Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being

MT Liversage

orcid.org / 0000-0003-1277-6052

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

Supervisor: Prof MP Wissing

Co-supervisor: Dr L Schutte

Graduation: May 2019

Student number: 13162802

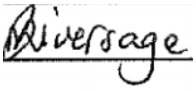
Summary

Goals and meaning as important constructs of eudaimonic well-being have been studied separately, but research is scant on the concordance of goals and meaning, especially in specific life domains. The aim of this study was to explore the concordance of goals and meaning in the family domain, and how different patterns of concordance are associated with demographic variables and indicators of well-being. Patterns of concordance for goals and meaning in this study were conceptualised as no-goal-no-meaning, both-goal-and-meaning, only-goal-no-meaning, and only-meaning-no-goal. A mixed methods convergent parallel design was used with simultaneous cross-sectional collection of quantitative and qualitative data. Qualitative data were transformed to quantitative data using the coding categories developed by Delle Fave et al (2011). The coded qualitative data on goals and meaning as manifested in the family life domain were analysed to establish the degree of concordance thereof. Participants were 585 South Africans - 18 years or older with at least a high school educational level. Measures included a Sociodemographic questionnaire; Satisfaction with Life Scale; Positive-Negative Affect Schedule; Meaning in Life Questionnaire; Mental Health Continuum; Semi-structured open-ended questions on important goals and meaning. The frequency of important goals and meaningful things, were analysed to determine the alignment patterns between goals and meaning per person within the family domain, followed by one- and two-way ANOVA's which were applied to establish associations among variables. Results indicated a high frequency of the goals-and-meaning pattern in the family domain. Significant interactions were found among patterns of concordance, sociodemographic variables and specific indices of well-being. Concordance patterns differed among age and marital status groups. Findings suggested that the understanding of well-being can be informed by taking sociodemographic variables and how they relate to alignment patterns of goals and meaning for the family domain into consideration, as identified in this study. Further research exploring the same topic in other life domains and other cultural contexts is suggested.

*Keywords***:** concordance, goals, meaning, well-being, family, sociodemographic variables

Solemn declaration

I, M.T. Liversage (student) hereby declare that the work is my own and has not been submitted to another institution for examination.



M.T.Liversage

Student

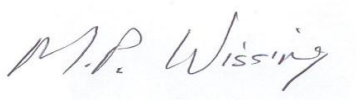
Preface

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 (JOPP). Some exceptions are made for the mini-dissertation, for example the length of the manuscript where the manuscript is currently longer than prescribed by the intended journal. The intended journal for publication (Journal of Positive Psychology) requires US English, but for the purposes of this mini-dissertation, UK English will be used and the manuscript changed to US English before submission to the Journal of Positive Psychology. The manuscript will also 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 one.

The body of this mini-dissertation consists of three chapters. Chapter one 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). Chapter two contains the research report for examination in article format, and Chapter 3 highlights reflections on the conclusions of the study, and makes some recommendations for further research and possible practical applications of findings.

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 conducted the literature review, interpreted the results, and drafted the manuscript with incorporation of suggestions from the co-authors. She took responsibility for the technical and language editing of the manuscript.



Prof. M. P. Wissing (Supervisor)

Dr. L. Schutte (Co-supervisor)

Acknowledgements

I would like to thank Prof. Wissing for her patient guidance throughout this study. Generously sharing her knowledge and expertise. It was a great honour to learn from her wonderful approach and mentorship. Her guidance and expertise have been central to the completion and quality of this research. Also thank you to Dr. Lusilda Schutte for her help, direction and statistical input. I appreciate all the time and effort offered from my supervising team towards completion of this study.

This work is based on the research supported in part by the National Research Foundation of South Africa (Grant Number: 106050). The Grant holder acknowledges that opinions, findings and conclusions or recommendations expressed are that of the authors and that the NRF accepts no liability whatsoever in this regard.

I would also like to thank my mother, Christelle Liversage, for all her wisdom and encouragement throughout this study. A special thanks to Francois Botha for all the support given. Lastly I would like to thank my Father for the gift of being able to study and learn about the world He created.

Table of Contents

Chapter 1

Background Orientation

Chapter 1 reflects the first phase of the research journey leading up to the manuscript as the main research report that will be presented in Chapter 2.

A literature review was conducted on relevant studies and a research proposal was developed that was firstly approved 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 the Scientific Committee of AUTHeR, 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 as evidence of background preparation, research and processes for the manuscript submitted in Chapter 2 for evaluation. 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.

It is to be expected that there is an overlap between the research proposal and ethics application, as well as with parts of the manuscript in Chapter 2, since it is all based on the same research project in different phases. The manuscript contained in Chapter 2 is the final research report.

1.1 Approved protocol for this study

Cover Page for Research Proposal		
School	Africa Unit for Trans-disciplinary Health Research (AUTHeR)	
Discipline	Positive Psychology	
Student		
Surname	Liversage	
Name/initials	Mandi T	
Cell phone number	084 800 0534	
Skype address	mandi.liversage	
Degree	MAPP	
Date of first registration for above mentioned degree	January 2017	
Student number	13162802	
Title of thesis/dissertation/mini-dissertation	Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being.	
Study leader/promoter	Prof. M.P. Wissing	
Help-/co-leader/promoter	Dr. L. Schutte	
Number of times of submission of this protocol (Mark were applicable)	1st	X
	2nd	
	3rd	
Does this project fall under a greater umbrella project?	Yes	X
	No	
If yes, Ethical number of the larger project	NWU-00002-07-A2	
Title of the larger project	FORT3: The prevalence of levels of psychosocial health: dynamics and relationships with biomarkers of (ill)health in South African social contexts. Sub-project: Meaning and Relational Well-being as core facets of functioning well and Psychosocial Health (NRF-CPRR funded project).	
Leader of the larger project	Prof. M.P. Wissing	
Specific aims of larger project **where by this study links**	**FORT3:** The **specific aims** included to explore: i. the nature, sources and motives for meaning, goals and positive relationships with a qualitative	

	and quantitative mixed method approach. This will be done amongst others by implementing the Eudaimonic-Hedonic Happiness Investigation instrument (EHHI) developed by Delle Fave et al (2011), and various visual (photo) and other art forms (e.g. poetry) in different groups (e.g. adolescents, adults, teachers) and in various South African cultural contexts, as well as for flourishing and languishing participants; ii. the links between meaning, goals /purposes, positive relational processes and other facets of psychosocial well-being, taking into account some sociodemographic and contextual variables.		
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. L. Schutte	
	2	Prof. M. Wissing	
	3	Dr. L. van Biljon	
	4	A. Cromhout	
	5	A. Du Plessis	
Date of approval by above mentioned panel	24 April 2018		

Research Proposal

1. Proposed Title

Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being.

Keywords: concordance, family, goals, meaning, sociodemographic variables, well-being.

2. Problem Statement

The FORT3 Research Project investigated the prevalence of levels of psychosocial health with regard to the dynamics and relationships with biomarkers of (ill)health in a South African social context. The exploration of the nature, sources and motives for positive relationships, goals and meaning with a mixed method approach was an aim of the FORT3 project as well as to explore the connections between positive relational processes, goals, meaning and other aspects of psychosocial well-being. Contextual variables and social-demographic aspects were taken into account. This study forms part of this FORT3 research project in addressing these aims using data already gathered for this project. It aims to determine how goals and meaning align in the family domain of life with specific focus on the associations with demographic variables and well-being. The present study's scope falls under the aims of the FORT3 project which obtained active ethics approval (NWU 00002-07-A2) and is therefore an affiliated study to FORT3**.**

Positive psychology is a scientifically grounded field that focuses on positive human functioning (Seligman, 2007; Seligman & Csikszentmihalyi, 2014; Gruman, Lumley, & González-Morales, 2018) and explores the conditions and circumstances that help individuals and communities to thrive. Goals and meaning are key constructs that guide the process of thriving towards well-being (Emmons, 2005; Brdar, Vella-Brodrick, Nakamura, & Solano, 2014) and have been studied as separate constructs. However, it is not known how these constructs and the manifestations thereof hang together in life or in specific life domains. Research on the concordance of goals and meaning within the family life domain is limited and

no research indicating the role of sociodemographic variables and well-being in a South African context could be located. The present study will address this gap in knowledge.

2.1 Goals

Scholars have defined goals in a variety of ways with resulting diverse perspectives. Little, Salmela-Aro, and Phillips (2017) define goals as future orientated desires a person aims to achieve or maintain and which play a vital role in terms of behaviour and well-being. Emmons (2005) states that the expression of future orientation pins down goal striving. Goals are interlinked with the following constructs and theories: purpose and meaning (Wong, 2017); hope (Guter, 2016; M. M. Tugade, Shiota, & Kirby, 2014), self-determination (Adams, Little, & Ryan, 2017; Bauer, King, & Steger, 2018); self-regulation (Van Tongeren et al., 2018) and self-motivation (Ryan & Deci, 2017). These constructs and theories will now be discussed. Hope refers to Snyder's hope theory that states that people have the ability to think about goals and create pathways to reach them (Guter, 2016; Snyder, Lopez, Shorey, Rand, & Feldman, 2003). Self-regulation and self-motivation form part of the self-determination theory and state that the pursuit of goals contributes to meaningful living or well-being. The need to relate, experiencing competence and autonomy underlines this well-being (Deci, Olafsen, & Ryan, 2017; Deci & Ryan, 2008).

Self-concordance can be defined as the extent to which personal goals are pursued with intrinsic interest feelings (Gaudreau, 2012). The self-determination theory is the foundation of the self-concordance model. This model focuses on the broad personal goal statement of people (Smith, Ntoumanis, & Duda, 2007). It is a model that can be used to explain and understand longitudinal processes because it explores the initial positive future outcomes (Gaudreau, 2012). The whole conative cycle is addressed for individuals striving to meet their own needs/goals over time. Studies showed that a link between goals and long-term values enhanced self-concordance and brought joy to overall goal pursuit (Gaudreau, Carraro, & Miranda, 2012).

Intrinsic, identified, introjected and extrinsic are different types of motivation and have an influence on the pursuit of goals. Intrinsic goals are based on psychological needs and extrinsic goals refer to financial success, social recognition and impressions which form part of motivation (Ciani, Sheldon, Hilpert, & Easter, 2011). There are also other types of goal orientation such as mastery goals, which involve the acquiring of new skills; performance goals being intentions towards making good impressions with demonstration of talents and best abilities; avoidance goals that aim to prevent a negative occurrence; approach goals that imply movement in a positive direction towards a positive outcome; instrumental goals that focus on effectiveness and constitutive goals that focus on the inner person and the activity which are inseparable and connected to meaning (Pekrun, Elliot, & Maier, 2009; Darnon, Harackiewicz, Butera, Mugny, & Quiamzade, 2007; Darnon, Butera, & Harackiewicz, 2007).

2.2 Meaning

Meaning in life is considered by many as a critical ingredient in human flourishing and well-being (Steger, Oishi, & Kashdan, 2009; Peterson & Park, 2012). The concept of meaning came to the forefront through Victor Frankl's work. Frankl (1962) expresses that optimal human functioning is derived from the experience of a sense of meaning and a life purpose.

Over time, scholars have interpreted meaning in many different ways with an assortment of views, theories and models. Meaning is seen as making sense out of life (Steger, 2009); connection to spiritual concerns or transcendence (Emmons, 2003); having a sense of self-worth, purpose, self-justification, efficacy and belonging (Lambert et al., 2013) and a sense of coherence, direction, significance, and belonging (Schnell, Höge, & Pollet, 2013). However, a meaningful life is often best understood from the perspective of the individual that is living it. The experience of meaning is in essence unique and reflective of themes in a person’s life moulded through history, culture, sociodemographics, values and beliefs, which in turn shapes the nature of the meaning that is constructed (Grouden & Jose, 2014).

A distinction in the conceptualisation of meaning was made in terms of the presence of

meaning and the search for meaning (Steger, 2009). People are seen to experience the presence of meaning when they understand their unique fit in the world and identify what they are trying to accomplish in their lives whereas search for meaning is the desire to understand and organise experiences in the world (Steger, Kashdan, Sullivan, & Lorentz, 2008). Research suggests that the presence of meaning is linked to well-being (Park & Peterson, 2010).

Key aspects of meaning are seen throughout the literature as containing elements of coherence, significance and purpose (Martela & Steger, 2016; Steger, 2012). Coherence, characterised by some degree of certainty and routine, allows life to make sense to the person living it. Significance entails the degree to which a person believes his or her life has value, worth, and importance. Purpose refers to having goals and direction in life (King, Heintzelman, & Ward, 2016).

Wong (2011) proposes the meaning mindset which focuses on the person as a meaning-seeking and meaning-making individual and also entails living a balanced life through meaning derived from various sources such as achievement, relationships, altruism, spirituality and justice. Research findings have indicated that individuals find interpersonal relationships, especially with family members, to be of utmost importance to their sense of meaning (Grouden & Jose, 2014).

The relationality-meaning model is based on research indicating that relationships and connections are at the core of meaning (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013; Wissing, 2014). Links are seen between meaning, positive relationships, context and well-being. The relationality model of well-being refers to meaning of life as connectedness to a higher power; meaning in life as relational well-being as source of meaning in various domains in life such as family; and meaning to life as values expressed in behaviour to meet needs.

Both goals and meaning are key constructs related to well-being. For purposes of this study, the point of departure for exploration of the degree of concordance of goals and meaning will be from a qualitative bottom up approach of lay peoples' notions of well-being.

2.3 Well-being

The World Health Organisation's (WHO) definition of health, in its broader sense, in its 1948 constitution, is 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity' (WHO, 1948). There are however, multiple perspectives, research findings and views on what constitutes well-being. From a positive psychology perspective, there are two broad perspectives in the explanation of well-being.

The first is a hedonic perspective (feeling good) which focuses on the good life of happiness, pleasure, enjoyment, satisfaction and comfort. The second entails the eudaimonic perspective (functioning well) contains purpose and meaning (Biswas-Diener, Kashdan, & King, 2009).

Seligman (2011) expanded on the concept of well-being and developed the PERMA model to explain well-being. The PERMA model represents positive emotion, engagement, relationships, meaning and purpose and accomplishment. He argued that if these elements are present, well-being is the result. Ryff and Singer (1998; 2013) explain well-being as an issue of engagement in living, involving expression of a broad range of human potentialities, namely intellectual, social, emotional and physical. This living is expressed in leading a life of purpose, deep and meaningful connections to others, self-regard and mastery. Keyes (2002) developed The Mental Health Continuum model in which he presents a multifaceted conceptualisation of well-being on a continuum from languishing to flourishing. He clustered explanations as well as theories and concepts together to explain the two broad perspectives on well-being (Disabato, Goodman, Kashdan, Short, & Jarden, 2016).

It is reported that individuals with a sense of meaning have a strong sense of autonomy, self-determination and purpose in life, construct clear and definite personal goals and higher well-being (García-Alandete, 2015). The broad cluster of eudaimonic well-being that focuses on psychological and social well-being such as meaning, goals, purpose and potential (Keyes, 2007) will be the focus of this study.

2.4 Goals and meaning as facets of eudaimonic well-being

Another indicator of eudaimonic well-being is social well-being. This refers to the wellness of functioning within a social context in terms of the quality of relationships with people and communities (Shapiro & Keyes, 2008). Social well-being has five dimensions; integration, contribution, coherence, actualisation and acceptance (Keyes, 1998). These dimensions complement aspects of eudaimonic well-being with the emphasis on functioning well. Theories further discussed touch on the importance of goals and meaning within eudaimonic well-being and how this can be a guide towards well-being.

Scholars argue that meaning is primarily behaviour that is goal-directed (Feldman & Snyder, 2005). Goals and purpose, and meaning and purpose, are used interchangeably. A set goal results in action and provides meaning towards the action (Klinger, 2013). With this in mind, meaning is the result of a commitment towards the pursuit of goals. Goals can refer to what of aspirations and meaning to the why. Meaning and purpose are attained from actions that are goal directed and factors that promote the feasibility of the intended goal, with well-being and satisfaction as outcome (Park, 2010).

Seligman and Csikszentmihalyi (2006) highlight the importance to find meaning through goal pursuit. Meaning and pursuit of goals play a big role in reaching optimisation or ideal self and positive qualities lead to the importance of what makes life worthwhile (Lambert et al., 2015).

The self-determination theory as a model of eudaimonic well-being was developed by Ryan and Deci (2008) and underlines the satisfaction of three fundamental, psychological needs essential for experiencing optimal well-being. This theory comprises of the following; competence in feeling effective and efficient in completing a task; autonomy in choosing and controlling behaviour towards goals; and relatedness which refers to a sense of belonging to others and gives meaning. When these three needs are met in the pursuit of meaningful goals, a higher sense of eudaimonic well-being is experienced. Ryff's (2013) six dimension model of

psychological well-being includes purpose in life to set goals towards a meaningful life and positive relationships as essential to well-being (Ryff, 2013).

The pursuit of personal goals can lead to a psychologically fulfilling life by providing meaning and structure to life. The sustained pursuit of meaningful goals has been associated with experiencing meaning and increased well-being (Gray, Ozer, & Rosenthal, 2017). Sociodemographic factors shape and mould the acquisition of well-being from different sources.

2.5 Sociodemographic variables in well-being

Sociodemographic variables play an important part in the experience of various facets of well-being (Hansson, Hillerås, & Forsell, 2005). Factors such as gender, age, standard of living, education level and marital status may have an influence on well-being (Diener & Ryan, 2009). However, Diener, Oishi, and Lucas (2003) found that sociodemographic factors merely account for minimal variance in well-being measures. The present study will explore the sociodemographic factors, gender, age, standard of living, education level and marital status and their association with goals and meaning in the specific South African sample.

2.6 The family domain of life

Family can be defined as a group that consists of parents and children, or people in the same line of descendants that have the same ancestral lineage (Fahey, Keilthy, & Polek, 2012). Family well-being is about the members, on a collective and subjective level, experiencing a sense of wellness and how individual family level needs interact (Zuna, Summers, Turnbull, Hu, & Xu, 2010). Members of a family that experience support have a heightened self-esteem, self-worth, positive affect and health (Preston et al., 2016). These connections augment meaning and purpose that in turn lead to enhanced well-being (Umberson & Karas Montez, 2010). Linked lives or relationships within a family profoundly influence well-being, and can be a source of well-being (Merz & Huxhold, 2010). The unique role of demographic variables and contextual factors in the understanding of the concordance of goals and meaning cannot be

overlooked (Wilson, Wissing, Schutte, & Kruger, 2018).

Studies on well-being in the family domain are available (Menon, Pendakur, & Perali, 2014; Botha, Booysen, & Wouters, 2017; Deist & Greeff, 2017; Harrell, 2018). However, literature is scarce on the alignment/concordance of goals and meaning in the family domain (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013).

2.7 The present study

There is a gap in knowledge on the concordance between goals and meaning in the family domain of life and how different patterns of concordance are associated with demographic variables and indicators of well-being. For purposes of this study the words concordance and alignment will be used as synonyms. The distinguished patterns of alignment of goals and meaning (per person, per the family domain of life) are as follows: 'not a goal or a meaning'; 'both a goal and a meaning'; 'goal but not a meaning'; 'meaning but not a goal'. A possible contribution of such a study can be that it provides knowledge for the development of well-being interventions that can be implemented and evaluated for the facilitation of eudaimonic well-being in the family domain of life.

In light of the above, the specific research questions that will be addressed by this study, is whether there is concordance/alignment between goals and meaning in the family domain of life and how the different patterns of concordance are associated with demographic variables and indicators of well-being.

3. Research aims

The aims of this study are to explore the concordance of goals and meaning in the family domain, and how different patterns of concordance are associated with demographic variables and indicators of well-being.

4. Method

The FORT3 project obtained ethical approval from the relevant ethics committee and all data gathered complied to the rules stipulated at the time when the project was developed

and executed. The rules on data gathering then and now differ, for example with regard to the informed consent form. The FORT3 informed consent form is not as elaborate as what is currently required and the form wasn't given to the participants a week before participation. Although notice of deviations from the new rules is taken, the project and data gathering when done in an ethical manner and was approved and done under supervision of the ethics committee of the North-West University from the outset (NWU-00002-07-A2).

The Health Research Ethics Committee of the North-West University requires monitoring reports on an annual basis and they are completed and submitted as required to ensure that the FORT3 project stays active for the allowance of the analysis of already gathered data. The Principal Investigator of the present study ensures data integrity and the participants consented to what is done in this study. A discussion on these matters was held with The Head of the Ethics Office and the chair of the Health Research Ethics Committee of the North-West University and the information was clarified as ethically acceptable. These aspects will be discussed below.

4.1 Design

The prevalence of levels of psychosocial health and exploration of the dynamics and relationships with biomarkers of (ill)health in a South African social context was investigated by the FORT3 project (Wissing, 2008/2012) and was done by means of a cross-sectional survey design. The current study, affiliated to FORT3, will use a mixed methods convergent parallel research design to analyse data from the FORT3 project (Creswell & Plano Clark, 2011; Plano Clark, 2017). Simultaneously collected quantitative and qualitative data from the FORT3 project will be used. The coding system as developed and elaborated by Delle Fave, Brdar, Freire, Vella-Brodrick, and Wissing (2011) was used to transform the qualitative data into quantitative data. These basic codes were categorised and grouped into life domains. Of these, data pertaining to the family domain will be used in the current study. Qualitative data gathered and coded on goals and meaning as well as the reasons thereof, will be examined to

determine their degree of concordance with specific reference to demographic variables and how they link to indicators of well-being which were part of the quantitative data gathered.

4.2 Participants

The participants (*N* = 585) included in the study were obtained from the FORT3 project. Recruitment of participants is outlined in Section 4.6.2, and the inclusion and exclusion criteria are presented in Section 4.6.5 of the protocol. The breakdown of participants in this study is as follows: female (61.9 %); male (37.9 %); between 18 and 25 years of age (8.7 %); between 26 and 40 years (36.4 %); between 41 and 60 years (52 %) and above 60 years of age (2.7 %). Participants were asked what their standard of living was and their responses were as follows: below average were 5.5 %, average 65.8 % and 25.1 % above average. The education level of the participants was determined and 37.6 % indicated that they obtained secondary level education and 61.7 % tertiary level. Participants that were single comprised 24.8 % of the sample, 62.7 % were married, 3.2 % cohabited, 5.8 % were separated/divorced and 1.9 % were widowed.

4.3 Measures

4.3.1 Sociodemographic questionnaire. Data were collected on gender, level of education, marital status, standard of living and age listed in the sociodemographic questionnaire.

4.3.2 Satisfaction with Life Scale (SWLS) (Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, Diener, Emmons, Larsen, & Griffin, 1985)**.** This 5-item scale was developed to measure the level of life satisfaction people experience in their lives. Participants score their level of agreement or disagreement with items on a 7-point Likert scale, 1 (strongly disagree) to 7 (strongly agree). The scale is not aimed at specific life domains but gives a more global and holistic experience of satisfaction with life. This scale showed good psychometric qualities and high internal consistency (Cronbach's alpha 0.74) as well as high validity (Pavot & Diener, 1993). The validity of the scale was as confirmed in South African samples. For example,

Westaway, Maritz and Golele attained a coefficient alpha of .92, indicative of very good internal consistency (1, 9) (Westaway, Maritz, & Golele, 2003).

4.3.3 Positive-Negative Affect Schedule (PANAS). Positive and Negative Affect Scales (Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item scale measuring positive affect (10 items, e.g., 'interested, attentive') and negative affect (10 items, e.g., 'irritable, jittery'). The participants were asked to respond in relation to 'how you feel at the present moment' or 'how you have felt over the past week'. Respondents scored each item on a 1 ('very slightly or not at all') to 5 ('extremely') fully anchored Likert scale. A potential range of 10 to 50 for each of positive affect and negative affect. The original study found an average Cronbach's alpha of 0.88 for the positive affect items and 0.87 for the negative affect items and showed that these values for each construct remained relatively consistent when reporting affect across time frames up to a year (David Watson, Clark, & Tellegen, 1988). The original study also applied the PANAS to a non-clinical student sample, a non-clinical adult sample, and an inpatient sample, resulting in similar Cronbach's alphas of above 0.85 for both constructs in all three samples. The PANAS was tested within a South African context on university students and the scale showed good validity, reliability and Rasch fit within this context (du Plessis & Guse, 2017).

4.3.4 Meaning in Life Questionnaire (MLQ) (Steger, Frazier, Oishi, & Kaler, 2006). This is a 10-item questionnaire that comprises of two subscales which measure the presence of meaning as well as the search of meaning in life. Participants score their level of agreement on a 7-point Likert scale, 1 (absolutely untrue) to 7 (absolutely true). *Presence* (items 1, 4, 5, 6, and 9) evaluates how life is interpreted as meaningful, while *Search* (items 2, 3, 7, 8, and 10) evaluates motivation towards the discovery of meaning in life (Schulenberg, Strack, & Buchanan, 2011). Scores are from 5 to 35 per subscale. Cronbach's alpha levels for Presence of Meaning and Search for Meaning showed good internal consistency ranging from .86 to .88 (Steger et al., 2006). Three studies done, demonstrated that the scale has high internal

consistency, temporal stability, factor structure, and strong validity (Steger et al., 2006). Internal consistency indices indicated satisfactory reliability for Presence of Meaning (MLQ-P) and Search for Meaning (MLQ-S) sub-scales within a South African context (Temane, Khumalo, & Wissing, 2014).

4.3.5 Mental Health Continuum - Short Form (MHC-SF) (Keyes, 2002)**.** The MHC-SF measures mental health on the well-being continuum of the two continua model described by Keyes (2002). There are two dimensions (hedonic and eudaimonic) and three clusters in the 14-item scale, namely Emotional Well-being (hedonic), Psychological Well-being (eudaimonic), and Social Well-being (eudaimonic). These clusters are combined on a continuous scale to indicate whether someone is flourishing or languishing (Keyes, 2002). Participants complete a 6-point Likert-type scale to rate their experiences over the past month as an experience occurring 'never (0), once or twice (1), about once a week (2), 2 or 3 times a week (3), almost every day (4), or every day (5)'.

In South Africa a Setswana version was validated mainly for Setswana-speaking adults and sufficient reliability was found with a Cronbach's alpha of 0.72 (Keyes et al., 2008). More recently a study was done within a culturally diverse South African context that tested the MHC-SF in three different languages. A bifactor exploratory structural equation modelling model displayed superior fit with the overall scale but not the subscales attaining sufficient reliability (Schutte & Wissing, 2017).

4.3.6 Semi-structured open-ended questions on goals and meaning. The study made use of semi-structured open-ended questions and is formulated as stipulated by Delle Fave, Brdar, Freire, Vella-Brodrick, and Wissing (2011) in the Eudaimonic-Hedonic Happiness Investigation (EHHI). The open-ended questions that were asked on meaning and goals were: 'Please list the three things that you consider most meaningful in your present life', followed by; 'For each of them, please specify why it is meaningful (try to be as specific as possible)'; 'Please list the three most important future goals for you' followed by; 'For each of them,

please specify why it is important’.

4.4 Procedure

Data gathered by post-graduate students in the FORT3 research programme (ethical approval number NWU 00002-07-A2) will be used in this affiliated study. The above-mentioned students were educated in the administration of psychosocial well-being measures and acted as fieldworkers under the direction of the researchers. Participants were recruited using the procedure depicted in section 4.6.6. Informed consent was provided by the participants and this specific procedure is described in section 4.6.4. Thereafter the research battery was completed by the participants at a time and place of their convenience. After the fieldworkers had received the questionnaires from the participants, participants were thanked, and the questionnaires were handed over to the researchers. If the questionnaires caused any negative emotional reaction, the relevant participant could choose to withdraw from the whole study without consequence or simply ignore the specific question. The chance of this happening was relatively small, as most of the questionnaire's content was positive. Participants were also provided with the contact details of psychologists or counsellors who could be of assistance if any debriefing was required. No need for debriefing was indicated by the participants. There were no incentives offered or given to the participants. See 4.6.7 for more information.

No feedback was given to the participants on the questionnaires and was not a requirement at that point in time when data was gathered. See 4.6.8 for more information on dissemination of results. The informed consent forms were submitted separately from the questionnaires, and therefore no specific questionnaire has a name or other information on it that would make the participant identifiable. This anonymised data were submitted for capturing of the quantitative data to the North-West University’s Statistical Consultation Services.

The procedure for managing, storing and destructing data for this study is explained in

Section 4.6.10. The quantitative data will be analysed by Dr. Lusilda Schutte for this specific study and the procedure that will be followed is stipulated in Section 4.5.2. The student will complete the research report when the results, sent to the student researcher and supervisor, are received. The research monitoring process is described in section 4.6.11.

4.5 Data analysis

In the present study, an existing FORT 3 dataset where participants completed the EHHI and the other measures mentioned above will be utilised.

4.5.1 Qualitative data analysis and trustworthiness. On the questions with regard to goals and meaning, the qualitative responses of the participants were converted to quantitative data using Delle Fave et al. (2011) coding system developed in an international project of which the study leader is part. All verbal expressions of the participants received a basic code within this coding system, and the codes were grouped and categorised into life domains. The family life domain is the focus of this study. Two trained coders coded the data from the South African context under supervision of the study leader. Discrepancies were discussed towards consensus. The FORT3 PI guided the process to reach consensus. When coding difficulties arose, an international expert (Prof. dr. A. Delle Fave) was consulted. New codes were then added to the international coding system where required.

4.5.2 Quantitative data analysis, validity and reliability. The coded (quantified) qualitative data was combined with the quantitative data from the sociodemographic questionnaire and the Likert-type well-being questionnaires in order to conduct the following quantitative analyses:

4.5.2.1 Cronbach's alpha will be used in preliminary analyses to determine whether all measures to be used in the present study, namely the PANAS, MHC-SF, MLQ and SWLS were reliable for the specific sample. IBM SPSS Statistics will be used to obtain these results. Total scores are generally considered to indicate internal consistency reliability when Cronbach’s alpha scores exceed 0.7. Confirmatory factor analysis will also be used to check

the factorial validity of the quantitative scales for this sample using M-plus version 7.4.

4.5.2.2 The frequency of the family domain being mentioned as an important goal, the reason for an important goal, as something meaningful, and as a reason for something being meaningful, will be determined using IBM SPSS Statistics.

4.5.2.3 Using Microsoft Office Excel, the alignment patterns between goals (what and why) and meaningful things (what and why) within the family domain will be determined per person. Four alignment patterns will be distinguished:

1 = The family domain was NEITHER mentioned in the participant's important goals or the reasons therefore, NOR in his/her meaningful things or motivations therefore.

2 = The family domain was mentioned in BOTH the participant's important goals or the reasons therefore, AND in his/her meaningful things or motivations therefore.

3 = The family domain WAS mentioned in his/her important goals or the reason therefore, BUT NOT in his/her meaningful things or motivations therefore.

4 = The family domain WAS NOT mentioned in the participant's important goals or the reasons therefore, BUT IT WAS mentioned in his/her meaningful things or motivations therefore.

4.5.2.4. Crosstabulations and accompanying chi-square tests will be used to explore the associations between the alignment patterns and the demographic variables using IBM SPSS.

4.5.2.5 One-way ANOVA's will be performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score will be compared for the four alignment pattern groups determined in 4.5.2.3. Note that a separate ANOVA will be performed for each of the well-being scales or subscales. In other words, this step will involve six one-way ANOVA's.

4.5.2.6 Two-way ANOVA's will be performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score

will be compared for the four alignment pattern groups determined in 4.5.2.3, the respective demographic variables (gender, age group, education level, standard of living, and marital status), and the interaction between alignment patterns and the respective demographic variables. Note that a separate ANOVA will be performed for each of the well-being scales or subscales and for each demographic variable. In other words, this step will involve 6 x 5 = 30 two-way ANOVA's.

4.6 Ethical considerations

4.6.1 Goodwill consent/ permission/ legal authorisation. Selected data from the FORT3 research project (Wissing, 2008/2012) will form the basis for this study. The Ethics Committee of the North-West University approved the FORT3 project, project number NWU 00002-07-A2.

The Health Research Ethics Committee of the North-West University requires completed monitoring reports and this was completed and submitted on an annual basis. The FORT3 project therefore is active for already gathered data to be analysed. The aims of the FORT3 were to explore:

i. 'the nature, sources and motives for meaning, goals and positive relationships with a qualitative and quantitative mixed method approach. This will be done amongst others by implementing the Eudaimonic-Hedonic Happiness Investigation instrument (EHHIi) developed by Delle Fave et al (2011), and various visual (photo) and other art forms (e.g. poetry) in different groups (e.g. adolescents, adults, teachers) and in various South African cultural contexts, as well as for flourishing and languishing participants';

ii. 'the links between meaning, goals /purposes, positive relational processes and other facets of psychosocial well-being, taking into account some sociodemographic and contextual variables'.

The specific study aim of the present study is to explore the concordance of goals and

meaning in the family domain, and how different patterns of concordance are associated with demographic variables and indicators of well-being. The aim of the affiliated study is thus aligned to the aims of the FORT3 in the sense that it investigates associations among goals, meaning, and psychosocial well-being, taking into account the sociodemographic and contextual variables. The authors of all the scales approved the usage thereof.

4.6.2 Facilities. The research battery was given to participants to complete at their own time and place of convenience. Participants completed the questionnaire at a facility that they found convenient, with most participants completing the questionnaires at their homes. The participants chose the time and place of participation and it is reasonable to assume that they selected a setting with sufficient privacy.

4.6.3 Risks and benefits. Although the test battery focussed on positive aspects of human functioning, there might have been a small risk of eliciting negative feelings. If the participant felt uncomfortable to answer a specific question they could skip it or withdraw from the study without consequence at any stage. Should the need have arisen, psychologists or counsellors were available for debriefing and referral. No participant indicated the need for referral or debriefing. The study and questionnaires mainly focused on positive mental health and therefore the risks involved for the participants were minimal. Potential risks that may be associated with the current affiliated study will be prevented as follows: Only anonymous data will be used (the dataset to be analysed in this study is anonymous and original participants cannot be identified in any way); data integrity of the data previously gathered that will be used in this study was and will be ensured as described in Section 4.6.10; and the research done in this affiliated study will be monitored as described in Section 4.6.11. Additional risks that may arise when data is not analysed in a scientifically accountable way will also be prevented by the fact that the team that works on this study has the necessary expertise and experience to conduct the study (see Section 4.6.12).

The test battery gave the opportunity for the participants to reflect on the important

goals, meaningful things, relationships and aspects of well-being in their lives, which many reported to have been a positive experience. However, the research had no direct benefits for the participants. Similarly, the current affiliated study will not have additional benefits to participants. Participants were given the opportunity to contribute to the scientific knowledge of psychosocial well-being within a South African context and by conducting this study, this scientific contribution is materialised. Their contributions could lead to improving the well-being and quality of life of other South Africans. The potential benefits of the study outweighed the potential risks because of the minimal risks involved.

4.6.4 Informed consent. Postgraduate students acted as fieldworkers under the supervision of the researchers and were trained in the administration of psychosocial well-being measures. The fieldworkers explained to all participants that participation was voluntary and that their analysed responses would be used anonymously. They were also free to withdraw from the study at any stage with no consequences. No coercion took place. The indirect benefits as well as the possible emotional responses were also explained by the fieldworkers.

The opportunity was given to the participants to pose any questions regarding the study to the head investigator and research team. After the participants were given the opportunity to ask questions, clarifying and understood the aims of the research as well as the ethics involved, the participants had time to decide if they wanted to participate in the study. When the participants confirmed their willingness to participate in the study, they were handed a consent form and thereafter a test battery to complete at their convenience. After the informed consent form and test battery were completed and returned, these documents were separated by the fieldworkers before they were distributed to the researchers. The current ethics rules stipulate that the consent form must be given at least a week before participation and notice of that is taken. The ethics guidelines were followed during data gathering at that time and was not a prerequisite at that stage. The participants had the opportunity to complete the consent form and test battery at a time and place of their convenience and therefore it can be deemed that the

participants had enough time to consider their participation.

4.6.5 Inclusion and exclusion criteria. The inclusion criteria for the participants stipulated that they should be older than 18 years of age, their level of education at least Grade 12 to ensure good comprehension, and have sufficient skills in reading and writing. They should have been competent in English because the questionnaires were administered in English. There were no specific exclusion criteria.

4.6.6 Participant recruitment. Data gathering in the original FORT3 project were collected by a nonprobability snowball method. Trained in the administration of psycho-social well-being measures, the post-graduate students acting as fieldworkers, identified people in their communities in the various provinces of South Africa who matched the inclusion criteria. These people selected were invited to participate in the study by the fieldworkers with no pressure, manipulation or coercion. The process was overseen by the Principle Investigator. After the study was presented to these participants, they were asked if they know of others in their communities that would like to participate in the study that fitted the inclusion criteria. Contact details were given to the fieldworkers who then contacted the mentioned references. The fieldworkers ensured that all participants that agreed to the study, fitted the inclusion criteria before they received the informed consent form and test battery. The snowball method of sampling helped to gather people that fit the inclusion criteria as well as add diversity to the sample and therefore was chosen as the best sampling method. For more details on the informed consent process, see Section 4.6.4.

4.6.7 Incentives and/or remuneration of participants. There were no incentives or remuneration offered to the participants in the study. This was not an ethics requirement at the time data was gathered. If a similar study be conducted now, a small token of appreciation can be offered for participation. We consider it ethically justifiable to say that participants were not exploited by not being offered remuneration for participating in the study because the study had minimal risk; Participants also completed the questionnaires at a time and place of own

convenience which was mostly at their homes and therefore did not have any costs to participate in the study; Participation involved minimal inconvenience because it only took 30 minutes of the participants' time.; The study gave the participants the possibility of self-reflection on positive aspects such as meaning in life, well-being and personal life goals.

4.6.8 Dissemination of results. The results and findings will be submitted to a scientific and recognised journal within the field of Positive Psychology for publication. The results will also be integrated with findings of the FORT3 project that will be published in the lay press. Findings will also be offered to educators in the current work context of the student-researcher, to understand and help families within their contexts. The same information will be given to volunteers at church, to be of guidance and bring understanding into the family life domain. The contact details of the original participants were unfortunately not obtained during data gathering (only their names and signatures were requested on the informed consent page, with no space for contact details). The results therefore cannot be communicated to the participants of the study. The responsibility of disseminating data to the original participants was not such a clear ethical requirement at the time when the data were gathered and therefore contact details were not obtained – we acknowledge this limitation. The findings can also not be disseminated to a specific community as the community where participants came from, because participants came from all over South Africa. The researchers will take up the responsibility of ensuring dissemination of the findings by ensuring that the findings are shared with the wider scientific and lay community.

4.6.9 Privacy and confidentiality. Participants received the questionnaire to complete at a setting convenient to them, with most participants completing the questionnaires at their homes and therefore the assumption can be made that the setting had sufficient privacy. After data collection, the participant's informed consent form was separated from the questionnaire to ensure confidentiality. The capturing of the quantitative data as well as the coding of the qualitative data were therefore done anonymously. This electronic data that were captured, was

stored on password protected computers in locked offices on the premises of the North-West University. Only the data on group scores will be analysed and therefore no participant will be identified during the reporting of the results.

4.6.10 Management, storage and destruction of data. The data integrity was and will be ensured as follows: The data from the Likert-type questionnaires were captured by the North-West University's Statistical Consultation Services who captured data twice and checked for any discrepancies, where after the electronic dataset was sent to the FORT3 principal investigator (PI) (Prof. M. P. Wissing) and collaborator (Dr. L. Schutte). The FORT3 PI/Collaborator collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data was coded and checked by a co-coder who were both trained in the EHHI coding system. Both coder and co-coder signed confidentiality agreement forms. Any differences were discussed and if consensus could not be reached, the FORT3 PI was involved to make a final decision. In cases where codes did not exist for the response, this matter was taken up with the international EHHI team, who then added an appropriate code to the coding system. Once codes were finalised, the codes were captured twice and independently by trained research interns who signed confidentiality agreement forms. This process was overseen and monitored by the FORT3 PI and collaborator. The coding and code checking were conducted on the hard copy versions of the questionnaires, which were handed to coders one pile at a time.

Once the coder was done with the pile, it was handed back to the FORT3 PI/collaborator. Capturing of the codes was done on computers that are placed within a locked office on the premises of the North-West University and the data was locked in cupboards in that office for the duration of data capturing. The captured data was sent to the FORT3 PI and collaborator and the data was then removed from the computers of the data capturers. After data coding and capturing, the hard copies of the questionnaires were moved to cupboards in a locked office of the North-West University where it is stored. Access to the hard copies of the

data is monitored by the FORT3 PI and collaborator. The FORT3 collaborator, who is a statistician and competent and experienced in data cleaning and management, merged the quantitative and qualitative data. The FORT3 PI and collaborator keep the electronic data on password protected computers to ensure the integrity of the data. If any of them need to make a change to the data, this is communicated to the other in writing and the updated dataset is shared with the other so that both have the same newest version on their computers. Should the need arise to share the dataset with another person to assist with the data analyses (e.g. a statistical consultant from Statistical Consultation Services), the dataset as stored on the computers of the PI and collaborator will be sent to the relevant person who is, from his professional obligation, responsible to also safeguard the data integrity. Since all analyses for this study will be conducted by the FORT3 collaborator, the student researcher involved will only receive the output from the analyses. She will not have access to the original data. FORT3 data will be destroyed according to NWU regulations after all analyses have been completed and data exhausted – six years after the last publication from this study.

4.6.11 Monitoring of research. The principal investigator of the FORT3 project that this study is linked to (supervisor), as well as the FORT3 collaborator (co-supervisor) will oversee and ensure that the approved protocol and research done will be of ethical nature and correctly applied by the student researcher. See Section 4.6.10 that explains how data management and monitoring will take place.

4.6.12 Competence of researchers. The study supervisor is Prof. M.P. Wissing. Prof. M.P. Wissing is an experienced, senior researcher at AUTHeR at the North-West University and supervised more than 100 students. She also has more than 100 peer-reviewed publications. She is the principal investigator of the FORT3 project and the current research topic of the study corresponds with her research focus. The methodology of the two studies, FORT3 and current study, also overlap. Prof. M.P. Wissing holds a PhD in Psychology and is a registered Clinical Psychologist.

The study co-supervisor is Dr. L. Schutte. She is a senior lecturer at AUTHeR at the North-West University. All statistical analyses will be done by her for the current study. She has a PhD in Psychology and a Masters Degree in Statistics. She is also a registered Clinical Psychologist. Her work experience gained from working as a statistical consultant for the North-West University's Statistical Consultation Services, equipped her to do the analyses for this study.

The student researcher is M.T. Liversage. The student has obtained a degree in Psychology, Social Work and did a Post graduate certificate in Education. During studies done, subjects on research methods was also completed. The student also worked in Social Work private practice for 5 years. The combination of psychology, social work and education gave the student researcher the ability to better understand the research process, the individuals confidential sharing of self, the sensitivity towards how the data must be handled and the importance of giving back the results so upliftment and empowerment can be brought to families and communities.

4.6.13 Conflict of interest. No conflict of interest from the student or supervisors' side needs to be declared.

5. Expected contribution of the study

A possible contribution of such a study can be that it provides knowledge for the development of well-being interventions that can be implemented and evaluated for contributions toward the facilitation of eudaimonic well-being in the family domain of life.

9. References

Adams, N., Little, T. D., & Ryan, R. M. (2017). Self-determination theory. In *Development of self-determination through the life-course* (pp. 47–54). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-024-1042-6_4

Bauer, J. J., King, L. A., & Steger, M. F. (2018). Meaning-making, self-determination theory, and the question of wisdom in personality. *Journal of Personality*. https://doi.org/10.1111/jopy.12381

Biswas-Diener, R., Kashdan, T. B., & King, L. A. (2009). Two traditions of happiness research, not two distinct types of happiness. *Journal of Positive Psychology*, *4*(3), 208–211. https://doi.org/10.1080/17439760902844400

Botha, F., Booysen, F., & Wouters, E. (2017). Satisfaction with family life in South Africa: The role of socioeconomic status. *Journal of Happiness Studies*, pp. 1–34. Springer Netherlands. https://doi.org/10.1007/s10902-017-9929-z

Brdar, I., Vella-Brodrick, D., Nakamura, J., & Solano, A. C. (2014). A cross-country study of personal goals and meanings. Retrieved from http://bib.irb.hr/prikazi-rad?rad=737503

Ciani, K. D., Sheldon, K. M., Hilpert, J. C., & Easter, M. A. (2011). Antecedents and trajectories of achievement goals: A self-determination theory perspective. *British Journal of Educational Psychology*, *81*(2), 223–243. https://doi.org/10.1348/000709910X517399

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. SAGE Publications. Retrieved from https://books.google.co.za/books/about/Designing_and_Conducting_Mixed_Methods_R.html?id=6tYNo0UpEqkC&redir_esc=y

Darnon, C., Butera, F., & Harackiewicz, J. M. (2007). Achievement goals in social interactions: Learning with mastery vs. performance goals. *Motivation and Emotion*, *31*(1), 61–70. https://doi.org/10.1007/s11031-006-9049-2

Darnon, C., Harackiewicz, J. M., Butera, F., Mugny, G., & Quiamzade, A. (2007).

Performance-approach and performance-avoidance goals: When uncertainty makes a difference. *Personality and Social Psychology Bulletin*, *33*(6), 813–827. https://doi.org/10.1177/0146167207301022

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*(1), 19–43. https://doi.org/10.1146/annurev-orgpsych-032516-113108

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, *49*(3), 182–185. https://doi.org/10.1037/a0012801

Deist, M., & Greeff, A. P. (2017). Living with a parent with dementia: A family resilience study. *Dementia*, *16*(1), 126–141. https://doi.org/10.1177/1471301215621853

Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. P. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research*, *100*(2), 185–207. https://doi.org/10.1007/s11205-010-9632-5

Delle Fave, A. D., Brdar, I., Wissing, M. P., & Vella-Brodrick, D. A. (2013). Sources and motives for personal meaning in adulthood. *The Journal of Positive Psychology*, *8*(6), 517–529. https://doi.org/10.1080/17439760.2013.830761

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S., Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, *54*(1), 403–425. https://doi.org/10.1146/annurev.psych.54.101601.145056

Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African Journal of Psychology*, *39*(4), 391–406. https://doi.org/10.1177/008124630903900402

Disabato, D. J., Goodman, F. R., Kashdan, T. B., Short, J. L., & Jarden, A. (2016). Different types of well-being: A cross-cultural examination of hedonic and eudaimonic well-being. *Psychological Assessment*, *28*(5), 471–482. https://doi.org/10.1037/pas0000209

Du Plessis, G. A., & Guse, T. (2017). Validation of the scale of positive and negative experience in a South African student sample. *South African Journal of Psychology*, *47*(2), 184–197. https://doi.org/10.1177/0081246316654328

Emmons, R. A. (2005). Striving for the sacred: Personal goals, life meaning, and religion. *Journal of Social Issues*, *61*(4), 731–745. https://doi.org/10.1111/j.1540-4560.2005.00429.

Emmons, R. A. (2003). Five personal goals, life meaning, and virtue: Wellsprings of a positive life. *CiteSeer*. https://doi.org/10.1.1.468.802

Fahey, T., Keilthy, P., & Polek, E. (2012). Family relationships and family well-being: A study of the families of nine year-olds in Ireland. Retrieved from http://researchrepository.ucd.ie/handle/10197/5102

Feldman, D. B., & Snyder, C. R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal–directed thinking and life meaning. *Journal of Social and Clinical Psychology*, *24*(3), 401–421. https://doi.org/10.1521/jscp.24.3.401.65616

Frankl, V. E. (1962). Psychiatry and man's quest for meaning. *Journal of Religion and Health*, *1*(2), 93–103. https://doi.org/10.1007/BF01532076

Frankl, V. E. (1997). *Man's Search for Meaning*. *Language* (Vol. 20).

García-Alandete, J. (2015). Does meaning in life predict psychological well-being: An analysis using the spanish versions of the purpose-in-life test and the Ryff's scales. *The European Journal of Counselling Psychology*, *3*(2), 89–98. https://doi.org/10.5964/ejcop.v3i2.27

Gaudreau, P. (2012). Goal self-concordance moderates the relationship between achievement goals and indicators of academic adjustment. *Learning and Individual Differences*, *22*(6), 827–832. https://doi.org/10.1016/j.lindif.2012.06.006

Gaudreau, P., Carraro, N., & Miranda, D. (2012). From goal motivation to goal progress: the mediating role of coping in the self-concordance model. *Anxiety, Stress and Coping*, *25*(5), 507–528. https://doi.org/10.1080/10615806.2011.628015

Gray, J. S., Ozer, D. J., & Rosenthal, R. (2017). Goal conflict and psychological well-being: A meta-analysis. *Journal of Research in Personality*, *66*, 27–37. https://doi.org/10.1016/J.JRP.2016.12.003

Grouden, M. E., & Jose, P. E. (2014). How do sources of meaning vary according to demographic factors. *New Zealand Journal of Psychology*, *43*(3).

Gruman, J. A., Lumley, M. N., & González-Morales, M. G. (2018). Incorporating balance: Challenges and opportunities for positive psychology. *Canadian Psychology/Psychologie Canadienne*, *59*(1), 54–64. https://doi.org/10.1037/cap0000109

Guter, M. (2016). *Hope, values, and goals: Predicting goal success and mental health outcomes*. The Ohio State University. Retrieved from https://kb.osu.edu/dspace/handle/1811/76772

Hansson, A., Hillerås, P., & Forsell, Y. (2005). Well-being in an adult Swedish population. *Social Indicators Research*, *74*(2), 313–325. https://doi.org/10.1007/s11205-004-6168-6

Harrell, S. (2018). *Human Families* (1st ed.). New York: Routledge. https://doi.org/10.4324/9780429499975

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, *61*(2), 121. https://doi.org/10.2307/2787065

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, *43*(2), 207. https://doi.org/10.2307/3090197

Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, *62*(2), 95–108. https://doi.org/10.1037/0003-066X.62.2.95

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008).

Evaluation of the mental health continuum short form (MHC-SF) in Setswana-speaking South Africans. *Clinical Psychology & Psychotherapy*, *15*(3), 181–192. https://doi.org/10.1002/cpp.572

King, L., Heintzelman, J., & Ward, S. (2016). Beyond the search for meaning: A contemporary science of the experience of meaning in life. *Current Directions in Psychological Science*, *25*(4), 211–216. https://doi.org/10.1177/0963721416656354

Klinger, E. (2013). Goal commitments and the content of thoughts and dreams: basic principles. *Frontiers in Psychology*, *4*, 415. https://doi.org/10.3389/fpsyg.2013.00415

Lambert, L., Passmore, H.A., & Holder, M. D. (2015). Foundational frameworks of positive psychology: Mapping well-being orientations. *Canadian Psychology/Psychologie Canadienne*, *56*(3), 311–321. https://doi.org/10.1037/cap0000033

Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter. *Personality and Social Psychology Bulletin*, *39*(11), 1418–1427. https://doi.org/10.1177/0146167213499186

Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, *11*(5), 531–545. https://doi.org/10.1080/17439760.2015.1137623

Menon, M., Pendakur, R., & Perali, F. (2014). All in the family: How do social capital and material well-being affect relational well-being. *Social Indicators Research*, *124*(3), 889–910. https://doi.org/10.1007/s11205-014-0816-2

Merz, E.-M., & Huxhold, O. (2010). Well-being depends on social relationship characteristics: comparing different types and providers of support to older adults. *Ageing and Society*, *30*, 843–857. https://doi.org/10.1017/S0144686X10000061

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, *136*(2), 257–301. https://doi.org/10.1037/a0018301

Park, N., Park, M., & Peterson, C. (2010). When is the search for meaning related to life satisfaction. *Applied Psychology: Health and Well-Being*, *2*(1),1–13. https://doi.org/10.1111/j.1758-0854.2009.01024.x

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, *5*(2), 164–172. https://doi.org/10.1037/1040-3590.5.2.164

Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, *57*(1), 149–161. https://doi.org/10.1207/s15327752jpa5701_17

Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, *101*(1), 115–135. https://doi.org/10.1037/a0013383

Peterson, C., & Park, N. (2012). Character strengths and the life of meaning. In *The human quest for meaning: Theories, research, and applications, 2nd ed.* (pp. 277–295). https://doi.org/10.4324/9780203146286

Plano Clark, V. L. (2017). Mixed methods research. *The Journal of Positive Psychology*, *12*(3), 305–306. https://doi.org/10.1080/17439760.2016.1262619

Preston, K. S. J., Gottfried, A. W., Oliver, P. H., Gottfried, A. E., Delany, D. E., & Ibrahim, S. M. (2016). Positive family relationships: Longitudinal network of relations. *Journal of Family Psychology*, *30*(7), 875–885. https://doi.org/10.1037/fam0000243

Ryan, R., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Retrieved from https://www.guilford.com/books/Self-Determination-Theory/Ryan-Deci/9781462528769

Ryff, C. D. (2013). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, *83*(1), 10–28. https://doi.org/10.1159/000353263

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, *9*(1), 1–28. https://doi.org/10.1207/s15327965pli0901_1

Schnell, T., Höge, T., & Pollet, E. (2013). Predicting meaning in work: Theory, data, implications. *The Journal of Positive Psychology*, *8*(6), 543–554. https://doi.org/10.1080/17439760.2013.830763

Schulenberg, S. E., Strack, K. M., & Buchanan, E. M. (2011). The meaning in life questionnaire: psychometric properties with individuals with serious mental illness in an inpatient setting. *Journal of Clinical Psychology*, *67*(12), 1210–1219. https://doi.org/10.1002/jclp.20841

Schutte, L., & Wissing, M. P. (2017). Clarifying the factor structure of the mental health continuum short form in three languages: A bifactor exploratory structural equation modeling approach. *Society and Mental Health*, *7*(3), 142–158. https://doi.org/10.1177/2156869317707793

Seligman, M. E. P. (2007). Coaching and positive psychology. *Australian Psychologist*, *42*(4), 266–267. https://doi.org/10.1080/00050060701648233

Seligman, M. E. P. (2011). *Flourish : a visionary new understanding of happiness and well-being*. Free Press. Retrieved from https://books.google.co.za/books?id=YVAQVa0dAE8C&dq=seligman+well+being+theory&lr=&source=gbs_navlinks_s

Seligman, M. E. P., & Csikszentmihalyi, M. (2006). Flow and the foundations of Positive Psychology: The collected works of Mihaly Csikszentmihalyi. *Learned Optimistm: How to Change Your Mind*. https://doi.org/10.1007/978-94-017-9088-8_18

Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive Psychology: An Introduction. In *Flow and the Foundations of Positive Psychology* (pp. 279–298). https://doi.org/10.1007/978-94-017-9088-8_18

Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married

always better off. *Social Indicators Research*, *88*(2), 329–346. https://doi.org/10.1007/s11205-007-9194-3

Smith, A., Ntoumanis, N., & Duda, J. (2007). Goal striving, goal attainment, and well-being: Adapting and testing the self-concordance model in sport. *Journal of Sport & Exercise Psychology*, *29*, 763–782. https://doi.org/10.1348/000709901158497

Snyder, C. R., Lopez, S. J., Shorey, H. S., Rand, K. L., & Feldman, D. B. (2003). Hope theory, measurements, and applications to school psychology. *School Psychology Quarterly*, *18*(2), 122–139. https://doi.org/10.1521/scpq.18.2.122.21854

Steger, M. F. (2009). Meaning in life. *Oxford Handbook of Positive Psychology*, *7*(1963), 679–689. https://doi.org/10.1093/oxfordhb/9780195187243.013.0064

Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry*, *23*(4), 381–385. https://doi.org/10.1080/1047840X.2012.720832

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*(1), 80–93. https://doi.org/10.1037/0022-0167.53.1.80

Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality*, *76*(2), 199–228. https://doi.org/10.1111/j.1467-6494.2007.00484.x

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

Temane, L., Khumalo, I. P., & Wissing, M. . (2014). Validation of the meaning in life questionnaire in a South African context. *Journal of Psychology in Africa*, *24*(1), 81–95. https://doi.org/10.1080/14330237.2014.904088

Tugade, M. M., Shiota, M. N., & Kirby, L. D. (2014). *Handbook of Positive Emotions*. (M.

Tugade, M. Shiota, & L. Kirby, Eds.) (1st ed.). New York: The Guilford Press. Retrieved from https://books.google.co.za/books?hl=en&lr=&id=O4ADBAAAQBAJ&oi=fnd&pg=PA396&ots=BpDGCnJqW1&sig=XpUAmSYq-leaFSXAW9_pYl_NhgY#v=onepage&q&f=false

Umberson, D., & Karas Montez, J. (2010). Social relationships and health: A flashpoint for health policy. *Journal of Health and Social Behavior*, S54–S66. https://doi.org/10.1177/0022146510383501

Van Tongeren, D. R., DeWall, C. N., Green, J. D., Cairo, A. H., Davis, D. E., & Hook, J. N. (2018). Self-regulation facilitates meaning in life. *Review of General Psychology*, *22*(1), 95–106. https://doi.org/10.1037/gpr0000121

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Westaway, M. S., Maritz, C., & Golele, N. J. (2003). Empirical testing of the satisfaction with life scale: A South African pilot study. *Psychological Reports*, *92*(2), 551–554. https://doi.org/10.2466/pr0.2003.92.2.551

WHO. (1948). WHO definition of Health. *Official Records of the World Health Organisation*, (2), 100. https://doi.org/10.1016/B978-012466044-1/50296-9

Wilson, A., Wissing, M. P., Schutte, L., & Kruger, I. M. (2018). Understanding goal motivations in deprived contexts: Perspectives of adults in two rural South African communities. *Applied Research in Quality of Life*, 1–17. https://doi.org/10.1007/s11482-017-9583-y

Wissing, M. (2014). Meaning and relational well-being: a reflection on the state of the art and a way forward. *Journal of Psychology in Africa*, *24*(1).

Wong, P. T. P. (2011). Positive psychology 2.0: Towards a balanced interactive model of the

good life. *Canadian Psychology/Psychologie Canadienne, Vol 52(2), 69-81.*

Wong, P. T. P. (2017). A decade of meaning: Past, present, and future. *Journal of Constructivist Psychology*, *30*(1), 82–89. https://doi.org/10.1080/10720537.2015.1119085

Zuna, N., Summers, J. A., Turnbull, A. P., Hu, X., & Xu, S. (2010). Theorizing about family quality of life. In *Enhancing the Quality of Life of People with Intellectual Disability: From Theory to Practice* (pp. 241–278). Springer, Dordrecht. https://doi.org/10.1007/978-90-481-9650-0_15

1.2 Approval letter of the Scientific Committee

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-2094
Web: http://www.nwu.ac.za

AUTHER SCIENTIFIC COMMITTEE APPROVAL LETTER

Dear Chair and members of the HREC committee,

Please find herewith the approval letter to acknowledge that the below mentioned study underwent critical quality review by members of the AUTHeR Scientific Committee and have been granted approval for review by the HREC:

Title:	**Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being.**
Student Name/Researcher	**Mandi T Liversage**
Supervisor:	**Prof MP Wissing**
Co-supervisor	**Dr L Schutte**
Date of the meeting	**18 May 2018**
Reviewers	**Prof P Bester, Drs N Claasen and CM Niesing**
Final date of approval	**13 June 2018**

Signature of the chairperson

2018-06-13
Date

Signature of the Director

2018-06-13
Date

1.3 Approved HREC application

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

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) **NWU 00075-18-S1**

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 § 1, 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 § 4.1.1).

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-HRECApply@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.

NWU Ethics Number NWU 00075-18-S1			
Campus	Potchefstroom	Faculty	Health Sciences
Principle Investigator/Study Leader	Prof. M. P. Wissing	Research entity	AUTHeR
Study Title	Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being		

Table of Contents

1. SECTION 1: STUDY IDENTIFICATION

Provide the necessary descriptions below to identify this study application:

1.1 Full, descriptive title of the study

Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being

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

Prof. M. P. Wissing

1.3 Name and Surname of the Student (if applicable)

Mandi Liversage

1.4 Student number

13162802

1.5 Discipline e.g. Consumer sciences

Positive Psychology

1.6 Researcher involvement

Self-initiated research with no student involvement	☐
Self-initiated research with student involvement	☐
Honours study for publication purposes	☐
Masters degree	☒
PhD degree	☐
Other: Specify Click here to enter text.	

1.7 Type of study

Single study	☐
Larger study	☐
Single study affiliated to another study	☒
Educational	☐
Other: Specify Click here to enter text.	

1.8 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".

Description		Yes	No
Human participants (subjects)	Qualitative	X	☐
	Quantitative	X	☐
	Mixed method	X	☐
	Other e.g. program evaluation	☐	X
Filed privileged information (e.g. medical files) or stored biological samples of human origin (e.g. samples collected for another study or medical diagnosis)		☐	X

1.9 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.

Commencement Date	Completion Date
2018/08/20	2019/12/31

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 Ethics 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

Date of first application	**Date of revise application** *(if applicable)*
2018/06/27	2018/07/30

2.3 Version number

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

Version	2

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”.

Description		**Yes**	**No**
Scientific Research	Study falls within a research entity	X	☐
	Study falls outside a research entity	☐	X
	Study includes postgraduate students (e.g. masters or doctorate)	X	☐
	Study includes contract work	☐	X
Education and training (e.g. undergraduate practicals)	For staff of the North-West University	☐	X
	For students (undergraduate or postgraduate learners)	☐	X
	For other learners (not associated with University)	☐	X

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.

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

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.*

Description		Number	
		Local	Foreign
Only for research studies	Study Leader (e.g. study leader/principle investigator)	1	0
	Study supervisor (day to day manager)	0	0
	Co-workers (researchers of the North-West University)	1	0
	Co-workers (researchers outside the North-West University)	0	0
	Co-workers (postgraduate students of the North-West University)	1	0
	Assistants/field workers	0	0
Only for education and training (e.g. undergraduate practicals)	Educator	0	0
	Co-workers (lecturers of the North-West University)	0	0
	Co-workers (lecturers outside the North-West University)	0	0
	Students (undergraduate learners of the North-West University)	0	0
	Students (postgraduate learners of the North-West University)	0	0
	Other learners (not associated with the North-West University)	0	0
	Assistants/field workers	0	0
Sponsors		1	0

Other members of the study team not mentioned above (specify)

Not applicable

2.8 The following professional supervisory persons are involved in this study (may in no way be directly part of the research team)

More information
Supervisor *indicates that the individual is an independent monitor involved during data gathering of the study and acts as an advocate for the participants/patients. (Fill in the number involved in ALL options.*

Researcher / Supervisor	Number	Researcher / Supervisor	Number
Supervisory Doctor	0	Supervisory Psychologist	0
Supervisory Nurse	0	Supervisory Pharmacist	0
Supervisory Psychiatrist	0	Supervisory Social worker	0

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
X	☐

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/Principle investigator

More information
NB! Only NWU staff, or extraordinary professors in collaboration with staff of the North-West University, may register as Study Leaders/Principal Investigators. The Study Leader/Principal Investigator accepts final, overall responsibility for the total study.

Surname	Full Names	Title
Wissing	Mariè	Prof.

NWU Campus	Faculty	Research entity/School
Potchefstroom	Health Sciences	AUTHeR

Position	University No.	Professional Registration (body & category)
Professor	10174524	HPCSA Clinical Psychologist

Telephone			NWU-box or Postal Address
Work	Home	Cell	
018-299-2603	Click here to enter text.	Click here to enter text.	Internal Box 500

E-mail Address
Marie.wissing@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 designated as **study supervisor**. The study supervisor is part of the study team.*

Yes	No
☒	☐

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

Surname	Full Names	Title
Click here to enter text.	Click here to enter text.	Click here to enter text.

NWU Campus	Faculty	Research entity/School
Click here to enter text.	Click here to enter text.	Click here to enter text.

Position	University no.	Professional Registration (body & category)
Click here to enter text.	Click here to enter text.	Click here to enter text.

Telephone			NWU-box or Postal Address
Work	Home	Cell	
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

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.

3.3.1 Name and qualifications of all supervisory professional persons

Name	Qualifications	Professional Registration	Function
Not applicable	Not applicable	Not applicable	Not applicable

(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 PROFFESIONAL 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.)

Name	Qualifications	Professional Registration	Function
Dr.Lusilda Schutte	PhD (Psychology); MSc (Statistics)	HPCSA Clinical Psychologist	Co-supervisor
Mandi Liversage	BA Psychology; BA Social Work; PGCE	SACSSP; SACE	Student

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)

3.5.1 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.

More information

Examples of conflict of interest: financial, non-financial: intellectual, bias, overly optimistic promises of potential benefits, role of the researcher/s, desire of professional advancement, desire to make a scientific breakthrough, relationship with participants.

Name of Researcher	Complete description of the conflict and how it will be managed
Not applicable	Not applicable

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.

3.5.2 Give full details of all sponsors of the study.

Name of Sponsor	Contact Details	Affiliation & Contribution	Nature & Extent
National Research Foundation	Meiring Naudè Road, Brummeria, Pretoria. Tel.no.:+27 (012)481 4000	Monetory Bursary towards study fees	R40000 awarded for 2017 R40000 awarded for 2018

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

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

Name of Participant	Association with Sponsor/Researcher
Not applicable	Not applicable

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

3.5.4 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.

Name of Team Member	Details
Prof. M. P. Wissing	Principle investigator for the FORT3 Project which is partially funded by the NRF

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.

More information
Your local team may collaborate with a team from a different national institution in South Africa or internationally, and thereby incorporate and benefit from their expertise and/or

facilities. Typically, in such cases, functions and responsibilities differ for certain parts of the study. These functions and responsibilities must be fully described.

Name of Collaborator	National/International (Indicate which)	Full Description of functions and responsibilities
Not applicable	Not applicable	Not applicable

Note: Type one name per row, or type "Not applicable" if there are no contractors. Add extra rows to 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.

More information
Sometimes there are contractual obligations with co-workers or organisations outside the University. These contractual obligations may e.g. place restrictions on certain aspects on the availability of raw data i.t.o. intellectual right of ownership. Particularly where foreign co-workers are involved, these contracts can get complex. Therefore you must indicate here what these contractual obligations encompass, whether the University approved and sanctioned it and declare and describe any other potential legal and ethical implications thereof.

Name of Contractor	Full Description of the agreement
Not applicable	Not applicable

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.

[PLEASE ATTACH ALL CONFIDENTIALITY AGREEMENTS (SEE CONFIDENTIALITY AGREEMENTS AS APPROVED BY THE LEGAL OFFICE OF THE NWU)]

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.

[PLEASE ATTACH ALL INDEMNITY FORMS (SEE INDEMNITY FORMS AS APPROVED BY THE LEGAL OFFICE)]

Remember to save your document regularly as you complete it!

4. SECTION 4: RESEARCH PROPOSAL AND SCIENTIFIC COMMITTEE APPROVAL

4.1 Executive summary and research proposal

4.1.1 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

Goals and meaning are important facets of eudaimonic well-being. Scholars have studied goals and meaning separately, but research is sparse on the concordance of goals and meaning, especially in specific life domains and how these may be associated with demographic variables and other indicators of well-being. The FORT3 Research Project investigated the prevalence of levels of psychosocial health with regard to the dynamics and relationships with biomarkers of (ill)health in a South African social context. The exploration of the nature, sources and motives for positive relationships, goals and meaning with a mixed method approach was an aim of the FORT3 project as well as to explore the connections between positive relational processes, goals, meaning and other aspects of psychosocial well-being. Contextual variables and social-demographic aspects were taken into account. This study forms part of this FORT3 research project in addressing these objectives using data already gathered for this project. The aim of this study is to explore the concordance of goals and meaning in the family domain, and how different patterns of concordance are associated with demographic variables and indicators of well-being. A mixed methods convergent parallel design will be used with simultaneous cross-sectional collection of quantitative and qualitative data. The coded qualitative data on goals and meaning as manifested in the family life domain will be analysed to establish the degree of concordance thereof. It is expected that understanding of well-being can be informed by taking cognizance of sociodemographic variables and how these relate to alignment patterns of goals and meaning.

4.1.2 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]

4.1.3 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.

Yes X	**Details**		
	Name of formal Scientific/Proposal Committee:		AUTHeR
	Title, initials and surname of all of the members of Scientific/Proposal Committee present during the review.		Prof. P. Bester Dr. C. Niesing Dr. N. Claasen
	Date of approval:		2018/06/13
No ☐	Reason:	Not applicable	

4.1.4 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 requested to complete a selection of questionnaires with reference to Psychosocial Well-being, which took approximately 30 minutes for completion. Although the questionnaires relate to well-being, some items could evoke emotional responses from participants. Therefore, debriefing was available if any participants were in need of 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. This study will only involve the use of previously collected data and therefore there will be no additional expectations of the participants..

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.

Risks (e.g. physical, psychological, social, legal, economic, dignitary and community) Identify all the possible risks.	**Precautions** (When describing these precautions be clear on how they will mitigate all the identified risks)
Psychological	Although the questionnaires relate to positive well-being, there is a possibility that some items could evoke emotional responses such as 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. No additional / new risks will occur in this affiliated study.
Anonymity	After data collection, the participant's informed consent form was separated from the questionnaire to ensure confidentiality. The capturing of the quantitative data as well as the coding of the qualitative data were therefore done anonymously. The data that will be analysed is thus anonymous. No participant will be identified in any way when results are reported.

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 the *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.

Direct benefits for participants	**Indirect benefits** for society at large or for the researchers/institution
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.	This affiliated study may promote a comprehensive understanding of goals and meaning in the family domain, why they are important and how they link to demographic

	variables, contributing to theory at a knowledge level, and on a practical level to the facilitation of well-being interventions. These interventions may be used to contribute to well-being in South Africa in family contexts.

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* for why research ethics approval should be given.

Benefit outweighs the risks	X		
Risks outweigh the benefit	☐	Justify:	Potential risks that may be associated with the current affiliated study will be prevented as follows: Only anonymous data will be used (the dataset to be analysed in this study is anonymous and original participants cannot be identified in any way); data integrity of the data previously gathered that will be used in this study was and will be ensured as described in Section 4.6.10; and the research done in this affiliated study will be monitored as described in Section 4.6.11. Additional risks that may arise when data is not analysed in a scientifically accountable way will also be prevented by the fact that the team that works on this study has the necessary expertise and experience to conduct the study (see Section 4.6.12).

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, but no participant indicated such a need

Participants completed the questionnaire at a facility that they found convenient, with most participants completing the questionnaires at their homes. The participants choose the time and place of participation and it is reasonable to assume that they selected a setting with sufficient privacy.

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 be 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.

Inclusion criteria	**Justification**
Inclusion criteria of the FORT3 study: The inclusion criteria for the participants stipulated that they should have at least	The criterion of secondary education was applied to increase the likelyhood that participants had a good comprehension of

secondary education, be older than 18 years of age, and have sufficient skills in reading and writing English. Selection of participants was fair and just - no persons were unfairly excluded.	the measures. Being 18 and above years of age enhances the probability of sufficient cognitive and reflected abilities for the participants provide accurate data on the questions posed. Sufficient fluency in English enhanced the likelyhood that participants were enable to interpret and complete the questionnaires which were administered in English.
Exclusion criteria	**Justification**
There were no specific exclusion criteria.	Not applicable

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.

Data gathering in the original FORT3 project were collected by a nonprobability snowball method. Trained in the administration of psycho-social well-being measures, the post-graduate students acting as fieldworkers, identified people in their communities in the various provinces of South Africa who matched the inclusion criteria. These people selected were invited to participate in the study by the fieldworkers with no pressure, manipulation or coercion. The process was overseen by the Principle Investigator. After the study was presented to these participants, they were asked if they know of others in their communities that would like to participate in the study that fitted the inclusion criteria. Contact details were given to the fieldworkers who then contacted the mentioned references. The fieldworkers ensured that all participants that agreed to the study, fitted the inclusion criteria before they received the informed consent form and test battery. The snowball method of sampling helped to gather people that fit the inclusion criteria as well as add diversity to the sample and therefore was chosen as the best sampling method.

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.

Postgraduate students acted as fieldworkers under the supervision of the researchers and were trained in the administration of psychosocial well-being measures. The fieldworkers explained to all participants that participation was voluntary and that their analysed responses would be used anonymously. They were also free to withdraw from the study at any stage with no consequences. No coercion took place. The indirect benefits as well as the possible emotional responses were also explained by the fieldworkers.

The opportunity was given to the participants to pose any questions regarding the study to the head investigator and research team. After the participants were given the opportunity to ask questions, clarifying and understood the aims of the research as well as the ethics involved, the participants had time to decide if they wanted to participate in the study. When the participants confirmed their willingness to participate in the study, they were handed a consent form and thereafter a test battery to complete at their convenience. After the informed consent form and test battery were completed and returned, these documents were separated by the fieldworkers before they were distributed to the researchers. The current ethics rules stipulate that the consent form must be given at least a week before participation and notice of that is taken. The ethics guidelines were followed during data gathering at that time and was not a prerequisite at that stage. The participants had the opportunity to complete the consent form and test battery at a time and place of their convenience and therefore it can be deemed that the participants had enough time to consider their participation.

[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 (**t**ime, **i**nconvenience, **e**xpenses 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).

Yes	No	Description
☐	X	There were no incentives or remuneration offered to the participants in the study because the participants completed the questionnaires at a time and place of their own convenience and therefore no refreshments could be offered. This was not an ethics requirement at the time data was gathered. If a similar study be conducted now, a small token of appreciation can be offered for participation. We consider it ethically justifiable to say that participants were not exploited by not being offered remuneration for participating in the study because the study had minimal risk; Participants also completed the questionnaires at a time and place of own convenience which was mostly at their homes and therefore did not have any costs to participate in the study; Participation involved minimal inconvenience because it only took 30 minutes of the participants' time.; The study gave the participants the possibility of self-reflection on positive aspects such as meaning in life, well-being and personal life goals.

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.

What?	The contact details of the original participants were unfortunately not obtained during data gathering (only their names and signatures were requested on the informed consent page, with no space for contact details). The results therefore cannot be communicated to the participants of the study. The responsibility of disseminating data to the original participants was not such a clear ethical requirement at the time when the data were gathered and therefore contact details were not obtained – we acknowledge this limitation. The findings can also not be disseminated to a specific community as the community where participants came from, because participants came from all over South Africa. The researchers will take up the responsibility of ensuring dissemination of the findings by ensuring that the findings are shared with the wider scientific and lay community. Although the results of the study will not be communicated to the participants themselves (no contact information of the participants was collected during data gathering of the FORT3 as communication of the results to the participants as such was not a prerequisite when data was gathered for FORT3), the data will be disseminated to the academic and public audience in different ways. See next point for more details.l
How?	The results and findings will be submitted to a scientific and recognised journal within the field of Positive Psychology for publication. The results will also be integrated with findings of the FORT3 project that will be published in the lay press and disseminated using other media, such as radio interviews. Findings will also be offered to people in the current work context of the student-researcher (educators). The same information will be given to volunteers at church, to be of guidance and bring understanding into the family life domain.
When?	On completion of study
To whom?	Public, educators, local community of student researcher, academics

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.
Participants completed the questionnaires at a time and place convenient to them, which ensured privacy. After data collection, the participant's informed consent form was separated from the questionnaire to ensure confidentiality. The capturing of the quantitative data as well as the coding of the qualitative data were therefore done anonymously. This electronic data that were captured, was stored on password protected computers in locked offices on the premises of the North-West

University. Only the data on group scores will be analysed and therefore no participant will be identified during the reporting of the results.

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.

After data collection, the participant's informed consent form was separated from the questionnaire to ensure confidentiality. The capturing of the quantitative data as well as the coding of the qualitative data were therefore done anonymously. This electronic data that were captured, was stored on password protected computers in locked offices on the premises of the North-West University. Only the data on group scores will be analysed and therefore no participant will be identified during the reporting of the results.

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 data integrity was and will be ensured as follows: The data from the Likert-type questionnaires were captured by the North-West University's Statistical Consultation Services who captured data twice and checked for any discrepancies, where after the electronic dataset was sent to the FORT3 principal investigator (PI) (Prof.MP Wissing) and collaborator (Dr.Lusilda Schutte). The FORT3 PI/Collaborator collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data was coded and checked by a co-coder who were both trained in the EHHI coding system. Both coder and co-coder signed confidentiality agreement forms. Any differences were discussed and if consensus could not be reached, the FORT3 PI was involved to make a final decision. In cases where codes did not exist for the response, this matter was taken up with the international EHHI team, who then added an appropriate code to the coding system. Once codes were finalised, the codes were captured twice and independently by trained research interns who signed confidentiality agreement forms. This process was overseen and monitored by the FORT3 PI and collaborator. The coding and code checking were conducted on the hard copy versions of the questionnaires, which were handed to coders one pile at a time.

Once the coder was done with the pile, it was handed back to the FORT3 PI/collaborator. Capturing of the codes was done on computers that are placed within a locked office on the premises of the North-West University and the data was locked in cupboards in that office for the duration of data capturing. The captured data was sent to the FORT3 PI and collaborator and the data was then removed from the computers of the data capturers. After data coding and capturing, the hard copies of the questionnaires were moved to cupboards in a locked office of the North-West University where it is

stored. Access to the hard copies of the data is monitored by the FORT3 PI and collaborator. The FORT3 collaborator, who is a statistician and competent and experienced in data cleaning and management, merged the quantitative and qualitative data. The FORT3 PI and collaborator keep the electronic data on password protected computers to ensure the integrity of the data. If any of them need to make a change to the data, this is communicated to the other in writing and the updated dataset is shared with the other so that both have the same newest version on their computers. Should the need arise to share the dataset with another person to assist with the data analyses (e.g. a statistical consultant from Statistical Consultation Services), the dataset as stored on the computers of the PI and collaborator will be sent to the relevant person who is, from his professional obligation, responsible to also safeguard the data integrity. Since all analyses for this study will be conducted by the FORT3 collaborator, the student researcher involved will only receive the output from the analyses. She will not have access to the original data. FORT3 data will be destroyed according to NWU regulations after all analyses have been completed and data exhausted – six years after the last publication from this study.

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 is no longer relevant, it 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 principal investigator of the FORT3 project that this study is linked to (supervisor), as well as the FORT3 collaborator (co-supervisor) will oversee and ensure that the approved protocol and research done will be of ethical nature and correctly applied by the student researcher. See Section 5.14 that explains how data management and monitoring will take place.

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.

Yes	No
☐	X

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.

What was the purpose of the original collection?
The FORT3 Research Project investigated the prevalence of levels of psychosocial health with regard to the dynamics and relationships with biomarkers of (ill)health in a South African social context. The exploration of the nature, sources and motives for positive relationships, goals and meaning with a mixed method approach was an aim of the FORT3 project as well as to explore the connections between positive relational processes, goals, meaning and other aspects of psychosocial well-being. Contextual variables and social-demographic aspects were taken into account.
What will your purpose be?
This study forms part of this FORT3 research project in addressing these aims using data already gathered for this project. It aims to determine how goals and meaning align in the family domain of life with specific focus on the associations with demographic variables and well-being.
Give a description of how research integrity was ensured in the original study by referring to: • **how informed consent was obtained from participants** • **what they consented for** • **the circumstances under which the data/biological samples were gathered** • **how the ethics of data/biological sample collection was ensured?**
The ethics of the original study was assured by the fact that the FORT3 study has ethical clearance from the ethics committee (ethics clearance number NWU-00002-07-A2 valid until 2018/08/31, 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 of the current ethics requirements. However, at the time that the FORT3 project was developed, approval was obtained from the relevant ethics committee

and data was 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 is 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 will be used for and how it will 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 consequence; that there is minimal foreseeable risk associated with participation; that responses will only be used as part of a group and only group scores will be used for analyses; the approximate duration of completion of the questionnaires; and how the study will 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) 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 well-being.

See Section 5.10 for more information on the Informed Consent procedure. See Section 5.12 for details on how privacy and confidentiality was ensured.

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?**

The data integrity was and will be ensured as follows: The data from the Likert-type questionnaires were captured by the North-West University's Statistical Consultation Services who captured data twice and checked for any discrepancies, where after the electronic dataset was sent to the FORT3 principal investigator (PI) (Prof.MP Wissing) and collaborator (Dr.Lusilda Schutte). The FORT3 PI/Collaborator collected the hard copies of the questionnaires from Statistical Consultation Services. The qualitative data was coded and checked by a co-coder who were both trained in the EHHI coding system. Both coder and co-coder signed confidentiality agreement forms. Any differences were discussed and if consensus could not be reached, the FORT3 PI was involved to make a final decision. In cases where codes did not exist for the response, this matter was taken up with the international EHHI team, who then added an appropriate code to the coding system. Once codes were finalised, the codes were captured twice and independently by trained research interns who signed confidentiality agreement forms. This process was overseen and monitored by the FORT3 PI and collaborator. The coding and code checking were conducted on the hard copy versions of the questionnaires, which were handed to coders one pile at a time.

Once the coder was done with the pile, it was handed back to the FORT3 PI/collaborator. Capturing of the codes was done on computers that are placed within a locked office on the premises of the North-West University and the data was locked in cupboards in that office for the duration of data capturing. The captured data was sent to the FORT3 PI and collaborator and the data was then removed from the computers of the data capturers. After data coding and capturing, the hard copies of the questionnaires were moved to cupboards in a locked office of the North-West University where it is

stored. Access to the hard copies of the data is monitored by the FORT3 PI and collaborator. The FORT3 collaborator, who is a statistician and competent and experienced in data cleaning and management, merged the quantitative and qualitative data. The FORT3 PI and collaborator keep the electronic data on password protected computers to ensure the integrity of the data. If any of them need to make a change to the data, this is communicated to the other in writing and the updated dataset is shared with the other so that both have the same newest version on their computers. Should the need arise to share the dataset with another person to assist with the data analyses (e.g. a statistical consultant from Statistical Consultation Services), the dataset as stored on the computers of the PI and collaborator will be sent to the relevant person who is, from his professional obligation, responsible to also safeguard the data integrity. Since all analyses for this study will be conducted by the FORT3 collaborator, the student researcher involved will only receive the output from the analyses. She will not have access to the original data.

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 is no longer relevant, it will be permanently deleted. .

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

Risks	**Precautions**
Participants: There was minimal risk associated with participating in the study. Although the questionnaires relate to well-being, some items could evoke emotional responses from participants. Researchers, fieldworkers and assistants: 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, fieldworkers and assistants. **Participants:** **Researchers:**	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. No participants indicated such a need. Researchers, fieldworkers and assistants: Researchers, field workers and assistants could have and can still also contact the arranged counsellors or psychologists if needed..

Will re-consent be necessary?
If "Yes" motivate:

- **why**
- **for what**
- **how this re-consent will be obtained.**

Yes	**No**		
☐	X	**Why?**	Not applicable
		For what?	Not applicable
		How?	Not applicable

[ATTACH A LETTER FROM THE STUDY LEADER/PI GIVING PERMISSION FOR THE USE OF THE DATA/BIOLOGICAL SAMPLES]

[ATTACH THE ETHICAL APPROVAL OF THE ORIGINAL STUDY]

[ATTACH THE INFORMED CONSENT DOCUMENTATION FOR RE-CONSENT (IF APPLICABLE)]

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.

The nature of the information to be used:	
Not applicable	
Process of obtaining permission/ethical approval for access:	
Not applicable	
Process of data collection:	
Not applicable	
Process of anonymization of the data:	
Not applicable	
Foreseeable risks for participants whose filed privileged information is being accessed:	
Risks	**Precautions**
Not applicable	Not applicable

5.19 Justifiability of statistical procedures

5.19.1 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 co-study leader who is a qualified statistician and has experience as a statistical consultant

5.19.2 Justification of sample size

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

The participants (*N* = 585) included in the study were obtained from the FORT3 project. This number is sufficient for the analyses conducted in the current study. In determining the adequacy of the sample size, the different quantitative analyses that will be performed as described in Section 5.19.4 need to be considered. To determine frequencies, the sample size is sufficient because this frequency analysis does not involve a statistical test or statistical power. For the other analyses, the study is considered of exploratory nature and work with all the data available. When sample sizes of specific demographic groups are small, this will be mentioned and taken into consideration when interpreting the results. Specifically, wherever small sample sizes of specific demographic groups could have an influence on the

interpretability of the findings, that will be mentioned as a limitation and interpretations will not be made.

5.19.3 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

5.19.4 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.

The following quantitative analyses will be conducted:

1 Cronbach's alpha will be used in preliminary analyses to determine whether all measures to be used in the present study, namely the PANAS, MHC-SF, MLQ and SWLS were reliable for the specific sample. IBM SPSS Statistics will be used to obtain these results. Total scores are generally considered to indicate internal consistency reliability when Cronbach's alpha scores exceed 0.7. Confirmatory factor analysis will also be used to check the factorial validity of the quantitative scales for this sample using M-plus.

2 The frequency of the family domain being mentioned as an important goal, the reason for an important goal, as something meaningful, and as a reason for something being meaningful, will be determined using IBM SPSS Statistics.

3 Using Microsoft Office Excel, the alignment patterns between goals (what and why) and meaningful things (what and why) within the family domain will be determined per person. Four alignment patterns will be distinguished:

1 = The family domain was NEITHER mentioned in the participant's important goals or the reasons therefore, NOR in his/her meaningful things or motivations therefore.

2 = The family domain was mentioned in BOTH the participant's important goals or the reasons therefore, AND in his/her meaningful things or motivations therefore.

3 = The family domain WAS mentioned in his/her important goals or the reason therefore, BUT NOT in his/her meaningful things or motivations therefore.

4 = The family domain WAS NOT mentioned in the participant's important goals or the reasons therefore, BUT IT WAS mentioned in his/her meaningful things or motivations therefore.

4. Crosstabulations and accompanying chi-square tests will be used to explore the associations between the alignment patterns and the demographic variables using IBM SPSS.

5. One-way ANOVA's will be performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score will be compared for the four alignment pattern groups determined in 4.5.2.3. Note that a separate ANOVA will be performed for each of the well-being scales or subscales. In other words, this step will involve six one-way ANOVA's.

6. Two-way ANOVA's will be performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score will be compared for the four alignment pattern groups determined in 4.5.2.3, the respective demographic variables

(gender, age group, education level, standard of living, and marital status), and the interaction between alignment patterns and the respective demographic variables. Note that a separate ANOVA will be performed for each of the well-being scales or subscales and for each demographic variable. In other words, this step will involve 6 x 5 = 30 two-way ANOVA's.

Remember to save your document regularly as you complete it!

6. SECTION 6: MATTERS THAT NECESSITATE ADDITIONAL INFORMATION

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").

Description	Yes	No
Minors	☐	X
Adults with incapacities	☐	X
Persons in dependent relationships e.g. prisoners	☐	X
Students	☐	X
Persons with physical disabilities	☐	X
Collectivities	☐	X
Research-naïve communities	☐	X
Other	☐	X
Specify: Not applicable		

6.1.1 Description

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

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

Not applicable

6.1.2 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.*

Not applicable

6.1.3 Additional precautionary measures to reduce the risk of harm

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

Not applicable

Remember to save your document regularly as you complete it!

6.2 Sec 6b: Infection, genetic modification and commercialisation of cell and tissue lines

6.2.1 What will you be doing with the cell or tissue line?

Infection of the cell or tissue line	☐
Genetic modification of the cell or tissue line	☐
Commercialisation of the cell or tissue line	☐

6.2.2 Number

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

Description	Number
Cell lines	0
Tissue lines	0

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.2.3 ACCORDING TO 6.2.2]

6.2.3 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

Approved Name & Code	Description
Click here to enter text.	Click here to enter text.

Source / Origin / Supplier	Catalogue No.	Biosafety level?	
Click here to enter text.	Click here to enter text.	Level 1	☐
		Level 2	☐
		Level 3	☐

Method of Storage and Maintenance
Click here to enter text.

Potential Dangers	Precautionary measures
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).

6.2.4 What is the infectious agent to be used (if applicable)?

Click here to enter text.

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

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

6.2.6 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.

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

6.2.7 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	Details	
☐	**Principal investigator**	**Researchers/Students/Fieldworkers**
	Click here to enter text.	Click here to enter text.

No	How do you plan to get the expertise required?	
☐	**Principal investigator**	**Researchers/Students/Fieldworkers**
	Click here to enter text.	Click here to enter text.

6.2.8 Facilities

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

Click here to enter text.

6.2.9 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.

6.3.1 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.

Description of Drugs / medication	Dosage
Click here to enter text.	Click here to enter text.

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.3.2 ACCORDING TO 6.3.1]

6.3.2 Product information

Provide detailed product information as requested

Drug 1

Approved Pharmacological (Generic) Name	Brand Name(s) (if applicable)
Click here to enter text.	Click here to enter text.

Registered at the MCC-SA?[1]		If "Yes", MCC-SA Registration Number[2]	If registered at the MCC-SA, is this for the indications, dosages and administrations as used in this study? Provide details where necessary.
Yes	**No**	Click here to enter text.	Click here to enter text.
☐	☐		

Accepted Dosage(s)	Accepted Administration Route(s)
Click here to enter text.	Click here to enter text.

Pharmacological Action, Therapeutic Effects & Indications	Side-effects, Precautions & Contra-indications
Click here to enter text.	Click here to enter text.

Other Relevant Information
Click here to enter text.

Proof of preclinical approval of the product
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).

6.3.3 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.

Yes	**No**	**Authorisation Number**	**Date of Authorisation**
☐	☐	Click here to enter text.	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.

[1] MCC-SA = Medicine Control Council of South Africa.

[2] The MCC-SA registration number can be found on medicine product leaflets.

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

[PLEASE UPLOAD MCC APPROVAL LETTER]

6.3.4 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.

6.4.1 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.

Description of drug delivery system	Dosage
Click here to enter text.	Click here to enter text.

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.4.2 ACCORDING TO 6.4.1]

6.4.2 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.

Registered at the MCC-SA?		If "Yes", MCC-SA Registration Number	If registered at the MCC-SA, is this for the indications, dosages and administrations as used in this study? Provide details where necessary.
Yes	☐	Click here to enter text.	Click here to enter text.
No	☐		

Accepted Dosage(s)	Proof of Accepted Administration Route(s)
Click here to enter text.	Click here to enter text.

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).

6.4.3 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.

Yes	No	Authorisation Number	Date of Authorisation
☐	☐	Type no. here, or type "Not Applicable".	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".

[PLEASE UPLOAD MCC APPROVAL LETTER]

6.4.4 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.

6.5.1 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.

Description	Number
Food	0
Fluids	0
Nutrients / nutrient combinations	0

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.5.2 ACCORDING TO 6.5.1]

6.5.2 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

Approved Name	Normal Quantities and Uses
Click here to enter text.	Click here to enter text.

Potential Dangers with Abuse	Contra-indications	Precautions
Click here to enter text.	Click here to enter text.	Click here to enter text.

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).

6.5.3 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

6.6.1 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.

6.6.2 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”.

Yes	**Details**	
☐	**Study leader**	**Researchers/Students/ /Fieldworkers**
	Click here to enter text.	Click here to enter text.
	Authorisation number	Click here to enter text.

No	**How do you plan to get the expertise required?**

☐	**Study leader**	**Students/Researchers/Fieldworkers**
	Click here to enter text.	Click here to enter text.

Attach a copy of the approval certificate from the Radiation Control Officer.

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

6.6.3 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.

Type here

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.

6.7.1 Number

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

Description	**Number**
Toxic substances	0
Other dangerous substances	0

6.7.2 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

Approved Name	Normal Uses & Dosages
Type here	Type here

Action & Toxic Effects/Dangers	Contra-indications	Precautions
Type here	Type here	Type here

Other Relevant Information
Type here

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

6.7.3 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

Possible detrimental effects	**Precautions**
Type here	Type here

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.

6.8.1 Name

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

Description
The Satisfaction with Life Scale (SWLS), the Positive Affect and Negative Affect Schedule (PANAS), the Meaning in Life Questionnaire (MLQ), and the Mental Health Continuum – short form (MHC-SF).**)**

6.8.2 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.

Psychometric measuring instrument/questionnaire

Approved Name	Normal Application
The Satisfaction with Life Scale (SWLS)	Respondent's own assessment of their global life satisfaction

Reliability	Validity

α=0.70 and 0.86 for the English version within a multicultural South African sample (Wissing & van Eeden, 2002).	Good construct validity was determined for the English version within a multicultural South African sample (Wissing & van Eeden, 2002)

Other Relevant Information

Psychometric measuring instrument/questionnaire

Approved Name	Normal Application
Positive Affect and Negative Affect Schedule (PANAS)	A self-report measure measuring positive and negative affect.

Reliability	Validity
α=0.85 for PA and α=0.89 for NA within an adult population in the UK (Crawford & Henry, 2004).	Factorial and external evidence of convergent and discriminant validity was established (Watson et al., 1988; Crawford & Henry, 2004).

Other Relevant Information

Psychometric measuring instrument/questionnaire

Approved Name	Normal Application
Meaning in Life Questionnaire (MLQ)	A self-report measure assessing the presence of and search for meaning in life respectively

Reliability	Validity
α=0.85 for MLQ – Presence subscale and α=0.84 for MLQ – Search subscale in a South African sample (Temane, Khumalo, & Wissing, 2014)	Construct, convergent and discriminant validity of the MLQ was indicated in mainly Western student samples (Steger et al., 2006)

Other Relevant Information

Psychometric measuring instrument/questionnaire

Approved Name	Normal Application
Mental Health Continuum – Short form (MHC-SF)	Measuring positive mental health in terms of three sub-scales, namely Emotional Well-being, Social Well-being, and Psychological Well-being.

Reliability	Validity
α = 0.72 for the Setswana version of the scale (Keyes, et al., 2008)	Construct, convergent and discriminant validity of the scale was found for a mainly Setswana-speaking group (Keyes, et al., 2008)

Other Relevant Information

6.8.3 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.

Yes	No	Details
☐X	☐	SWLS – Wissing and van Eeden (2002) obtained sufficient reliability scores (alpha values between 0.70 and 0.86) and construct validity with the use of the English SWLS within a multicultural South African sample. Reliability and validity indicators will be calculated for the present sample. PANAS – Factorial and external evidence of convergent and discriminant validity was established within an adult population in the UK (Crawford & Henry, 2004). Reliability and validity indicators will be calculated for the present sample. MLQ – Temane, Khumalo, and Wissing (2014) investigated the psychometric properties of the MLQ in a South African sample and good validity was determined. Reliability and validity indicators will be calculated for the present sample. MHC-SF – The Setswana version of this scale was validated by Keyes et al. (2008) and construct, convergent and discriminant validity of the scale was found for a mainly Setswana-speaking group. A bifactor exploratory equation modelling approach was applied to the English version of the scale. While the overall scale score was shown to be reliable, subscale scores were not reliable (Schutte & Wissing, 2017). In line with these findings, the present study will only make use of the overall scores of the MHC-SF. Reliability and validity 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.

6.9.1 Please indicate the risk level of the current study in terms of environmental impact.

Category	Description	Select
0	**None** **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.	X
1	**Mild** **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.	☐
2	**Medium** **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.	☐
3	**Severe** **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.	☐
4	**Very severe** **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.	☐
5	**Intolerable** **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.	☐

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

Not applicable

6.9.3 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 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.

Risks (e.g. effect on environment, legal implications, potential impact on the reputation of the NWU, etc.).	**Precautions** (When describing these precautions be clear on how they will mitigate all the identified risks)

Not applicable	Not applicable

Remember to save your document regularly as you complete it!

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.

Name of the Research Ethics Committee	Date of Approval/In Process	Contact Number or E-mail address of the research ethics committee	Approval no.
Not applicable	Not applicable	Not applicable	Not applicable

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.

7.2.1 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.

Type	Risks
Participants	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.
Researchers	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
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

7.2.2 These potential risks are covered by:

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

7.2.3 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?
X	☐	Click here to enter text.

Remember to save your document regularly as you complete it!

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

Study Leader (Title, Initials and Surname)	**Study Title** (see § 1.1)
Prof.Marie Wissing	Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being.

NWU Ethics Number
NWU 00075-18-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
Prof. Marie Wissing	Drs Phil (Clinical Psychology); D.Phil (Psychology)

	2018/06/03
Signature	Date

Remember to save your document regularly as you complete it!

Health Research Ethics Application

Study Leader (Title, Initials and Surname)	**Study Title** (see § 1.1)
Prof. Marie Wissing	Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being.

NWU Ethics Number
NWU 00075-18-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).

8.2.1 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.

Yes	No	Remarks
X	☐	The co-study leader of the present study has a masters degree in statistics and worked at Statistical Consultation Services for a few years. She is experienced in the analyses conducted in this study and currently specialises in social statistics in her research. According to her discretion, the statistical analyses to be used in this study are justifiable.

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

Signature	Date

Remember to save your document regularly as you complete it!

Health Research Ethics Application

Study Leader (Title, Initials and Surname)	**Study Title** (see § 1.1)
Prof.Marie Wissing	Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being

NWU Ethics Number
NWU 00075-18-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.

8.3.1 Research Director:

The director of the research entity signs here.

Name (Title, Full Names & Surname)	Capacity
Prof. Petra Bester	Research Director AUTHeR

Signature	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

1.4 Approval letter of HREC application (NWU 00075-18-S1)

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Health Sciences Ethics Office for Research, Training and Support

Health Research Ethics Committee (HREC)
Tel: 018-285 2291
Email: Wayne.Towers@nwu.ac.za

Prof MP Wissing
Positive Psychology
AUTHeR

27 September 2018

Dear Prof Wissing

APPROVAL OF YOUR APPLICATION BY THE HEALTH RESEARCH ETHICS COMMITTEE (HREC) OF THE FACULTY OF HEALTH SCIENCES

Ethics number: NWU-00075-18-S1

Kindly use the ethics reference number provided above in all future correspondence or documents submitted to the administrative assistant of the Health Research Ethics Committee (HREC) secretariat.

Study title: Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being

Study leader/supervisor: Prof MP Wissing

Student: M Liversage-13162802

Risk level: Minimal (monitoring report required annually)

Expiry date: 30 September 2019 (Monitoring report is due at the end of September annually until completion)

You are kindly informed that after review by the HREC, Faculty of Health Sciences, North-West University, your ethics approval application has been successful and was determined to fulfil all requirements for approval. Your study is approved for a year and may commence from 27/09/2018. Continuation of the study is dependent on receipt of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation. A monitoring report should be submitted two months prior to the reporting dates as indicated i.e. annually for minimal risk studies, six-monthly for medium risk studies and three-monthly for high risk studies, to ensure timely renewal of the study. A final report must be provided at completion of the study or the HREC, Faculty of Health Sciences must be notified if the study is temporarily suspended or terminated. The monitoring report template is obtainable from the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-HRECMonitoring@nwu.ac.za. Annually, a number of studies may be randomly selected for an internal audit.

The HREC, Faculty of Health Sciences requires immediate reporting of any aspects that warrants a change of ethical approval. Any amendments, extensions or other modifications to the proposal or other associated documentation must be submitted to the HREC, Faculty of Health Sciences prior to implementing these changes. These requests should be submitted to Ethics-HRECApply@nwu.ac.za with a cover letter with a specific subject title indicating, "Amendment request: NWU-XXXXX-XX-XX". The letter should include the title of the approved study, the names of the researchers involved, the nature of the amendment/s being made (indicating what changes have been made as well as where they have been made), which documents have been attached and any further explanation to clarify the amendment request being submitted. The amendments made should be indicated in yellow highlight in the amended documents. The *e-mail*, to which you attach the documents that you send, should have a *specific subject line* indicating that it is an amendment

request e.g. "Amendment request: NWU-XXXXX-XX-XX". This e-mail should indicate the nature of the amendment. This submission will be handled via the expedited process.

Any adverse/unexpected/unforeseen events or incidents must be reported on either an adverse event report form or incident report form to Ethics-HRECIncident-SAE@nwu.ac.za. The *e-mail*, to which you attach the documents that you send, should have a specific subject line indicating that it is a notification of a serious adverse event or incident in a specific project e.g. "SAE/Incident notification: NWU-XXXXX-XX-XX". Please note that the HREC, Faculty of Health Sciences has the prerogative and authority to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process.

The HREC, Faculty of Health Sciences complies with the South African National Health Act 61 (2003), the Regulations on Research with Human Participants (2014), the Ethics in Health Research: Principles, Structures and Processes (2015), the Belmont Report and the Declaration of Helsinki (2013).

We wish you the best as you conduct your research. If you have any questions or need further assistance, please contact the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-HRECApply@nwu.ac.za.

Yours sincerely

Prof Wayne Towers
HREC Chairperson

Prof Minrie Greeff
Ethics Office Head

Current details: (23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5 Ethics\NWU-00075-18-S1\9.1.5.4.1_AL_NWU-00075-18-S1_27-09-2018.docm
27 September 2018

File reference: 9.1.5.4.1

Summary

Section 1 reflects the first phase of the research journey towards the development of an accepted research proposal, which was also acceptable according to ethical requirements of the Health Research Ethics Committee of the NWU. After all the necessary approvals were obtained by relevant panels, the study commenced. The research report on the concordance of goals and meaning in the family domain and their associations with demographic variables and well-being will be presented in the next section as a manuscript in article format.

Chapter 2

Manuscript for evaluation

2.1 Manuscript in article format

This dissertation has been done in article format as indicated in the 2018 General Academic Rules (A4.1.1.1.4 and 4.2.2.9) of the North-West University. The manuscript and article style follow the requirements of the specific journal, Journal of Positive Psychology, to which it will be submitted, with some exceptions to ease the reading of this mini-dissertation. This applies specifically to the inclusion of relevant tables and figures in-text instead of adding them separately in the addenda at the end of the manuscript and a somewhat longer word-count manuscript for mini-dissertation purposes.

2.2 'Guidelines to authors for the Journal of Positive Psychology

2.2.1 About the Journal. *The Journal of Positive Psychology* is an international, peer-reviewed journal, publishing high-quality, original research. Please see the Journal's Aims and Scope for information about its focus and peer-review policy. This journal only publishes manuscripts in English.

The Journal of Positive Psychology accepts the following types of article: Peer Review - Taylor & Francis is committed to peer-review integrity and upholding the highest standards of review. Once the paper has been assessed for suitability by the editor, it will then be single blind peer reviewed by independent, anonymous expert referees (The Journal of Positive Psychology Instructions for Authors, 2017).

2.2.2 Preparing Your Paper.

2.2.2.1 Structure. The paper should be compiled in the following order: title

page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list).

2.2.2.2 Word Limits. Please include a word count for the paper. A typical paper for this journal should be no more than 7 500 words, inclusive of tables, references, figure captions, endnotes.

2.2.2.3 Style Guidelines. Any spelling style is acceptable so long as it is consistent within the manuscript. Use single quotation marks, except where ‘a quotation is “within” a quotation’. Note that long quotations should be indented without quotation marks. Section headings should be concise.

2.2.2.4 Formatting and Templates. Papers may be submitted in Word or LaTeX formats. Figures should be saved separately from the text. To assist in preparing the paper, formatting template(s) are provided. Word templates are available for this journal. Templates should be saved to your hard drive, ready for use. A LaTeX template is available for this journal. Save the LaTeX template to your hard drive and open it, ready for use, by clicking on the icon in Windows Explorer.

2.2.2.5 References. Reference guide provided must be used when preparing the paper. An EndNote output style is available to be used.

2.2.3 Taylor & Francis Editing Services. To help improve the manuscript and prepare it for submission, Taylor & Francis provides a range of editing services. Options, such as English Language Editing, which will ensure that your article is free of spelling and grammar errors, Translation, and Artwork Preparation, are available.

2.2.4 Checklist: What to Include:

2.2.4.1 Author details. All authors of a manuscript should include their full name and affiliation on the cover page of the manuscript. Where available, please also include ORCiDs and social media handles (Facebook, Twitter or LinkedIn). One author will need to be identified as the corresponding author, with his/her e-mail 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. Note that no changes to affiliation can be made after the paper is accepted. Should contain an unstructured abstract of 150 words. A video abstract can be included with the article. Between 4 and 10 keywords.

2.2.4.2 Funding details. 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].

2.2.4.3 Disclosure statement. This is to acknowledge any financial interest or benefit that has arisen from the direct applications of the research.

2.2.4.4 Data availability statement. If there is a data set associated with the paper, provide information about where the data supporting the results or analyses presented in the paper can be found. Where applicable, this should include the hyperlink, DOI or other persistent identifier associated with the data set(s). Templates are also available to support authors.

2.2.4.5 Data deposition. If chosen to share or open the data underlying the study, deposit the data in a recognized data repository prior to or at the time of submission. Provide the DOI, pre-reserved DOI, or other persistent identifier for the data set.

2.2.4.6 Geolocation information. Submitting a geolocation information section, as a separate paragraph before the acknowledgements, means that your paper's study area can accurately be indexed in Journal Map's geographic literature database and make the article more discoverable to others.

2.2.4.7 Supplemental online material. Supplemental material can be a video, dataset, file set, sound file or anything which supports (and is pertinent to) the paper.

2.2.4.8 Figures. Figures should be high quality (1200 dpi for line art, 600 dpi For grayscale and 300 dpi for colour, at the correct size). Figures should be supplied in one of the preferred file formats: EPS, PS, JPEG, GIF, or Microsoft Word (DOC or DOCX).

2.2.4.9 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.

2.2.4.10 Equations. If the manuscript is submitted as a Word document, please ensure that equations are editable.

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

2.2.5 Using Third-Party Material in your Paper. The necessary permission must be obtained to reuse third-party material in the 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 any material is included in the paper for which no copyright is granted, and which is not covered by this informal agreement, written permission must be obtained from the copyright owner prior to submission.

2.2.6 Submitting Your Paper. If submitting in LaTeX, convert the files to PDF beforehand (upload your LaTeX source files with the PDF). Note that *The Journal of Positive Psychology* uses Crossref™ to screen papers for unoriginal material. By submitting the paper to *The Journal of Positive Psychology* permission is granted to originality checks during the

peer-review and production processes. On acceptance, the recommendation is that a copy of the accepted manuscript should be kept.

2.2.7 Data Sharing Policy. This journal applies the Taylor & Francis Basic Data Sharing Policy. Authors are encouraged to share or make open the data supporting the results or analyses presented in their paper where this does not violate the protection of human subjects or other valid privacy or security concerns. Authors are encouraged to deposit the dataset(s) in a recognized data repository that can mint a persistent digital identifier, preferably a digital object identifier (DOI) and recognizes a long-term preservation plan. If uncertain about where to deposit the data, see information regarding repositories. Authors are further encouraged to cite any data sets referenced in the article and provide a Data Availability Statement. At the point of submission, the question will be asked if there is a data set associated with the paper. If the answer is yes, provide the DOI, pre-registered DOI, hyperlink, or other persistent identifier associated with the data set(s). If selected to provide a pre-registered DOI, be prepared to share the reviewer URL associated with the data deposit, upon request by reviewers. Where one or multiple data sets are associated with a manuscript, these are not formally peer reviewed as a part of the journal submission process. It is the author's responsibility to ensure the soundness of data. Any errors in the data rest solely with the producers of the data set(s).

2.2.8 Publication Charges. There are no submission fees, publication fees or page charges for this journal.

2.2.9 Copyright Options. Copyright allows you to protect your original material, and stop others from using the work without permission. Taylor & Francis offers a number of different license and reuse options, including Creative Commons licenses when publishing open access. Read more on publishing agreements.

2.2.10 Complying with Funding Agencies. All National Institutes of Health or Welcome Trust-funded papers will be deposited into PubMed Central on behalf of authors, meeting the requirements of their respective open access policies. If this applies, tell the production team when the article proofs have been received, so it can be done. Check funders' open access policy mandates.

2.2.11 Open Access. This journal gives authors the option to publish open access via our Open Select publishing program, making it free to access online immediately on publication. Many funders mandate publishing your research open access.**'**

Reference

Instructions for authors, (2017). The Journal of Positive Psychology. Retrieved October 14, 2018, from https://www.tandfonline.com/action/authorSubmission?journalCode=rpos20&page=instructions

2.3 Manuscript

Concordance of goals and meaning in the family domain: Associations with demographic variables and well-being

Mandi Liversage [1]*, Marié P. Wissing [2], Lusilda Schutte [3]

Author affiliations

1* Corresponding author. Africa Unit for Transdisciplinary Health Research (AUTHeR, North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa. +27848000534 mandiliv@gmail.com.

ORCID ID: orchid.org/0000 – 0003 – 1277 – 6052

2 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 ID: orcid.org/0000-0002-0445-6246

3 Africa Unit for Transdisciplinary Health Research (AUTHeR), North-West University, Potchefstroom Campus, Private Bag X6001, Potchefstroom 2520, South Africa. +27182992090 Lusilda.Schutte@nwu.ac.za

Abstract

Goals and meaning as important components of eudaimonic well-being are often studied separately. Research on their concordance in life domains and associations with demographic variables is limited. This study explored the concordance of goals and meaning in the family domain and how different patterns of concordance were associated with demographic variables and indicators of well-being. Participants were 585 South Africans, 18 years or older; with at least Grade 12 education. A mixed methods convergent parallel design was implemented. Qualitative data were transformed to quantitative data. Descriptive statistics showed a high frequency of the goals-and-meaning pattern in the family domain. One-way ANOVAs highlighted some significant associations between patterns of alignment and sociodemographic variables. One- and two-way ANOVAs revealed that the associations between alignment patterns and indices of well-being were only significant in few instances where sociodemographic variables were taken into account, and also varied for different measures of well-being. Qualified support for the general self-concordance model is thus found in the family domain. Similar research is needed in other life domains.

Keywords: concordance, goals, meaning, well-being, family, sociodemographic variables

Positive psychology is a scientifically grounded field that focuses on positive human functioning (Seligman, 2007; Seligman & Csikszentmihalyi, 2014; Gruman, Lumley, & González-Morales, 2018) and explores the conditions and circumstances that help individuals and communities to thrive. Goals and meaning are key constructs that guide the process of thriving towards well-being (Emmons, 2005; Brdar, Vella-Brodrick, Nakamura, & Solano, 2014) and have been studied as separate constructs. However, it is not known how these constructs and the manifestations thereof hang together in life or in specific life domains. Research on the concordance of goals and meaning within the family life domain is limited and no research on such concordance indicating the role of sociodemographic variables and well-being in a South African context could be located. The present study addresses this knowledge gap.

Goals

Scholars have defined goals in a variety of ways. Little, Salmela-Aro, and Phillips (2017) defined goals as future orientated desires a person aims to achieve or maintain and which play a vital role in terms of behaviour and well-being. Emmons (2005) stated that the expression of future orientation pins down goal striving. Goals as phenomena and concepts are interlinked with constructs and theories, such as purpose and meaning (Wong, 2017), hope (Guter, 2016; Tugade, Shiota, & Kirby, 2014), self-determination (Adams, Little, & Ryan, 2017; Bauer, King, & Steger, 2018), self-regulation (Van Tongeren et al., 2018) and self-motivation (Ryan & Deci, 2017). Related constructs/theories and some links among them will be discussed.

Hope refers to Snyder's hope theory that stated that people have the ability to think about goals and create pathways to reach them (Guter, 2016; Snyder, Lopez, Shorey, Rand, & Feldman, 2003). Self-regulation and self-motivation form part of the self-determination theory which posits that the pursuit of goals contributes to meaningful living and well-being.

The need to relate, experiencing competence and autonomy underlines this well-being (Deci, Olafsen, & Ryan, 2017; Deci & Ryan, 2008).

Self-concordance can be defined as the extent to which personal goals are pursued with intrinsic interest feelings (Gaudreau, 2012). The self-concordance model explains the whole sequence from the setting of a goal to the attainment thereof, and it also addresses the effects of reaching a goal on the satisfaction of needs and well-being (Sheldon & Elliot, 1999; Sheldon, 2014). The self-determination theory is the foundation of the self-concordance model. It is a model that was used to explain and understand longitudinal processes because it explored the initial positive future outcomes (Gaudreau, 2012). The whole conative cycle was designed for the striving of individuals to meet their own needs/goals over time. Studies showed that a link between goals and long-term values (meaningful things) enhanced self-concordance and brought joy to overall goal pursuit (Gaudreau, Carraro, & Miranda, 2012).

Intrinsic, identified, introjected and extrinsic types of motivation have an influence on the pursuit of goals. Intrinsic goals are based on psychological needs and extrinsic goals refer to financial success, social recognition and impressions, which form part of motivation (Ciani, Sheldon, Hilpert, & Easter, 2011; Howard, Gagné, & Bureau, 2017). There are also other types of goal orientation, such as mastery goals, which involve the acquiring of new skills, namely performance goals which include intentions towards making good impressions with demonstration of talents and best abilities, avoidance goals which aim to prevent a negative occurrence; approach goals that imply movement in a positive direction towards a positive outcome, instrumental goals that focus on effectiveness, and constitutive goals which refers to the inseparableness of path activity and outcome/goal end state (Fowers, Mollica, & Procacci, 2010; Pekrun, Elliot, & Maier, 2009; Darnon, Harackiewicz, Butera, Mugny, & Quiamzade, 2007).

Meaning

Meaning in life has been considered by many as a critical ingredient in human flourishing and well-being (Steger, Oishi, & Kashdan, 2009; Peterson & Park, 2012; Ryff, 2018). The concept of meaning came to the forefront through Victor Frankl's work. Frankl (1962) expressed that optimal human functioning is derived from the experience of a sense of meaning and a life purpose.

Over time, scholars have interpreted meaning in many different ways with an assortment of views, theories and models. Meaning has been seen as making sense out of life (Steger, 2009; 2012), connection to spiritual concerns or transcendence (Emmons, 2003), having a sense of self-worth, purpose, self-justification, efficacy and belonging (Lambert et al., 2013), and a sense of coherence, direction, significance, and belonging (Schnell, Höge, & Pollet, 2013). However, a meaningful life was often best understood from the perspective of the individual that is living it. The experience of meaning is in essence unique and reflective of themes in a person's life moulded through history, culture, sociodemographics, values and beliefs, which in turn shaped the nature of the meaning that was constructed (Grouden & Jose, 2014).

A distinction in the conceptualisation of meaning was also made in terms of the presence of meaning and the search for meaning (Newman, Nezlek, & Thrash, 2018; Steger, 2009). People are perceived to experience the presence of meaning when they understood their unique fit in the world and identified what they were trying to accomplish in their lives, whereas search for meaning is the desire to understand and organise experiences in the world (Steger, Kashdan, Sullivan, & Lorentz, 2008). Research suggested that the presence of meaning is linked to well-being (Park & Peterson, 2010; Wilt et al., 2018).

Key aspects of meaning were observed throughout the literature as containing elements of coherence, significance and purpose (Martela & Steger, 2016; Steger, 2012). Coherence, which is characterised by some degree of certainty and routine, allowed life to

make sense to the person living it. Significance entailed the degree to which a person believed his or her life had value, worth, and importance. Purpose referred to having goals and direction in life (King, Heintzelman, & Ward, 2016).

Wong (2011) proposed the meaning mindset, which focused on the person as a meaning-seeking and meaning-making individual and also entailed living a balanced life through meaning derived from various sources such as achievement, relationships, altruism, spirituality and justice. Research findings indicated that individuals found interpersonal relationships, especially with family members, to be of utmost importance to their sense of meaning (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013).

The relationality-meaning model (Wissing, 2014; Wissing & Delle Fave, 2013) was based on research indicating that relationships and connections were at the core of meaning (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013). Links were seen between meaning, positive relationships, context and well-being. The relationality model of well-being refers to meaning *of* life as connectedness to a higher power; meaning *in* life as relational well-being as source of meaning in various domains in life such as family and meaning *to* life as values expressed in behaviour to meet needs.

Both goals and meaning are key constructs related to well-being. For the purpose of this study, the point of departure for the exploration of the degree of concordance of goals and meaning, was from a qualitative bottom up approach of lay peoples' notions of goals and meaning towards well-being.

Well-Being

The World Health Organisation’s (WHO) definition of health, in its broader sense as defined in the1948 constitution, is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1948). There are, however,

multiple perspectives, research findings and views on what constitutes well-being. From a positive psychology perspective, there are two broad perspectives in the explanation of well-being.

The first is a hedonic perspective (feeling good) which focuses on the good life of happiness, pleasure, enjoyment, satisfaction and comfort. The second entails the eudaimonic perspective (functioning well) which contains purpose and meaning (Biswas-Diener, Kashdan, & King, 2009; Ryff & Boyle, 2016).

Seligman (2011) expanded on the concept of well-being and developed the PERMA model to explain well-being. The PERMA model represented positive emotion, engagement, relationships, meaning and purpose, and accomplishment. He argued that if these elements were present, well-being would be the result. Ryff and Singer (1998; 2013) explained well-being as an issue of engagement in living, involving expression of a broad range of human potentialities, namely intellectual, social, emotional and physical. This living was expressed in leading a life of purpose, deep and meaningful connections to others, self-regard and mastery. Keyes (2002) developed the Mental Health Continuum model in which he presents a multifaceted conceptualisation of well-being on a continuum from languishing to flourishing. He clustered explanations, as well as theories and concepts together to explain the two broad perspectives on well-being (Disabato, Goodman, Kashdan, Short, & Jarden, 2016).

The importance of internal harmony with facets of self was also indicated in the new definition of mental health by Galderisi, Heinz, Kastrupet et al. (2015). They opined that mental health or well-being is characterised by an internal dynamic state of equilibrium. Such a state of equilibrium empowers individuals to function in harmony with universal values of society. It is reported that individuals with a sense of meaning, a strong sense of autonomy, self-determination and purpose in life, had the ability to construct clear and definite personal goals and showed higher well-being (García-Alandete, 2015).

The broad cluster of eudaimonic well-being focuses on psychological and social well-being, including constructs, such as meaning, goals, purpose and potential (Keyes, 2007). Social well-being refers to the wellness of functioning within a social context in terms of the quality of relationships with people and communities (Shapiro & Keyes, 2008). Social well-being has five dimensions: integration, contribution, coherence, actualisation and acceptance (Keyes, 1998). These dimensions complement aspects of eudaimonic well-being with the emphasis on functioning well (Deci & Ryan, 2008). Other literature touches on the importance of goals and meaning within eudaimonic well-being and suggests that these elements can be a guide towards well-being (McMahan & Renken, 2011; Kiaei & Reio Jr., 2014).

Goals and Meaning as Facets of Eudaimonic Well-Being

Both goals and meaning are facets of eudaimonic well-being, and therefore some degree of association between them can be expected. Scholars argue that meaning is primarily behaviour that is goal-directed (Feldman & Snyder, 2005). The phenomena and terms goals and purpose, and meaning and purpose, are often used interchangeably (Emmons, 2003; George & Park, 2013), but are also distinguished and the links among them specified. A set goal results in action and provides meaning towards the action (Klinger, 2013). With this in mind, meaning is the result of a commitment towards the pursuit of goals. Goals can refer to the ‘what’ of aspirations and meaning to the ‘why’. Meaning and purpose are attained from actions that are goal directed and factors that promote the feasibility of the intended goal, with well-being and satisfaction as outcome (Park, 2010; Sheldon, Corcoran, & Prentice, 2018).

Seligman and Csikszentmihalyi (2006) highlight the importance of finding meaning through goal pursuit. Meaning and pursuit of goals play a significant role in reaching

optimisation or ideal self and positive qualities lead to the importance of what makes life worthwhile (Lambert et al., 2015).

The self-determination theory as a model of eudaimonic well-being was developed by Ryan and Deci (2008) and underlines the satisfaction of three fundamental, psychological needs essential for the experience of optimal well-being. This theory entails the following: competence in feeling effective and efficient in completing a task, autonomy in choosing and controlling behaviour towards goals, and relatedness which refers to a sense of belonging to others and gives meaning. When these three needs are met in the pursuit of meaningful goals, a higher sense of eudaimonic well-being is experienced. Ryff's (2013) six dimension model of psychological well-being includes purpose in life to set goals towards a meaningful life and positive relationships as essential to well-being (indicating that purpose and meaning are overlapping).

In this study, goals and meaning are conceptualised as different but linked phenomena. On the one hand, pursuit of personal goals can lead to a psychologically fulfilling life by providing meaning and structure to life, but on the other hand, values that are important/meaningful, can elicit goals to realise these values. The sustained pursuit of meaningful goals is associated with experiencing meaning and increased well-being (Gray, Ozer, & Rosenthal, 2017). Patterns of concordance of goals and meaning can be conceptualised and measured in various ways and were used for the purposes of this study as described by Wissing, Carlquist, Martos, and Schutte (2017). Sociodemographic factors may shape and mould the development of concordance between goals and meaning and its association with other indices of well-being.

Sociodemographic Variables in Well-Being

Sociodemographic variables play an important part in the experience of various facets of well-being (Hansson, Hillerås, & Forsell, 2005). Factors, such as gender, age, standard of

living, education level and marital status may have an influence on well-being (Diener & Ryan, 2009). However, Diener, Oishi, and Lucas (2003) found that sociodemographic factors explain merely a minimal amount of variance in well-being measures. This study explored the role of certain sociodemographic factors, namely, gender, age, standard of living, educational level and marital status with regard to their association with patterns of concordance of goals and meaning and the association thereof with well-being indicators in a South African sample.

The Family Domain of Life

Family can be defined as a group that consists of parents and children, or people in the same line of descendants that have the same ancestral lineage (Fahey, Keilthy, & Polek, 2012). Family well-being is about the members, on a collective and subjective level, experiencing a sense of wellness and communal needs which interact (Zuna, Summers, Turnbull, Hu, & Xu, 2010). Members of a family who experience support have heightened self-esteem, self-worth, positive affect and health (Preston et al., 2016). These connections increase meaning and purpose that in turn lead to enhanced well-being (Umberson & Karas Montez, 2010). Linked lives or relationships within a family profoundly influence well-being, and are a source of well-being (Merz & Huxhold, 2010). The unique role of demographic variables and contextual factors in the understanding of the concordance of goals and meaning cannot be overlooked (Wilson, Wissing, Schutte, & Kruger, 2018).

Studies on well-being in the family domain are available (Menon, Pendakur, & Perali, 2014; Botha, Booysen, & Wouters, 2017; Deist & Greeff, 2017; Harrell, 2018). However, literature is scarce on the alignment/concordance of goals and meaning in the family domain (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013).

The Present Study

This study addresses a gap in knowledge with regard to the concordance between goals and meaning in the family domain of life and how different patterns of concordance are associated with sociodemographic variables and indicators of well-being. For purposes of this study, the words concordance and alignment are used as synonyms. The distinguished patterns of alignment of goals and meaning (per person, per the family domain of life) were as follows: 'not a goal or a meaning'; 'both a goal and a meaning'; 'goal but not a meaning'; 'meaning but not a goal' as conceptualised and operationalised by Wissing et al. (2017). A possible contribution of this study is that it may provide a deeper understanding of facets of eudaimonic well-being in the family domain of life and how these may hang together with sociodemographic factors and other indicators of well-being. Such knowledge may be taken into account in the development of well-being interventions which could be implemented and evaluated for the facilitation of eudaimonic well-being in the family domain of life.

In view of the above, the specific research questions that were addressed by this study, are whether there is concordance/alignment between goals and meaning in the family domain of life, and how different patterns of concordance are associated with variables and indicators of well-being.

Method

Research Design

The prevalence of levels of psychosocial health and exploration of the dynamics and relationships with biomarkers of (ill)health in a South African social context were investigated in the FORT3 project (Wissing, 2008/2012). Data collected in a mixed methods convergent parallel research design (Creswell & Plano Clark, 2011; Plano Clark, 2017) collected between 2014 and 2016 in the original FORT3 project will be used in the present study. Post-graduate students, trained in the administration of psycho-social well-being

measures, acted as fieldworkers. They identified people in their communities in the various provinces of South Africa who matched the inclusion criteria.

Participants

The participants (N = 585) included in this study were: female (n = 362); male (n = 222); between 18 and 25 years of age (n = 51); between 26 and 40 years (n = 213); between 41 and 60 years (n = 304) and above 60 years of age (n = 16). The inclusion criteria for the participants stipulated that they should be older than 18 years of age, and their level of education at least Grade 12 to ensure good comprehension and sufficient skills in reading, reflecting and writing.

Data Gathering

Quantitative measures. The explanation and characteristics of the measures used in this study will now be discussed.

Sociodemographic questionnaire. Data were collected on gender, level of education, marital status, standard of living and age listed in the sociodemographic questionnaire.

Satisfaction with Life Scale (SWLS). This five-item scale was developed by Diener, Emmons, Larsen, & Griffin (1985) to measure the level of life satisfaction people experienced in their lives. Participants scored their level of agreement or disagreement with items on a 7-point Likert scale, 1 (*strongly disagree*) to 7 (*strongly agree*). The scale was not aimed at specific life domains but gave a more global and holistic experience of satisfaction with life. This scale showed good psychometric qualities and high internal consistency (Cronbach's alpha .74), as well as high validity (Pavot & Diener, 1993). The validity of the scale was as confirmed in South African samples (Wissing et al., 2010). The reliability index for this scale in the present study is Cronbach’s alpha .87.

Positive-Negative Affect Schedule (PANAS). The PANAS, developed by Watson, Clark, and Tellegen (1988), is a 20-item scale measuring positive affect (*10 items, e.g., 'interested, attentive'*) and negative affect (*10 items, e.g., 'irritable, jittery'*). The participants were asked to respond to a number of words that describe different feelings and emotions. Each item had to be read through and then the appropriate answer had to be encircled. Participants were asked to indicate how they generally feel and also how they feel on average. Respondents scored each item on a 1 ('*very slightly or not at all*') to 5 ('*extremely*') fully anchored Likert scale. A potential total ranges between 10 to 50 for each of the positive- and negative-affect sections. The original study found an average Cronbach's alpha of .88 for the positive affect items and .87 for the negative affect items and showed that these values for each construct remained relatively consistent when reporting affect across time frames up to a year (Watson et al., 1988). The original study also applied the PANAS to a non-clinical student sample, a non-clinical adult sample, and an inpatient sample, resulting in similar Cronbach's alphas of above .85 for both constructs in all three samples. The PANAS was tested within a South African context on university students and the scale showed good validity, reliability and Rasch fit within this context (Du Plessis & Guse, 2017). The Cronbach alpha reliability index of this scale for the current group of participants was PANAS_PA .83 and PANAS_NA .88.

Meaning in Life Questionnaire (MLQ). This is a 10-item questionnaire developed by Steger, Frazier, Oishi, and Kaler, (2006) that comprises two subscales which measure the presence of meaning, as well as the search for meaning in life. Participants scored their level of agreement on a 7-point Likert scale, 1 (*absolutely untrue*) to 7 (*absolutely true*). The Presence subscale (*items 1, 4, 5, 6, and 9*) evaluates how life is interpreted as meaningful, while the Search subscale (*items 2, 3, 7, 8, and 10*) measures the degree of motivation towards the discovery of meaning in life (Schulenberg, Strack, & Buchanan, 2011). Total

scores ranged between 5 to 35 per subscale. Cronbach's alpha levels for Presence of Meaning and Search for Meaning showed good internal consistency, ranging from .86 to .88 (Steger et al., 2006). Three studies done demonstrated that the scale had high internal consistency, temporal stability, factor structure, and strong validity (Steger et al., 2006). Internal consistency indices indicated satisfactory reliability for Presence of Meaning (MLQ-P) and Search for Meaning (MLQ-S) sub-scales within a South African context (Temane, Khumalo, & Wissing, 2014). The Cronbach alpha reliability index for this scale in the present study is MLQ-P .81 and MLQ-S .88.

Mental Health Continuum-Short Form (MHC-SF). The MHC-SF measures mental health on the well-being continuum of the two continua model described and developed by Keyes (2002; 2008). This measure evaluates two dimensions (hedonic and eudaimonic) of well-being and distinguishes three clusters in the 14-item scale, namely Emotional Well-being (hedonic), Psychological Well-being (eudaimonic), and Social Well-being (eudaimonic). These clusters were combined on a continuous scale to indicate whether someone was flourishing, moderately mentally healthy, or languishing (Keyes, 2002). Participants completed a 6-point Likert-type scale to rate their experiences over the past month as an experience occurring '*never (0), once or twice (1), about once a week (2), 2 or 3 times a week (3), almost every day (4), or every day (5)*'.

In South Africa, a Setswana version was validated mainly for Setswana-speaking adults and sufficient reliability was found with a Cronbach's alpha of .72 (Keyes et al., 2008). More recently a study was conducted within a culturally diverse South African context evaluating the MHC-SF in three different languages: A bifactor exploratory structural equation modelling model displayed superior fit for the overall scale, but the subscales did not attain sufficient reliability (Schutte & Wissing, 2017). A Cronbach's alpha of .89 was obtained for this scale in the present study.

Qualitative data gathering. Semi-structured open-ended questions on goals and meaning were used to collect qualitative data.

Semi-structured open-ended questions on goals and meaning. The study made use of semi-structured open-ended questions and which were formulated as stipulated by Delle Fave, Brdar, Freire, Vella-Brodrick, and Wissing (2011) in the Eudaimonic-Hedonic Happiness Investigation (EHHI). The open-ended questions which were asked on meaning and goals were: 'Please list the three things that you consider most meaningful in your present life', followed by: 'For each of them, please specify why it is meaningful (try to be as specific as possible)', 'Please list the three most important future goals for you' followed by: 'For each of them, please specify why it is important'.

Procedure

Data were gathered by trained post-graduate students who acted as field workers under the supervision of the researchers. Informed consent was provided by the participants. Thereafter the research battery was completed by the participants at a time and place of their convenience. Data were anonymised before being submitted for capturing of the quantitative data by the North-West University's Statistical Consultation Services. Qualitative data were coded by implementation of the coding system developed by Delle Fave et al. (2011). Codes were then quantified and linked to quantitative data.

Ethical Considerations

The Ethics Committee of the North-West University approved the FORT3 project, project number NWU 00002-07-A2 and the present study was approved by the Health Research Ethics Committee (HREC) of the North-West University, allocating the approval number of NWU 00075-18-S1. The test battery gave the opportunity for the participants to reflect on the important goals, meaningful things, relationships and aspects of well-being in

their lives, which many reported to have been experienced as positive. This was a minimal risk study where the participants were free to withdraw any time they felt uncomfortable or at risk with no consequence. Informed written consent was given by each participant. Participants completed the questionnaire at a facility that they found convenient with sufficient privacy, with most participants completing the questionnaires at their homes. After data collection, the participant's informed consent form was separated from the questionnaire to ensure confidentiality. The capturing of the quantitative data, as well as the coding and capturing of the qualitative data were therefore done anonymously. The management, storage and destruction of data was overseen and monitored by the FORT3 PI (second author) and collaborator (third author). The FORT3 PI and collaborator keep the electronic data on password protected computers to ensure the integrity of the data.

Data analysis. In the present study, an existing FORT 3 dataset where participants completed the EHHI and the other measures mentioned above, was utilised.

Qualitative data analysis and trustworthiness. On the questions with regard to goals and meaning, the qualitative responses of the participants were converted to quantitative data using Delle Fave et al. (2011) coding system developed in an international project of which the second author is part. All verbal expressions of the participants received a basic code within this coding system, and the codes were grouped and categorised into life domains. The family life domain is the focus of this study. Two trained coders coded the data from the South African context under supervision of the second author. Discrepancies were discussed towards consensus. This process was overseen and monitored by the FORT3 principal investigator (second author) and collaborator (third author).

Quantitative data analysis, validity and reliability. The coded (quantified) qualitative data were combined with the quantitative data from the sociodemographic questionnaire and

the Likert-type well-being questionnaires in order to conduct the following quantitative analyses:

1 Cronbach's alpha indices were used in preliminary analyses to determine whether all measures used in the present study, namely the PANAS, MHC-SF, MLQ and SWLS were reliable for the specific sample. IBM SPSS Statistics were used to obtain these results. Total scores are generally considered to indicate internal consistency reliability when Cronbach's alpha indices exceed .70. Confirmatory factor analysis was used to check the factorial validity of the quantitative scales for this sample using M-plus version 7.4.

2 The frequencies of the family domain mentioned as an important goal, the reason for an important goal, as something meaningful, and as a reason for something being meaningful, were determined using IBM SPSS Statistics.

3 Using Microsoft Office Excel, the alignment patterns between goals (what and why) and meaningful things (what and why) within the family domain were determined per person. Four alignment patterns were distinguished as described by Wissing et al. (2017):

> 1 = The family domain was NEITHER mentioned in the participant's important goals or the reasons therefore, NOR in his/her meaningful things or motivations therefore.
>
> 2 = The family domain was mentioned in BOTH the participant's important goals or the reasons therefore, AND in his/her meaningful things or motivations therefore.
>
> 3 = The family domain WAS mentioned in his/her important goals or the reason therefore, BUT NOT in his/her meaningful things or motivations therefore.

4 = The family domain WAS NOT mentioned in the participant's important goals or the reasons therefore, BUT IT WAS mentioned in his/her meaningful things or motivations therefore.

4 Cross-tabulations and accompanying chi-square tests and Cramer's V as effect size were used to explore the associations between the alignment patterns and the demographic variables using IBM SPSS.

5 One-way ANOVA's were performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score were compared for the four alignment pattern groups. Note that a separate ANOVA was performed for each of the well-being scales or subscales. In other words, this step involved six one-way ANOVA's. Omega squared effect sizes were determined as indication of possible practical significance.

6 Two-way ANOVA's were performed using IBM SPSS where the scores on the SWLS, PANAS-PA, PANAS-NA, MLQ-P, MLQ-S, and MHC-SF total score were compared for the four alignment pattern groups, the respective demographic variables (gender, age group, education level, standard of living, and marital status), and the interaction between alignment patterns and the respective demographic variables. Note that a separate ANOVA was performed for each of the well-being scales or subscales and for each demographic variable. In other words, this step involved 6 x 5 = 30 two-way ANOVA's. Omega squared effect sizes were determined as indication of possible practical significance.

Results

The results are presented as follows: firstly, the frequencies of goals and meaning in the family domain, then the associations between alignment patterns and sociodemographic variables, followed by the associations between alignment patterns and well-being, and lastly

interactions between alignment patterns and sociodemographic variables in their association with well-being indices.

Frequencies of goals and meaning in the family domain

Table 1 indicates the frequencies of family being mentioned as a goal/meaning or as a reason for their goal/reason for meaning.

Table 1.

Frequencies of goals and meaning in the family domain of life (N=585)

Frequency	**Goal**	**Reason for goal**	**Meaningful thing**	**Reason for meaningful thing**
0	47.7 %	56.6 %	15 %	55.2 %
1	43.8 %	30.3 %	63.9 %	27.5 %
2	7.2 %	8.2 %	18.3 %	10.4 %
3	0.9 %	2.4 %	2.6 %	1.7 %
4	-	-	-	0.3 %
Missing	0.5 %	2.6 %	0.2 %	4.8 %
Total	**100 %**	**100 %**	**100 %**	**100 %**
Sum of 1, 2, 3, 4	**51.9 %**	**40.9%**	**84.8 %**	**39.9 %**

Note. Frequency *0* = no mention of family as a goal or meaning, *1* = mentioned family once as goal or meaning, *2* = indicated family twice as a goal or meaning, *3* = indicated family three times as a goal or meaning, *4* = indicated family four times as a goal or meaning.

In Table 1 it can be noticed that 51.9% of the participants did mention family as one of their goals, and that 84.8% mentioned family as an important meaningful thing in their lives. It is thus clear that a large number of participants referred to the family when contemplating important goals and meaningful things in their lives, however, family was mentioned far more often in terms of meaning than in relation to goals.

Associations between alignment patterns and sociodemographic variables

The chi-square test, which is referred to in the following analyses, relies on the assumption that the observations are independent and that the expected count of all cells are large enough, where a minimum expected value of 5 is often considered sufficient (Field, 2013). In this study, the observations were independent, and the count per cell exceeded the minimum in the instances of Gender and Educational levels as sociodemographic variables. This means that the chi-square with regard to other variables need to be interpreted with caution. Figure 1 depicts goal and meaning alignment patterns as associated with sociodemographic variables.

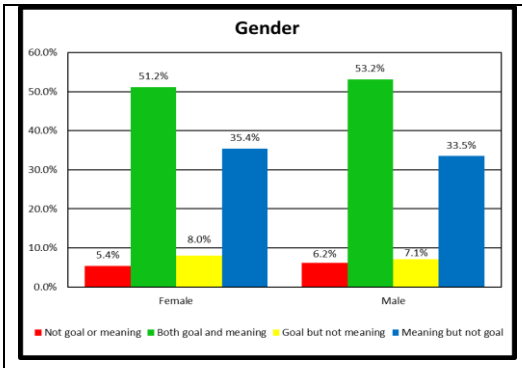
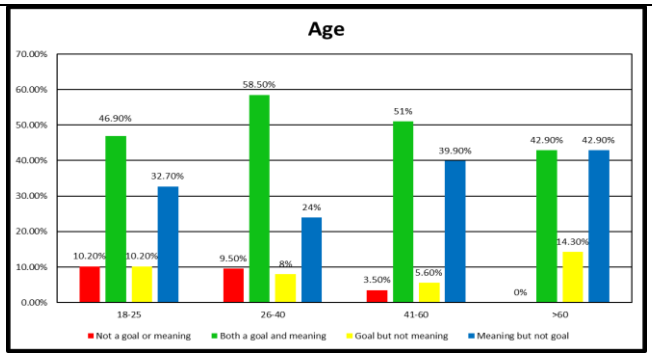
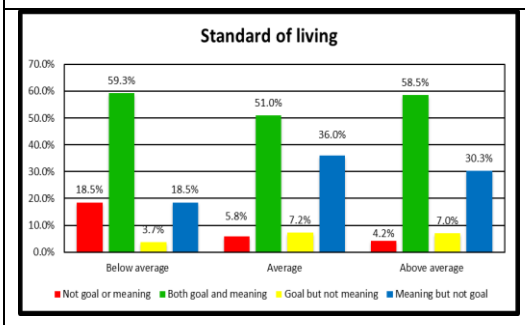
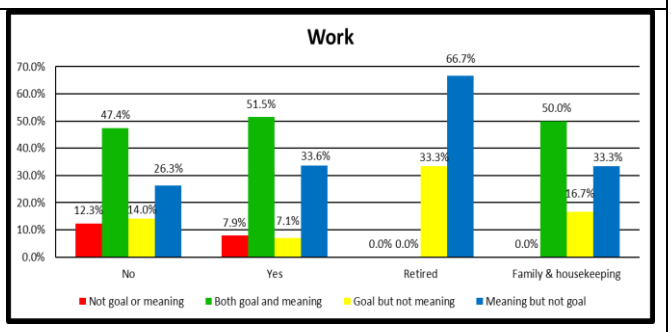
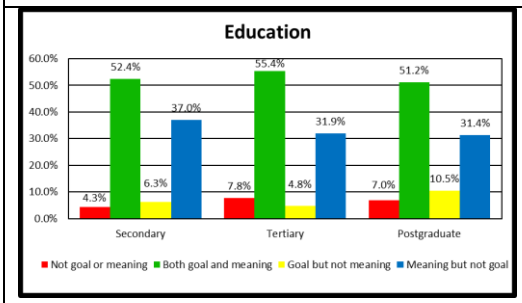
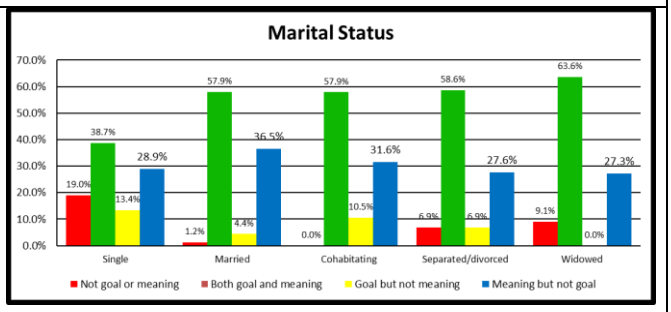
<table>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Chi-Square test: p=.306, V=0.081</td><td>Chi-Square test: p=.006, V=0.118</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Chi-Square test: p=.054, V=0.0.108</td><td>Chi-Square test: p=.316, V=0.106</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Chi-Square test: p=.329, V=0.079</td><td>Chi-Square test: p=.001, V=0.214</td></tr>
</table>

Figure 1. Alignment patterns of goals and meaning in association with sociodemographic variables

In reviewing all the sub-figures of Figure 1, it is clear that the green and blue bars reflecting the both-goals-and-meaning, and the meaning-only patterns respectively, are far more frequent in the family domain when considering sociodemographic variables than any of the other two concordance patterns (not a goal or meaning, goal but not meaning) or no-goal-no meaning option. This shows the prominence of meaning and the overlap of meaning and goals inherently in the family domain of life, irrespective of sociodemographic qualifications, when people reflect on important things in their lives from a eudaimonic perspective.

Statistically significant associations with alignment patterns were determined according to the p-value of alpha less than .05, and Cramer's V effect size of which the latter was interpreted according to the guidelines of David and Sutton (2004): 0-0.19 very low association; 0.20-0.39 low association; 0.40-0.69 modest association; 0.70-0.89 high association; 0.90=1 very high association. In this regard, statistically significant associations were found for age (p=.006, V=0.118), standard of living (p=.054, V=0.108) and marital status (p<=.000, V=0.214). In all these instances, these associations were of small practical significance as indicated by the Cramer V. In general, family became less prominent as both a goal and a meaning as age increased, but more common as a source of meaning (without being a goal). As age increased, the frequency of family not being a goal or a meaning decreased, with no observations in this category for the age group older than 60 years. Participants who indicated a below average standard of living had the highest frequency in the no-goal-no-meaning category for family, but at all three levels of income the goal-and-meaning pattern was higher than any other pattern. Both the meaning-only pattern and goal-only pattern were higher in the average income and above average income groups than in the

below average income group. For marital status, family was the least mentioned as a goal or a source of meaning for single participants, while it was common for all other categories.

Associations between alignment patterns and well-being

One-way ANOVA tests rely on the assumptions that the observations are independent, that the outcome variable is normally distributed within each group and that the groups being compared have homogeneous variances (Field, 2018). In this study, the observations were independent. The Shapiro-Wilk test of normality indicated that the well-being variables were not normally distributed. For the one-way ANOVAs, Levene's test of homogeneity of variances confirmed this assumption for all well-being variables. To account for deviations from normality and homogeneity of variances, the nonparametric Kruskal-Wallis test was also conducted to check if the findings of the one-way ANOVA were confirmed. In all cases, the findings were confirmed.

Table 2 depicts the significance of associations between well-being scores and goal and meaning alignment patterns in the family domain of life as shown by one-way ANOVA-tests. The figures of the associations between alignment patterns and well-being are added in the addenda as Figure A1.

Table 2.

Associations between alignment patterns and well-being

Scale	*F*	df_1, df_2	*P*	ω^2
SWLS	0.564	3, 544	.639	-0.002
PANAS-PA	1.590	3, 545	.191	.003
PANAS-NA	0.588	3, 545	.623	-0.002
MLQ-P	1.228	3, 544	.299	.001
MLQ-S	1.037	3, 544	.376	.000
MHC-SF-tot	2.215	3, 502	.086	.007

Note. SWLS = Satisfaction with Life Scale; PANAS-PA = Positive and Negative Affect Schedule-Positive Affect; PANAS-NA = Positive and Negative Affect Schedule-Negative Affect-Negative Affect; MLQ-P = Meaning in Life Questionnaire-Presence; MLO-S = Meaning in Life Questionnaire-Search; MHC-SF-tot = Mental Health Continuum-Short Form-Total.

ω^2 = effect size where ω^2 = 0.01 indicates a small effect, ω^2 = 0.06 indicates a medium effect; and ω^2 = 0.14 indicates a large effect (Field, 2017).

As can be noted in Table 2, there are no statistical or practical significant associations between alignment patterns and indices of psychosocial well-being. Alignment patterns and well-being as measured with the MHC-SF total score are significant on the 10% level, but this is not of any practical significance.

Interactions between alignment patterns and sociodemographic variables in their association with well-being

In the case of two-way ANOVAs, the assumptions are also that the observations are independent, that the outcome variable is normally distributed within each group and that the groups being compared have homogeneous variances (Field, 2018). In this study, the observations were independent. The Shapiro-Wilk test of normality indicated that the well-being variables were not normally distributed. For the two-way ANOVAs the assumption of homogeneity of variances held in many, but not all, cases. Since no nonparametric test exist which could be conducted to check if the findings of the parametric two-way ANOVA were confirmed, the deviations from the assumptions are recognised as a limitation, and the findings will be interpreted with caution, especially in cases where group sizes were small.

Table 3 reflects the interactions between alignment patterns and sociodemographic variables in association with well-being. As can be noted, only few significant interactions were identified.

Table 3.

Interactions between alignment patterns and sociodemographic variables in association with well-being

Scale	**Main effect 1: Alignment pattern**				**Main effect 2: Demographic variable**				**Interaction effect**			
	F	df_1, df_2	*p*	ω^2	*F*	df_1, df_2	*p*	ω^2	*F*	df_1, df_2	*p*	ω^2
Gender												
SWLS	0.822	3, 540	.482	-0.001	3.267	1, 540	**.071**	0.004	0.679	3, 540	.565	-0.002
PANAS-PA	1.536	3, 541	.204	0.003	0.017	1, 541	.895	-0.002	0.224	3, 541	.880	-0.004
PANAS-NA	0.594	3, 541	.619	-0.002	0.024	1, 541	.876	-0.002	0.247	3, 541	.864	-0.004
MLQ-P	1.299	3, 540	.274	0.002	0.004	1, 540	.952	-0.002	0.654	3, 540	.581	-0.002
MLQ-S	0.965	3, 540	.409	0.000	1.922	1, 540	.166	0.002	1.847	3, 540	.137	0.005
MHC-SF-tot	1.665	3, 498	.174	0.004	0.055	1, 498	.814	-0.002	1.286	3, 498	.278	0.002
Age Group												
SWLS	0.989	3, 533	.397	0.000	1.117	3, 533	.341	0.001	0.619	8, 533	.762	-0.005
PANAS-PA	1.101	3, 534	.348	0.001	1.772	3, 534	.151	0.004	1.232	8, 534	.278	0.003
PANAS-NA	1.903	3, 534	.128	0.005	1.353	3, 534	.256	0.002	1.177	8, 534	.311	0.003
MLQ-P	0.188	3, 533	.904	-0.004	0.696	3, 533	.554	-0.002	1.939	8, 533	**.052**	**0.013**
MLQ-S	1.079	3, 533	.357	0.000	0.369	3, 533	.775	-0.003	1.196	8, 533	.299	0.003
MHC-SF-tot	0.914	3, 491	.434	-0.001	0.464	3, 491	.707	-0.003	1.174	8, 491	.313	0.003
Standard of Living												
SWLS	0.520	3, 517	.669	-0.002	13,219	2, 517	**.000**	**0.041**	0.735	6, 517	.622	-0.003
PANAS-PA	1.579	3, 518	.193	0.003	1.454	2, 518	.235	0.002	1.182	6, 518	.314	0.002
PANAS-NA	0.641	3, 518	.589	-0.002	0.815	2, 518	.443	-0.001	0.991	6, 518	.430	0.000
MLQ-P	1.799	3, 517	.146	0.004	2.815	2, 517	**.061**	0.007	1.685	6, 517	.122	0.007
MLQ-S	2.421	3, 517	**.065**	0.008	7.671	2, 517	**.001**	**0.024**	1.535	6, 517	.165	0.006
MHC-SF-tot	1.915	3, 479	.126	0.006	0.258	2, 479	.773	-0.003	0.764	6, 479	.598	-0.003
Education Level												
SWLS	0.575	3, 537	.632	-0.002	0.269	1, 537	.604	-0.001	0.342	3, 537	.795	-0.004
PANAS-PA	1.081	3, 538	.357	0.000	2.451	1, 538	.118	0.003	0.077	3, 538	.972	-0.005
PANAS-NA	0.601	3, 538	.615	-0.002	1.937	1, 538	.165	0.002	0.097	3, 538	.962	-0.005
MLQ-P	0.862	3, 537	.461	-0.001	14.986	1, 537	**.000**	**0.025**	0.751	3, 537	.522	-0.001
MLQ-S	0.280	3, 537	.840	-0.004	12.497	1, 537	**.000**	**0.020**	0.566	3, 537	.638	-0.002
MHC-SF-tot	1.956	3, 496	.120	0.006	0.567	1, 496	.452	-0.001	0.177	3, 496	.912	-0.005
Marital status												
SWLS	2.007	3, 522	.112	0.005	2.954	4, 522	**.020**	**0.014**	0.664	10, 522	.758	-0.006
PANAS-PA	1.205	3, 523	.307	0.001	0.478	4, 523	.752	-0.004	0.748	10, 523	.679	-0.005
PANAS-NA	2.926	3, 523	**.033**	**0.010**	3.354	4, 523	**.010**	**0.017**	1.876	10, 523	**.046**	**0.016**

MLQ-P	1.181	3, 522	.316	0.001	2.365	4, 522	**.052**	**0.010**	1.092	10, 522	.366	0.002
MLQ-S	2.913	3, 522	**.034**	**0.010**	2.080	4, 522	**.082**	0.008	1.670	10, 522	**.084**	**0.012**
MHC-SF-tot	1.462	3, 483	.224	0.003	1.271	4, 483	.280	0.002	1.514	10, 483	.131	**0.010**

Note. SWLS = Satisfaction with Life Scale; PANAS-PA = Positive and Negative Affect Schedule-Positive Affect; PANAS-NA = Positive and Negative Affect Schedule-Negative Affect-Negative Affect; MLQ-P = Meaning in Life Questionnaire-Presence; MLO-S = Meaning in Life Questionnaire-Search; MHC-SF-tot = Mental Health Continuum-Short Form-Total.

ω^2 = effect size where ω^2 = 0.01 indicates a small effect, ω^2 = 0.06 indicates a medium effect; and ω^2 = 0.14 indicates a large effect (Field, 2018)

Significant interactions with a 5 to 10 percent variation range are depicted in Figure 2. All interaction figures are added to the addenda as Figures A2 to A6.

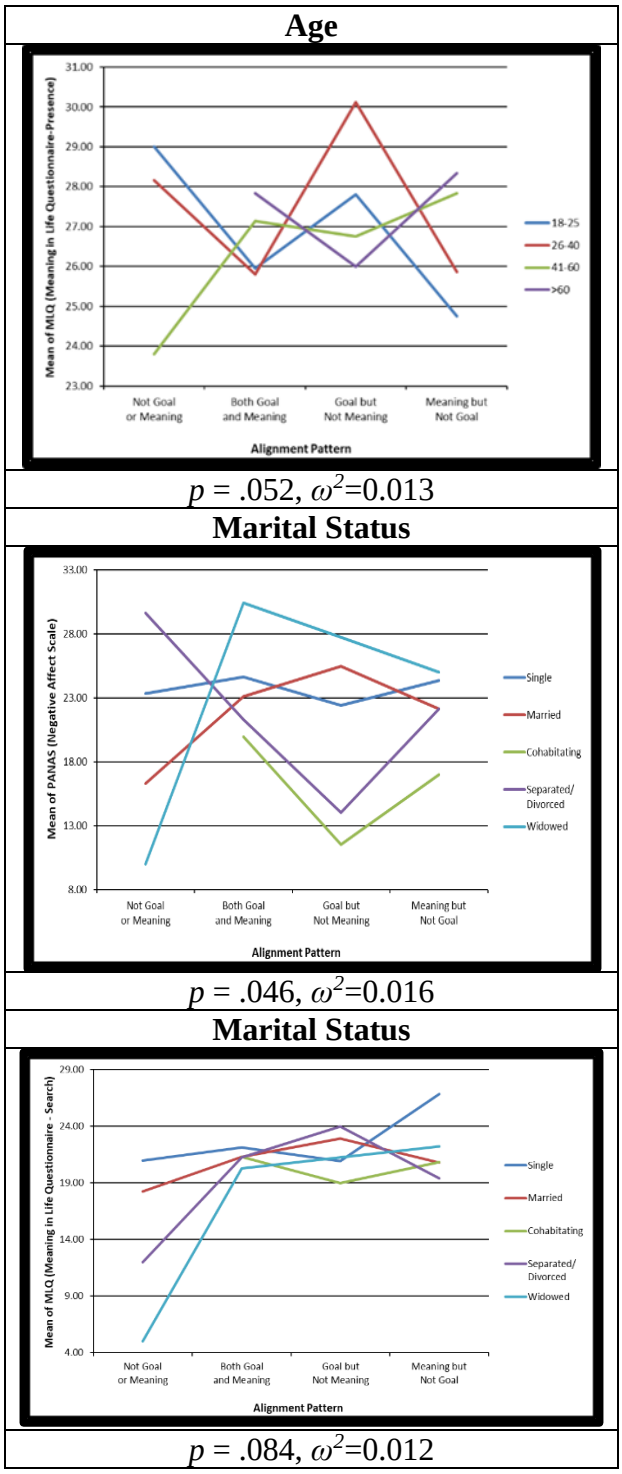


Figure 2. Significant interactions between alignment patterns and sociodemographic variables in association with well-being

Gender as a demographic variable showed no interaction effect, but was statistically significant (on the .10 level of significance) as a main effect in the case of the Satisfaction with Life Scale (SWLS) (p=.071), but this was not of practical significance as shown by omega squared as index of effect size (ω^2= 0.004; guidelines for interpretation are 0.01 small, 0.06 medium, 0.14 large - Field, 2018). The alignment patterns and age as a sociodemographic variable showed a significant interaction in the case of the Presence of Meaning (MLQ-P) (p=.052) with a small effect size (ω^2= -0.013). There were no statistically significant interactions between alignment patterns, Standard of Living and well-being indices. However, some significant main effects were shown for Standard of living in the cases of SWLS (p=.000, ω^2=0.041 - near medium effect size), MLQ-P, (p=061, ω^2=0.007 - no practical significance), and MLQ-S (p=.065 main effect alignment pattern, p=.001 main effect demographic variable, ω^2=0.024 – small effect size).

No statistically significant interactions were found for alignment patterns, sociodemographic variables and well-being indices. Statistically significant main effects were found for Education in the case of MLQ-P (p=.000, ω^2=0.025), and MLQ-S (p=.000, ω^2=0.020) which were in both instances of small practical significance. Marital Status was the most important sociodemographic variable playing a role in the association of alignment patterns and sociodemographic variables with well-being indices. A significant main effect was shown for SWLS (p=.020, ω^2=0.014) which was of a small practical significance. The PANAS (Negative Affect) showed a statistical significant interaction with alignment patterns and the relevant sociodemographic variable (marital status) (p=.046) with a small effect size (ω^2=0.017), as well as statistical significant main effects in both instances which were also of small practical significance (see Table 3). The MLQ-P only showed a statistically significant (p=.052) main effect with marital status which was of a small effect size (ω^2=0.010). The MLQ-S manifested a statistical significant main effect for alignment patterns and marital

status (p=.034, ω^2=0.010 – small effect size). The other main effect was only significant on the 10 percent level, which is of no practical significance. The overall interaction was also only significant on the 10 percent level (p=.082), and had only a small practical effect size (ω^2=. 012).

Discussion

The aim of this study was to explore the concordance/alignment between goals and meaning in the family domain of life and how different patterns of concordance were associated with demographic variables and indicators of well-being. Both goals and meaning as alignment pattern appear to be prominent in the family domain of life. Furthermore, a few significant interactions were found among patterns of concordance, sociodemographic variables and specific indices of well-being.

The findings showed that many participants referred to the family domain when mentioning their most important goals, reasons for goals, most important meaningful things, and reasons for the meaningfulness. These findings reflect the inherent importance of family life in people's eudaimonic well-being as manifested in goals /purposes and meaningful experiences. However, it is also evident that a far larger number of participants mentioned family as an important meaningful thing in their lives, than those mentioning goals in the family domain of life (although half of the participants also mentioned family as a goal). The strong figuration of family in what is meaningful to people is in line with findings from previous studies showing that family is the most important source of meaning (Delle Fave, Brdar, Wissing, & Vella-Brodrick, 2013; Lambert et al., 2013). The present findings also resonates to some extent with the relationality meaning model, which emphasises amongst others, that meaning at its core is about relationships and connections (Wissing, 2014). As family consists of a combination of relationships and connections (Thomas, Liu, & Umberson, 2017; Umberson, Crosnoe, & Reczek, 2010), it is therefore mostly mentioned as a

meaningful thing. A possible explanation for family not being indicated that often as a goal, may be because family is already experienced as highly meaningful and satisfying belongingness needs (Lambert et al., 2013).

Some associations between alignment patterns and sociodemographic variables were found. Family became less prominent as both-a-goal-and-a-meaning as age increased, but more common as a source of meaning (without being a goal). This finding correlates with the results from a study conducted by Delle Fave et al. (2013) in which family was found to be a greater source of meaning for older adults than younger individuals. Steger, Oishi and Kashdan (2009) also found in their studies that as people age, they reported more meaning in later stages of life than the earlier life stages.

Participants who indicated a below average standard of living reflected the highest frequency in the no-goal-no-meaning category. This pattern may be an indication that the below average income group is at a low point in life due to lack of resources and financial constraints, and has given up on goals and meaning. Alternatively, it may also theoretically be that people with little drive have less financial success in life, and that this is a reciprocal process.

Our findings with regard to standard of living and association with alignment patterns dovetail to some extent with the results of Ward and King (2016) who found that people forecast there future lives as more meaningful if they are wealthy and not poor. For marital status, family was the least mentioned as a goal or a source of meaning for single participants. In a study by Delle Fave et al. (2013), it was found that the younger generation, who may still be single, are on a journey of self-discovery and self-focus using society to construct meaning, and may therefore be less focussed on family.

It is noteworthy that despite the few indicated significant associations between alignment patterns and sociodemographic variables, the both-goal-and-meaning pattern, as well as the meaning-but-no-goal pattern were mentioned far more frequently than any other alignment patterns in all instances of sociodemographic variables explored in the present study. This finding points to the core importance of eudaimonic well-being facets, such as goals and meaning as well as their co-occurrence in family life.

The self-concordance model (Sheldon & Elliot, 1999) predicts that alignment of meaning and goals will be associated with higher levels of well-being. This could not be supported by the present findings where no statistical or practical significant associations between alignment patterns in the family domain of life and indices of psychosocial well-being were found. The present unexpected finding is difficult to explain. However, a possible explanation may be that the self-concordance model refers to life in general, whereas the present study focused on the family domain of life in which the dynamics among variables may be different from that of life in general or perhaps in other life domains. Another reason may be that the operationalisation of alignment patterns may differ among studies, and that well-being operationalisations may differ, or that some scales are not sensitive enough to pick up subtle differences as found by Schutte, Wissing, and Ellis (2018).

Some significant main effects and interactions were found between alignment patterns and sociodemographic variables in association with well-being indices. A new insight from this study is that the association between alignment patterns and well-being in the family domain of life is influenced by some sociodemographic variables, and that different indices of well-being revealed different results. In view of the only small practical significances obtained in most statistically significance cases, these findings should be interpreted with caution. The fact that the associations between alignment patterns and indices of well-being in the family domain of life were only significant in some instances where sociodemographic

variables were taken into account, therefore only provides qualified support for the self-concordance model as found in the current South African sample. It should, however, also be taken into account that the self-concordance model actually refers to life in general, and not specific life domains. It may be that the dynamics in the family domain are unique, or that dynamics may differ in various domains of life. Similar research is needed in other life domains in order to provide a fuller picture of the association between patterns of goal and meaning alignment on the one hand, and indicators of well-being on the other hand, while taking sociodemographic variables into account, and perhaps to contribute to the elaboration of the self-concordance model.

Taking the above discussion into consideration, it can be concluded that family remains an important source of meaning, whether it is stated as a goal or not (although many people also set goals in the family domain of life). Future research of similar studies replicated in other countries may be extremely valuable to compare the results. Limitations of this research are that only a South African group had been included, and that the association of alignment patterns with sociodemographic variables and indices of well-being were only explored in the family domain of life. For comparison purposes and further insights similar studies need to be conducted in other domains of life, such as work, leisure, intra-personal, and community life domains. This study contributed to a deeper understanding of the dynamics of eudaimonic well-being facets in the family domain of life.

Acknowledgements

This work is based on research supported in part by the National Research Foundation (NRF) of South Africa (Grant no.106050). It is acknowledged that opinions, findings, conclusions and recommendations expressed are those of the authors and that the NRF accepts no liability in this regard.

Declaration of interest statement

There is no conflict of interest to declare for any of the authors of this article.

References

Adams, N., Little, T. D., & Ryan, R. M. (2017). Self-determination theory. In *Development of Self-Determination Through the Life-Course* (pp. 47-54). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-024-1042-6_4

Bauer, J. J., King, L. A., & Steger, M. F. (2018). Meaning-making, Self-determination theory, and the question of wisdom in personality. *Journal of Personality*. https://doi.org/10.1111/jopy.12381

Biswas-Diener, R., Kashdan, T. B., & King, L. A. (2009). Two traditions of happiness research, not two distinct types of happiness. *Journal of Positive Psychology*, *4*(3), 208-211. https://doi.org/10.1080/17439760902844400

Botha, F., Booysen, F., & Wouters, E. (2017). Satisfaction with family life in South Africa: The Role of Socioeconomic Status. *Journal of Happiness Studies*, pp. 1–34. Springer Netherlands. https://doi.org/10.1007/s10902-017-9929-z

Brdar, I., Vella-Brodrick, D., Nakamura, J., & Solano, A. C. (2014). A cross-country study of personal goals and meanings. Retrieved from http://bib.irb.hr/prikazi-rad?rad=737503

Ciani, K. D., Sheldon, K. M., Hilpert, J. C., & Easter, M. A. (2011). Antecedents and trajectories of achievement goals: A self-determination theory perspective. *British Journal of Educational Psychology*, *81*(2), 223-243. https://doi.org/10.1348/000709910X517399

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. SAGE Publications. Retrieved from

https://books.google.co.za/books/about/Designing_and_Conducting_Mixed_Methods_R.html?id=6tYNo0UpEqkC&redir_esc=y

Darnon, C., Harackiewicz, J. M., Butera, F., Mugny, G., & Quiamzade, A. (2007). Performance-approach and performance-avoidance goals: When uncertainty makes a difference. *Personality and Social Psychology Bulletin, 33*(6), 813-827. https://doi.org/10.1177/0146167207301022

David, M., & Sutton, C. D. (2004). *Social Research: The Basics.* Sage: London, UK

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*(1), 19-43. https://doi.org/10.1146/annurev-orgpsych-032516-113108

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies*, *9*(1), 1–11. https://doi.org/10.1007/s10902-006-9018-1

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, *49*(3), 182-185. https://doi.org/10.1037/a0012801

Deist, M., & Greeff, A. P. (2017). Living with a parent with dementia: A family resilience study. *Dementia*, *16*(1), 126-141. https://doi.org/10.1177/1471301215621853

Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. P. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research, 100*(2), 185–207. https://doi.org/10.1007/s11205-010-9632-5

Delle Fave, A., Brdar, I., Wissing, M. P., & Vella-Brodrick, D. A. (2013). Sources and motives for personal meaning in adulthood. *Journal of Positive Psychology*, *8*(6), 517-529. https://doi.org/10.1080/17439760.2013.830761

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S., Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, *54*(1), 403-425. https://doi.org/10.1146/annurev.psych.54.101601.145056

Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African Journal of Psychology*, *39*(4), 391-406. https://doi.org/10.1177/008124630903900402

Disabato, D. J., Goodman, F. R., Kashdan, T. B., Short, J. L., & Jarden, A. (2016). Different types of well-being? A cross-cultural examination of hedonic and eudaimonic well-being. *Psychological Assessment*, *28*(5), 471-482. https://doi.org/10.1037/pas0000209

Du Plessis, G. A., & Guse, T. (2017). Validation of the scale of positive and negative experience in a South African student sample. *South African Journal of Psychology*, *47*(2), 184-197. https://doi.org/10.1177/0081246316654328

Emmons, R. A. (2003). Personal goals, life meaning, and virtue: Wellsprings of a positive life. In *Flourishing: Positive psychology and the life well-lived.* (pp. 105-128). Washington: American Psychological Association. https://doi.org/10.1037/10594-005

Emmons, R. A. (2005). Striving for the sacred: Personal goals, life meaning, and religion. *Journal of Social Issues*, *61*(4), 731-745. https://doi.org/10.1111/j.1540-4560.2005.00429.x

Emmons, R. A., & Emmons, R. A. (2003). Five personal goals, life meaning, and virtue: Wellspring of a positive life. *CiteSeer*. https://doi.org/10.1.1.468.802

Fahey, T., Keilthy, P., & Polek, E. (2012). Family relationships and family well-being: A study of the families of nine year-olds in Ireland. Retrieved from http://researchrepository.ucd.ie/handle/10197/5102

Feldman, D. B., & Snyder, C. R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal–directed thinking and life meaning. *Journal of Social and Clinical Psychology*, *24*(3), 401-421. https://doi.org/10.1521/jscp.24.3.401.65616

Field, A. (2018). *Discovering Statistics using IBM SPSS Statistics*. Sage. Retrieved from https://books.google.co.za/books?hl=en&lr=&id=c0Wk9IuBmAoC&oi=fnd&pg=PP2&ots=LbCqMG0w4G&sig=IHKHWqkP5-RiQleC_rEJDweUE1I&redir_esc=y#v=onepage&q&f=false

Fowers, B. J., Mollica, C. O., & Procacci, E. N. (2010). Constitutive and instrumental goal orientations and their relations with eudaimonic and hedonic well-being. *Journal of Positive Psychology*, *5*(2), 139-153. https://doi.org/10.1080/17439761003630045

Frankl, V. E. (1962). Psychiatry and man's quest for meaning. *Journal of Religion and Health*, *1*(2), 93-103. https://doi.org/10.1007/BF01532076

Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. *World Psychiatry*, *14*(2), 231-233. https://doi.org/10.1002/wps.20231

García-Alandete, J. (2015). Does meaning in life predict psychological well-being?: An analysis using the spanish versions of the purpose-in-life test and the Ryff's scales. *The*

European Journal of Counselling Psychology, *3*(2), 89-98. https://doi.org/10.5964/ejcop.v3i2.27

Gaudreau, P. (2012). Goal self-concordance moderates the relationship between achievement goals and indicators of academic adjustment. *Learning and Individual Differences*, *22*(6), 827-832. https://doi.org/10.1016/j.lindif.2012.06.006

Gaudreau, P., Carraro, N., & Miranda, D. (2012). From goal motivation to goal progress: the mediating role of coping in the Self-Concordance Model. *Anxiety, Stress and Coping*, *25*(5), 507-528. https://doi.org/10.1080/10615806.2011.628015

George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct?: An examination of correlates and predictors. *The Journal of Positive Psychology*, *8*(5), 365-375. https://doi.org/10.1080/17439760.2013.805801

Gray, J. S., Ozer, D. J., & Rosenthal, R. (2017). Goal conflict and psychological well-being: A meta-analysis. *Journal of Research in Personality*, *66*, 27-37. https://doi.org/10.1016/J.JRP.2016.12.003

Grouden, M. E., & Jose, P. E. (2014). How do sources of meaning vary according to demographic factors?. *New Zealand Journal of Psychology*, *43*(3).

Gruman, J. A., Lumley, M. N., & González-Morales, M. G. (2018). Incorporating balance: Challenges and opportunities for positive psychology. *Canadian Psychology/Psychologie Canadienne*, *59*(1), 54-64. https://doi.org/10.1037/cap0000109

Guter, M. (2016). *Hope, values, and goals: Predicting goal success and mental health outcomes*. The Ohio State University. Retrieved from https://kb.osu.edu/dspace/handle/1811/76772

Hansson, A., Hillerås, P., & Forsell, Y. (2005). Well-being in an adult Swedish population. *Social Indicators Research*, *74*(2), 313-325. https://doi.org/10.1007/s11205-004-6168-6

Harrell, S. (2018). *Human Families* (1st ed.). New York: Routledge. https://doi.org/10.4324/9780429499975

Howard, J. L., Gagné, M., & Bureau, J. S. (2017). Testing a continuum structure of self-determined motivation: A meta-analysis. *Psychological Bulletin*, *143*(12), 1346-1377. https://doi.org/10.1037/bul0000125

JOPP (2017). The Journal of Positive Psychology Instructions for Authors. Retrieved October 14, 2018, from https://www.tandfonline.com/action/authorSubmission?journalCode=rpos20&page=instructions

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, *61*(2), 121. https://doi.org/10.2307/2787065

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, *43*(2), 207. https://doi.org/10.2307/3090197

Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, *62*(2), 95–108. https://doi.org/10.1037/0003-066X.62.2.95

Keyes, C. L. M., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the mental health continuum short form (MHC-SF) in setswana-speaking South Africans. *Clinical Psychology & Psychotherapy*, *15*(3), 181-192. https://doi.org/10.1002/cpp.572

Kiaei, Y. A., & Reio Jr., T. G. (2014). Goal pursuit and eudaimonic well-being among university students: Metacognition as the mediator. *Behavioral Development Bulletin*, *19*(4), 91-104. https://doi.org/10.1037/h0101085

King, L., Heintzelman, J., & Ward, S. (2016). Beyond the search for meaning: A contemporary science of the experience of meaning in life. *Current Directions in Psychological Science*, *25*(4), 211-216. https://doi.org/10.1177/0963721416656354

Klinger, E. (2013). Goal commitments and the content of thoughts and dreams: basic principles. *Frontiers in Psychology*, *4*, 415. https://doi.org/10.3389/fpsyg.2013.00415

Lambert, L., Passmore, H. A., & Holder, M. D. (2015). Foundational frameworks of positive psychology: Mapping well-being orientations. *Canadian Psychology/Psychologie Canadienne*, *56*(3), 311-321. https://doi.org/10.1037/cap0000033

Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter. *Personality and Social Psychology Bulletin*, *39*(11), 1418-1427. https://doi.org/10.1177/0146167213499186

Little, B. (Ed.), Salmela-Aro, K. (Ed.), Phillips, S. (Ed.). (2007). *Personal Project Pursuit*. New York: Psychology Press

Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, *11*(5), 531-545. https://doi.org/10.1080/17439760.2015.1137623

McMahan, E. A., & Renken, M. D. (2011). Eudaimonic conceptions of well-being, meaning in life, and self-reported well-being: Initial test of a mediational model. *Personality and Individual Differences*, *51*(5), 589-594. https://doi.org/10.1016/j.paid.2011.05.020

Menon, M., Pendakur, R., & Perali, F. (2014). All in the family: How do social capital and material well-being affect relational well-being? *Social Indicators Research*, *124*(3), 889-910. https://doi.org/10.1007/s11205-014-0816-2

Merz, E.-M., & Huxhold, O. (2010). Well-being depends on social relationship characteristics: comparing different types and providers of support to older adults. *Ageing and Society*, *30*, 843-857. https://doi.org/10.1017/S0144686X10000061

Newman, D. B., Nezlek, J. B., & Thrash, T. M. (2018). The dynamics of searching for meaning and presence of meaning in daily life. *Journal of Personality*, *86*(3), 368-379. https://doi.org/10.1111/jopy.12321

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, *136*(2), 257-301. https://doi.org/10.1037/a0018301

Park, N., Park, M., & Peterson, C. (2010). When is the search for meaning related to life satisfaction? *Applied Psychology: Health and Well-Being*, *2*(1), 1-13. https://doi.org/10.1111/j.1758-0854.2009.01024.x

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, *5*(2), 164-172. https://doi.org/10.1037/1040-3590.5.2.164

Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, *101*(1), 115-135. https://doi.org/10.1037/a0013383

Peterson, C., & Park, N. (2012). Character strengths and the life of meaning. In *The human quest for meaning: Theories, research, and applications*, (2nd ed.) (pp. 277-295). https://doi.org/10.4324/9780203146286

Plano Clark, V. L. (2017). Mixed methods research. *The Journal of Positive Psychology*, *12*(3), 305-306. https://doi.org/10.1080/17439760.2016.1262619

Preston, K. S. J., Gottfried, A. W., Oliver, P. H., Gottfried, A. E., Delany, D. E., & Ibrahim, S. M. (2016). Positive family relationships: Longitudinal network of relations. *Journal of Family Psychology*, *30*(7), 875-885. https://doi.org/10.1037/fam0000243

Ryan, R., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Retrieved from https://www.guilford.com/books/Self-Determination-Theory/Ryan-Deci/9781462528769

Ryff, C. D. (2013). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, *83*(1), 10-28. https://doi.org/10.1159/000353263

Ryff, C. D. (2018). Well-being with soul: Science in pursuit of human potential. *Perspectives on Psychological Science*, *13*(2), 242-248. https://doi.org/10.1177/1745691617699836

Ryff, C. D., & Boyle, J. M. (2016). Linking happiness to health: Comparisons between hedonic and eudaimonic well-being. In L. Bruni & P. L. Porta (Eds.), *Handbook of Research Methods and Applications in Happiness and Quality of Life* (1st ed.) (pp. 53-71). Massachusetts: Edward Elgar. https://doi.org/10.4437/9781783471171

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, *9*(1), 1-28. https://doi.org/10.1207/s15327965pli0901_1

Schnell, T., Höge, T., & Pollet, E. (2013). Predicting meaning in work: Theory, data, implications. *The Journal of Positive Psychology*, *8*(6), 543-554. https://doi.org/10.1080/17439760.2013.830763

Schulenberg, S. E., Strack, K. M., & Buchanan, E. M. (2011). The meaning in life questionnaire: psychometric properties with individuals with serious mental illness in an

inpatient setting. *Journal of Clinical Psychology*, *67*(12), 1210-1219. https://doi.org/10.1002/jclp.20841

Schutte, L., & Wissing, M. P. (2017). Clarifying the factor structure of the mental health continuum short form in three languages: A bifactor exploratory structural equation modeling approach. *Society and Mental Health, 7*(3), 142-158. https://doi.org/10.1177/2156869317707793

Schutte, L., Wissing, M. P., & Ellis, S. M. (2018). Problematic Factorial Validity of Three Language Versions of the Basic Psychological Needs Scale (BPNS): Why and What are the Implications? *Journal of Happiness Studies*, *19*(4), 1175–1194. https://doi.org/10.1007/s10902-017-9861-2

Seligman, M. E. P. (2007). Coaching and positive psychology. *Australian Psychologist*, *42*(4), 266-267. https://doi.org/10.1080/00050060701648233

Seligman, M. E. P. (2011). *Flourish : a visionary new understanding of happiness and well-being*. Free Press. Retrieved from https://books.google.co.za/books?id=YVAQVa0dAE8C&dq=seligman+well+being+theory&lr=&source=gbs_navlinks_s

Seligman, M. E. P., & Csikszentmihalyi, M. (2006). Flow and the foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi. *Learned optimistm: How to change your mind*. https://doi.org/10.1007/978-94-017-9088-8_18

Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In *Flow and the Foundations of Positive Psychology* (pp. 279-298). https://doi.org/10.1007/978-94-017-9088-8_18

Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married always better off? *Social Indicators Research*, *88*(2), 329-346. https://doi.org/10.1007/s11205-007-9194-3

Sheldon, K. M. (2014). Becoming oneself. *Personality and Social Psychology Review*, *18*(4), 349-365. https://doi.org/10.1177/1088868314538549

Sheldon, K. M., Corcoran, M., & Prentice, M. (2018). Pursuing eudaimonic functioning versus pursuing hedonic well-being: The first goal succeeds in its aim, whereas the second does not. *Journal of Happiness Studies*, 1-15. https://doi.org/10.1007/s10902-018-9980-4

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: the self-concordance model. *Journal of Personality and Social Psychology*, *76*(3), 482-497. https://doi.org/10.1037//0022-3514.76.3.482

Snyder, C. R., Lopez, S. J., Shorey, H. S., Rand, K. L., & Feldman, D. B. (2003). Hope theory, measurements, and applications to school psychology. *School Psychology Quarterly*, *18*(2), 122-139. https://doi.org/10.1521/scpq.18.2.122.21854

Steger, M. F. (2009). Meaning in life. *Oxford Handbook of Positive Psychology*, *7*(1963), 679-689. https://doi.org/10.1093/oxfordhb/9780195187243.013.0064

Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry*, *23*(4), 381-385. https://doi.org/10.1080/1047840X.2012.720832

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*(1), 80-93. https://doi.org/10.1037/0022-0167.53.1.80

Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between

seeking and experiencing meaning. *Journal of Personality*, *76*(2), 199-228. https://doi.org/10.1111/j.1467-6494.2007.00484.x

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

Temane, L., Khumalo, I. P., & Wissing, M. . (2014). Validation of the meaning in life questionnaire in a South African context. *Journal of Psychology in Africa*, *24*(1), 81-95. https://doi.org/10.1080/14330237.2014.904088

Thomas, P. A., Liu, H., & Umberson, D. (2017). Family relationships and well-being. *Innovation in Aging*, *1*(3). https://doi.org/10.1093/geroni/igx025

Tugade, M. M., Shiota, M. N., & Kirby, L. D. (2014). *Handbook of Positive Emotions*. (M. Tugade, M. Shiota, & L. Kirby, Eds.) (1st ed.). New York: The Guilford Press. Retrieved from https://books.google.co.za/books?hl=en&lr=&id=O4ADBAAAQBAJ&oi=fnd&pg=PA396&ots=BpDGCnJqW1&sig=XpUAmSYq-leaFSXAW9_pYl_NhgY#v=onepage&q&f=false

Umberson, D., Crosnoe, R., & Reczek, C. (2010). Social relationships and health behavior across life course. *Annual Review of Sociology*, *36*, 139-157. https://doi.org/10.1146/annurev-soc-070308-120011

Umberson, D., & Karas Montez, J. (2010). Social relationships and health: A flashpoint for health policy. *Journal of Health and Social Behavior*, *51*(1_suppl), S54-S66. https://doi.org/10.1177/0022146510383501

Van Tongeren, D. R., DeWall, C. N., Green, J. D., Cairo, A. H., Davis, D. E., & Hook, J. N. (2018). Self-regulation facilitates meaning in life. *Review of General Psychology*, *22*(1), 95-106. https://doi.org/10.1037/gpr0000121

Ward, S. J., & King, L. A. (2016). Poor but happy? Income, happiness, and experienced and expected meaning in life. *Social Psychological and Personality Science*, *7*(5), 463-470. https://doi.org/10.1177/1948550615627865

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070. https://doi.org/10.1037/0022-3514.54.6.1063

WHO. (1948). WHO definition of Health. *Official Records of the World Health Organisation*, (2), 100. https://doi.org/10.1016/B978-012466044-1/50296-9

Wilson, A., Wissing, M. P., Schutte, L., & Kruger, I. M. (2018). Understanding goal motivations in deprived contexts: Perspectives of adults in two rural South African communities. *Applied Research in Quality of Life*, 1-17. https://doi.org/10.1007/s11482-017-9583-y

Wilt, J. A., Stauner, N., Lindberg, M. J., Grubbs, J. B., Exline, J. J., & Pargament, K. I. (2018). Struggle with ultimate meaning: Nuanced associations with search for meaning, presence of meaning, and mental health. *The Journal of Positive Psychology*, *13*(3), 240-251. https://doi.org/10.1080/17439760.2017.1279208

Wissing, M. P. & Delle Fave, A. (2013, May). Meaning and relational well-being: Towards a model. Paper presented at the Second Conference on Positive Psychology (CPPC) in Brno, Czech Republic.

Wissing, M. P. (2014). Meaning and relational well-being: a reflection on the state of the art and a way forward. *Journal of Psychology in Africa*, *24*(1), 115-121. https://doi.org/10.1080/14330237.2014.904100

Wissing, M. P., Thekiso, S. M., Stapelberg, R., Van Quickelberge, L., Choabi, P., Moroeng, C., & Vorster, H. H. (2010). Validation of three Setswana measures for psychological well-being. *SA Journal of Industrial Psychology, 36*(2), 1-8. https://doi.org/10.4102/sajip.v36i2.860

Wissing, M. P., Carlquist, E., Martos, T., & Schutte, L. (2017). Do goals walk the talk of meaning in well-being? Presentation in symposium: In their own voices: Lay people's perceptions and dimensions of well-being facets across world regions. Chairs: Ingrid Brdar (Croatia) & Marié Wissing (SA), Discussant Despina Moraitou (Greece), ISQOLS2017 Annual Conference on "Quality of Life: Towards a better Society", 27-30 September 2017, Innsbruck, Austria

Wong, P. T. P. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology/Psychologie Canadienne, 52*(2), 69-81.

Wong, P. T. P. (2017). A decade of meaning: Past, present, and future. *Journal of Constructivist Psychology*, *30*(1), 82-89. https://doi.org/10.1080/10720537.2015.1119085

Zuna, N., Summers, J. A., Turnbull, A. P., Hu, X., & Xu, S. (2010). Theorizing about family quality of life. In *Enhancing the Quality of Life of People with Intellectual Disability: From Theory to Practice* (pp. 241-278). Springer, Dordrecht. https://doi.org/10.1007/978-90-481-9650-0_15

Appendices

Appendix 1

Figures of the mean scores on the well-being scales for the different alignment groups

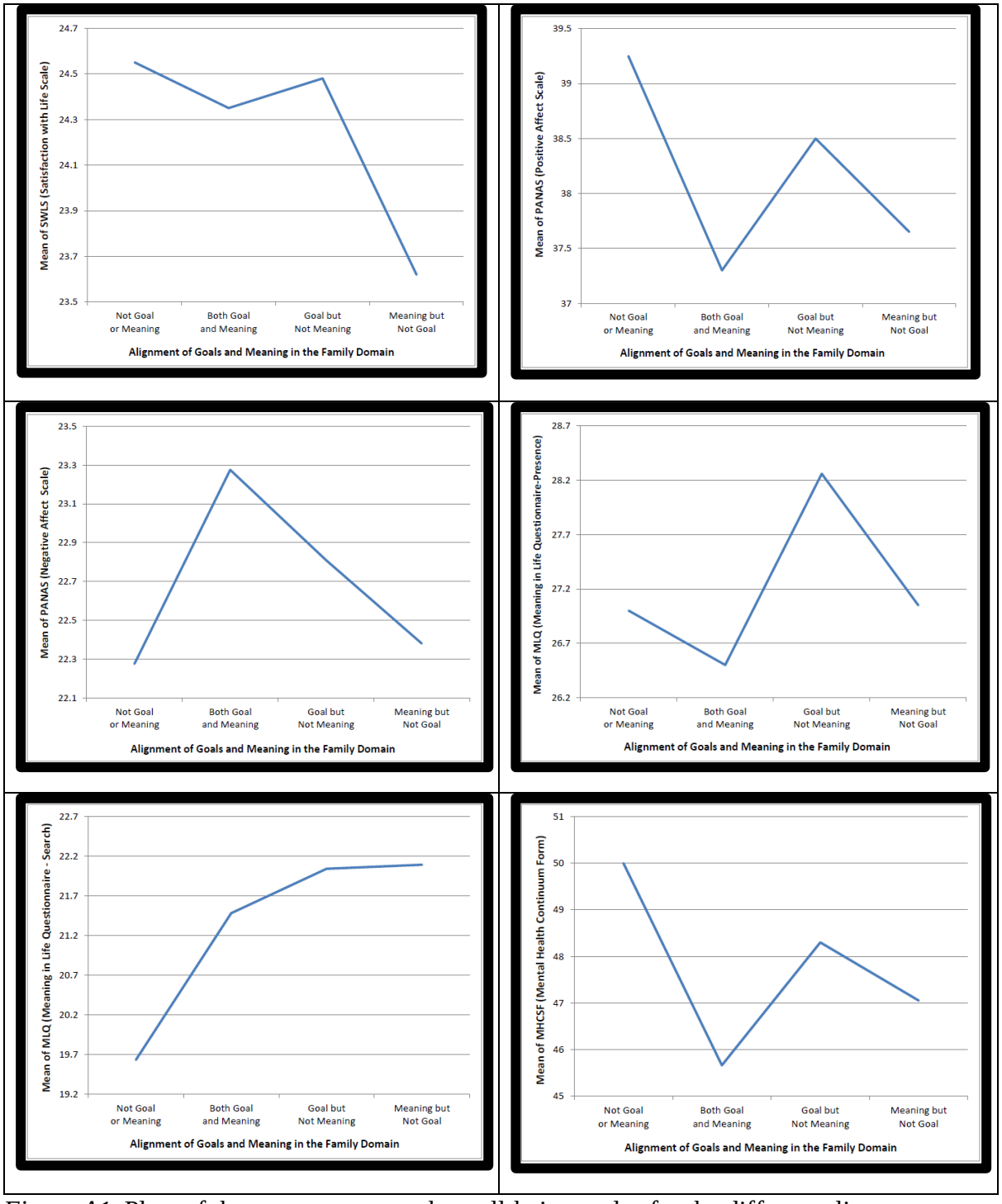
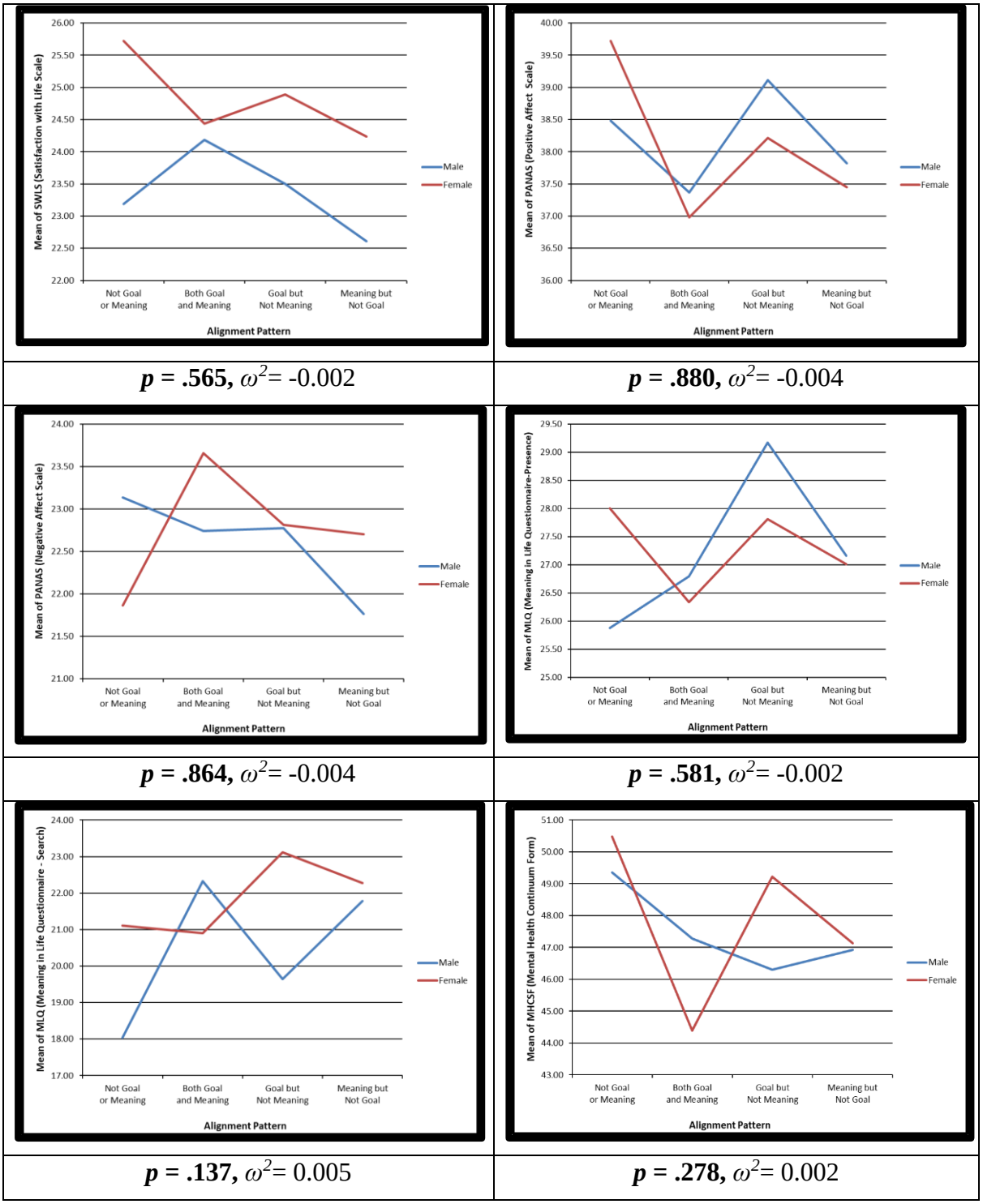


Figure A1. Plots of the mean scores on the well-being scales for the different alignment groups

Appendix 2

Figures of the Interaction plots for gender for the different well-being scales



***p* = .565,** ω^2= -0.002 | ***p* = .880,** ω^2= -0.004

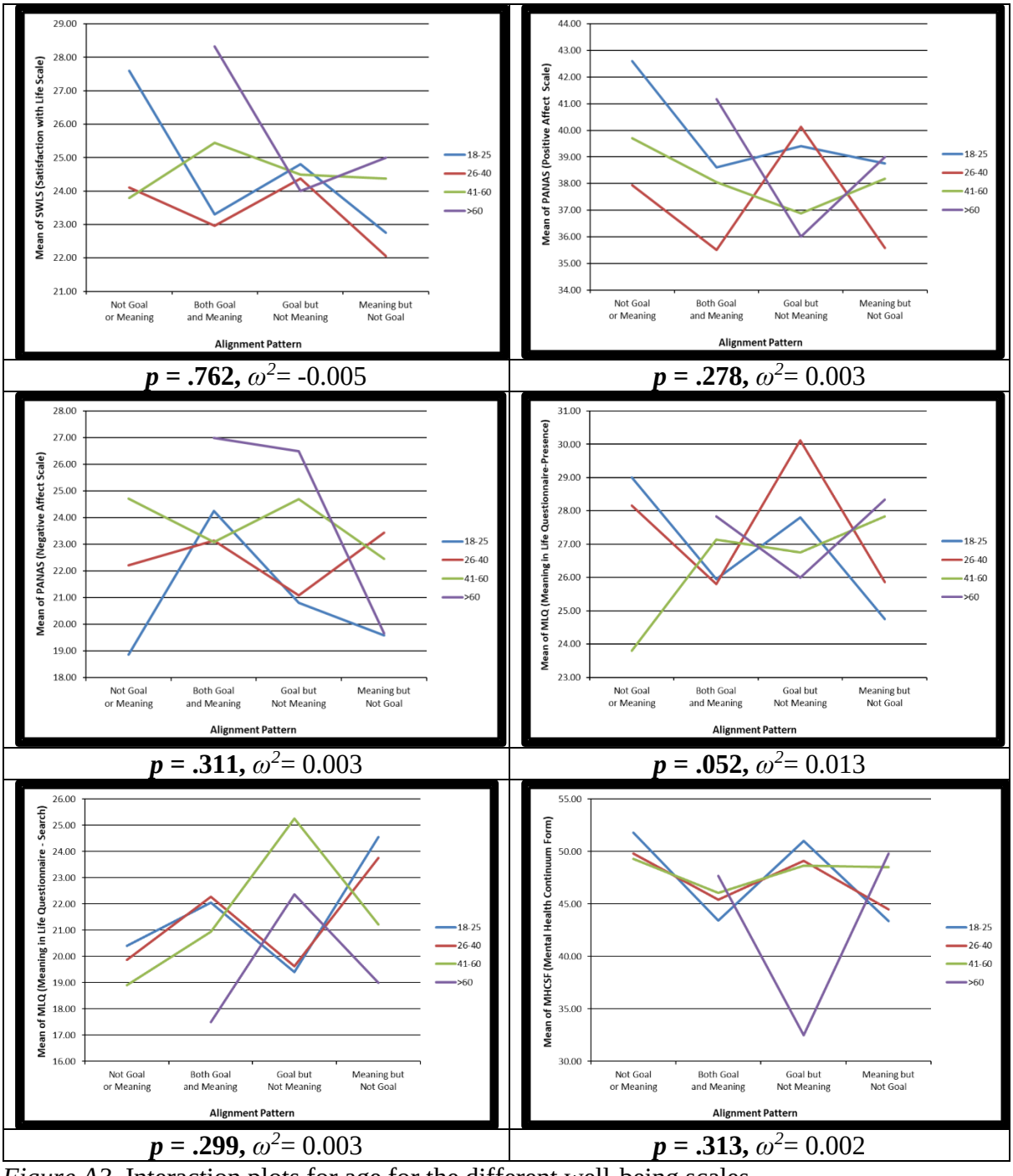
***p* = .864,** ω^2= -0.004 | ***p* = .581,** ω^2= -0.002

***p* = .137,** ω^2= 0.005 | ***p* = .278,** ω^2= 0.002

Figure A2. Interaction plots for gender for the different well-being scales.

Appendix 3

Figures of the interaction plots for age for the different well-being scales



***p* = .762,** ω^2= -0.005 | ***p* = .278,** ω^2= 0.003

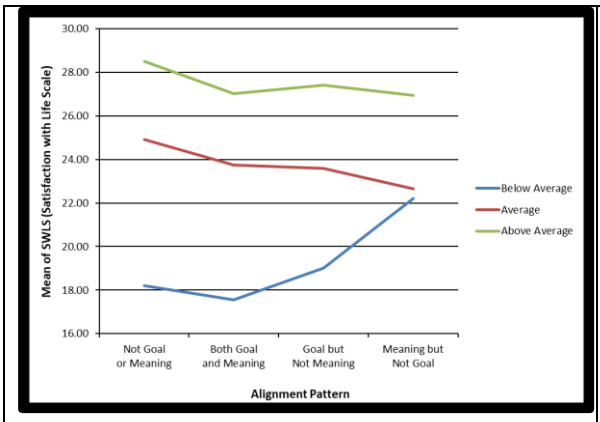
***p* = .311,** ω^2= 0.003 | ***p* = .052,** ω^2= 0.013

***p* = .299,** ω^2= 0.003 | ***p* = .313,** ω^2= 0.002

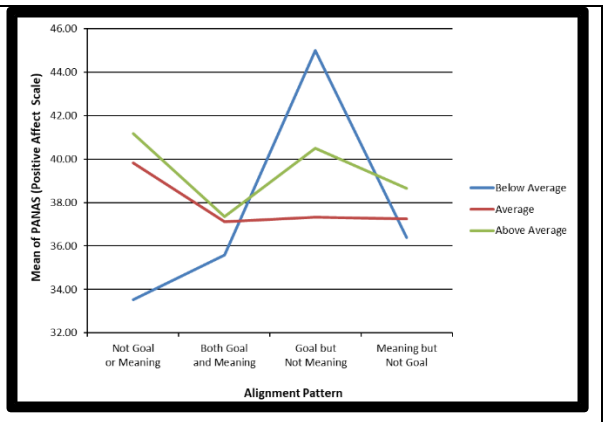
Figure A3. Interaction plots for age for the different well-being scales.

Appendix 4

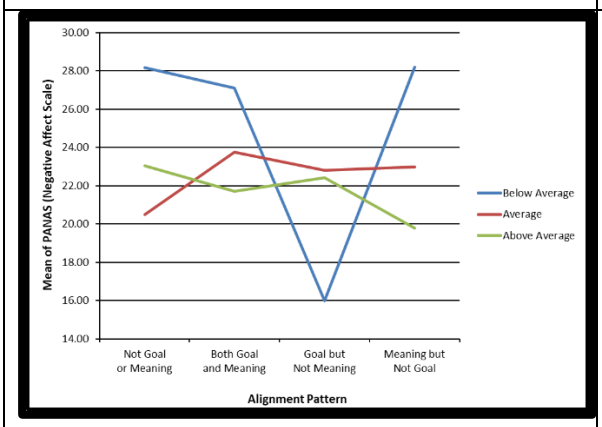
Figures of the interaction plots for standard of living for the different well-being scales



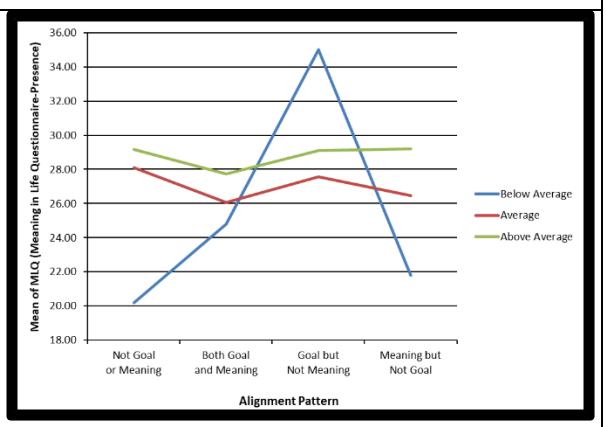
***p* = .622,** ω^2= -0.003



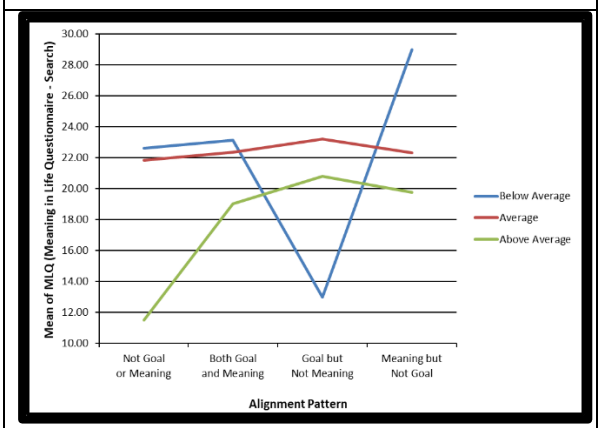
***p* = .314,** ω^2= 0.002



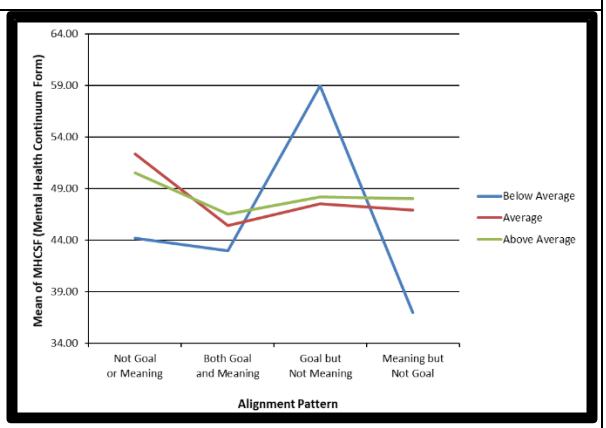
***p* = .430,** ω^2= 0.000



***p* = .122,** ω^2= 0.007



***p* = .165,** ω^2= 0.006

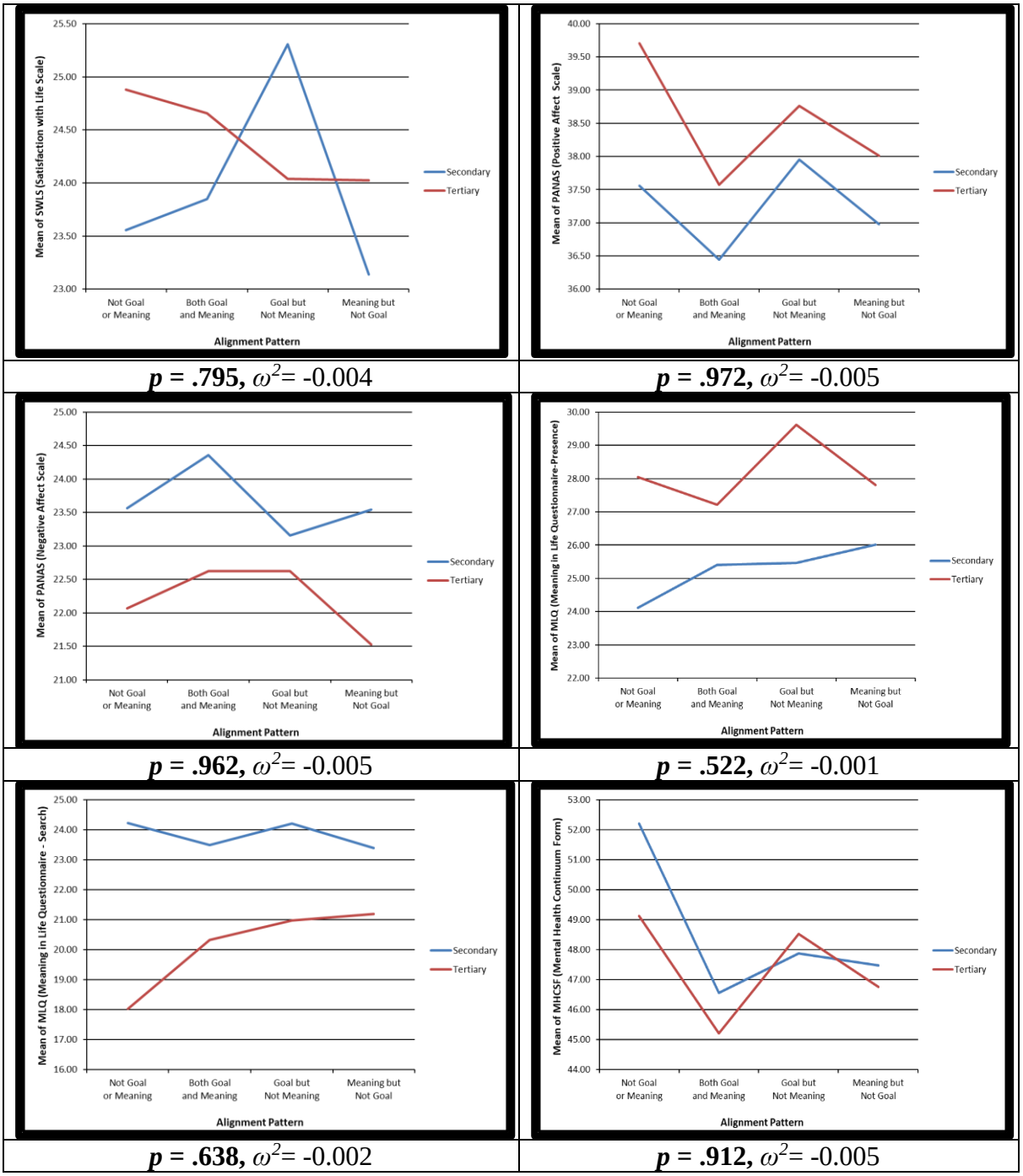


***p* = .598,** ω^2= -0.003

Figure A4. Interaction plots for standard of living for the different well-being scales.

Appendix 5

Figures of the interaction plots for educational level for the different well-being scales

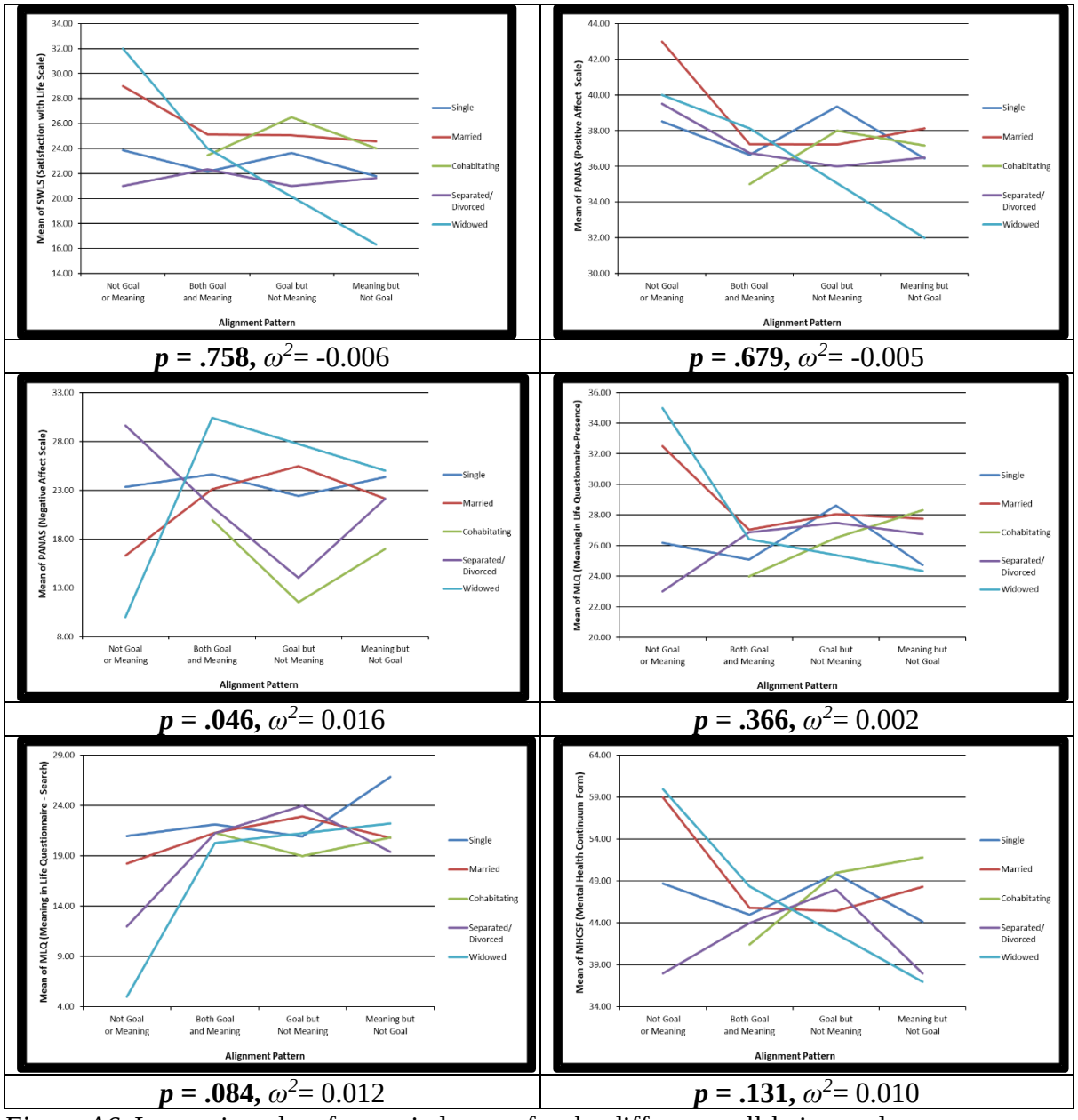


***p* = .795,** ω^2= -0.004	***p* = .972,** ω^2= -0.005
***p* = .962,** ω^2= -0.005	***p* = .522,** ω^2= -0.001
***p* = .638,** ω^2= -0.002	***p* = .912,** ω^2= -0.005

Figure A5. Interaction plots for educational level for the different well-being scales.

Appendix 6

Figures of the interaction plots for marital status for the different well-being scales



***p* = .758,** ω^2= -0.006 | ***p* = .679,** ω^2= -0.005

***p* = .046,** ω^2= 0.016 | ***p* = .366,** ω^2= 0.002

***p* = .084,** ω^2= 0.012 | ***p* = .131,** ω^2= 0.010

Figure A6. Interaction plots for marital status for the different well-being scales.

Chapter 3

Concluding Thoughts

Summary

The aim of this study was to explore the concordance/alignment between goals and meaning in the family domain of life and how different patterns of concordance were associated with demographic variables and indicators of well-being. Chapter one focused on the process of conceptualising the study and obtaining approval for the study. In chapter two, the study conducted was reported. A key finding was that goals and meaning as alignment pattern was highly prominent in the family domain of life. A new insight derived from this study was that the association between alignment patterns and well-being in the family domain of life was influenced by some sociodemographic variables, in particular gender, standard of living and marital status. Alignment patterns, sociodemographic variables and some indices of well-being revealed significant associations, but it is interesting that the same results are not obtained with all operationalisations of well-being. This issue needs further research.

The present findings provide qualified support for the self-concordance model of Sheldon and Elliot (1999) in the family domain of life as found in the present sample of participants. These findings need to be further explored in other groups and contexts before generalisations can be made. The question as to how the findings of the present study can contribute to practical usability will now be discussed further.

Possible implications for practice and further research

Abundant literature was found with regard to therapeutic family interventions (Fife et al., 2017; Grácio, Gonçalves-Pereira, & Leff, 2018; Lobban & Barrowclough, 2009; Saarela, Johansson, Louhija, Appelberg, & Juva, 2018; Saltzman, 2016). However, limited positive

family interventions to increase well-being were found. Furthermore, interventions specifically focusing on goals and meaning within the family domain were scarce.

A few studies were found on family interventions to enhance well-being (Doss, Feinberg, Rothman, Roddy, & Comer, 2017; Kumpfer, Magalhães, & Xie, 2017). The Happy family kitchen project intervention conducted in Hong Kong (Chu et al., 2018) emphasised dining and cooking with family members. It was grounded on five positive psychology themes, namely gratitude, flow, happiness, health and savouring. This intervention was successful in increasing family communication and well-being. Another study focusing on the use of 'wise' interventions (Walton & Wilson, 2018) emphasised meaning-making and reminding people of their goals in key situations by using three basic motives. These motives were the need to understand, the need for self-integrity and the need to belong. The outcome changed the making of meaning assisting people to flourish in social contexts, such as the family. The suggestions and recommendations from the research conducted in this current study dovetails with the above research findings.

Other interventions focused on increasing well-being, but not in a family context. Some of these interventions, which show good results with regard to the increase of well-being, can be customised with minor changes for use in other domains, such as the family domain. One such an intervention, which showed favourable results, was an online goal-setting and planning intervention to improve the well-being of adults using a longitudinal, randomised crossover design (Oliver & MacLeod, 2018).

Family evidence-based interventions (FEBIs), as evident in the literature, can promote social competencies (Van Ryzin, Roseth, Fosco, Lee, & Chen, 2016). As family interventions are often deemed as 'one size fits all', Kumpfer et al. (2012) stressed the importance of family interventions to be culturally adapted to suit the needs of diverse families. Although few interventions could be sourced with regard to goals and meaning in the family domain,

the above-mentioned well-being interventions can be the start of conceptualising an intervention that focusses mainly on goal-orientation and meaning-making within the family domain of life.

A possible intervention that can be developed, is a game that families can play while having a meal and sitting around the table. This game can start by requesting that each family member formulate three goals which he/she wants to achieve in the following month. After this has been written down on a piece of paper, the papers need to be folded and thrown into a bag. The bag is placed in the middle of the table. A game board with a start and end is also placed next to the bag. Each person at the table receives a different coloured board piece. This piece will represent each family member on the board. A dice, which has a maximum of four dots, will be thrown. If a family member throws a one, he/she will have to take a paper out of the bag, read it out aloud, and try to guess who wrote the goal on the paper. If correct, he/she gets one move on the board. If he/she throws a two, the member must read what is written on the paper aloud as in the first instance, but must also guess why this goal is important for that person. If correct, the person moves two places on the board. If not correct, the person who wrote the paper must explain why he/she wanted to reach the goal. If a three is thrown, the member will be skipped and the next member will get a turn. If a four is thrown, the same procedure applies as when a two is thrown, but the person who wrote down the goal on the paper must receive one word of encouragement from each member of the family. A strength the person has must be emphasised and why he/she has the ability to reach the intended goal. If the person who wrote the goal feels encouraged, he/she can give the go ahead for another move on the board, thus three moves. A game, such as this can open up a discussion around personal goals and if this corresponds with family aims and values. This game can be repeated by writing down what gives each family member meaning instead of goals.

Another intervention for the family, which can include children if carefully explained by using drawing as a medium, is as follows: each person is asked to draw on a blank piece of paper what he/she values most about the family and how this contributes to meaning in his/her life. After completion of the drawings, each member gets a chance to explain his/her drawing. Together they can decide which elements were mentioned the most and then draw one inclusive drawing for the family. Ideally, each element can be set as a goal and value for the family, for example drawing a sunflower can mean that 'our family believes in friendliness and will be friendly towards other family members and the community'. This drawing can be placed on the fridge or wall to remind the family members of their belongingness and source of meaning.

The above interventions are intended to enhance family well-being with specific focus on goals, meaning and values. However, each of the above versions of possible practical applications suggested needs to be evaluated in further intervention research with pre-, post- and follow-up measures to determine whether they are effective, and to establish what participants' experiences thereof were, and what they would regard as worthwhile for adding to the programme.

Personal Reflection

Looking back on this study, I can see how it helped me to grow as a researcher and as a person. It challenged my thinking patterns and stimulated higher order thinking.

As a researcher, I was fortunate to interpret data from a larger project. However, this I experienced as a challenging task as I have no statistical background. The terminology was very abstract and this forced me to read, learn, grow and think outside the box. I learned how to order my thoughts on paper. This forced me to better my writing skills and express my thoughts in clear and understandable words. I learned that no assumptions can be made without supporting literature. This helped me to ground ideas towards facts. Learning to

construct a mini-dissertation and article according to guiding formats, helped me to understand the academic process and how this process can contribute to uplift and enrich people's lives.

For me as a person, I learned a lot about goals, meaning and family. It was very interesting for me to explore different opinions about these constructs. Family and meaning are constructs close to my heart. I would love to see healthy families with meaning functioning in our communities. This study helped me to gain a better understanding of how people perceive the family and how to think about family goals and meaning interventions for the future. I also learned a lot about myself and had to grow with regard to intrinsic motivation and positive reframing of my thoughts. Whenever I came to a dead end or did not know what to do, I had to re-order my thoughts towards learning and growing. This study contributed to my life in so many different ways and was definitely worthwhile.

Conclusion

Goals and meaning as an alignment pattern seemed to be evident in the family domain of life in the present sample of participants. A few significant interactions were found among patterns of concordance, sociodemographic variables and specific indices of well-being. Family remains an important source of meaning, whether it is stated as a goal or not. The scarcity of well-being interventions for the family domain, illustrates the need for further research to design interventions of this nature. Future research of similar studies replicated with other groups and in other countries may be extremely valuable for a deeper understanding of goals and meaning in the family domain of life.

References

Chu, J. T. W., Ho, H. C. Y., Mui, M., Wan, A., Stewart, S. M., Lam, T. H., & Chan, S. S. (2018). Happy family kitchen II: Participants' perspectives of a community-based family intervention. *Journal of Child and Family Studies*, *27*(5), 1629-1639. https://doi.org/10.1007/s10826-017-0998-8

Doss, B. D., Feinberg, L. K., Rothman, K., Roddy, M. K., & Comer, J. S. (2017). Using technology to enhance and expand interventions for couples and families: Conceptual and methodological considerations. *Journal of Family Psychology*, *31*(8), 983-993. https://doi.org/10.1037/fam0000349

Fife, B. L., Von Ah, D. M., Spath, M. L., Weaver, M. T., Yang, Z., Stump, T., & Farag, S. (2017). Preliminary efficacy of a brief family intervention to prevent declining quality of life secondary to parental bone marrow transplantation. *Bone Marrow Transplantation*, *52*(2), 285-291. https://doi.org/10.1038/bmt.2016.267

Grácio, J., Gonçalves-Pereira, M., & Leff, J. (2018). Key elements of a family intervention for schizophrenia: A qualitative analysis of an RCT. *Family Process*, *57*(1), 100-112. https://doi.org/10.1111/famp.12271

Kumpfer, K. L., Magalhães, C., & Xie, J. (2012). Cultural adaptations of evidence-based family interventions to strengthen families and improve children's developmental outcomes. *European Journal of Developmental Psychology*, *9*(1), 104-116. https://doi.org/10.1080/17405629.2011.639225

Lobban, F., & Barrowclough, C. (2009). *A casebook of family interventions for psychosis*. Wiley-Blackwell. Retrieved from https://books.google.co.za/books?hl=en&lr=&id=7qT3XXZaUmsC&oi=fnd&pg=PR5&dq=lobban+barrowclough+2009&ots=u6fKcHn7X0&sig=PzU0TGLQCHln64-

T5MoDLLtnReA#v=onepage&q=lobban barrowclough 2009&f=false

Oliver, J. J., & MacLeod, A. K. (2018). Working adults' well-being: An online self-help goal-based intervention. *Journal of Occupational and Organizational Psychology*, *91*(3), 665-680. https://doi.org/10.1111/joop.12212

Saarela, T., Johansson, M., Louhija, U., Appelberg, B., & Juva, K. (2018). Introducing a family intervention to elderly with first episode psychosis. *International Psychogeriatrics*, pp. 1-2. Cambridge University Press. https://doi.org/10.1017/S1041610218000248

Saltzman, W. R. (2016). The FOCUS family resilience program: An innovative family intervention for trauma and loss. *Family Process*, *55*(4), 647-659. https://doi.org/10.1111/famp.12250

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, *76*(3), 482-497. https://doi.org/10.1037/0022-3514.76.3.482

Van Ryzin, M. J., Roseth, C. J., Fosco, G. M., Lee, Y., & Chen, I.-C. (2016). A component-centered meta-analysis of family-based prevention programs for adolescent substance use. *Clinical Psychology Review*, *45*, 72-80. https://doi.org/10.1016/J.CPR.2016.03.007

Walton, G. M., & Wilson, T. D. (2018). Wise interventions: Psychological remedies for social and personal problems. *Psychological Review*, *125*(5), 617-655. https://doi.org/10.1037/rev0000115