<td>Since participants completed the questionnaires at a time and place of their own convenience, the offering of refreshments was not applicable. Participants were not remunerated for participation.</td>
</tr>
</tbody>
</table>

5.12 **Announcement of study results to participants**

Indicate *what, how, when and to whom* you will communicate the results of the study to the participants.

<table>
<thead>
<tr>
<th>What?</th>
<th>How?</th>
<th>When?</th>
<th>To whom?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication of results in an academic journal.</td>
<td>Publication of results in an academic journal and possibly other media platforms.</td>
<td>After all data have been analysed, interpreted and deemed fit for dissemination by the study leaders and examiners.</td>
<td>The larger scientific reader base and possibly participants.</td>
</tr>
</tbody>
</table>

5.13 **Privacy and confidentiality**

Explain how you will ensure both privacy and confidentiality throughout the research.

**Privacy**

Privacy is concerned with who has access to *personal information and records* about the participant as well as *privacy during physical measurements* e.g. anthropometric measures or *psychological procedures* e.g. interviews/focus groups. Explain how privacy will be ensured in your study.

The participants completed the questionnaires anonymously. The signed written consent forms were handed in separately from the questionnaires and the data were captured anonymously and stored on password protected computers in locked offices at the North-West University. To further ensure anonymity, interpretation will only be done on group scores and participants will in no way be identified during the analysis of the data or the reporting of the results of the current affiliated study. Only authorised researchers have access to the databases.

**Confidentiality**

Confidentiality ensures that *appropriate measures* will be implemented to *prevent disclosure of information* that might identify the participant either during the course of the research or afterwards e.g. anonymising data or pooling results. Explain how confidentiality will be ensured in your study.

The participants completed the questionnaires anonymously. The signed written consent
forms were handed in separately from the questionnaires and the data were captured anonymously and stored on password protected computers in locked offices at the North-West University. To further ensure anonymity, interpretation will only be done on group scores and participants will in no way be identified during the analysis of the data or the reporting of the results of the current affiliated study. Only authorised researchers have access to the databases.

5.14 Management, storage and destruction of data/biological samples

Describe how you will manage the collected data/biological samples as well as the storage thereof.

Data/biological samples management

For management of data/biological samples, indicate:

- what data/biological samples will be stored
- how it will be stored
- how data in its various forms will be managed e.g. questionnaires, recorded interviews or biological samples
- who will manage the data/biological samples storage
- who will have access to the stored data/biological samples
- how will data be regained from other research team members
- and if data sharing is to occur, how will this be managed?

Ensure that you refer to both electronic and hard copy versions of data as well as biological samples.

The quantitative data were captured by the Statistical Consultation Services who capture data twice and check for any discrepancies, after which the electronic data set was sent to the FORT3 principal investigator (PI). The PI collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data were captured by three research interns who were trained to do the capturing of the qualitative data and who signed confidentiality agreement forms. The interns checked each other’s capturing to ensure that capturing was done correctly. The capturing was done on computers placed within a locked office on the premises of the North-West University and the data were locked in cupboards in that office for the duration of data capturing. After data capturing, the hard copies of the questionnaire were moved to cupboards in a locked office of the North-West University where they are stored. Access to the hard copies of the data is monitored by the PI and study leader. The data were removed from the computers of the data capturers. The captured data was sent to the FORT3 PI. The study leader (a collaborator of the FORT 3 study), who is a statistician who is competent and experienced in data management, merged the quantitative and qualitative data which was then sent to and checked by the PI. The PI as well as the study leader of the present study keeps the electronic data on password-protected computers to ensure the integrity of the data. Should the need arise to share the full data set with another person to assist with the data analyses (e.g., a statistical consultant from Statistical Consultation Services), the data set as stored on the computers of the PI and the study supervisor would be sent to the relevant person who would, from his professional obligation, also safeguard the data integrity. The student researcher and co-coder will be granted access to just the relevant variables in the original electronic data set of the FORT 3 project in order to carry out the analyses under the supervision of the
supervisors and principal investigator. For the time period of this study, the student and co-coder will have the relevant data on their own computers, which will be password protected. Once that study has been completed, the student and co-coder will delete the data from their computers.

The statistical analyses and identification of the particular subset of participants that should be included in this particular study, will be done by the study supervisor, Dr L. Schutte, who is a statistician and competent in doing such analyses. The qualitative data analysis will be done by the student researcher and co-coder, and monitored by the supervising team who are experienced in this kind of analysis.

**Storage and destruction of data/biological samples**

Describe:
- where and how data/biological samples will be stored
- for how long it will be stored
- who will be responsible for storage
- how it will be destroyed?

Ensure that you refer to both *electronic* and *hard copy versions* of data as well as *biological samples*

The original completed questionnaires (hard copies) will be stored in locked offices at the Africa Unit for Trans-disciplinary Health Research (AUTHeR) of the North-West University for six years after the last publication utilising the project data, after which the data will be destroyed by shredding it. Electronic data will be stored on password protected computers of the study leader of the present study and the principal investigator of the FORT3 study for at least six years after the last publication utilising the project data. When the data are no longer relevant, they will be permanently deleted.

**5.15 Monitoring of research**

Describe how you as the researcher will monitor:
- both the *implementation and progress* of the research
- compliance with the approved protocol
- the management of ethics throughout the research process
- the management of amendments during the execution of the research study, should they be needed
- how *incidents* and *adverse events/serious adverse events* (if applicable) will be reported.

The study leader and the co-study leaders – one of whom is also the principal investigator of the FORT3 project to which this study is affiliated - will assure that the approved protocol is complied with and research is done in an ethical manner by the student researcher. The data integrity was and will be ensured as follows: The quantitative data were captured by the Statistical Consultation Services, who capture data twice and check for any discrepancies, after which the electronic data set was sent to the FORT3 principal investigator (PI). The PI collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data were captured by three research interns who were trained to do the capturing of the qualitative data and who signed confidentiality agreement forms. The interns checked each other’s capturing to ensure that it was done correctly. The capturing was done on computers in a locked office on the premises of the
North-West University and the data were locked in cupboards in that office for the duration of data capturing. After data capturing, the hard copies of the questionnaire were moved to cupboards in a locked office of the North-West University, where they are now stored. Access to the hard copies of the data is monitored by the PI and study leader. The electronic data were removed from the computers of the data capturers. The captured data were sent to the FORT3 PI. The study leader (a collaborator of the FORT 3 study), who is a statistician and is competent and experienced in data management, merged the quantitative and qualitative data which were then sent to and checked by the PI. The PI as well as the study leader of the present study keeps the electronic data on password-protected computers to ensure the integrity of the data. Should the need arise to share the full data set with another person to assist with the data analyses (e.g., a statistical consultant from Statistical Consultation Services), the data set as stored on the computers of the PI and the study supervisor will be sent to the relevant person who will, from his professional obligation, also safeguard the data integrity. The student researcher and co-coder will be granted access only to the relevant variables in the original electronic data set of the FORT 3 project in order to carry out the analyses under the supervision of the supervisors and principal investigator. For the time period of this study, the student and co-coder will have the relevant data on their own computers, which will be password protected. Once the affiliated study has been completed, the student and co-coder will delete the data from their computers.

The statistical analyses and identification of the particular subset of participants that should be included in this particular study, will be done by the study supervisor, Dr. L. Schutte, who is a statistician and competent in doing such analyses. The qualitative data analysis will be done by the student researcher and co-coder, and monitored by the supervising team who are experienced in this kind of analysis.

5.16 Misleading of participants (if applicable)

Is use made of any form of misleading in the research, where the participants are not told the complete truth (e.g. placebo or psychotherapeutic interventions)?

More information
In the case of using a placebo (e.g. drug or psychotherapeutic intervention), justification has to be provided that there is no alternative treatment with proven efficacy. When such an alternative treatment exists, the standard of care should be provided to both the experimental and control group.

If “Yes”, in either case of using a placebo or during a psychotherapeutic intervention:
- justify in full why it is necessary
- describe how the participants will be protected against potential negative consequences of the placebo or misleading information/action.
- when you will disclose and debrief
- describe how you will disclose to them that they were misled.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

Justification | Precautionary measures
---|---
Not applicable | Not applicable

Disclosure
- When?
- How?

Not applicable | Not applicable

5.17 Use of previously collected data/biological samples (if applicable)
When your research study is making use of previously collected data or biological samples, provide a comprehensive description of the following.

<table>
<thead>
<tr>
<th>What was the purpose of the original collection?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The study forms part of the FORT3 project that aims to understand, among other things, what people’s perception and understanding is of well-being and how they experience happiness and meaningfulness.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What will your purpose be?</th>
</tr>
</thead>
<tbody>
<tr>
<td>To explore the goals and motives directing individuals’ goals as they relate to different meaning profiles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Give a description of how research integrity was ensured in the original study by referring to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- how informed consent was obtained from participants</td>
</tr>
<tr>
<td>- what they consented for</td>
</tr>
<tr>
<td>- the circumstances under which the data/biological samples were gathered</td>
</tr>
<tr>
<td>- how the ethics of data/biological sample collection was ensured?</td>
</tr>
</tbody>
</table>

The ethics of the original study was ensured by the fact that the FORT3 study had ethical clearance from the ethics committee (ethics clearance number NWU-00002-07-A2 valid until 2017/08/31, thereafter continuation will be requested by submitting the annual HREC monitoring report). We note that we are aware that data gathering in the original FORT3 project did not comply with all the current ethics requirements. However, at the time that the FORT3 project was developed, approval was obtained from the relevant ethics committee and data were gathered in accordance with all the rules. Monitoring reports are completed and submitted on an annual basis as required by the Health Research Ethics Committee of the North-West University, which means that the FORT3 project is active and allows for analysis of the already gathered data. Data integrity was ensured by the Principal Investigator of the study and the participants’ informed consent covers the research done in this affiliated study. These matters were discussed in consultations with the Head of the Ethics Office and the Chair of the Health Research Ethics Committee of the North-West University's Potchefstroom Campus and it was determined that the current study is ethically acceptable.

Participants of the FORT3 study were informed about the aim and purpose of the research, what the data would be used for and how it would be stored, both verbally by the trained fieldworkers and in writing. Participants were also informed that participation was entirely voluntary; that data would stay anonymous; that they could withdraw from the study at any point without any repercussions or negative consequences; that there was minimal foreseeable risk associated with participation; that responses would only be used as part of a group and only group scores would be used for analyses; the approximate duration of completion of the questionnaires; and how the study would contribute to science and society. An informed consent form explaining the process was provided and after being given a break, which allowed time for the participant to review and/or discuss the details and procedures, participants handed in the written consent forms separately from the anonymously completed questionnaires. The participants could complete the questionnaires in their own time at a place convenient to them.

In the informed consent form (see Attachment 8) the following was stipulated: "We want to understand what people think about their lives and well-being, and how they experience happiness, well-being and meaningfulness. Therefore we need your assistance and personal view." The present affiliated study, that aims to explore the goals and motives directing individuals’ goals as they relate to different meaning profiles, fit with what the participants consented to, as it is all about understanding goals and meaning as aspects of
Give a detailed description of:
- how data/biological sample storage was managed
- where and how data/biological samples were stored
- for how long it was stored
- who was responsible for storage
- how it was ensured that no tampering occurred?

Since data gathering (2011-2014), the original completed questionnaires (hard copies) have been stored in locked offices at the Africa Unit for Trans-disciplinary Health Research (AUTHer) of the North-West University. Electronic copies of data that were gathered through the questionnaires have been stored on password protected computers of the principal investigator of the FORT3 study and the study leader of the present study who is a collaborator in FORT 3 after data capturing. Access is controlled by the PI of the FORT3 project who ensures that no tampering is with the data is possible. She always works on the master data set that is kept on her and the collaborator’s computers to be sure of data integrity. In all cases where other parties needed access to the data, authorisation was granted by the PI and only the necessary data made available to the relevant parties. Data were removed from the other party’s computer after completion of the task. The master document was at all times retained on the computers of the PI and collaborator to ensure data integrity. After the data have been used by the student researcher for the purpose of the present study, it will be deleted from her computer to ensure that no data are kept separately from the original data sets. While still in use by the student researcher, the data will also be stored on a password protected computer in a locked office.

Foreseeable risks for participants or researchers involved in using the previously collected data/biological samples?

<table>
<thead>
<tr>
<th>Risks</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants:</td>
<td>Participants: After completion of the questionnaires, participants were given the opportunity to obtain the contact details of qualified professionals who could provide debriefing should they feel the need.</td>
</tr>
<tr>
<td>None.</td>
<td>Researchers: None.</td>
</tr>
</tbody>
</table>

Will re-consent be necessary?
If “Yes” motivate:
- why
- for what
- how this re-consent will be obtained.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Why?</th>
<th>For what?</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☒</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
5.18 Use of filed privileged information (if applicable)

Filed privileged information may be used for research purposes with the research ethics committee waiving informed consent. Give a detailed description of the process under the following headings.

<table>
<thead>
<tr>
<th>The nature of the information to be used:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process of obtaining permission/ethical approval for access:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process of data collection:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process of anonymization of the data:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

Foreseeable risks for participants whose filed privileged information is being accessed:

<table>
<thead>
<tr>
<th>Risks</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

5.19 Justifiability of statistical procedures

Statistical consultation

Indicate how you ensured the suitability of the statistical procedures to be used in this study, e.g. consultation or proof of expertise.

The study will make use of the SPSS and MPlus statistical analysis software programs as well as Excel and the data analysis will be done by the study leader who is a qualified statistician and has experience as a statistical consultant.

Justification of sample size

Indicate how the sample size was determined, e.g. power calculation or previously reported study designs.

The original sample, consisting of 812 participants, will be used to determine the validity and reliability of the Meaning in Life Questionnaire’s scores for the present sample. This is of sufficient size to effectively do the required analyses since a minimum of 300 participants is required for factor analysis (Tabachnik & Fidell, 2001).
Method of randomisation (if applicable)

If randomisation is to be used in this study, please indicate the manner by which randomisation will be assured.

| Not applicable |

Statistical methodology

Describe the means by which the statistical analyses will be conducted i.e. descriptive statistics, comparisons to be made, specific statistical tests to be used and the manner in which co-variance will be corrected for.

Data will be selected for secondary analysis from the existing FORT3 data sets that included both the Meaning in Life Questionnaire (MLQ) and open-ended questions on goals. First, the validity and reliability of scores on the Meaning in Life Questionnaire will be ascertained by confirmatory factor analysis and by calculation of reliability estimates.

A matrix of four groups of participants will then be quantitatively distinguished based on values from the lower and upper quartiles of the MLQ search and presence scores: those high in search and high in presence; those high in search and low in presence; those low in search and high in presence; those low in search and low in presence (see Figure 1 on p 12 of the Research Proposal for a graphical illustration). In preliminary analyses, it became evident that the low search, low presence group contains the least participants. Therefore the qualitative data from this quadrant will be analysed first. If data saturation is not reached by the time that the data from all participants that fell in the low search, low presence quadrant have been analysed, participants that fall within the lower tertile of both presence of and search for meaning, and that have not yet been included in the study, will be randomly selected and their data analysed until data saturation is reached. The same number of participants will then be selected randomly from each of the other quadrants for data analysis. If data saturation is not reached in one of the other quadrants by the time that the selected number of participants has been included, participants will be added until data saturation has been reached in that quadrant. The same number of participants will then also be added to all the other quadrants to ensure that the sample size in each of the quadrants is the same. The study will make use of the SPSS and MPlus statistical analysis software programs as well as Excel and the data analysis will be supervised by the study leader who is a qualified statistician.

Remember to save your document regularly as you complete it!
6.1 Sec 6a: Vulnerable participants

Please complete this section if your study includes minors, adults with incapacities, persons in dependent relationships e.g. prisoners, students, persons with physical disabilities, collectivities and research-naïve communities. (Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”).

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minors</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Adults with incapacities</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Persons in dependent relationships e.g. prisoners</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Students</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Persons with physical disabilities</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Collectivities</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Research-naïve communities</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Specify: Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description

Give a detailed description of the vulnerable group by referring to:

- who they are
- where they come from
- what makes them vulnerable.

Justification for inclusion

Explain the necessity for including this specific group of vulnerable people as human participants (subjects) indicating the direct benefit to the participants themselves or the indirect benefit of an improved scientific understanding.

Additional precautionary measures to reduce the risk of harm

Explain any additional precautionary measures you will take to reduce the possibility of harm.

Remember to save your document regularly as you complete it!

6.2 Sec 6b: Infection, genetic modification and commercialisation of cell and tissue lines
What will you be doing with the cell or tissue line?

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection of the cell or tissue line</td>
<td>☐</td>
</tr>
<tr>
<td>Genetic modification of the cell or tissue line</td>
<td>☐</td>
</tr>
<tr>
<td>Commercialisation of the cell or tissue line</td>
<td>☐</td>
</tr>
</tbody>
</table>

Number

How many cell and/or tissue lines will be used in the study?

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell lines</td>
<td>0</td>
</tr>
<tr>
<td>Tissue lines</td>
<td>0</td>
</tr>
</tbody>
</table>

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 0 ACCORDING TO 0]

Product information

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the cell and tissue lines. Give the necessary details below.

More information

**Human origin and consent:**
For standard cell and/or tissue cultures from banks such as the ATCC consent already exists for general, ethically justifiable and medically related research.

**Potential dangers and risks:**
Tissue banks such as the ATCC classify cell and/or tissue cultures as “bio safety level 1, 2 or 3”, depending on potential for infection with pathogens which may be harmful to man, or cancerous characteristics that would make growth in a person possible after undesirable, accidental inoculation. **NB!** These cell cultures may never be used in people.
Cell Line or Tissue Line

<table>
<thead>
<tr>
<th>Approved Name &amp; Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source / Origin / Supplier</th>
<th>Catalogue No.</th>
<th>Biosafety level?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Level 1 ☐</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 2 ☐</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level 3 ☐</td>
</tr>
</tbody>
</table>

Method of Storage and Maintenance
Click here to enter text.

Potential Dangers
Click here to enter text.

Precautionary measures
Click here to enter text.

Other Relevant Information
Click here to enter text.

To add additional tables, copy the whole table above (select, then press Ctrl + C), click here, press enter and then paste (Ctrl + V).

What is the infectious agent to be used (if applicable)?
Click here to enter text.

Has the participant given informed consent for commercialisation of their cell line?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

If “Yes” attach a copy of the completed informed consent form
If “No”, justify why not:
Click here to enter text.

Has a benefit sharing agreement been undertaken with the participant if commercialisation of their cell line is being undertaken?
If “Yes” attach the agreement. If “No” justify why this is the case.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

If “Yes” attach a copy of the completed benefit sharing document
If “No”, justify why not:
Click here to enter text.

Expertise and facilities
Do you have the necessary expertise to work with the cell and/or tissue cultures? Provide full
details. Mark “Yes” or “No” with X in the appropriate box. Provide additional details as
requested.

### Yes

<table>
<thead>
<tr>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal investigator</td>
</tr>
<tr>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

### No

<table>
<thead>
<tr>
<th>How do you plan to get the expertise required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal investigator</td>
</tr>
<tr>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

**Facilities**

Describe the facilities that are in place to work with the cell and/or tissue line.

Click here to enter text.

**Biosafety**

Explain the measures you have in place to protect the safety of researchers/workers/the
environment against the potential detrimental effects of the infection, genetic modification or
commercialisation of the cell and/or tissue and waste. Also specify methods and safety
measures for the disposal of cell and/or tissue cultures. If available, attach the standard
operating procedures (SOPs) of these processes.

Click here to enter text.

---

**Remember to save your document regularly as you complete it!**

---

### 6.3  Sec 6c: Use of Drugs/Medicines

Please complete this section if any drugs or medicines are used or administered in this
study.

**Number**

How many types of drugs / medicines will be used in the study? If more than one dosage
form or brand name of the same drug (active ingredient) is used, it must be counted and
mentioned separately. Where applicable, placebos must also be mentioned and calculated.

<table>
<thead>
<tr>
<th>Description of Drugs / medication</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 0 ACCORDING TO 0]

**Product information**

Provide detailed product information as requested
### Drug 1

<table>
<thead>
<tr>
<th>Approved Pharmacological (Generic) Name</th>
<th>Brand Name(s) (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Registered at the MCC-SA?&lt;sup&gt;1&lt;/sup&gt;</th>
<th>If “Yes”, MCC-SA Registration Number&lt;sup&gt;2&lt;/sup&gt;</th>
<th>If registered at the MCC-SA, is this for the indications, dosages and administrations as used in this study? Provide details where necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>No</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accepted Dosage(s)</th>
<th>Accepted Administration Route(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pharmacological Action, Therapeutic Effects &amp; Indications</th>
<th>Side-effects, Precautions &amp; Contra-indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Relevant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proof of preclinical approval of the product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

To add additional tables, copy the whole table above (select, then press Ctrl + C), click here, press enter and then paste (Ctrl + V).

**Special authorisation for use in humans:**

If any of the medication is not registered with the Medicine Control Council or, if it is registered but the study deals with indications for which it is not specifically registered, or if other doses, dosages, dosage forms or administration routes are used than what is registered, special approval must be obtained for the clinical test from the Medicine Control Council. Has such special authorisation been obtained? Please mark with X in the appropriate box and complete further as applicable.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Authorisation Number</th>
<th>Date of Authorisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>Click here to enter text.</td>
<td>Click here to enter a date.</td>
</tr>
</tbody>
</table>

---

1. MCC-SA = Medicine Control Council of South Africa.
2. The MCC-SA registration number can be found on medicine product leaflets.
If “Yes” please upload a copy of the approval letter. If “No” please explain the manner in which you plan to go about obtaining approval before the study begins. **NB!** Final approval of the application by the HREC is dependent on the approval of the study by the Medicine Control Council. No study may continue before written approval is obtained.

If “No” type explanation here, or type “Not Applicable”.

[PLEASE UPLOAD MCC APPROVAL LETTER]

Explain the measures that will be in place to protect the workers, participants and the environment against the potential side-effects of the medicinal substances and waste (disposal).

Click here to enter text.

Remember to save your document regularly as you complete it!

### 6.4 Sec 6d: Use of drug delivery systems

Please complete this section if any drug delivery systems are used or administered in this study.

**Number**

How many types of drug delivery systems will be used in the study? If more than one dosage form of a drug delivery system is used, it must be counted and mentioned separately.

<table>
<thead>
<tr>
<th>Description of drug delivery system</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 0 ACCORDING TO 0]

**Drug delivery system information**

Provide detailed drug delivery system information as requested. If more than one drug delivery system is used, it must be counted and mentioned separately.
Drug delivery system 1

Approved Name
Click here to enter text.

<table>
<thead>
<tr>
<th>Registered at the MCC-SA?</th>
<th>If “Yes”, MCC-SA Registration Number</th>
<th>If registered at the MCC-SA, is this for the indications, dosages and administrations as used in this study? Provide details where necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>☐</td>
<td>Click here to enter text.</td>
</tr>
<tr>
<td>No</td>
<td>☐</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accepted Dosage(s)</th>
<th>Proof of Route(s)</th>
<th>Accepted Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

Side-effects | Contra-indications | Precautions
Click here to enter text. | Click here to enter text. | Click here to enter text.

Other Relevant Information
Click here to enter text.

To add additional tables, copy the whole table above (select, then press Ctrl + C), click here, press enter and then paste (Ctrl + V).

Special authorisation for use in humans

If any of the drug delivery systems are not registered with the Medicine Control Council or, if it is registered but the study deals with indications for which it is not specifically registered, or if other doses, dosages, dosage forms or administration routes are used than what is registered, special approval must be obtained for the clinical test from the Medicine Control Council. Has such special authorisation been obtained? Please mark with X in the appropriate box and complete further as applicable.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Authorisation Number
Type no. here, or type “Not Applicable”.

Date of Authorisation
Click here to enter a date.

If “Yes” please upload a copy of the approval letter.

If “No” please explain the manner in which you plan to go about obtaining approval before the study begins.

NB! Final approval of the application by the HREC is dependent on the approval of the study by the Medicine Control Council. No study may continue before written approval is obtained.

If “No” type explanation here, or type “Not Applicable”.
Explain the measures that will be in place to protect the workers, participants and the environment against the potential side-effects of the drug delivery system and waste (disposal).

Click here to enter text.

Remember to save your document regularly as you complete it!

6.5 Sec 6e: Use of Food, Fluids or Nutrients

Please complete this section if any food, fluids or nutrients (alone or in combination) are used or administered in this study. This also applies to dangers with abuse, whether or not it holds any potential danger for people, animals or the environment.

Note: This does not include the provision of a regular plate of food for maintenance during residence.

Number

How many kinds of food, fluids or nutrients will be used in the study?

More information

If more than one dosage form or brand name of the food, fluids or nutrient is used, it must be counted and mentioned separately. Placebos are also included, except if the placebo treatment includes no administration.

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>0</td>
</tr>
<tr>
<td>Fluids</td>
<td>0</td>
</tr>
<tr>
<td>Nutrients / nutrient combinations</td>
<td>0</td>
</tr>
</tbody>
</table>
Product information:

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the food, fluids and nutrients.

Food, Fluid or Nutrient

<table>
<thead>
<tr>
<th>Approved Name</th>
<th>Normal Quantities and Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Dangers with Abuse</th>
<th>Contra-indications</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

Other Relevant Information & Literature References

Click here to enter text.

To add additional tables, copy the whole table above (select, then press Ctrl + C), click here, press enter and then paste (Ctrl + V).

Explain the measures that will be in place to protect the workers, participants and the environment against the potential detrimental effects of the food, fluids or nutrients and waste.

Click here to enter text.

Remember to save your document regularly as you complete it!

6.6 Sec 6f: Use of Radio-Active Substances

Description:

Where any radio-active substances are used in experiments or administered to participants, give full details thereof, including the isotopes and possible risks it may hold for the participants/researchers/workers/environment.

Click here to enter text.

Competence and licensing:

Do you have the necessary competence and licensing from the Department of Health at your disposal to work with radio-active substances? Mark “Yes” or “No” with X in the appropriate box. Provide the authorisation number if “Yes”.

<table>
<thead>
<tr>
<th>Yes</th>
<th>Study leader</th>
<th>Researchers/Students/Fieldworkers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Click here to enter text.</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authorisation number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

| No | How do you plan to get the expertise required? |
Attach a copy of the approval certificate from the Radiation Control Officer.

[PLEASE UPLOAD THE APPROVAL LETTER FROM THE RADIATION CONTROL OFFICER]

Facilities

Describe the facilities and procedures to ensure safe use and disposal of the radio-active substances? Explain the measures you have in place to protect the safety of participants/researchers/workers/environment against the potential detrimental effects of the radio-active substances and waste. If applicable, also specify methods and safety measures for the disposal of radio-active contaminated body fluids and tissue.

Remember to save your document regularly as you complete it!

6.7 Sec 6g: Use of Toxic Substances or Dangerous Substances

Please complete this section if any toxic or dangerous substances are used or administered in this study. This also applies to dangers with abuse, whether or not it holds any potential danger for people, animals or the environment.

Number

How many toxic substances/dangerous substances will be used in the study?

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic substances</td>
<td>0</td>
</tr>
<tr>
<td>Other dangerous substances</td>
<td>0</td>
</tr>
</tbody>
</table>

Product information

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the toxic and dangerous substances.

**NB!** If more than one such substance is used, select and copy the whole table and paste as many tables underneath as is necessary.

**Substance 1**

<table>
<thead>
<tr>
<th>Approved Name</th>
<th>Normal Uses &amp; Dosages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type here</td>
<td>Type here</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action &amp; Toxic Effects/Dangers</th>
<th>Contra-indications</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type here</td>
<td>Type here</td>
<td>Type here</td>
</tr>
</tbody>
</table>
To add additional tables, copy the whole table above (select, then press Ctrl + C), click here, press enter and then paste (Ctrl + V).

Explain the measures that will be in place to protect the workers, participants and the environment against the potential detrimental effects of the toxic or dangerous substances and waste

<table>
<thead>
<tr>
<th>Possible detrimental effects</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type here</td>
<td>Type here</td>
</tr>
</tbody>
</table>

Remember to save your document regularly as you complete it!

6.8 Sec 6h: Measuring instruments and questionnaires that need psychometric interpretation

Please complete this section if any measuring instruments or validated questionnaires are used in this study that needs psychometric interpretation. **NB! Do not complete this section for any other types of questionnaires.**

Name

Which psychometric measuring instruments and validated questionnaires will be used in the study?

**Description**

The Meaning in Life Questionnaire (MLQ) and the Eudaimonic-Hedonic Happiness Investigation questionnaire (EHHI).

Information about the measuring instrument/questionnaire

Provide detailed information on the psychometric measuring instrument/questionnaire, so that the reviewers can evaluate the ethically justifiable use thereof. **NB! If more than one psychometric measuring instrument/questionnaire is used, select and copy the whole table and paste as many tables underneath as is necessary.**

<table>
<thead>
<tr>
<th>Psychometric measuring instrument/questionnaire</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Name</td>
<td>Normal Application</td>
</tr>
<tr>
<td>Meaning in Life Questionnaire (MLQ)</td>
<td>A self-report measure assessing the presence of and search for meaning in life respectively.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>α=0.85 for MLQ – Presence subscale and α=0.84 for MLQ – Search subscale in a South African sample (Temane, Khumalo, &amp; Wissing,</td>
<td>Construct, convergent and discriminant validity of the MLQ was indicated in mainly Western student samples (Steger</td>
</tr>
</tbody>
</table>
Other Relevant Information

Click here to enter text.

Psychometric measuring instrument/questionnaire

<table>
<thead>
<tr>
<th>Approved Name</th>
<th>Normal Application</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative measure therefore not applicable.</td>
<td>Qualitative measure therefore not applicable.</td>
</tr>
</tbody>
</table>

Other Relevant Information

Click here to enter text.

Validation for target group:

Is the measuring instrument validated for the target group (e.g. for South African circumstances)? Provide full details. Please mark with X in the appropriate box and provide details.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

Details

MLQ – Temane, Khumalo, and Wissing (2014) investigated the psychometric properties of the MLQ in a South African sample and good validity was determined. Validity and reliability indicators will be calculated for the present sample.

Remember to save your document regularly as you complete it!

6.9  Sec 6i: Possible impact on the environment

Please complete this section if the study to be undertaken will have any impact on the environment as determined by evaluation of the study using the risk level descriptor for environmental impact. If this section is to be completed, please ensure that a completed copy of the risk level descriptor for environmental impact is attached to the application that is submitted.
Please indicate the risk level of the current study in terms of environmental impact.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Select</th>
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<tbody>
<tr>
<td>0</td>
<td>None</td>
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<tr>
<td></td>
<td>Effect on the environment: Potential for incidental and/or transient changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: No legal implications. No need to apply for any environmental authorisations; or Potential impact on reputation of the NWU: No discernible impact on reputation.</td>
<td></td>
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<tr>
<td>1</td>
<td>Mild</td>
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<tr>
<td></td>
<td>Effect on the environment: Potential for acceptable, short term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: Complaints for the public and/or regulator. No need to apply for any environmental authorisations; or Potential impact on reputation of the NWU: Potential impact on reputation.</td>
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<tr>
<td>2</td>
<td>Medium</td>
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<td></td>
<td>Effect on the environment: Potential for acceptable, longer term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: Departmental enquiry and correspondence. Environmental authorisation may be required; or Potential impact on reputation of the NWU: Limited, reputation impacted with small number of people.</td>
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<tr>
<td>3</td>
<td>Severe</td>
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<td>Effect on the environment: Potential for unacceptable, short term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: Notification of intent to issue a directive. Environmental authorisation required; or Potential impact on reputation of the NWU: Reputation impacted with some stakeholders.</td>
<td>☐</td>
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<td>4</td>
<td>Very severe</td>
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<td></td>
<td>Effect on the environment: Potential for unacceptable, longer term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: Withdrawal of permit. Environmental authorisation required; or Potential impact on reputation of the NWU: Reputation impacted with significant number of key stakeholders.</td>
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<tr>
<td>5</td>
<td>Intolerable</td>
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<tr>
<td></td>
<td>Effect on the environment: Potential for irreversible changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or Legal implications: Referral to the National Prosecuting Authority. Potential investigation by authority with prosecution and fines. Environmental authorisation required; or Potential impact on reputation of the NWU: Reputation impacted with majority of key stakeholders.</td>
<td>☐</td>
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</table>

Explain the type of environmental impact that the study will have.

Type here

Name and explain *all the possible risks* for the environment that may occur during the research. Use the template included in the approved risk level descriptor document for studies with environmental impact to guide you into identifying all the possible risks.
types of risk as well as the probability and magnitude of harm. Please also include all the precautions that will be taken in order to mitigate the risks to the environment.

<table>
<thead>
<tr>
<th>Risks (e.g. effect on environment, legal implications, potential impact on the reputation of the NWU, etc.).</th>
<th>Precautions (When describing these precautions be clear on how they will mitigate all the identified risks)</th>
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</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
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</tbody>
</table>

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7. **SECTION 7: OTHER ETHICS EVALUATIONS AND RISK INSURANCE**

7.1 **Sec 7a: Evaluation by other Research Ethics Committees**

Please complete this section if this study has been or will be evaluated by any other research ethics committees, for example with multi-institutional studies. Provide information about all research ethics committees involved in the review and approval of this study.

<table>
<thead>
<tr>
<th>Name of the Research Ethics Committee</th>
<th>Date of Process</th>
<th>Approval/In Process</th>
<th>Contact Number or E-mail address of the research ethics committee</th>
<th>Approval no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
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Remember to save your document regularly as you complete it!

7.2 **Sec 7b: Risk Insurance**

The North-West University has insurance at its disposal to cover the risk of claims against the University in case of damage to participants due to professional negligence – the maximum cover is currently R100 million per annum (all studies included). However, this is only available if studies are ethically approved and researchers have kept to the proposal.

Describe the potential risks to which the participants/researchers/assistants/field workers are going to be subject to in so far as complications may lead to summonses.

<table>
<thead>
<tr>
<th>Type</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>Although the questionnaires relate to well-being, some items could evoke emotional responses from participants. After completion of the questionnaires, participants were given the opportunity to obtain the contact details of qualified professionals who could provide debriefing should they feel the need.</td>
</tr>
<tr>
<td>Researchers</td>
<td>Minimal risk with regard to involvement in the study is foreseen. However, since some items could evoke emotional responses from participants, this could also impact on researchers. Researchers could have and can still also contact the arranged counsellors or psychologists if needed.</td>
</tr>
</tbody>
</table>
Assistants and/or field workers | Minimal risk with regard to involvement in the study is foreseen. However, since some items could evoke emotional responses from participants, this could also impact field workers. Assistant researchers and field workers also had the opportunity to contact the arranged counsellors or psychologists if they felt the need.

Others | Not applicable

These potential risks are covered by:

| North-West University | ☒ |
| Sponsor/s | ☐ |
| Other: Specify: Click here to enter text. | ☐ |

Is this insurance adequate (measured against the potential risks)?

Please mark with X in the appropriate box.

| Yes | No | If “No”, indicate what will be done to ensure that there is sufficient coverage? |
| ☒ | ☐ | Click here to enter text. |

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8. **SECTION 8: DECLARATIONS**

Applications and declaration are filled in and signed by:
Sec 8a: Study Leader
Sec 8b: Statistical Consultant
Sec 8c: Research Director

The pages with declarations and signatures must be **scanned** with this form.

[SCAN ALL SIGNED DECLARATIONS]

Health Research Ethics Application

<table>
<thead>
<tr>
<th>Study Leader</th>
<th>Study Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Title, Initials and Surname)</td>
<td>(see § 1.1)</td>
</tr>
<tr>
<td>Dr L. Schutte</td>
<td>Exploration of goals among adults in a matrix of presence of and search for meaning.</td>
</tr>
</tbody>
</table>

**NWU Ethics Number**

NWU-00052-17-S1

8.1 **Sec 8a: Study Leader**

Application and Declarations by Study Leader

I, the undersigned, hereby apply for approval of the research study as described in the preceding proposal and declare that:

8.1.1 The information in this application is, to the best of my knowledge, correct and that no ethical codes will be violated with the study;
8.1.2 I will make sure that the study is managed ethically justifiably from start to finish;
8.1.3 In the case of human participants;
8.1.3.1 I will put it clearly to all participants that participation (including assent) in any research study is absolutely voluntary and that no pressure, of whatever nature, will be placed on any potential participant to take part;
8.1.3.2 I will put it clearly to all participants that any participant may withdraw from the study at any time and may ask that his/her data no longer be used in the study, without stating reasons and without fear of any form of prejudice;
8.1.3.3 every participant who takes part in the study will receive the accompanying form for informed consent and it will be ensured that every participant understands the information (including the process and risks) fully;
8.1.3.4 every participant will sign the informed consent in writing before the study commences, or a witness will stand in on behalf of the participant when the participant is illiterate;
8.1.3.5 the written permission of the parent or legal guardians of all minor subjects will be obtained before the research commences;
8.1.3.6 any foreseeable risk is restricted to the minimum, any permanent damage is avoided as far as possible and that appropriate precautions and safety measures are in place;
8.1.3.7 confidentiality of all the information of all participants will be respected and ensured;
8.1.4 I and all co-workers/assistants/field workers are appropriately qualified, capable and legally competent to implement the proposed studies/procedures/interventions;

8.1.5 I will not deviate from the approved proposal and that I understand approval for the study will be cancelled if I deviate from the proposal without the approval of the Health Research Ethics Committee;

8.1.6 the study is scientifically justifiable;

8.1.7 where necessary, all contracts, permits and the applicable documents of relevance will be obtained before the research commences;

8.1.8 I will ensure that all data/biological samples are stored safely and remain in the possession of the North-West University;

8.1.9 I will report in writing any incidents or adverse events/serious adverse events that occur during the study without delay to the Health Research Ethics Committee;

8.1.10 I undertake to respect intellectual property rights throughout and to avoid any form of plagiarism;

8.1.11 I will obtain permission for amendments to the protocol and report annually (or more often for medium and high risk studies) to the Health Research Ethics Committee on the prescribed monitoring report concerning progress of the study;

8.1.12 I will notify the Health Research Ethics Committee should the study be terminated.

Name (Title, Full Names & Surname) | Qualifications
--- | ---
Dr Lusilda Schutte | PhD in Psychology  
M. Sc. Statistics

Signature  
Date

2017/04/25

Remember to save your document regularly as you complete it!
Health Research Ethics Application

<table>
<thead>
<tr>
<th>Study Leader (Title, Initials and Surname)</th>
<th>Study Title (see § 1.1)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Exploration of goals among adults in a matrix of presence of and search for meaning</td>
</tr>
</tbody>
</table>

NWU Ethics Number
NWU-00052-17-S1

8.2 Sec 8b: Statistical Consultant (If applicable)

The statistician of the Statistical Consultation Service of the North-West University completes this section (where applicable).

Have you ascertained that the statistical analyses to be used in this study is justifiable according to your judgement?

Please mark with X in the appropriate box and provide details.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>☒</td>
<td>☐</td>
<td>The study leader of the present study has a masters degree in statistics and worked at Statistical Consultation Services for a few years. According to her discretion, the statistical analyses to be used in this study are justifiable.</td>
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</table>

<table>
<thead>
<tr>
<th>Name (Title, Full Names &amp; Surname)</th>
<th>Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Lusilda Schutte</td>
<td>PhD in Psychology</td>
</tr>
<tr>
<td></td>
<td>M. Sc. Statistics</td>
</tr>
</tbody>
</table>

Signature

2017/04/25

Date

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Health Research Ethics Application

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<tr>
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<td>Exploration of goals among adults in a matrix of presence of and search for meaning.</td>
</tr>
</tbody>
</table>

**NWU Ethics Number**

NWU-00052-17-S1

### 8.3 Sec 8c: Research Director (School director if Education request)

I, the undersigned, hereby declare that the above study has been reviewed by a Scientific/Proposal Committee and may proceed to the Health Research Ethics Committee and that the Study Leader/Researcher has enough physical facilities, equipment and money at his/her disposal to implement and complete the study.

Research Director:

The director of the research entity signs here.

<table>
<thead>
<tr>
<th>Name (Title, Full Names &amp; Surname)</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof Petra Bester</td>
<td>Research Director AUTHeR</td>
</tr>
</tbody>
</table>

Signature  

2017/04/25

Date

Remember to save your document regularly as you complete it!

Credits

Compiled by the Faculty of Health Sciences Ethics Office for Research, Training and Support

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Section 2

Manuscript for Evaluation

2.1 Manuscript in Article Format

This mini-dissertation is submitted in article format as indicated in the 2018 General Academic Rules (A4.4.2 and A4.10.5) of the North-West University. The manuscript and article style adhere to the requirements for the specific journal, namely The Journal of Positive Psychology, to which it will be submitted. Exceptions have been made with regards to the length of the manuscript, the line spacing and the placement of figures and tables. Before the manuscript is submitted for publication it will be shortened, the line spacing will be changed from 1.5 to double, and the figures and tables will be moved to the end of the text.

2.2 Guidelines to Authors for The Journal of Positive Psychology

The Journal of Positive Psychology is an international, peer-reviewed journal that publishes original research in English on topics related to the science and application of Positive Psychology.

1. Preparing your paper

1.1. Structure

Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgements; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list).

All authors of a manuscript should include their full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page of the manuscript. One author should be identified as the corresponding author. Please give the affiliation where the research was conducted. If any of the named co-authors moves affiliation during the peer review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after the manuscript is accepted. Please note that the email address of the corresponding author will normally be displayed in the article PDF (depending on the journal style) and the online article.

1.2 Word limits

Please include a word count for your paper.

A typical manuscript for this journal should be no more than 7500 words; this limit includes tables, references, figure captions, endnotes.
1.3. Style guidelines
Please refer to these style guidelines when preparing your paper, rather than any published articles or a sample copy.
Please use any spelling style consistently throughout your manuscript.
Please use single quotation marks, except where 'a quotation is 'within' a quotation'. Please note that long quotations should be indented without quotation marks.
Long quotations of 40 words or more should be indented without quotation marks.
Section headings should be concise.

1.4. Formatting and templates
Papers may be submitted in any standard format, including Word and LaTeX. Figures should be saved separately from the text. To assist you in preparing your paper, we provide formatting templates.
A LaTeX template is available for this journal.
Word templates are available for this journal. Please save the template to your hard drive, ready for use.
If you are not able to use the templates via the links (or if you have any other template queries) please contact authortemplate@tandf.co.uk

1.5. References
Please use this reference style guide when preparing your paper. An EndNote output style is also available to assist you.

1.6. Checklist: what to include
1.6.1. Author details. Please include all authors’ full names, affiliations, postal addresses, telephone numbers and email addresses on the title page. Where available, please also include ORCID identifiers and social media handles (Facebook, Twitter or LinkedIn). One author will need to be identified as the corresponding author, with their email address normally displayed in the article PDF (depending on the journal) and the online article. Authors’ affiliations are the affiliations where the research was conducted. If any of the named co-authors moves affiliation during the peer-review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after your paper is accepted. Read more on authorship.
1.6.2. A non-structured abstract of no more than 150 words. Read tips on writing your abstract.
1.6.3. You can opt to include a video abstract with your article. Find out how these can help your work reach a wider audience, and what to think about when filming.

1.6.4. 4-10 keywords. Read making your article more discoverable, including information on choosing a title and search engine optimization.

1.6.5. Funding details. Please supply all details required by your funding and grant-awarding bodies as follows:

For single agency grants: This work was supported by the [Funding Agency] under Grant [number xxxx].

For multiple agency grants: This work was supported by the [funding Agency 1]; under Grant [number xxxx]; [Funding Agency 2] under Grant [number xxxx]; and [Funding Agency 3] under Grant [number xxxx].

1.6.6. Disclosure statement. This is to acknowledge any financial interest or benefit that has arisen from the direct applications of your research. Further guidance on what is a conflict of interest and how to disclose it. [Hyperlink].

1.6.7. Geolocation information. Submitting a geolocation information section, as a separate paragraph before your acknowledgements, means we can index your paper’s study area accurately in JournalMap’s geographic literature database and make your article more discoverable to others.

1.6.8. Supplemental online material. Supplemental material can be a video, data set, fileset, sound file or anything which supports (and is pertinent to) your paper. We publish supplemental material online via Figshare. Find out more about supplemental material and how to submit it with your article.

1.6.9. Figures. Figures should be high quality (1200 dpi for line art, 600 dpi for grayscale and 300 dpi for color, at the correct size). Figures should be saved as TIFF, PostScript or EPS files. More information on how to prepare artwork. [Hyperlink].

1.6.10. Tables. Tables should present new information rather than duplicating what is in the text. Readers should be able to interpret the table without reference to the text. Please supply editable files.

1.6.11. Equations. If you are submitting your manuscript as a Word document, please ensure that equations are editable. More information about mathematical symbols and equations. [Hyperlink].

1.6.12. Units. Please use SI units (non-italicized).

2. Using third-party material in your paper
You must obtain the necessary permission to reuse third-party material in your article. The use of short extracts of text and some other types of material is usually permitted, on a limited basis, for the purposes of criticism and review without securing formal permission. If you wish to include any material in your paper for which you do not hold copyright, and which is not covered by this informal agreement, you will need to obtain written permission from the copyright owner prior to submission. More information on requesting permission to reproduce work(s) under copyright. [Hyperlink].

3. Submitting your paper
This journal uses ScholarOne Manuscripts to manage the peer-review process. If you haven't submitted a paper to this journal before, you will need to create an account in the submission centre. Please read the guidelines above and then submit your paper in the relevant author centre where you will find user guides and a helpdesk.

If you are submitting in LaTeX, please convert the files to PDF beforehand (you may also need to upload or send your LaTeX source files with the PDF).

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Exploration of goals among adults in a matrix of presence of and search for meaning

Pier Heynike a*, Lusilda Schutte b, Marié P. Wissing c and Christelle Liversage d

a Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa, 27812417395, pierh@web.de, orcid.org/0000-0002-3046-5509;
b Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa, +27182991104 Lusilda.Schutte@nwu.ac.za, orcid.org/0000-0002-2107-3669;
c Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa, +27182991721, Marie.Wissing@nwu.ac.za, orcid.org/0000-0002-0445-6246;
d Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa, +27182992519 Christelle.Liversage@nwu.ac.za, orcid.org/0000-0003-4272-7892.

*Corresponding author
Abstract

This study explored how presence of and search for meaning are associated with individuals’ choices of goals and motives directing their goals using a mixed methods approach.

Participants ($N = 180$) were quantitatively selected from South African data according to the values of the first and third quartiles of the Meaning in Life Questionnaire (MLQ) search and presence scores. Thematic analysis of responses to semi-structured questions on goals and motives revealed that levels of presence of and search for meaning are associated with the type of goals participants set for themselves: high search, high presence (HSHP) preferred relationship goals; high search, low presence (HSLP) preferred career goals; and low search, high presence (LSHP) preferred goals related to quality of life. The low search, low presence (LSLP) group did not prioritise a particular type of goal, but found positive affect to be the most important reason for striving towards goals.

Key words

meaning, goals, motivation, Meaning in Life Questionnaire, South Africa
Exploration of goals among adults in a matrix of presence of and search for meaning

Much research has been done in the past that investigated the associations between goals and individuals’ sense of meaning (Emmons, Colby, & Kaiser, 1998; Vess, Rogers, Routledge, & Hicks, 2016; Wrosch, Scheier, Miller, & Carver, 2012). According to Park (2010), an individual’s global meaning (the system which individuals use to orientate themselves in life and through which they understand experiences) consists of goals as well as a personal sense of purpose. Yeager and Bundick (2009) found that scholars who had purposeful goals had higher meaning in life scores.

However, very little research has been done to explore how presence of and search for meaning are associated with people’s choice of goals (Steger, 2012b). It is not known whether individuals’ levels of search for and presence of meaning can be associated with the type of goals they set and the motives underlying their identified personal goals. For example, what motivates people low in search for and presence of meaning to strive towards achieving goals? Exploring questions like this could add to our understanding of how goals, and the reasons why they are important to individuals, are associated with levels of meaning.

This study aims to qualitatively explore similarities and differences among four groups of people distinguished by the two dimensions of meaning hypothesised by Steger, Frazier, Oishi, and Kaler (2006), namely search for and presence of meaning, with regards to (i) types of goals, and (ii) reasons underlying the pursuit of these goals. The four profile groups are high search, high presence (HSHP); high search, low presence (HSLP); low search, high presence (LSHP); and low search, low presence (LSLP).

Meaning in life

Frankl (1946/1985) was of the opinion that we create our own meaning by dedicating ourselves to a purpose; through enriching experiences; or through our attitude to suffering. Meaning can be considered to be derived from sources of experience in our daily lives (Schnell, 2011; Steger et al., 2013). King and Hicks (2009) proposed that there are two processes by which one can find meaning in one’s life: meaning detection (when we feel that our life makes sense) and meaning construction (when we need to reassess our view of the world in order to make sense of our experiences). According to Schnell (2011), meaning in life is enhanced by engaging with a variety of sources which are as diverse as possible, with those sources that support generativity contributing the most to a sense of meaning. King, Hicks, Krull, & Del Gaiso (2006) suggested that individuals experience their lives as having meaning when they have a sense of coherence and purpose beyond the experience of the moment. Intervention strategies, such as Wong’s PURE model which identifies the four
pillars of increasing meaning to be purpose, understanding, responsibility and enjoyment (Wong, 2010, 2011), aim to delineate the components that contribute to the experience of meaning.

Another prominent theory of meaning in life is that of Steger et al. (2006) who considered meaning to be made up of two dimensions, namely (a) presence of meaning (the ability to make sense of one’s life and consider it meaningful) and (b) search for meaning (being driven by a sense of purpose to take action towards creating meaning). Their research indicated, by using factor analysis, that the two are independent of each other (Steger et al., 2006). Steger, Oishi, and Kesebir (2011) found that the interaction between these two distinct dimensions of meaning were instrumental to individuals’ perception of their satisfaction with life, thus paving the way for other researchers to investigate how this interplay relates with other well-being indicators and constructs.

Goals
Goals are the manifestation of our personal purpose (Emmons, 2005) and have been described as ‘internal representations of desired states, where states are broadly construed as outcomes, events, or processes’ (Austin & Vancouver, 1996, p. 338). Goals have been examined from many perspectives. Goal orientation theories see individual choice and reasoning as the driving force for goal pursuit (Fowers et al., 2014). Early goal theorists postulated two types of goal orientations, namely (a) a mastery goal orientation, which is the aspiration to master new skills, and (b) a performance goal orientation, which is a desire to demonstrate competence and make a good impression (Kaplan & Maehr, 2007). Elliot (1999) distinguished between approach and avoidance orientations for both mastery and performance goals. An approach orientation is focused on succeeding and an avoidance orientation is focused on avoiding failure (Kaplan & Maehr, 2007). Fowers, Mollica, and Procacci (2010) suggested distinguishing between instrumental goal orientation (in which means and ends are separable) and constitutive goal orientation (in which the means and ends are inherently related).

Snyder’s hope theory relates goals to hope, stating that hope rests on the synergy of goals (that which we wish to attain), pathways (the way in which we plan to attain our goal) and agency (our motivation to attain the goal) (Snyder et al., 1991). According to this theory, individuals’ hope is powered by the measure of belief one has in one’s own ability to move towards and reach goals. Self-regulation has an important part to play in this process of moving towards and reaching goals. Hofmann, Baumeister, Förster, and Vohs (2012) stated that people with high levels of self-control ensure that they do not have to resist desires that
conflict with their goals and values as often as most people by making sure that they avoid situations that cause motivational conflicts to arise. Sheldon and Elliot (1999) maintain that the self-concordance of goals (how well they match a person’s values and interests) influences goal attainment in that, when self-concordance is high, individuals put more effort into working towards their goals and also experience greater well-being upon goal-attainment. The reason for this is that self-concordant goals are more in line with the core self and not in any way reliant upon others.

Some research has attempted to organise types of goals into different categories. For instance, using cluster analysis, Chulef, Read, and Walsh (2001) came up with three categories of goals, namely (a) goals around family and intimate-relationships (includes goals associated with sex, marriage, and family); (b) goals related to interpersonal relationships (includes goals related to friendships, leadership opportunities, opportunities for giving back); and (c) intrapersonal goals (includes goals around meeting personal needs, health, social awareness, career, personal growth, well-being, finances and safety).

According to Fowers et al. (2014), quantitative research done up until now on goals has been restricted in its ability to promote goal theory as it limits the chance of gaining new knowledge, firstly by not allowing participants to freely choose goals, but rather to select goals from a list set by researchers; and secondly by the fact that the participants are asked to rank the listed goals to indicate their relative importance by a researcher designed ranking system, but this does not shed any light on the reasons why the participant find some goals more important or worthy than others. Qualitative research on goals has the advantage of conquering these limitations and offering the possibility of rich data in that it allows participants to provide their own goals and reasons for pursuing them. Previous studies using open-ended questions to explore goals and their importance to participants have produced rich and novel data (Dowson & McInerney, 2001; Levy, Kaplan, & Patrick, 2004; Yeager & Bundick, 2009). Kaplan and Maehr (2007) showed how combining quantitative methods with qualitative methods in research on goals is of benefit as it can bring new knowledge to light, expand existing knowledge and clarify previous findings.

**Goals and meaning**

The present study aims to contribute to an understanding of the relationship between goals and meaning. Klinger (2012) stated that striving for goals is one of the major factors influencing an individual’s sense of meaning. Reker (2000) maintains that a sense of meaning is the result of the perception that one’s life has coherence and purpose; as well as the process of striving for and attaining worthy goals and the sense of fulfilment that arises from reaching
one’s goals. McGregor and Little (1998) found that goal integrity (‘the extent to which participants appraise their personal projects as consistent with their values, commitments, and other important aspects of self-identity’ (p. 496)) was positively correlated with meaning. King et al. (2006) are of the opinion that a sense of meaning in life stems from the knowledge that one’s actions are dedicated to realising a chosen goal. According to Leontiev (2013) our actions are given meaning by the goals that drive them and our goals derive their meaning from the motivation that drives them. Ventegodt and Merrick (2012) state that the absence of a sense of meaning in life results in an individual lacking the drive to act. From the above we see that meaning and goals are considered to be entwined.

The present study

This study will qualitatively explore how different quantitative configurations of presence of and search for meaning are related to goals and the reasons given for having these goals. By exploring goals among adults in a matrix of presence of and search for meaning, the present study may contribute to understanding how goals and the reasons why they are pursued relate to meaning and may thereby point to new possibilities for enhancing meaning in life.

Method

Design

Data from substudies of the FORT3 (Wissing 2008/2012) project were used for this study. FORT3 investigated the prevalence of levels of psychosocial health and explored dynamics and relationships with biomarkers of (ill)health in South African social contexts by means of a cross-sectional survey design. Data for the relevant substudies were gathered using various instruments that were administered simultaneously, including the Meaning in Life Questionnaire (MLQ, Steger et al., 2006) and the Eudaimonic-Hedonic Happiness Investigation inventory (EHHI-i) (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011), which included open-ended questions on goals and motives for goals.

The current study applied a mixed methods convergent parallel design (Creswell & Plano Clark, 2011). In the first phase, quantitative data from the MLQ were used to select subsamples of participants according to their scores on the two dimensions of meaning distinguished in this scale: Presence of Meaning and Search for Meaning. The sample consists of participants who obtained scores below the first quartile or above the third on each of the two dimensions, creating four profile groups: high search, high presence (HSHP); high search, low presence (HSLP); low search, high presence (LSHP); and low search, low presence (LSLP) (see Figure 1).
In the second phase, responses to the two structured open-ended questions on goals and their motives as contained in the EHHI-i were thematically analysed for the subsample of participants that had been selected in phase 1. The quantitative (phase 1) and qualitative (phase 2) data were integrated for interpretation.

**Participants**

Data sets that included both the MLQ and EHHI-i measures were selected from the FORT3 data and combined into one data set ($N = 812$). This data set consists of a multi-cultural adult South African non-probability sample, with participants ranging between the ages of 18 and 84 ($M = 39.51, SD = 13.10$) of which 525 were female. Inclusion criteria were fluency in the English language because that was the language of test administration; being 18 or above years of age; and currently being resident in South Africa.

Application of the quantitative selection process produced four subsamples: HSHP ($n = 38$), HSLP ($n = 60$), LSHP ($n = 71$) and LSLP ($n = 11$) within the data set ($N = 180$). Participants from these groups were included in the study until data saturation had been reached, while ensuring that an equal number of participants were included in each group.

*Figure 1.* The four profile groups across the dimensions of search for and presence of meaning. Quartile points are shown on the axes. $q_1 =$ first quartile (25th percentile of the data); $q_3 =$ third quartile (75th percentile of the data).
This resulted in final inclusion of 11 participants per profile group, where the LSLP profile group also included two participants who had scores lower than the first tertile on the search for and presence of meaning dimensions (see Analyses section for details).

The participants in the HSHP \((n = 11)\) profile group were between the ages of 24 and 55 \((M = 40.09, SD = 11.00)\) and 8 were female. For the HSLP \((n = 11)\) profile group the ages ranged between 21 and 58 \((M = 33.09, SD = 10.12)\) and 7 were female. The participants in the LSHP \((n = 11)\) profile group were between the ages of 21 and 56 \((M = 40.27, SD = 11.74)\) with 6 females. The LSLP \((n = 11)\) profile group were between 19 and 55 years of age \((M = 34.27, SD = 11.77)\) and four were female.

**Measures**

Data from two measures was used.

*Socio-demographic questionnaire*

Participants were requested to provide socio-demographic information such as gender, age and level of education.

*The Meaning in Life Questionnaire (MLQ)*

The MLQ (Steger et al., 2006) was used to determine the level of search for and presence of meaning in participants. These are represented by two subscales, each with five items which are rated on a 7-point Likert-type scale ranging from 1 *(absolutely untrue)* to seven *(absolutely true)*. The Search for Meaning subscale (MLQ-S) measures the strength of an individual’s desire to find meaning and the Presence of Meaning subscale (MLQ-P) measures how full of meaning participants’ feel their lives are currently (Steger et al., 2006). The 10 items are all positively worded and positively scored except for item 9, which is reverse phrased and inversely scored.

Steger et al. (2006) found that the MLQ scores were reliable (Cronbach’s \(\alpha\)-values ranging between 0.82 and 0.88) among a multi-cultural sample of North American students. They found adequate test-retest stability over periods of a month to a year and could demonstrate discriminant and convergent validity for both the MLQ-P and the MLQ-S subscales. According to Temane, Khumalo, and Wissing (2014), the MLQ showed good reliability (MLQ-P \(\alpha = 0.85\), MLQ-S \(\alpha = 0.84\)), as well as good validity, in a multi-cultural sample of South African undergraduate students. The MLQ was also found to display good psychometric potential using Rasch modelling with respondents from South Africa, Australia, and New Zealand, although some adaptations were recommended (Schutte, Wissing, Ellis, Jose, & Vella-Brodrick, 2016).
The Eudaimonic-Hedonic Happiness Investigation inventory (EHHI-i, Delle Fave et al., 2011).

The EHHI-i explores various facets of well-being and consists of eight questions. Only responses to the two open-ended questions on goals were used for the current study. These questions are:

1. ‘Please list the three most important future goals for you.’
2. ‘For each of them, please specify why it is important.’

Procedure and ethical considerations

The data were gathered between 2010 and 2014 as part of substudies of the FORT3 research project. Postgraduate students acted as fieldworkers and collected data across South Africa using the snowball method. Participation was voluntary and participants were free to withdraw from the study at any stage without adverse consequences. Volunteers were provided with background on the research project and those who agreed to participate were given an informed consent form as well as the research battery by a trained fieldworker. The contact details of the researchers had been made available to give the participants the opportunity to pose questions. The participants completed the test battery in their own time and at a place of their convenience, returning it to the fieldworker upon completion.

This FORT3 study was granted ethics approval by the Health Research Ethics Committee of the North-West University with approval number NWU 00002-07-A2. The principal investigator of the FORT3 project has approved the present study.

Analyses

Data sets that included both the MLQ and EHHI-i measures were selected from the FORT3 data and combined into one data set. The reliability index (Cronbach’s alpha) and confirmatory factor analysis fit indices were calculated for the quantitative data using IBM SPSS Statistics and Mplus, respectively, in order to ensure the reliability and factorial validity of the data. For the confirmatory factor analysis in Mplus, robust maximum likelihood estimation was used to assess the fit of a correlated two-factor model. Missing data were handled by full information maximum likelihood estimation. The comparative fit index (CFI) and root mean squared error of approximation (RMSEA) with its 90% confidence interval was used to assess global model fit and will be reported. Values above 0.90 for the CFI are considered to indicate an acceptable fit, but a value of 0.95 is recommended (Byrne, 2012; Hu & Bentler, 1999). An RMSEA value below 0.05 indicates a good model fit while values above 1.0 suggest a poor model fit (Kline, 2016).
Data from the MLQ were utilized to quantitatively create a matrix of four categories according to participants’ levels of presence of meaning in relation to search for meaning, selecting those who attained scores smaller than the first and larger than the third quartiles on the two dimensions of meaning to form four profile groups.

Qualitative thematic analysis (Braun & Clarke, 2006; Clarke & Braun, 2017) was conducted on the responses to the two open-ended questions contained in the EHHI-i for the participants of each group. The analysis was conducted by the first author and a co-coder, who were both trained in conducting thematic analysis. An inductive approach was taken and themes were identified on the semantic level. The coders familiarised themselves with the data; generated initial codes; grouped the codes together according to emergent themes; reviewed the themes to determine whether they accurately represented the ideas in the data and whether anything had been missed; and defined the themes. In order to limit bias and increase the trustworthiness of the findings, the coders did the qualitative data analysis independently from each other, and afterwards discussed their results until they reached consensus. The results were then reviewed and audited by an independent co-coder and the other authors of the article.

Since there were only 11 participants in the LSLP profile group, it was decided to start the thematic analysis using all these participants and 11 randomly chosen valid entries in each of the other three profile groups while checking whether data saturation had been reached in each group. During the process of doing the thematic analysis it was however discovered that there were two empty entries in the LSLP group and thus only nine valid participants. Since there were no more participants in the LSLP profile group, it was decided to add two randomly selected participants who attained scores on Search for and Presence of Meaning subscales that were lower than the first tertile on the respective subscales to this group. Although the tertile-based additions to the LSLP group are not strictly comparable to the quartile data, no new goal themes were generated, and it was therefore deemed in order to include these participants in the LSLP group.

In order to test for data saturation, two additional randomly selected participants were added to each group (using tertile data to select the participants for the LSLP group). Since no new information or themes were observed in the data, it was agreed that data saturation had been met with 11 participants in each group (Guest, Bunce, & Johnson, 2006). The study used the responses of the first 11 participants across all groups, except the LSLP group, where both the nine participant quartile data only group (LSLP-Q) and the 11 participant mixed quartile and tertile data group (LSLP-M) are presented in order for potential
differences to be identified. Analyses were done independently for the different profile
groups and the goal motives for each profile group were coded independently of the goal
themes. The results regarding people’s goals and goal motives across the matrix of meaning
were then compared for similarities and differences and the findings were linked to previous
findings and existing theories.

**Trustworthiness**
The trustworthiness of the qualitative component of the study was ensured by adhering to
Guba’s requisites for trustworthiness, namely (a) credibility (in deference to accuracy and
validity); (b) transferability (in deference to applicability in other contexts); (c) dependability
(in deference to repeatability of findings); and (d) confirmability (in deference to neutrality of
findings) (Guba, 1981). The research adhered to the inductive nature of qualitative data
analysis by generating themes from the qualitative data rather than basing the themes on
existing theory. As much as possible, the 21 guidelines provided by O’Brien, Harris,
Beckman, Reed, and Cook (2014) were adhered to in the reporting phase.

**Credibility**
**Accuracy.** The quality and accuracy of the data is supported by only having selected
participants 18 and above years of age, as per the inclusion criteria of the FORT3 project.
This criterion enhanced the probability of sufficient cognitive and reflective abilities for the
participant to have provided accurate data on the questions posed.

**Reflexivity.** The first author and the co-coder analysed the data independently, both making a
concerted effort to keep an open mind and to not allow their own world view to cloud the
process.

**Peer review.** The results were reviewed and audited by an independent co-coder and the other
authors of the article, who are experienced researchers with output on the topic covered and
methodology used.

**Structural coherence.** Previous studies (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013;
Delle Fave et al., 2011) that used the open-ended questions in the EHHI-i instrument
produced relevant and interesting research. These studies used an international data set,
which included data from South Africa, and thus suggested that similarly relevant data could
have been expected in the present study. The qualitative data were analysed in an iterative
interactional process to ensure that the findings are trustworthy.

**Transferability.** In support of transferability, the participants of the FORT3 project were
selected in a way that allowed for good variability in the data set; the participants were
described accurately and in detail; and the research process was delineated in detail. A
limitation is, however, that the sample only included South African participants, only participants fluent in English, and who were not randomly selected, which means that other segments of the population could be underrepresented. To provide clarity on the profile of the specific sample used in this study, the sample’s demographic characteristics have been described in detail.

**Dependability**. Dependability was ensured in a number of ways. Firstly, the first author and the co-coder conducted the thematic analysis independently. Secondly, the first author and the co-coder agreed on a work protocol for data analysis. The first author and the co-coder discussed their findings in an iterative process until consensus was reached. An independent co-coder consultant, as well as the other authors of the article, monitored and audited the results of the thematic analysis.

**Confirmability**. In order to ensure that the study findings were consistent and unbiased, an audit trail of the process of qualitative analysis, covering the steps and motivation for decisions, was kept. The generated themes were compared to existing theory in order to link new knowledge and insights with existing findings.

Although Guba’s constructs give us a very solid base from which to work to ensure methods and practices that deliver trustworthy qualitative research, the conversation around what contributes to good qualitative research has since broadened its scope. Applying Tracy’s (2010) criteria for evaluating research to this affiliated study, the following additions were made to the above:

**Worthy topic**. The subject of meaning in life and striving is deeply relevant to all individuals. **Resonance**. Care was taken to represent the insights emanating from the interpretation of the qualitative data in a way that ensures maximum possible impact on the reader. The hope is that the reader will be able to relate to the insights gained on the association between meaning and goals and carry the knowledge over into their own lives.

**Significant contribution**. The study intends to contribute to the body of existing knowledge by generating novel research and hopes to perhaps even create a sense of curiosity for future research, since it investigates a topic that has not yet been extensively explored.

**Results**

The current research indicated that the MLQ showed good reliability (MLQ-P $\alpha = 0.82$, MLQ-S $\alpha = 0.89$). Factorial validity was reasonable, based on a CFI-value of 0.93 and an RMSEA-value of 0.084, with a 90 percent confidence interval (0.074; 0.095).

In this section the results emerging from participants’ responses for goal themes and goal motive themes are presented as they relate to the four profile groups in the matrix. The
qualitative analysis of the participants' responses to the question ‘Please list the three most important future goals for you’ across the four profile groups of the matrix, revealed a total of five goal themes (see Figure 2). The goal subthemes, as well as their frequencies can be found in Table 1. Qualitative analysis of the participants' responses to the question ‘For each of them, please specify why it is important.’ generated seven goal motive themes (see Figure 3). The goal motive subthemes, as well as their frequencies can be found in Table 2.

Although the thematic analysis for each of the four profile groups was done separately for both the goals and goal motives, the themes that emerged were the same for all four groups. A detailed description of the results are given after this for each profile group.

The themes are illustrated by verbatim examples from participants. Participants are indicated by the profile group abbreviation and a participant number between one and 11. In order to differentiate between responses from tertile and quartile data, participants who were selected from tertile data are indicated with an asterisk (LSLP10* and LSLP11*).

Figure 2. Frequency of goal themes across the profile groups. HSHP = high search, high presence group; HSLP = high search, low presence group; LSHP = low search, high presence group; LSLP-Q = low search, low presence group using quartile data only; LSLP-M = low search, low presence group using mixed quartile and tertile data.
Figure 3. Frequency of goal motive themes across the profile groups. HSHP = high search, high presence group; HSLP = high search, low presence group; LSHP = low search, high presence group; LSLP-Q = low search, low presence group using quartile data only; LSLP-M = low search, low presence group using mixed quartile and tertile data.

Table 1

Goal themes and their subthemes

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<th>Goal theme</th>
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<th>HSLP</th>
<th>LSHP</th>
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### Table 2

**Goal motive themes and their subthemes**

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*Note.* HSHP = high search, high presence group; HSLP = high search, low presence group; LSHP = low search, high presence group; LSLP-Q = low search, low presence group using quartile data only; LSLP-M = low search, low presence group using mixed quartile and tertile data.
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

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Note. HSHP = high search, high presence group; HSLP = high search, low presence group; LSHP = low search, high presence group; LSLP-Q = low search, low presence group using quartile data only; LSLP-M = low search, low presence group using mixed quartile and tertile data.

**High Search, High Presence (HSHP)**

**Goals**

Compared to the other groups in the matrix, this group had the highest number of responses to the goal theme of Relationships as well as the most varied types of relationship subthemes (see Figure 2 and Table 1). The subthemes for Relationships were Family, Parenthood, Community and Partnership. The scope of the relationship goals of the respondents in the HSHP group seems greater than other groups. They not only indicate a high level of benevolence and desire to support others, but also show a level of investment in relationships not exhibited in other groups. This can be seen in responses such as ‘I want to contribute to society in my work with who I am’ (HSHP1, Community subtheme); ‘To see my son being educated’ (HSHP4, Family subtheme); and ‘Raise my children to be the best adults they can be’ (HSHP8, Parenthood subtheme).

HSHP was also the group with the highest number of responses for the goal theme Personal development (see Table 1). Responses fell under the subthemes of Intellectual development (e.g., ‘Achieving intellectual growth’, HSHP2), Life of significance (e.g., ‘Living a life of significance through my career’, HSHP7), Fulfil potential (e.g., ‘Live life to
the best - by doing good things’, HSHP10) and Personal growth (e.g., ‘Being a leader living a life of integrity’, HSHP2).

Subthemes for the goal theme of Career were Education, Work and Career Development. All goals for Education referred to studying in various forms, e.g., ‘Study further’ (HSHP3), ‘Starting with my PhD’ (HSHP6). The goal theme Quality of life had only two subthemes for this group, namely Material success and Security. Goals were practical and within reason, revolving around living in a better home and saving money (Security) and having a better lifestyle and procuring a car (Material success).

Responses in the goal theme of Faith included ‘I want to live out God's Kingdom on earth in the way in which I do things and live in relationship with Him’ (HSHP1) and ‘To grow closer in my relationship with God’ (HSHP9), both with a focus on religion and a relationship with God.

Goal motives
The respondents in the HSHP profile group did not seem to draw motivation to strive for their goals from one specific source, but were driven by Personal development, Career, Personal well-being, Security, Relationships and Faith. In describing their reasons for pursuing goals, they often used active voice sentences and positive formulations, for example ‘I believe’ (HSHP1), ‘To influence and inspire’ (HPHS11), ‘Validate my passion’ (HSHP7), ‘I can reach’ (HSHP9).

Relationship goal motive subthemes were Parenthood, Family, Partnership, Contribution and Generativity. Affirmative language that conjured up positive emotions and experiences was often used, with words like ‘love’ (HSHP6), ‘fun times’ (HSHP7), ‘peace’ (HSHP9) and ‘kind’ (HSHP10) appearing in responses. One participant even expressed a sense of excitement on the subtheme of Family: ‘This is where I'm at peace, my support comes from my husband and I can't wait to have a family’ (HSHP9).

Personal development goal motive subthemes included Personal growth, Life of significance, Accomplishment and Fulfil potential. For example, those respondents who value goals that allow them to fulfil their potential spoke of ‘my purpose on earth’ (HSHP1) and reaching their ‘optimal potential’ (HSHP9). Examples of Personal growth goals were ‘Complete my degree in business - more knowledge, better myself’ (HSHP2) and ‘To be more informed’ (HSHP3).

The goal motive theme of Career had considerably more entries compared to other profile groups (see Figure 3 and Table 2), with the responses in subthemes Work and Education. The entries for Work focused on a specific job and made no reference to career
development with words like ‘post’ (HSHP3), ‘work’ (HSHP6) and ‘job’ (HSHP8). Education was viewed as a springboard into a more successful career with phrases used including ‘Key to success’ (HSHP4), ‘opportunity’ (HSHP6) and ‘give me a platform’ (HSHP7).

The goal motive theme of Personal well-being had the lowest frequency of responses for all profile groups (see Table 2). Responses were in the subthemes of Happiness, Personal peace, Good health and Self-care, and Comfort and responses mostly used positive language as typified by participant HSHP2: ‘Enjoy being healthy, exercise. Opportunity to walk the route Pilgrims walked years ago’.

Responses for the goal motive Security were concerned with securing a stable economic and physical environment, with references to owning property (‘live under your roof’, HSHP3, Personal security), taking care of necessities (‘it’s a need’, HSHP4, Personal security), being able to take care of oneself financially (‘buy everything for myself’, HSHP5, Financial security) and being able to provide for family (‘my kids will have some security’, HSHP10, Family security).

The goal motive of Faith was well represented in this group with most respondents alluding to their relationship with God, for example ‘Live the life God has called me to’ (HSHP2) and ‘I made this promise to God’ (HSHP8).

**High Search, Low Presence (HSLP)**

**Goals**

Career was the most cited goal theme for this group, with a considerably higher number of responses compared to other goals, as well as compared to the frequency of this theme for other groups in the matrix (see Figure 2 and Table 1). Goals for the theme of Career related to owning a business (HSLP1, Work), developing skills through studying (HSLP2, Education), finding a better job (HSLP4, Work), job satisfaction (HSLP7, Work) and career development (HSLP8, Career development). The majority of responses were, however, around the subtheme of Work, which only focused on having a job and only a few participants considered the bigger picture of long term career development. It is also noteworthy that about half of the goals listed for career did not include a verb in the response and that those that did include a verb often did not infer any kind of pathway towards a goal. Examples would be ‘to be” (HSLP7) and ‘want’ (HSLP10), neither of which suggests imminent or intended action to reach a goal.
Goals around Quality of life were focused on Personal well-being for this group, with a wide range of wishes for improvement of personal status, for example ‘To enjoy life’ (HSLP2) and ‘Better living conditions’ (HSLP4).

With regard to goals related to the theme of Relationships, even though the group’s focus was spread over the subthemes of Family, Parenthood, Community and Partnership, the emphasis seemed to be on having relationships and less on the reciprocity of rewarding relationships. The word ‘have’ appeared repeatedly in responses; examples are ‘Have a rewarding, fulfilling marriage and start a family’ (HSLP6, Family); ‘Children - making plans to have them’ (HSLP8, Parenthood); and ‘Get married and have children’ (HSLP9, Family).

Responses for the goal themes of Personal development within the HSLP profile group expressed the desire to develop specific skills (‘To take a photography course’, HSLP7, Personal growth); master high level physical challenges (‘Run a marathon’, HSLP8, Personal growth) and a wish for autonomy (‘Freedom’, HSLP4, Autonomy).

Goals for Faith were solely focused on the subtheme of Religion, such as ‘Fulfilling God’s purpose regarding my life’ (HSLP1) and ‘A deepened relationship with God’ (HSLP6), with one participant finding this topic so important that two of their three goals were formulated around this theme.

Goal motives
The HSLP profile group used a lot of passive language when referring to the reasons why they strive towards reaching goals, with very little reference to imminent or intended action, and a lot of reference to need, examples include ‘need to work’ (HSLP3), ‘to have’ (HSLP4), ‘we need’ (HSLP5), ‘I would like to’ (HSLP7), ‘it gives me’ (HSLP9), and ‘I want’ (HSLP10). This expression of need was especially evident in the Relationship theme. Although the responses were focused on interpersonal relationships between people, words that indicated a focus on the participant him- or herself were often used. Examples are ‘need’ (‘As a person one needs growth in terms of supporting your family’, HSLP3, Family; ‘We need others’, HSLP5, Social connection); ‘have’ (‘To have someone you can share memories with’, HSLP7, Social connection); and ‘want’ (‘I want to be important to someone else and I want to give my love to someone who will return it’, HSLP9, Partnership).

The goal motive subthemes for Personal well-being were Leisure, Happiness, Personal peace, Engaged activity and Self-care. The language used often referred to a state of being in the present moment; examples being ‘feel’ (HSLP2), ‘be alone’ (HSLP4), ‘peaceful’ (HSLP5), ‘bored’ (HSLP6), ‘Sense’ (HSLP8) and ‘nice time’ (HSLP11).
There was a notable emphasis on the subtheme of Financial security within the goal motive theme of Security. The scope of the focus was, however, very broad, from the basic need of being able to afford food (‘To put food you need to work’, HSLP3), through to ‘Financial freedom’ (HSLP5).

The responses for the goal motives of Personal development fell within the subthemes of Personal growth and Autonomy with responses for Personal growth demonstrating a sense of dissatisfaction with their life. Responses such as ‘To be a better me - knowledge, skills’ (HSLP2); ‘I have an urge to see what is out there in the world’ (HSLP9); and ‘Challenge myself’ (HSLP8) seem to imply a sense of wanting to change or escape their current status quo.

Goal motives for Faith referenced religion, for example: ‘It is the only way I would have benefited the Kingdom of God’ (HSLP1). There were very few responses for the goal motive theme of Career, but when referring to career as a reason for striving to achieve important goals, this profile group tended to frame their responses in a way that demonstrated a very negative attitude towards their current work (e.g., ‘I'm not interested in pursuing my current career’, HSLP6) or gave an indication that they experienced their work as a hardship (‘shouldn't be a ‘punishment’, HSLP7) or else revealed a lack of personal agency (‘need to progress in my career’, HSLP8).

**Low Search, High Presence (LSHP)**

**Goals**

The most commonly mentioned goals for this group fell within the goal theme Quality of Life and the number of responses for this goal theme was considerably higher than for any of the other profile groups, as well as for the other goal themes within LSHP (see Figure 2 and Table 1). This was mostly due to the high frequency of responses within the subtheme of Personal well-being, with participants in this group wanting to improve self-care, create more balance in their lives, and have less stress and more happiness, illustrated by responses such as ‘To have a balance between work, study, family and leisure time’ (LSHP6) and ‘Total happiness for myself’ (LSHP8). Other subthemes were Material success, Leisure, Good health and Security.

Relationship goals were spread across the subthemes of Family, Community and Partnership. Family themed goals had at their core a wish for positive interactions with family members, with responses being ‘Closer relationship with wife and children’ (LSHP1); ‘Want to spend less time on work and more time with my husband, our kids, and myself”
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

The participant responses for the goal theme Career fell within the subtheme of Education, as typified by the response ‘To obtain my Doctoral degree in nursing’ (LSHP6); Career development and Work, with responses in this subtheme indicating a desire for a specific job or role, for example ‘Being a qualified psychologist’ (LSHP5).

The goal theme of Personal development had few responses for this group and they fell within the subthemes of Fulfil potential, examples being ‘Fulfilling my purpose and goal’ (LSHP9) and Personal growth. Responses for the goal theme Faith fell within the subtheme Religion, (e.g., ‘Closer relationship with God’, LSHP1), and Spiritual Growth (e.g., ‘Maintaining spiritual growth’, LSHP10).

Goal motives

The LSHP profile group used positive language when referring to the reasons why they pursued goals and the responses with mostly formulated in the active voice, examples are ‘to grow’ (LSHP1), ‘to lead’ (LSHP2), ‘to create’ (LSHP3), ‘to help’ (LSHP5), ‘I love’ (LSHP7) and ‘complete’ (LSHP10). The language used when referring to goal motives that focused on Personal development, conveyed a sense of purpose and importance, represented by words like ‘born to’, ‘passion’ and ‘noble’ (LSHP2); ‘give meaning’ (LSHP3) and ‘important’ (LSHP5). Subthemes were Personal Growth, Life of significance, Fulfil potential and Autonomy.

Participants who cited Personal well-being as a reason to pursue goals, did so because they thought ‘Happiness improves your quality of life’ (LSHP8, Happiness) or because ‘A happy environment with family and friends creates peace’ (LSHP9, Personal peace) or because they felt it would be ‘nice to relax and rest’ (LSHP4, Self-care) or else for reasons that involved Good health, Meaning or Comfort.

Relationship-related goal motives were in the subthemes of Social connection, Family and Contribution. Responses indicated a deep desire to be of service with phrases used including ‘help others’ (LSHP5) and ‘reached and touched’ (LSHP7); some responses revealed the depth of this conviction by using words such as ‘passion’ (LSHP5) and ‘I believe’ (LSHP9).

Within the responses for the goal motive of Faith, the word ‘God’ was used in every entry except one, indicating a clear religious focus. Participants saw their lives as being an expression of God’s vision (e.g., ‘My call and election is not my own, but God's’, LSHP9); or viewed their lives as a dedication to God (e.g., ‘I want to honour God with my life’, LSHP6).
or else focused on their relationship with God (e.g., ‘My relationship with God is eternal’, LSHP1).

The goal motive theme of Career had three subthemes: Career development (e.g., ‘Knowledge to create sustainable successful business’, LSHP3); Work (e.g., ‘To get a job’, LSHP10); and Education (e.g., ‘Complete most of my CT exams before I start working’, LSHP10). The LSHP group had only a single entry for the goal motive Security (‘To be well taken care of’, LSHP11).

Low Search, Low Presence (LSLP)
The fact that the first nine participants in the LSLP group were selected using quartile cut-off points and the remaining two were selected using tertile cut-off points, posed a challenge. The thematic analysis of the goal themes was conducted on the data of all 11 participants, but the results for both the nine-participant (LSLP-Q) and 11-participant (LSLP-M) groups are presented in order to pick up on any differences. Figures 2 and 3 show that the frequencies for the goal and goal motive themes for LSLP-Q and LSLP-M are not considerably different. Since adding the two participants selected using tertile cut-off scores did not create a significant difference in the results, we will describe the results for the LSLP-M group in this section.

Goals
The LSLP group was the only profile group that showed no clear preference for a specific goal theme. Within the goal theme Quality of life, responses in the subtheme of Material success demonstrated awareness that material success did not happen overnight and achieving it was a process, except for one participant, who had the goal of ‘Being a millionaire’ (LSLP1), but no implied path to reach this goal. Other subthemes included Leisure (e.g., ‘Traveling the world’, LSLP1); Good health (e.g., ‘Getting into shape’, LSLP4); Personal well-being (e.g., ‘Be happy in your work and what you do’, LSLP8); and Security (e.g., ‘Constructing my own house’, LSLP11*).

The goal theme of Career showed that participants wanted a specific job (‘Being a Quantity surveyor’, LSLP1), or just any job (‘Finding a good job’, LSLP4), but there was no mention of developing a career path. Responses for the subtheme of Education included ‘Having a PhD’ (LSLP11*) and ‘Study further’ (LSLP9).

The Relationship goals for the LSLP group were focused on the topics of relationships with family and children. The responses expressed a sense of benevolence and care towards family and children, using phrases such as ‘loving and caring’ (LSLP7), ‘loved ones’ (LSLP5) and ‘support’ (LSLP10*).
Responses in the goal theme of Personal development revealed the subthemes Personal growth, Fulfil potential and Intellectual development. The focus seemed to be self-improvement, with responses including ‘Become somebody with your studies’ (LSLP8, Fulfil potential); ‘To improve my personal growth’ (LSLP5, Personal growth); and ‘To acquire as much knowledge as I can’ (LSLP6, Intellectual development).

The subthemes for the goal theme of Faith were Religion, with a specific focus on Christianity (e.g., ‘Being a Christian for the rest of my life’, LSLP2) and Spiritual growth, representing a more universal desire for spiritual growth (e.g., ‘Improve my spiritual life’, LSLP9).

**Goal motives**

The highest frequency for any goal motive theme was found within this profile group, namely Personal Well-being (see Figure 3 and Table 2). The goal motive subthemes for Personal well-being were Leisure, Happiness, Personal peace, Engaged activity, Good health and Self-care, with a significant inclination towards Happiness as a reason to strive for goals. The high number of participants who cited Happiness as a motive is a noteworthy difference in the goal motives of this group in relation to the others groups. Responses included ‘I don't think you can be happy without personal growth’ (LSLP5); ‘Being healthy brings more energy and a feeling of happiness’ (LSLP4); and ‘A sense of achievement will contribute to my happiness’ (LSLP5). For this group happiness surfaced as the motivator behind goals as diverse as good health, family relationships, material success, personal growth and personal well-being.

Personal development had the goal motive subthemes of Personal growth (e.g., ‘It is my passion and a desire I have in me’ (LSLP2); Life of significance (e.g., ‘One day when I am no more they will remember me’, LSLP7); Accomplishment (e.g., ‘Make yourself a goal till you get there’, LSLP8); Fulfil potential (e.g., ‘It will be my road to self-fulfilment’, LSLP11*); and Autonomy (e.g., ‘A house is a basic need and will afford me independence and privacy’, LSLP11*). It seems that for this group, those who cited Personal Development as a reason for change, were very strongly driven by this goal motive as three out of the five respondents had two entries each for the goal motive of Personal Development.

When it came to the goal motive theme of Security, this group directed their focus onto Financial security as a reason to reach goals, with responses such as ‘Want to afford a decent life’ (LSLP1) and ‘Because I need money to support my kids and make a living’ (LSLP7).
The frequency of responses for Relationships as a motive theme was much lower for the LSLP profile group than for the other groups. Echoing the responses for the goal themes, the goal motives focusing on relationships indicated a focus on immediate relationships since there were no responses that cited contribution to community, society or generativity as motivation. The goal motive subthemes cited were Parenthood and Social connection with responses including ‘I want her to have the support I never had’ (LSLP10*, Parenthood) and ‘I am a social being’ (LSLP11*, Social connection).

Responses in the goal motive theme of Career were all focused on Career development with responses including ‘It is the career I find interesting’ (LSLP1) and ‘At my current job, there is no opportunity’ (LSLP3). The goal motive theme of Faith was poorly represented compared to other profile groups with only two entries.

Discussion
Meaning plays a very important part in people’s lives. It has been said that ‘Without meaning and purpose, there is little reason to do what is necessary to live’ (Emmons, 2005, p. 735).

The aim of this study was to qualitatively investigate the type of goals people set and the motives underlying their identified personal goals as they relate to the four meaning profile groups based on the two dimensions of Steger’s model, namely presence of meaning and search for meaning (Steger et al., 2006). Findings show that levels of search for and presence of meaning are associated with the type of goals participants set for themselves. Three of the four profile groups exhibited a clear frontrunner for their most popular type of goal, with each group having a different preference for their most important goal type: relationships goals for HSHP, career goals for HSHP and quality of life goals for LSHP. The LSLP profile group was the only group with no preference for a most popular goal type, but was found to be heavily driven by positive affect as a reason to strive for goals. Findings are discussed according to the most prominent goals and goal motives.

**High Search, High Presence: Relationship focused**

The results indicated that HSHP individuals tend towards choosing life goals that support choices that further eudaimonic well-being as defined by Deci and Ryan (2008): ‘living life in a full and deeply satisfying way’, with an approach that is fundamentally about fulfilling one’s potential. They value positive relationships and personal growth, both elements of eudaimonia (Huta & Waterman, 2014), while at the same time not finding personal well-being an important motive for striving towards goals. The majority of HSHP individuals demonstrated high levels of benevolence towards others, a genuine desire to support and a level of investment in relationships not seen in other groups. Emmons (2005) is of the
EXPLORATION OF GOALS AMONG ADULTS IN A MATRIX OF MEANING

opinion that the ability to have relationships that are based on benevolence and trust are an important sign of psychosocial maturity. This altruistic outward focus of the HSHP participants on the well-being of others expresses a focus on a greater good rather than personal well-being. Park, Peterson, and Ruch (2009) considered a propensity towards dedicating oneself to something larger and higher than oneself as the mark of a meaningful life, which ties in with the fact that this group shows high levels of presence of meaning. Studies have found interpersonal relationships to be the most frequently mentioned source of meaning (Ebersole, 1998), as well as the most important source of meaning (Little, 1998) and it can be argued that goals centred around interpersonal relationships are the greatest contributor to people’s sense that their lives are meaningful (Klinger, 2012). Seligman (2011) found that individuals who have positive relationships with others are happier and healthier. The literature points out that positive relationships are essential for experiencing eudaimonia (Fowers et al., 2010) and that people higher in eudaimonia are more involved in prosocial actions (Ryan, Huta, & Deci, 2008). It perhaps comes as no surprise then that the group that most valued relationship focused goals was also the group with the lowest frequency of responses citing personal well-being as a reason to pursue goals when compared to the other profile groups.

Meaning is thought to contribute to individuals’ levels of happiness (Ryff & Singer, 2008), and it has been established that individuals who felt their lives to be meaningful were less depressed, experienced greater satisfaction with life, more optimism and higher levels of positive affect (Zika & Chamberlain, 1992). Positive affect is strongly associated with self-reported feelings of meaning in life (King et al., 2006). It might be that the HSHP profile group experienced enough positive affect in order not to be motivated by a desire for increased personal well-being when striving for goals.

The HSHP profile group also put a high priority on goals focused on Personal development, which also ties in with a eudaimonic approach to life which values challenges and growth (Deci & Ryan, 2000). This tallies with previous research that found that high levels of search for meaning indicate a desire to expand one’s understanding of one’s own life as significant and meaningful (Steger, Oishi, & Kashdan, 2009) and is thought to drive ‘people to seek out new opportunities and challenges, [while] fuelling their desire to understand and organise their experiences’ (Steger, Kashdan, Sullivan, & Lorentz, 2008, p. 200). Mohanty, Pradhan and Jena (2015) found that personal growth is positively associated with a meaningful life and Ryff (1989) goes so far as to argue that continual personal growth is the cornerstone of well-being.
The responses of HSHP individuals were positively formulated and indicated a sense of pending action which exhibited personal agency. Fowers et al. (2014) see individual choice and reasoning as the driving force for goal pursuit. Research has also shown that individuals who believe in their own ability to take action are more likely to set their sights high when choosing goals and persevere in the face of obstacles as well as have a strong sense of well-being (Little, 1998).

According to Weinstein, Ryan and Deci (2012), ‘to find true meaning, individuals must get to know who they truly are—that is, know what is valuable and important to them—and act in accord with that knowledge’ (p. 92). It is therefore noteworthy that the profile group who most values personal development is also the profile group which shows clear alignment between their most important goals and the reasons they cite for pursuing their goals, in that the most cited goals and goal motives were both focused on relationships for this profile group. This alignment of the most important goals and the most cited reasons for pursuing important goals, bodes well for the participants’ goal attainment since, according to Leontiev (2013), our actions are given meaning by the goals that drive them and our goals derive their meaning from the motivation that drives them. Also, this alignment between important goals and the reasons this group cite for pursuing their goals point towards self-concordant goals, when goals line up with an individual’s values and interests, which increases the chances of goal attainment since people tend to put more effort into attaining them (Sheldon & Elliot, 1999). According to Goal Contents Theory (GCT), extrinsic goals such as those relating to image and financial success are less likely to promote well-being than intrinsic goals such as close relationships and personal growth as seen here in individuals with high levels of search for and presence of meaning (Vansteenkiste, Lens, & Deci, 2006).

**High Search, Low Presence: Career focused**

HSLP individuals tended to show a lack of personal agency. Generally when describing the reasons they strove to attain goals, the HSLP profile group used a lot of passive language with very little reference to imminent or intended action and demonstrated a sense of wanting to escape their current circumstances. Their responses pointed to an attitude of waiting for their goal to happen to them: they wanted it to happen, they needed it to happen, they wished for it to happen, but there was no sense of intended action towards achieving their goal. This aligns with the views of Ventegodt and Merrick (2012), who are of the opinion that the absence of a sense of meaning in life will result in an individual’s lack of drive to act. HSLP individuals also did not demonstrate a belief in their personal power, but rather tended towards seeing themselves as passive bystanders of outcomes instead of agents of their own
actions. Tied in with this, was the fact that, although Career was the most cited goal theme for the HSLP group, the majority of responses focused on having a job and only a few participants considered the bigger picture of long term career development. It has been postulated that individuals see their work in one of three ways: a job, a career, or a calling (Rosso, Dekas, & Wrzesniewski, 2010). The more involvement an individual experiences in their work, the more meaningful that work becomes (Brown, 1996). It has been found that a job orientation mindset is associated with lower levels of meaning in life and life satisfaction (Steger, & Dik, 2009), as well as lower levels of well-being (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997) than those who viewed their work as a calling. Such a job orientation mindset often leads people to see their work purely as a means to a financial end and not as an opportunity to experience meaning and fulfilment (Rosso et al., 2010). It is therefore interesting to note that the HSLP profile group also had the highest frequency of responses for financial security as a reason for pursuing goals compared to other profile groups. It appears that HSLP individuals are more concerned with getting by than striving to flourish.

The intrapersonal focus of the goals most often cited by individuals with high levels of search and low levels of presence of meaning was echoed within goals related to the theme of Relationships, where these goals tended to be self-focused, with a greater concern for what the relationship could provide them with than an interest in the rewards of reciprocal relationships.

Although Career is the goal theme with the highest number of responses for the HSLP group, it is also the least cited goal motive. This emphasis on career as the most important focus for goals, while simultaneously being the least motivating reason to strive for goals, indicates a lack of goal integrity. This finding, coupled with the fact that this group demonstrated low levels of presence of meaning, is consistent with the finding of McGregor and Little (1998) that goal integrity—the degree to which goals and values align—is positively correlated with meaning.

**Low Search, High Presence: Quality of life focused**

The most commonly mentioned goals for the LSHP profile group fell within the goal theme Quality of Life, with a considerable focus on Personal well-being. According to Wong (2010), goals are concerned with questions such as ‘What really matters in life? What do I value most?’ (p. 90). With this in mind, the goals for this profile group demonstrate an emphasis on personal comfort and happiness to be the most important aspects of life. This emphasis on personal well-being indicates an orientation towards hedonic well-being as
defined by Ryan et al. (2008), focusing on a life of pleasure, positive affect and life satisfaction. This is underscored by the fact that this group also had very few responses for goals related to personal development, suggesting a lack of interest in striving to better themselves in the future. Although individuals with low levels of search and high levels of presence of meaning did not have a pronounced emphasis on relationship goals, they did seem to value rewarding, reciprocal relationships.

When describing their reasons for pursuing important goals, individuals with low levels of search and high levels of presence of meaning used language that indicated intended action. They demonstrated a sense of their personal power to attain their goals, as well as a confidence in finding ways to reach their goals. Snyder et al. (1991) referred to these as perceived agency and pathways and postulated that levels of hope are partly dependent on these two constructs. Research has found that search for meaning in life is negatively related to hope (Steger & Shin, 2010) and that there is a positive correlation between hope and presence of meaning in life (Hedayati & Khazaei, 2014). This bodes well for the LSHP individuals in terms of goal attainment, since individuals with high levels of hope have been found to be more resourceful in finding solutions when facing challenges that might stop them from reaching their goals (Snyder et al., 1996) as well as being more persistent in their efforts to attain their goals (Nelissen, 2017).

**Low Search, Low Presence: Undifferentiated**

Although the LSLP group was the only profile group that showed no clear preference for a specific goal theme, they tended to be greatly motivated by a desire for personal well-being, especially happiness, and put a relatively low priority on relationships. Since presence of meaning in life has been found to be positively associated with positive affect (King et al., 2006; Vela, Castro, Cavazos, Cavazos, & Gonzalez, 2015); as well as levels of happiness (Ryff & Singer, 2008; Vela et al., 2015); and lack of meaning predicts depression and disengagement (Wong & Fry, 1998), it is not surprising that this group is motivated by a need to experience more positive affect in their lives. However, research has found that striving for happiness itself is often illusive and that it is more often a by-product of other meaningful activities (Emmons, 2003). According to Ryff (1989), concentrating on happiness in the moment is also often at the price of achieving more long-term outcomes that relate to meaning making, creating positive relationships and personal development. This desire for happiness indicates a hedonic approach to well-being. According to Ryan et al. (2008), a hedonic approach to well-being, which focuses on the hedonic outcomes of happiness and pleasure, as opposed to an eudaimonic approach, which rather focuses on the content of one’s
life and the process of living well, cannot lead to psychological well-being, but will rather result in a life lacking in meaning and a sense of community. They suggest that individuals who follow the tenets of eudaimonic living—meaningful endeavours, fulfilling one’s potential and functioning well—are more likely to experience positive affect.

It is noteworthy that this group, which has low presence of meaning and a high desire for happiness, is also the group with the least responses citing relationships as a reason to pursue goals. This is in line with Lambert et al.’s (2013) finding that there is a strong correlation between having a sense of belonging (having positive, close attachments) and perceived meaningfulness of life, as well as research that indicates that family and social relations are associated with happiness and meaningfulness (Delle Fave et al., 2011). Wong (2010) maintains that in order to have meaning in life, one needs to set goals that go beyond self-interest.

Compared to other groups, the LSLP group did not generally see faith as a reason to pursue important goals. If we view religion as the desire to answer the ultimate meaning questions, then it makes sense that a group of people who do not find their life to have meaning and are not motivated to seek meaning, would not appear to be motivated by Faith. This also makes sense in light of previous research where it has been shown that those individuals who feel their lives are meaningful are more inclined to be involved in religion (Steger, 2012a).

Integration and implications of findings

According to Emmons (2005) ‘strivings provide information not only on what a person is trying to do, but also on who a person is trying to be …, goals are highly personal - they reflect subjective experience, values, and commitments as uniquely identified by the person’ (p. 732). This is echoed by Wong (2011), who suggests that purpose reflects existential values and emphasises what is really important to an individual. This seems to imply that a preference for specific types of goals and predominant motives within a group can tell us a lot about what this group values most in life. Importantly, insight into these matters can guide us in designing interventions that are suitable for people with different profiles of meaning in life.

Both groups with high levels of presence of meaning exhibited a sense of personal agency with regards to their goals, demonstrating a belief in their ability to take action and to reach their goals. Individuals with high levels of presence of meaning also proved to value reciprocal relationships. The individuals with low levels of presence of meaning tended towards intrapersonal goals and did not seem to put importance on reciprocal relationships.
Relationships are central to meaning and it has been said that interpersonal relationships are ‘the greatest contributors to people’s sense that their lives are meaningful’ (Klinger, 2012, p. 29). In terms of practical implications, interventions that focus on increasing relational well-being can be recommended for individuals with low levels of presence of meaning, with the hope of also enhancing levels of meaning in life. In the HSLP profile group, a shift towards more career minded (as opposed to job orientated) goals might increase their sense of agency and levels of well-being, while capitalising on their interest in career related goals (Rosso et al., 2010; Steger, & Dik, 2009).

Although no distinctive similarities were found for individuals with high levels of search for meaning, the profile groups with low levels of search for meaning tended to have a hedonic focus when it came to goals, preferring goals that increased their personal well-being. Since eudaimonic living is known to result in more long-term hedonic happiness (Ryan et al., 2008), it might be worth directing individuals with low levels of search for meaning towards considering setting goals with a more eudaimonic focus. This would be especially beneficial for the LSLP profile group, who were decidedly motivated to strive for goals by the desire for happiness. These goals could incorporate activities that are meaningful to them and allow them to contribute to their community or enhance their personal growth, actions that have been shown to increase eudaimonia (Turban & Yan, 2016).

**Limitations and recommendations for future research**

Despite valuable insights gained from this study, the study is not without limitations. The data that were gathered for this study used a cross-sectional design. Meaning making is often seen as a process that unfolds over time and this dynamic process is not reflected in the current study. Future studies should use a longitudinal design, measuring meaning in life and goal development over time.

Since there is no global agreement on how to organise types of goals into a cohesive set of categories, we used a bottom-up qualitative approach to identify goal and goal motive themes in this study. This has the advantage of not forcing the data into any preconceived direction. However, it does restrict comparability.

The study used questionnaires with open-ended questions and analysed the responses to these questions. In contrast with standardised surveys, this allowed for responses which potentially incorporated sociodemographic and personal differences, but in-depth interviews would offer an opportunity for even richer data to be collected for analysis.

This study was done on a small South African sample and it would be necessary to replicate the study within other cultural groups in order to validate the results, especially
since research has suggested that there may be cultural variations in the interaction between the two distinct dimensions of meaning in life (Steger, Kawabata, Shimai, & Otake, 2008). This would also broaden our understanding of how cultural contexts influence the goals and motives directing individuals’ goals, as they relate to different meaning profiles. A larger data set would also have been desirable as it most probably would have allowed us to use quartile data only.

A very interesting finding in this study is the preference of specific meaning profiles for certain types of goals. A recommendation for further research is to see whether these findings replicate in other groups and to explore these associations between meaning profiles and goal preferences further.

**Conclusion**

The purpose of the current study was to explore how goals and the reasons individuals strive for goals are associated with levels of search for and presence of meaning. Results suggest that specific meaning profiles have a preference for certain types of goals. Also, individuals with low levels of presence of meaning tended towards intrapersonal goals and did not seem to put importance on reciprocal relationships, whereas individuals with low levels of search for meaning tended to prefer goals that increased their personal well-being. This insight gives an opportunity to direct individuals with low levels of presence of meaning towards interventions that focus on increasing relational well-being, potentially also enhancing their levels of meaning in life and well-being; and individuals with low levels of search for meaning towards considering setting goals that have a more eudaimonic focus in order to increase long-term happiness and well-being. Previous studies have shown that a sense of purpose and goal integrity are associated with higher levels of meaning, but this study is the first to provide insight into how different patterns of meaning are associated with different goal types, and the reasons people strive for goals as investigated qualitatively.

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References


Section 3

Conclusion and reflection

Conclusion

The key finding that arose from exploring goals and the reasons participants strive for goals among adults in a matrix of presence of and search for meaning, was that levels of search for meaning and presence of meaning were associated with the type of goals participants set for themselves, as well as the reasons people cited for striving towards achieving these goals. Although much research has been done in the past that investigated the associations between goals and individuals’ sense of meaning, very little research has been done to explore how presence of and search for meaning are associated with people’s choice of goals. Insight into this point can guide us in designing interventions that are suitable for people with different levels of search for and presence of meaning in life.

This study demonstrated that individuals with high levels of presence of meaning exhibited a sense of personal agency with regards to their goals and a belief in their ability to take action in order to reach these goals. They were also shown to value reciprocal relationships. In contrast, individuals with low levels of presence of meaning did not seem to attach importance to reciprocal relationships and tended towards more intrapersonal goals. Low levels of search for meaning in individuals were associated with goals that increased personal well-being.

In light of these findings, individuals with low levels of presence of meaning could be encouraged to consider setting goals that enable them to experience positive social interactions and small achievements on a daily basis, since this has proven to increase levels of meaning in life (Machell, Kashdan, Short, & Nezlek, 2015). Such individuals can also be encouraged to pursue activities that are meaningful to them since studies have shown that changes in meaningful activity is a strong predictor of levels of meaning in life, as well as a sense of autonomy, competence and relatedness (Eakman, 2014). Individuals with high levels of search for meaning and low levels of presence of meaning would especially benefit from such increased levels of autonomy and competence, since they were shown to lack a sense of their own agency. Considering their career focus, this group might find the most benefit from being encouraged to find meaningful actions within the scope of their working day that shift their approach from job orientated to career minded, and could in so doing potentially find more fulfilment in a segment of their lives that is important to them (Rosso, Dekas, & Wrzesniewski, 2010).
Individuals with low levels of both search for and presence of meaning could be directed towards considering the types of goals they set, and aim to set more goals that incorporate a eudaimonic approach instead of a focus on personal well-being, as this would lead to long term well-being instead of just passing happiness (Steger, Kashdan, Oishi, 2008). This profile group could also benefit from being encouraged to put effort into personal development interventions since levels of meaning in life have been shown to increase with self-knowledge (Schlegel, Hicks, King, & Arndt, 2011). Participants with low levels of both search for and presence of meaning were particularly motivated to strive for goals by their desire for happiness. Theory indicates that interpersonal relationships are associated with happiness and meaning in life (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011), and that prosocial behaviour increases meaning in life (Van Tongeren, Green, Davis, Hook, & Hulsey, 2016), making this group particularly suitable to interventions that improve or increase social relations. Due to their high desire for happiness, interventions proven to increase positive affect would be valuable to this group, especially since experiencing positive affect makes individuals more inclined to feel that life is meaningful (Steger, Kashdan, Sullivan, & Lorents, 2008), as well as heightening their awareness of the potential meaningfulness of situations they experience in daily life (King, Hicks, Krull, & Del Gaiso, 2006).

Although high levels of search for meaning can have a negative impact on subjective well-being (Steger, Oishi, & Kashdan, 2009), studies have shown that this can be combatted by increased levels of presence of meaning and self-actualisation (Cohen, & Cairns, 2012). In this light, it would be beneficial for the HSLP profile group to engage in interventions that promote personal development. Individuals scoring high on search for meaning and low on presence of meaning have been shown to have low psychosocial functioning (Dezutter, et al., 2014), making interventions that promote relational skills and well-being particularly suitable to these individuals. Interventions that increase levels of meaning in life can also be promoted to this group since people with high levels of meaning in life have been shown to be more likeable and considered desirable as potential friends (Stillman, Lambert, Fincham, & Baumeister, 2011).

Future research would need to replicate the study within other countries and cultural groups in order to validate the results of the current study. A recommendation for further research is to also further explore the associations between meaning profiles and goal preferences.
One of the strengths of this study was its mixed methods approach. Using open-ended questions that were qualitatively analysed, instead of standardised surveys, created an opportunity for gathering new insights. It meant that participants could freely choose their own goals, instead of selecting from a predetermined list, and were able to explain why their chosen goals were important to them.

The findings of this study gave valuable insight into the similarities and differences of the most important goals and their motivations as expressed by individuals with different levels of presence and search for meaning and the patterns thereof. This insight has the potential to inform interventions that aim to enhance meaning in life and well-being, supporting the field of positive psychology in its drive to assist individuals to flourish.

**Personal reflection**

Writing this mini-dissertation has at the same time been one of the hardest things I have done and one of the most enriching. There were times when I felt that I could not carry on: when unforeseen circumstances intervened and threatened to derail my efforts; when my children needed my support with challenges they were facing; and when I felt that I was at the limits of my endurance and just didn’t have it in me to juggle all the demands of daily life. I am extremely thankful that I kept going, even though it took me longer than I had planned to finish. As a life coach, I am called upon to support people who are stuck and grappling with life issues. This journey gave me renewed empathy with my clients, appreciation for the diligence and effort of will it takes to achieve one’s goals, and an awareness of the level of endurance required, especially in achieving difficult goals. All of this flows into my coaching practice, giving me greater insight and solidarity with my clients.

The topics covered in this study are also closely related to my work: one of my main roles as a coach is to support individuals in conceptualising relevant goals for themselves; guiding them in creating realistic pathways to their goals; and just generally being a cheerleader along the way. A lot of people reach a point in their lives where they no longer feel connected to the path they are on: their sense of direction and purpose starts to feel tenuous and they look for support in order to find their way back to a place of meaning. During the process of writing this mini-dissertation, I have gained a more in-depth understanding of the theory behind goals and meaning, and how levels of meaning can influence what individuals hope to achieve in their lives. I look forward to applying this knowledge in my coaching practice.

The research process itself felt arduous at times, especially the lengthy approval process required before being able to start the research phase. It was frustrating to be stuck in
this process when ideally I would have liked to have been doing the research itself. However, once I started the research process, I realised what valuable preparation this had been and how it had provided me with a solid foundation and insight into the research process. The research process itself was also not without its challenges. Coming from an applied mathematics background, my lack of a strong foundation in the writing of academic theory became a stumbling block and it required a substantial investment of time in order for me to improve this ability. I learnt how to find relevant research, critically consider and interpret the ideas presented, and link them to other existing theories. This process tapped into my love of learning and made me feel part of the universal process of constructing knowledge.

Another challenge was time management, which I found to be one of my greatest weaknesses. It seemed that I was never able to stick to my own schedule, always needing more than the allotted time to reach each successive milestone. The challenging schedules of all involved in this research project, as well as the complexities of long distance communication, made this even more difficult, especially during the data analysis phase where a lot of collaboration was required. I realise, however, that it taught me about the very real and sometimes mundane challenges involved in research. Although the support and guidance of my supervisor and fellow authors was invaluable, the other members of my research team were based in a different part of the country from me. I missed being able to discuss the ideas and insights generated by the project with fellow researchers and was often plagued by a recurring sense of isolation. However, this was also a very big growth point for me, in that I was forced to rely on myself and my own ability to tough it out when faced with having to understand knotty and complex theories, or trying to decide how best to approach a challenging question. I learnt to trust my own abilities more and to push myself to stretch my intellectual limits. I think this strengthened belief in my own capabilities has been the greatest growth point for me as a result of writing this mini-dissertation. I now have more confidence in my resilience and capacity for endurance in the face of what may seem insurmountable challenges. These strengths will support me in future endeavours, helping me to push through adversity and reach my goals.
References