

**ANTECEDENTS AND OUTCOMES OF HAPPINESS OF
MANAGERS IN THE AGRICULTURAL SECTOR
IN SOUTH AFRICA**

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Thesis submitted for the degree Doctor of Philosophy in Industrial Psychology at the Vaal
Triangle Campus of the North-West University

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November 2011

COMMENTS

The reader is reminded of the following:

- The references as well as the editorial style as prescribed by the *Publication Manual* (6th edition) of the American Psychological Association (APA) were followed in this thesis.
- The thesis is submitted in the form of three research articles.

DEDICATION

The completion of this thesis has been a lifetime aspiration and the fruition thereof is a result of the immense effort, extreme dedication, patience, guidance and a belief in my capabilities by Professor Ian Rothmann. He has proven to be a friend, promoter, mentor and gentleman during the entire process and for that I will forever be indebted to him.

ACKNOWLEDGEMENTS

In writing this thesis, I was fortunate to be assisted by various people. I would hereby like to thank the following key individuals and organisations that assisted with and contributed to the completion of this thesis:

- All praise to God who allowed me the opportunity to complete this research.
- Prof. Ian Rothmann, my promoter and mentor, for his tremendous inspiration, guidance, encouragement, patience, effort and contribution to this study.
- My wife, Hester, who has always been a source of inspiration and a pillar of support throughout.
- My parents for their support throughout my life.
- North-West University (Vaal Triangle Campus) for their financial contribution toward study fees.
- The organisations that participated in the survey. Special appreciation for the efforts of Mr Johan Liebenberg and Ms Ronelle Breytenbach of KaapAgri who facilitated national participation in the survey in the agricultural sector.
- Ian Rothmann Jnr for his most competent development, distribution and management of the questionnaires and database.
- Melanie Rothmann for her exceptional hospitality, friendship and assistance.
- Ms Lynn Booysen for her administrative support and arrangements.
- Ms Arina Wilson for the language editing.

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SUMMARY

Topic: Authentic happiness of managers in the agricultural sector of South Africa.

Key terms: Happiness, pleasure, meaning, engagement, hedonia, eudaimonia, managers, antecedents, psychological needs satisfaction, job satisfaction, work engagement, flourishing, work-role fit, co-worker relations, task characteristics, work beliefs, purpose, organisational citizenship behaviour, turnover intention.

The happiness of managers is an important research theme for several reasons. Managers spend most of their working day with people, are constantly interacting with various social systems and are role models for happiness in organisations. Furthermore, happiness (in terms of feeling and functioning well) is associated with mental health and positive organisational outcomes. The prevalence of positive mental health is relatively low, with less than a third of the population experiencing high mental health. Research about happiness is necessary given that gains in mental health predict declines in mental illness. Two conceptualisations of happiness, namely authentic happiness (Seligman, 2002), and flourishing (Keyes, 2005) include dimensions of feeling and functioning well. No studies have been conducted regarding the happiness of managers in South Africa. Therefore, research is necessary to investigate the factors associated with happiness, as well as the pathways to managers' happiness. Psychological need satisfaction is an important pathway through which social-contextual variables impact happiness of people. The aim of this research was to investigate the state of, antecedents and outcomes of happiness of managers in the agricultural sector in South Africa.

A cross-sectional design with managers in the South African agricultural sector ($N = 507$) was used. The Orientations to Happiness Questionnaire, Satisfaction with Life Scale, Job Satisfaction Scale, Organisational Citizenship Behaviour Scale, Organisational Commitment Scale, Antecedents Scale, Work-related Basic Need Satisfaction Scale, Work Engagement Scale, Mental Health Continuum Short Form, Questionnaire for Eudaimonic Well-being, Work-role Fit Scale, Work-Life Questionnaire and Turnover Intention Scale were utilised. Cronbach alpha coefficients, exploratory factor analysis, Pearson correlations, multiple regression analysis, descriptive statistics and mediational analysis (Omnibus procedure) were

applied. Structural equation modelling was used to test a structural model of orientations to happiness and its relation to various organisational outcomes.

The results of study 1 showed that orientations to happiness (i.e. pleasure, meaning and engagement) had strong direct effects on subjective well-being, job satisfaction and organisational citizenship behaviour. Orientations to happiness impacted job satisfaction indirectly through subjective well-being. Subjective well-being had a strong direct and positive effect on job satisfaction. Orientations to happiness and subjective well-being affected organisational commitment indirectly through their effects on job satisfaction.

Concerning happiness as flourishing at work, the results of study 2 showed that 3% of the managers were languishing, 48.5% were moderately flourishing, while 48.5% were flourishing. Task characteristics, supervisor relations, availability of resources impacted job satisfaction, emotional and psychological well-being of managers. Remuneration was associated with job satisfaction, emotional and social well-being. Task characteristics, supervisor relations, personal resources and remuneration satisfied the psychological needs for autonomy, competence and relatedness, which impacted job satisfaction, work engagement and flourishing of managers positively.

The results of study 3 showed that factors contributing to meaningful work (work role fit, good co-worker relations, meaningful tasks and work beliefs) had direct effects on psychological need satisfaction, purpose and meaning in life, organisational citizenship behaviour and turnover intention. Work role fit, co-worker relations, task characteristics and career orientation (as a work belief) impacted meaning and purpose in life indirectly through competence satisfaction. Purpose in life impacted turnover intention negatively via psychological need satisfaction, while meaning in life impacted organisational citizenship behaviour and turnover intention via competence and relatedness satisfaction.

Recommendations for future research were made.

CHAPTER 1

INTRODUCTION

This thesis is about the happiness of managers and the antecedents and outcomes thereof.

Chapter 1 contains the background and motivation of the research, problem statement, aims of the research, research method, and the division of chapters.

1.1 BACKGROUND AND MOTIVATION OF THE RESEARCH

Research and practice in psychology have long been concerned with the psychopathological underpinnings of suffering, ill health and deviance (Cameron, Dutton, & Quinn, 2003; Peterson & Seligman, 2004; Seligman, 2002; Seligman & Csikszentmihalyi, 2000). This focus culminated in the disease model, while few attempts were made to study the optimal development of individual, social, and institutional potential from a positive psychology paradigm (Peterson & Seligman, 2004). Positive psychology refers to the science of subjective experiences, positive institutions and individual traits, which improves the quality of life and prevents the onset of psychopathology (Seligman & Csikszentmihalyi, 2000), or, in a more abbreviated description, the *science of happiness* (Seligman, 2002).

The importance of measuring optimal functioning has been emphasised in recent years and happiness has been proposed as an important indicator of optimal functioning (Diener, Kesebir, & Lucas, 2008; Diener & Suh, 1997). Happiness has various positive outcomes. It has a positive effect on self-acceptance, self-esteem and morale (Ryff, 1989). Research indicates significant correlations between happy people and high involvement, deep concentration, intrinsic motivation and the perception of high challenges matched by adequate personal skills (Vittersø, 2003). Happy people are healthier, maintain better interpersonal relationships, enjoy educational and vocational success and essentially enjoy the happy or good life (Park & Huebner, 2005; Seligman, 2002, 2008). Happy people are also more productive, have higher self-esteem and are generally satisfied with life (DeNeve & Cooper, 1998).

Working adults generally spend more than half of their waking life at work (Wrzesniewski, 2003). Managers play a significant role in organisations (Carson & Lowman, 2002). Kilburg (2000) describes how managers must intervene as role model and change agent of individuals and collectively within groups. Research by Kampa-Kokesch (2001) indicated that skilled and generally content (happy) managers improved relationships, facilitated faster changes in the working environment, reduced personal difficulties and contributed to better leadership decisions within the organisations. Therefore, research about the happiness of managers at work, and the antecedents thereof, is relevant.

For organisations, measuring happiness of managers and intervening to promote happiness are inherently part of a strategic approach to human resource management. Armstrong (2006) identified both high commitment and high involvement management as strategic approaches to human resource management. High commitment management is aimed at eliciting a commitment so that behaviour is primarily self-regulated rather than controlled by sanctions and pressures external to the individual, while relations within the organisation are based on high levels of trust. High involvement management involves communication with and involvement of employees. Efforts to increase the happiness of employees (via intrinsic motivation, self-regulation, and trust), will result in commitment and involvement, which in turn will contribute to individual and organisational performance (Armstrong, 2006).

The question arises whether it is a worthy scientific endeavour to study people's happiness and to try to affect it. Three considerations led to scientific pessimism about the possibility of studying and affecting people's happiness (Lyubomirsky, Sheldon, & Schkade, 2005). First, people have a genetically determined set point which determines at least 50% of their happiness. Second, personality characteristics of individuals (and specifically neuroticism and extraversion) are remarkably stable over time, which results in people maintaining the same rank ordering in their levels of worry, guilt, social engagement, enthusiasm, and self-confidence. Third, gains in happiness are short term because people adapt quickly to change.

However, there are various reasons for optimism regarding attempts to increase people's happiness (Lyubomirsky et al., 2005). Research has shown that specific interventions could increase people's happiness. Also, many motivational and attitudinal factors are amenable to some control, e.g. the tendency to take an optimistic perspective on life situations, and the tendency to experience self-efficacy. Furthermore, research findings suggest that greater

happiness can be achieved over time. Finally, it seems that the unwanted effects of genes could be minimised by active efforts to steer oneself away from situations that detract from well-being. Therefore, enhancing individuals' happiness levels is a worthy scientific goal, especially after basic physical and security needs have been met (Lyubomirsky et al., 2005).

According to Diener, Suh, Lucas, and Smith (1999) and Lyubomirsky et al. (2005), happiness is a subjective phenomenon of which the individual should be the final judge. The fact that happiness is a subjective experience does not mean that the influences on that judgement cannot be investigated empirically. Research has shown that subjective well-being is strongly associated with peer and spouse reports of well-being, smiling behaviour, and physiological responses (Lyubomirsky et al., 2005). Happiness can be studied in terms of chronic happiness or happiness at a particular moment or on a particular day. Chronic happiness, which can be altered, is defined as a person's "retrospective summary judgements regarding his or her mood and satisfaction during some recent period" (Lyubomirsky et al., 2005, p. 116). It is more difficult to alter one's happiness level at a specific moment or on a particular day.

Based on the subjective well-being approach, happiness refers to the conscious experience of feelings and cognitions of the individual, whether he or she perceives his or her life as a 'good life' (Diener & Suh, 1997; Diener et al., 2008). Subjective well-being is the judgment over one's own life and its events in three domains, namely cognitive, positive and negative affective experiences (Diener et al., 2008). Therefore, happiness is characterised by frequent positive affect, infrequent negative affect, and high life satisfaction. These three constructs are the primary components of subjective well-being, are highly related, and load on a single factor if negative affect has been recoded (Diener et al., 2008; Lyubomirsky et al., 2005).

Ryan, Huta, and Deci (2008) distinguished between two approaches to happiness, namely hedonism and eudaimonia. The hedonic perspective aims to maximise pleasure and avoid pain, and can include living a life of shallow values, greed, and exploitation of others (Vella-Brodrick, Park, & Peterson, 2009). The eudaimonic perspective focuses on the "content of one's life and the processes in living well" (Ryan et al., 2008). Keyes and Annas (2009) point out that hedonic well-being (i.e. feeling good) and eudaimonic well-being (functioning well) are two distinctive but related concepts. Eudaimonia is about quality of life whether it is through feeling good, getting what you want or enjoying an activity.

Two models, namely the model of Keyes and Annas (2009) and the model of Peterson, Park, and Seligman (2005), integrate hedonic and eudaimonic well-being. The happiness of managers could be studied in terms of these two models. Peterson et al. (2005) proposed an integrated model for happiness also flowing from the hedonic and eudaimonic approaches. Peterson et al. (2005) suggest three orientations to happiness, namely pleasure (the pleasant life), meaningfulness (the meaningful life) and engagement (the good life). Keyes and Annas (2009) distinguished between two subjective components of happiness, namely “feeling well” and “functioning well”. These two components of happiness are conceptualised and measured in terms of emotional well-being, psychological well-being, and social well-being (Keyes, 2005). Individuals who measure high on all three dimensions are described as flourishing, and such people are regarded as happy (Keyes & Annas, 2009).

Keyes (2005) found that flourishing adults reported the fewest health limitations of activities of daily living, the fewest missed days at work, and the healthiest psychosocial functioning. In analysing the results of a study on mental health, Keyes and Annas (2009) found that 48.5% of the participants measured high on hedonic well-being, 18% measured high on both types of well-being, while 30.5% measured high on hedonic well-being and moderate on eudaimonic well-being. Individuals who measured high on hedonic well-being and moderate on eudaimonic well-being had approximately twice the rate of mental illness than individuals who measured high on both types of well-being.

Researching and promoting the happiness of people, specifically also in the work context, is highly relevant. According to Keyes (2005) gains in the level of positive mental health should decrease the risk of mental illness over time. Losses of mental health increase the risk of mental illness over time. Building on the research about subjective well-being, Lyubomirsky et al. (2005) proposed a sustainable happiness model, which suggests that lasting gains in happiness can occur under specific optimal circumstances. The sustainable happiness model suggests that it is better for individuals to focus on new patterns of activity, rather than new life circumstances. Sheldon et al. (2010) found that the type or quality of activities that people engage in affect their happiness, given that they also continue to invest effort in these activities (i.e. by pursuing particular goals). Furthermore, happiness levels are strongly affected by the positivity of current proximal experiences.

1.2 PROBLEM STATEMENT

The happiness of managers can be regarded as an important research theme for several reasons. Managers spend most of their working day with people. In this regard, Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) state that the effect of meaning of work (which contributes to happiness) is more visible in an occupation where the individuals are constantly interacting with various social systems within an organisation. Furthermore, managers will be more effective and efficient in their roles if they are happy themselves. Managers are also role models for happiness in the workplace (Cameron et al., 2003). Finally, happiness of individuals predicts positive organisational outcomes such as organisational commitment, organisational citizenship behaviour, low turnover intention, job satisfaction, and subjective well-being (Bakker, Demerouti, & Schaufeli, 2003; Harter, Schmidt, & Hayes, 2002; Simpson, 2008). However, no studies have been conducted regarding the happiness of managers in South Africa. Measuring instruments of happiness have also not been validated for the South African context. Information is needed regarding the reliability and validity of measuring instruments of happiness developed by Keyes (2005) and Peterson et al. (2005).

In addition to gathering and evaluating the suitability of measuring instruments of happiness of managers in South Africa, it is also necessary to study the pathways to happiness. Scientific information is needed regarding pathways to flourishing (Keyes, 2005), and authentic happiness (Peterson et al., 2005). Although some overlap exists between the models of Keyes (2005) and Peterson et al. (2005), the latter model does not refer explicitly to social and psychological dimensions of happiness. Nel et al. (in press) found in a recent study that social and relational aspects of personality are more salient (in all language groups) in South Africa than in Western countries. Therefore, it is important to include social well-being in studies of happiness of managers in South Africa.

Given that engagement and meaning as pathways to happiness are under the control of individuals, and that these routes lead to longer-lasting fulfilment (Seligman, 2002; Peterson et al., 2005), it seems justifiable to study the antecedents of these two routes to happiness. Engagement refers to a psychological state of involvement, commitment, and attachment to a work role (Macey & Schneider, 2008). Engagement is characterised by three dimensions, namely a physical dimension, an emotional dimension, and a cognitive dimension (Rothmann & Rothmann, 2010). Although psychological meaning is regarded as an antecedent of work

engagement, it could also occur regardless of an individual's engagement (Kahn, 1990; May, Gilson, & Harter, 2004; Seligman, 2002).

Self-determination theory (SDT: Deci & Ryan, 1985; Ryan et al. 2008) can be used to understand the positivity of individuals' experiences. SDT suggests that people have three basic psychological needs, namely the need for autonomy (to make their own decisions and choices, so that what they do is interesting, meaningful, and valuable), competence (to feel effective and capable in life, and doing things that they are good at), and relatedness (to feel a sense of connection with important others flowing based on mutual understanding and caring). According to SDT, the satisfaction of these three psychological needs is essential for well-being and optimal functioning. SDT research has focused on the factors that facilitate or thwart the satisfaction of these psychological needs. This study builds on the SDT and flourishing literature to hypothesise a model in which psychological needs fulfilment mediates the relations between antecedents (work role fit, task characteristics, supervisor relations, co-worker relations, personal resources and remuneration) and job satisfaction, work engagement and flourishing. It is proposed that different antecedents satisfy different psychological needs, and that psychological needs satisfaction relates to favourable employee outcomes.

Various social-contextual factors can influence happiness of managers. Studies (Bakker, Demerouti, & Verbeke, 2004; Coetzer & Rothmann, 2007; Hakanen, Schaufeli, & Ahola, 2008; Kahn, 1990; May et al., 2004; Rothmann & Joubert, 2007) showed that factors such as work role fit, availability of resources, task characteristics, supervisor and co-worker relations and remuneration impact the well-being of people at work. However, research is needed regarding the role of these factors in happiness of managers.

Regarding the meaningful life and a route to happiness, it is necessary to distinguish between two concepts, namely psychological *meaning* and psychological *meaningfulness* (Pratt & Ashforth, 2003). Meaning refers to the outcome of having made sense of something; while meaningfulness refers to the amount of significance an individual attaches to his/her work. According to May et al. (2004), job enrichment, work-role fit, and rewarding co-worker relations are antecedents of meaningful work. Work roles and activities which are aligned with individuals' self-concepts and utilise a person's signature strengths lead to psychological meaning, allowing them to express their values and beliefs in their work and to be authentic

(May et al., 2004; Seligman, 2002). Furthermore, researchers of job design (Johns, Xie, & Fang, 1992; Renn & Vandenberg, 1995) have demonstrated that job enrichment in the areas of skill variety, task identity, task significance, autonomy, and feedback leads to psychological meaning. According to Kahn (1990), individuals should experience more meaning in the work environment when they have rewarding interpersonal interactions with their colleagues, when they are treated with respect and dignity, and are valued for their contributions. The level of interaction individuals have with their co-workers will also foster a stronger sense of social identity, a sense of belonging, and greater meaningfulness (Kahn, 1990).

Beliefs about the role or function of work in life can shape the meaningfulness of work. In this regard, the research of Wrzesniewski, McCauley, Rozin, and Schwartz (1997) regarding work orientation, i.e. beliefs about work in general, is relevant. Wrzesniewski et al. (1997) researched the meaningfulness of work and found that most people saw their work as a job (focus on financial awards and necessity rather than pleasure or fulfilment, and not a major positive part of life), a career (focus on advancement within the workplace), or a calling (focus on enjoyment of fulfilling, socially useful work). The research of Wrzesniewski et al. (1997) showed that approximately one-third of their research population fell into each of these three categories. Biswas-Diener and Dean (2007) also explain the importance of job crafting in the work of managers, i.e. rearranging the components of the work to increase the sense of purpose. Perceiving work as a calling leads to stronger organisational commitment (Wrzesniewski, 2003), and higher life satisfaction (Peterson, Park, Hall, & Seligman, 2009).

Authentic happiness is associated with various organisational outcomes, including organisational commitment, intention to stay/leave, job satisfaction and organisational citizenship behaviour. Job satisfaction is regarded as one of the most important indexes of subjective well-being of individuals in organisations (Van Schalkwyk & Rothmann, 2010). Overall job satisfaction is a subjective assessment by the employee of the job. This assessment can also include cognitive evaluations. It is the extent to which an employee experiences being immersed in work and that a variety of rewards, i.e. recognition, good performance appraisals and financial benefits will be forthcoming as a result of good work rendered (Bakker & Oerlemans, 2012).

Organisational commitment refers to the employee's identification with the organisational goals and strategies, the willingness to exert considerable effort to attain those goals and a strong desire to remain an employee within the company (Harrison & Hubbard, 1998). Affective commitment is regarded as the most important component of organisational commitment (Meyer & Allen, 1991). It affects an individual's intention to turnover, as well as on-the-job behaviour, i.e. job satisfaction. Considering the important role of managers, it is important to attempt to retain managers and keep them satisfied in their jobs for the sake of longevity and long-term strategy of the organisation. According to Russell (2008), engagement has a positive effect on retention and organisational commitment.

Organisational citizenship behaviour is defined as intentional employee behaviour that is discretionary, improves the functioning of the organisation, and that may be recognised and rewarded during performance appraisals (Organ, 1997). Organisational citizenship behaviour consists of two dimensions, namely an interpersonal dimension (e.g. volunteering help to a co-worker), and an organisational dimension (e.g. praising the organisation to outsiders) (Organ & Paine, 1999). Positive and negative affect, organisational commitment, and job satisfaction have been linked to organisational citizenship behaviour (Dalal, 2005). However, no studies were found which link organisational commitment, turnover intention, job satisfaction and organisational citizenship behaviour to happiness and flourishing of managers.

Turnover intention refers to a wilful and deliberate attempt to leave the organisation. Whilst this appears to be a very specific activity, the level of intention is not at all clear as such turnover intention can vary from a mere contemplation to actively attempting to secure alternative employment (Tett & Meyer, 1993). Turnover intention is more than often preceded by withdrawal behaviours, such as absenteeism, slackness in executing tasks, asocial behaviour with superiors and co-workers and, often, dysfunctional behaviour (Ladebo, 2005).

Based on the above-mentioned discussion, the research problems can be summarised as follows: First, it is unclear what the levels of happiness of managers are and how pleasure, engagement, and meaning at work contribute to their happiness. No South African studies have been found which focused on the happiness of managers from the perspectives of the theoretical models of Keyes and Annas (2009) and Peterson et al. (2005). Second, scientific

information is needed regarding antecedents of happiness, in terms of feeling well and functioning well as well as in terms of their flourishing or languishing. It is not clear whether task characteristics, personal resources, work role fit, co-worker relationships, supervisor support, remuneration and work orientation will impact on their happiness, and how psychological need satisfaction mediates between antecedents and happiness (in terms of feeling well and functioning well). Scientific information about these topics can be of great value in the development of managers in organisations, and in implementing programmes to address their happiness. Furthermore, information is needed regarding the relationships between the happiness of managers, organisational commitment, turnover intention, job satisfaction and organisational citizenship behaviour.

Flowing from the above, the following more specific research questions are posed:

- What is happiness and what are the antecedents and outcomes thereof?
- What are managers' orientations to happiness (i.e. pleasure, engagement, and meaning) and the relationships thereof with subjective well-being?
- Are managers' orientations to happiness and subjective well-being related to individual and organisational outcomes?
- What are the levels of flourishing and languishing of managers and what are the organisational antecedents and outcomes thereof?
- Are there relationships among task characteristics, supervisor support, personal resources, remuneration and flourishing of managers?
- Are there relationships among work role fit, task characteristics, work beliefs, and meaning and purpose in life of managers?
- Does the fulfilment of psychological needs mediate the relationship between antecedents (task characteristics, supervisor support, personal resources and adequate remuneration) on the one hand and flourishing of managers on the other hand?
- Does the fulfilment of psychological needs mediate the relationship between antecedents (task characteristics, work role fit, work orientation and co-worker relationships) and psychological meaning and purpose as experienced by managers?

This study will make the following contributions to the field of Industrial/Organisational Psychology: Firstly, it will result in reliable, valid and equivalent measuring instruments for different conceptualisations of happiness and its antecedents and outcomes of managers.

Secondly, it will result in validated models of happiness and flourishing of managers. More specifically, this study will contribute to the literature by exploring how factors such as work role fit, task characteristics, work beliefs and co-worker relations influence meaning and purpose in life, organisational citizenship behaviour and turnover intention. It will contribute to the SDT literature by investigating how the antecedents of work role fit, task characteristics, co-worker relationships and work beliefs satisfy the three psychological needs. The current study builds on the SDT and flourishing literatures to hypothesise a model in which psychological need fulfilment mediates the relations between antecedents (task characteristics, supervisor relations, personal resources and remuneration) and job satisfaction, work engagement and flourishing. Thirdly, it will result in new scientific information regarding the relationship between happiness, flourishing and organisational outcomes thereof.

1.3 AIMS OF THE RESEARCH

1.3.1 General aim

The general aim of this research is to investigate the happiness of managers in one sector, i.e. the agricultural sector in South Africa, and the antecedents and outcomes thereof.

1.3.2 Specific objectives

Flowing from the general aim, the following specific research objectives are formulated:

- To conceptualise happiness, the antecedents and outcomes thereof from the literature.
- To investigate managers' orientations to happiness (i.e. pleasure, engagement, and meaning) and the relationships thereof with subjective well-being.
- To study the relationships between managers' orientations to happiness, subjective well-being and organisational antecedents outcomes.
- To evaluate the levels of flourishing of managers in life and at work and to assess the antecedents and outcomes thereof.

- To investigate the relationships between work role fit, task characteristics, co-worker relationships and work beliefs, meaning and purpose in work, organisational citizenship behaviour and turnover intention.
- To determine whether psychological needs mediate the relationship between antecedents (task characteristics, supervisor relationships, personal resources and adequate remuneration) on the one hand and flourishing of managers on the other hand.
- To assess whether psychological needs mediate the relationship between antecedents (task characteristics, co-worker relationships, work role fit, work orientation) and meaning and purpose in life of managers.

1.4 RESEARCH METHOD

1.4.1 Research design

In this research, a quantitative approach is followed. More specifically a survey design is used (Huysamen, 2001). This design is suitable to study the relationships between different variables. Questionnaires are used to gather primary data in a non-random field survey (Davis, 2005; Rosnow & Rosenthal, 1999). The internal validity of this research is enhanced by defining happiness as a dependent variable and the various antecedents as independent variables from the literature, as well as the verification of the relationship between these variables in an empirical fashion. Within a contextual sense, this internal validity is ensured by:

- Models and theories being identified selectively and presented in a standardised method from the literature.
- Measuring instruments being selected on the basis that they related directly to this research and have already been proven to be valid by previous research.
- Measuring instruments having been applied according to the prescribed administration procedures, as well as within the context of professional ethics that is expected from a researcher at this particular level of research.

1.4.2 Participants

In this study, managers from businesses in the agricultural sector are studied. Agri-business includes the production of food and other consumables, but also has a significant link to non-agricultural business. The sustainable impact of agri-business in any economy is highlighted by providing food for domestic consumption, releasing labour for industrial employment, enlarging the market for domestic industrial output, increasing the supply of domestic savings and local revenue, and earning foreign exchange by way of agricultural export (Meijerink & Roza, 2007). The most significant driver of agri-business in South Africa is through cooperatives and agricultural businesses in South Africa, of which there are close to 1000 primary agricultural co-operatives and agribusinesses throughout the country.

Since 1994 the structure of agribusinesses had changed dramatically as a result of the deregulation of the agricultural sector. In 2000 the expenditure on agricultural input and services amounted to more than R21 billion and these inputs and services were handled by agribusinesses (http://old.southafrica.co.za/agriculture_29.html). The Agricultural Business Chamber regards the development of agribusinesses as being one of the top contributors to sustainability in the primary and secondary agriculture (<http://www.agbiz.co.za>).

Three levels of managers are used, namely supervisors, middle managers, and senior managers. In order to select a suitable and meaningful sample, random, stratified sampling was utilised. Stratification was prudent to ensure that appropriate numbers of elements were drawn from homogeneous subsets of the management population. The sample is stratified according to gender, level and race. Authorization for the use of the database was formally sought in each instance. A total sample of at least 500 managers from across South Africa will be included.

1.4.3 Measuring instruments

In this research, the following measuring instruments were used:

- The *Satisfaction with Life Scale* (SWLS; Diener, 1994) will be used to measure the cognitive component of subjective well-being. The SWLS consists of five items which measure the individual's evaluation of satisfaction with life in general (e.g. "I am satisfied

with my life” and “If I could live my life over, I would change almost nothing”). Responses range from 1 (*strongly disagree*) to 7 (*strongly agree*) for each question. Responses are then averaged to provide a total life satisfaction score. Research has established acceptable psychometric properties for the SWLS (Diener, 1994). Reliability by means of consistency was satisfactory within a population of 167 participants, 67 of which were re-tested after one month, with a correlation coefficient of 0.82 and coefficient alpha of 0.87 found (Diener, Emmons, Larsen, & Griffin, 1985).

- The *Antecedents Scale* (AS; May et al., 2004) will be used to measure participants’ perceptions of themselves, their jobs, supervisors, and the remuneration they receive. *Task characteristics* were measured by seven items (e.g. “Does your work make sufficient demands on all your skills and capacities?”). Each item requires the respondent to answer on a scale which varies from 1 (*never*) to 6 (*every day*). *Supervision relations* are measured by 10 items (e.g. “My manager encourages employees to speak up when they disagree with a decision”). Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*). *Co-worker relationships* were measured by 10 items. An example of the items is as follows: “My co-workers value my input”. Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*). *Personal resources* are measured by 8 items (e.g., “I feel emotionally healthy at the end of the workday”). Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*). *Remuneration* is measured by four items (e.g. “Do you think you are paid enough for the work that you do?”). Each item required the respondent to answer on a scale which varies from 1 (*never*) to 6 (*every day*).
- The *Mental Health Continuum Short Form* (MHC-SF; Keyes, 2009) will be used to measure emotional, social and psychological well-being. The *Mental Health Continuum Short Form* (MHC-SF; Keyes 2002) was used to measure emotional, social and psychological well-being. The MHC-SF consists of 14 items which measure emotional well-being (three items), psychological well-being (six items), and social well-being (five items). Items were rated using a six-point scale varying from 1 (*never*) to 6 (*every day*). The MHC-SF has shown high internal consistency ($> .80$) and discriminant validity

(Keyes 2009). The three-factor structure of the MHC-SF has been confirmed in studies in the USA (Keyes, 2009), and South Africa (Keyes et al., 2008).

- The *Orientations to Happiness Questionnaire* (OHQ; Peterson et al., 2005) will be used to measure an individual's orientation to happiness by the pursuit of pleasure, engagement, and meaning. This questionnaire comprises 12 face-valid items reflecting each of the three orientations initially drafted by Peterson et al. (2005). Examples of the items are as follows: "Life is too short to postpone the pleasures it can provide" (pleasure); "I seek out situations that challenge my skills and abilities" (engagement); "In choosing what to do, I always take into account whether it will benefit other people" (meaning). The OHQ contains a total of 18 items (6 items per scale). The participants were instructed to respond to the statements on how they actually live their lives. Each item requires the respondent to answer on a scale which varies from 1 (*very much unlike me*) to 5 (*very much like me*). Peterson et al. (2005) found the following alpha coefficients for the three scales in samples in the United States and Switzerland: pleasure = 0.84, engagement = 0.77, and meaning = 0.88.
- The *Affect Balance Scale* (ABS; Bradburn, 1969) was used to measure the affective component of subjective well-being. The ABS consists of 10 items designed to assess positive affect, negative affect and overall psychological well-being or affect balance. Positive affect items include feelings of being particularly excited or interested in something, or proud subsequent to having been given a compliment. The items on the positive affect scale reflect one's social life, esteem for others, focus on friends and objects outside oneself. Negative affect items include feelings of restlessness, and being bored or depressed. These items focus on the self and one's mental health. McGloshen and O'Bryant (1988) found Cronbach alpha coefficients of 0.62 for the positive affect scale and 0.74 for the negative affect scale. The two scales were relatively independent with a correlation of 0.14. Bolin and Dodder (2001) found that test-retest reliability of the ABS was above 0.70.
- The 23-item *Work-related Basic Need Satisfaction Scale* (WBNSS; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010) will be used to assess the satisfaction of the needs for autonomy, competence and relatedness. Items such as "I feel like I can

pretty much be myself at work” tap into autonomy satisfaction. Competence satisfaction was measured with items such as “I feel competent at work”. The item “People at work care about me” will be used to measure relatedness satisfaction. Respondents were asked to evaluate the items on a 5-point scale from 1 (*totally disagree*) to 5 (*totally agree*). The general need satisfaction scale and the three subscales are reliable, with Cronbach’s alpha coefficients of 0.89, 0.86, 0.88, and 0.86 for general need satisfaction and autonomy, competence and relatedness satisfaction, respectively.

- The *Work-role Fit Scale* (WRFS; May et al., 2004) will be used to measure work-role fit. Work-role fit was measured by averaging four items (e.g. “My job ‘fits’ how I see myself”), which measured individuals’ perceived fit with their jobs and self-concept. For all items, a five-point agreement-disagreement Likert scale varying from 1 (*never*) to 5 (*always*) will be used. Olivier and Rothmann (2007) confirmed the reliability of the WRFS in a petrochemical company ($\alpha = 0.90$).
- The *Work-Life Questionnaire* (WLQ; Wrzesniewski et al., 1997) was utilised in order to determine the levels of meaning managers associate with their work. According to Wrzesniewski et al. (1997), the WLQ is a self-report measure which aims to classify an individual’s orientation to work into three main categories, namely (a) work as a job, (b) work as a career, and (c) work as a calling. The questionnaire is divided into two parts. The first part contains a set of three paragraphs representing the three main meanings of work, in which the respondent is encouraged to rate his level of association with each paragraph on a scale of 1 (*not at all*) to 4 (*completely*).
- The *Organisational Commitment Scale* (OCS; Rothmann, 2010) will be used to measure organisational commitment. The OCS consists of six items. The scale measures attachment (loyalty, e.g. “I feel personally attached to my work organisation.”) and pride (identification, e.g. “I feel proud to be an employee of this organisation.”) Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha coefficient for the OCS is 0.85.
- The *Job Satisfaction Scale* (JSS; Rothmann, 2010) will be used to measure job satisfaction. The JSS consists of four items which measure the individual’s satisfaction

with his or her work (e.g., “I find real enjoyment in my present job.” Responses ranged from 1 (*totally disagree*) to 5 (*totally agree*) for each question.

- The *Turnover Intention Scale* (TIS; Sjöberg & Sverke, 2000) will be used to measure intention to leave. The TIS consists of three items. An example of an item is “If I was completely free to choose I would leave this job” (Sjöberg & Sverke, 2000). Response options range from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach alpha coefficient for the TIS was 0.83. Turnover-rates will also be provided by human resource managers (months after participants have reported on their need satisfaction).
- Organisational citizenship behaviour will be measured by *Organisational Citizenship Behaviour Scale* (OCBS; Rothmann, 2010). The OCBS consists of six items, three which measures assistance to co-workers in the organisation (e.g. “I give up time to help co-workers who have work or non-work problems”) and assistance to the organisation (e.g. “I take action to protect the organisation from potential problems.”). Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha coefficient for the two scales were 0.78 (assistance to co-workers) and 0.80 (assistance to the organisation).
- A *biographical questionnaire* will be administered to gather information regarding age, gender, ethnicity, marital status, parental status, number of children, language of choice, years working as a manager, level of education and number of current employees reporting to the manager.

1.4.4 Research procedure

Participants were sourced via the human resources functions of various agribusinesses. The researcher corresponded with all the major agribusinesses in South Africa and requested their participation. In the majority of cases those that granted consent were visited personally to explain the process. The researcher administered electronic questionnaires on participants in the different organisations. The questionnaires were completed anonymously by participants. A web-based survey was used. All ethical guidelines in the treatment of human subjects in research were observed and executed in all the steps of the study.

1.4.5 Statistical analysis

The analysis will be carried out with the SPSS19 program (SPSS, 2011). Confirmatory factor analyses will be conducted to confirm that the measures were distinct from one another. Cronbach's alphas are used to determine the reliability of the measuring instruments. Descriptive statistics (means and standard deviations) are computed to describe the data. Pearson correlation coefficients are used to specify the relationships between the variables. The level of statistical significance is set at $p < 0.05$. Effect sizes (Steyn, 1999) are used to decide on the practical significance of the findings. A cut-off point of 0.30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Structural equation modelling (SEM) methods, as implemented in AMOS (Arbuckle, 2008) is used to test the factorial models and structural equivalence of the measuring instruments by using the maximum likelihood analyses. The following indexes produced by AMOS will be used in this study (Hair, Black, Babin, & Andersen, 2010): the Chi-square statistic, which is the test of absolute fit of the model, the Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root-Means-Square Error of Approximation (RMSEA).

Hierarchical multiple regression analyses are conducted to determine the amount of variance in the dependent variable, predicted by the independent variables. Indirect effects are assessed using the procedure explained by Hayes (2009). Bootstrapping is used to construct two-sided bias-corrected confidence intervals to evaluate mediation effects. The significance of bootstrap-estimated indirect effects is assessed (Preacher & Hayes, 2008).

1.4.6 Ethical considerations

The research project was evaluated and accepted by the Ethics Committee of the North-West University (Vaal Triangle Campus). The research process was explained to the participants. The participants were given an opportunity to ask questions and raise concerns about the project before considering participation. The roles and responsibilities of all the parties involved were outlined. Participation in the project was voluntary. The researcher provided the participants with a consent form stating that the information obtained via the research

would be used for research purposes only. Participation in the study was anonymous. Participants were allowed an opportunity to receive feedback on the results of the study.

1.5 CHAPTER LAYOUT

Chapter 1:	Introduction
Chapter 2:	Article 1: Authentic happiness of managers, and individual and organisational outcomes
Chapter 3:	Article 2: Flourishing of managers: The role of psychological needs satisfaction and antecedents thereof
Chapter 4:	Article 3: Meaning and purpose in work: The role of psychological needs satisfaction and antecedents thereof
Chapter 5:	Conclusions, limitations and recommendations

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CHAPTER 2

ARTICLE 1

AUTHENTIC HAPPINESS OF MANAGERS, AND INDIVIDUAL AND ORGANISATIONAL OUTCOMES

ABSTRACT

The aim of this study was to investigate managers' orientations to happiness, and the relationship thereof to individual and organisational outcomes. A cross-sectional survey design was used with managers in the agricultural sector in South Africa ($N = 507$). The Orientations to Happiness Questionnaire, Satisfaction with Life Scale, Job Satisfaction Scale, Organisational Citizenship Behaviour Scale and Organisational Commitment Scale were administered. The results showed that orientations to happiness (i.e. pleasure, meaning and engagement) had strong direct effects on subjective well-being, job satisfaction and organisational citizenship behaviour. Orientations to happiness also impacted job satisfaction indirectly through subjective well-being. Subjective well-being had a strong direct and positive effect on job satisfaction. Both orientations to happiness and subjective well-being affected organisational commitment indirectly through their effects on job satisfaction.

Key terms: Happiness, pleasure, meaning, engagement, hedonia, eudaimonia, managers

Organisations are increasingly becoming aware of the importance of recruiting and retaining managers who are productive and functioning optimally to realise their strategic objectives (Tarique & Schuler, 2010). Managers who are psychologically well are needed to deal with the complex, dynamic, competitive, and volatile environment that organisations find themselves in. The attraction and retention of managers who are well are problematic in several regions in the world, but are acute in emerging markets, also in South Africa (Kock & Burke, 2008; Tyman, Stumpf, & Doh, 2010). Well-being consists of two components, namely feeling and functioning well (Keyes & Annas, 2009).

The importance of measuring happiness has been emphasised in recent years and happiness has been proposed as an important indicator of well-being (Diener, Kesebir, & Lucas, 2008; Park, Peterson, & Ruch, 2009). However, research that investigates the happiness of managers and the relationship thereof with individual and organisational outcomes is sparse. Measuring happiness of managers and intervening to promote happiness are inherently part of a strategic approach to human resource management. Armstrong (2006) identified both high commitment and high involvement management as strategic approaches to human resource management. High commitment management is aimed at eliciting a commitment so that behaviour is primarily self-regulated rather than controlled by sanctions and pressures external to the individual, while relations within the organisation are based on high levels of trust. High involvement management involves communication with and involvement of employees. Efforts to increase the happiness of employees (via intrinsic motivation, self-regulation, and trust) will result in commitment and involvement (Armstrong, 2006).

According to Diener, Suh, Lucas, and Smith (1999) and Lyubomirsky, Sheldon, and Schkade (2005), happiness is a subjective phenomenon of which the individual should be the final judge. Happiness refers to a cognitive evaluation of one's life moving in the right direction, a constant search for meaning and purpose in life – inclusive of frequent positive and infrequent negative emotions (Seligman, 2011). The word “happiness” is often criticised as unsuitable for use in scientific studies (Seligman, 2011). According to Sheldon, Kashdan, and Steger (2011), happiness is often equated with perpetual cheerfulness and devoid of any negative affect. In layman's terms, it is equated with concepts such as love, generosity, bliss and religiosity, but from a scientific perspective it might be all of these – inclusive of positive and negative affect. Because the term “happiness” lacks scientific precision, some researchers refer to subjective well-being (Zelenski, Murphy, & Jenkins, 2008). However, the fact that

happiness is a subjective experience does not mean that it cannot be investigated empirically (Lyubomirsky et al., 2005). It is possible to study happiness by clearly defining concepts based on scientific models (Keyes & Annas, 2009).

Peterson, Park, and Seligman (2005) proposed an integrated model for happiness flowing from two approaches, namely the hedonic and eudaimonic approaches. The hedonic approach focuses on pleasures of the mind, as well as the body and the avoidance of pain. Eudaimonia is concerned with a deeper level of perceived happiness (Ryan, Huta, & Deci, 2008). Peterson et al. (2005) suggest three orientations to happiness, namely pleasure (the pleasant life), meaningfulness (the meaningful life) and engagement (the good life). These routes to happiness are discernible, compatible, could be pursued simultaneously, and affect the subjective well-being (i.e. satisfaction with life, and positive and negative affect) of individuals (Peterson et al., 2005; Schueller & Seligman, 2010). However, engagement and meaning as routes to happiness seem more under deliberate control of individuals than pleasure.

Three considerations led to scientific pessimism about the possibility of affecting people's happiness (Lyubomirsky et al., 2005). First, people have a genetically determined set point which determines at least 50% of their happiness. Second, personality characteristics of individuals (and specifically neuroticism and extraversion) are quite stable over time, which results in people maintaining the same rank ordering in their levels of worry, guilt, social engagement, enthusiasm, and self-confidence. Third, gains in happiness are short term because people adapt quickly to change. However, there are various reasons for optimism regarding attempts to increase people's happiness (Lyubomirsky et al., 2005). Research has shown that specific interventions could increase people's happiness. Also, many motivational and attitudinal factors are amenable to some control, e.g. the tendency to take an optimistic perspective on life situations, and the tendency to experience self-efficacy. Furthermore, research findings suggest that greater happiness can be achieved over time. Finally, it seems that the unwanted effects of genes could be minimised by active efforts to steer oneself away from situations that detract from well-being. Therefore, measuring and enhancing individuals' happiness levels is a worthy scientific goal, especially after basic physical and security needs have been met (Lyubomirsky et al., 2005).

Seligman (2002) introduced the concept of authentic happiness, which consists of three orientations to happiness, namely pleasure, engagement, and meaning. The three orientations affect a person's subjective well-being, i.e. satisfaction with life, positive affect, negative affect, and domain-specific satisfaction. Subjective well-being, in turn, is expected to affect individual and organisational outcomes (Bowling, Eschleman, & Wang, 2010). Lyubomirsky, King, and Diener (2005) analysed studies which focused on the benefits of happiness, expressed in terms of frequent positive affect for success. They showed that the happiness-success link existed not only because success makes people happy, but also because positive affect engenders success.

Cross-sectional studies reviewed by Lyubomirsky et al. (2005) showed that happiness (as indicated by frequent positive affect) is associated with performance and productivity, job satisfaction, and organisational citizenship behaviour. Dispositional affect explained 10% to 25% of the variance in job satisfaction (with a mean correlation of 0.49 between positive affect and job satisfaction). Happy employees also showed less withdrawal behaviour (e.g. turnover intention). Happy employees are more committed, are less intent to leave the organisation, and exert higher levels of organisational citizenship behaviour (Harrison & Hubbard, 1998; Organ, 1997). Longitudinal studies analysed by Lyubomirsky et al. (2005) showed that happiness promoted success, in part because happy employees show adaptive characteristics.

Lyubomirsky et al. (2005) were primarily interested in positive affect as an indicator of happiness. They argued that adaptive characteristics impact positive affect. Frequent positive affect (i.e. emotional well-being or "feeling well") is only one dimension of subjective well-being (Diener, 1994). Furthermore, Lyubomirsky et al. (2005) did not study the effects of satisfaction with life and negative affect, as well as orientations to happiness on individual and organisational outcomes. Together, these dimensions reflect the extent to which individuals are feeling and functioning well. No studies were found which investigated the relationships between individual and organisational outcomes and this conceptualisation of happiness.

The aim of this study was to investigate the relationship between orientations to happiness and subjective well-being of managers, as well as individual and organisational outcomes thereof, in the agricultural sector in South Africa.

Orientations to happiness and subjective well-being

The term *happiness* has its roots in ancient Greek philosophy which proposed two distinct, yet inseparable or overlapping, traditions, namely hedonia and eudaimonia (Waterman, 2008). Hedonia proposes a life of maximum pleasure and minimum discomfort or psychological pain, and is about feeling good (Kahneman, Diener, & Schwarz, 1999). Eudaimonia refers to a life by actualising one's potential, realising the *daimon* (true self) and, thus, focusing on content of life (i.e. living well) as opposed to focus on pleasure. Various theories and models exist which use hedonia and eudaimonia (or combinations of the two traditions) as a point of departure for defining happiness.

Diener (1994) proposed a three-component approach to subjective well-being, i.e. life satisfaction, positive affect and negative affect. *Life satisfaction* has two facets, i.e. a global perspective of viewing one's life and having the intention and motivation to lead the full life (Steger, Kashdan, & Oishi, 2008). The other facet focuses on domain-specific aspects, such as personal perspective of life, personality traits, emotional, cognitive and social considerations. The selection of one or more facets would be reliant on the specific setting within which the assessment of well-being takes place (Diener, 1994). *Positive affect* relates to the frequency or presence of positive or pleasurable emotions, such as joy and happiness. Conversely, the presence of *negative affect* indicates adverse emotions, such as sadness or feeling dejected.

Based on the concepts of hedonia and eudaimonia, Peterson et al. (2005) proposed an integrated model of happiness comprising three orientations, namely pleasure (the pleasant life), meaningfulness (the meaningful life) and engagement (the good life). The constructs of pleasure, meaning and engagement were found to be statistically discernable from one another. However, they are compatible, can be researched simultaneously and make unique contributions to life satisfaction (Peterson et al., 2005; Vella-Brodrick, Park, Peterson, 2009).

The first orientation towards happiness is pleasure. A pleasant life consists of having as much pleasure as you can through the experience of positive affect (Peterson et al., 2005). Within limits, individuals can increase their positive affect about the past (by cultivating gratitude and forgiveness), their positive emotions about the present (by savouring and mindfulness), and positive emotions about the future (by building optimism and hope) (Seligman, 2002).

Increasing pleasure as orientation towards happiness has its theoretical underpinnings in hedonism (Park et al., 2009). Currently the field of hedonic psychology (Kahneman et al., 1999) focuses on how pleasurable experiences can be savoured. From the perspective of positive psychologists, the pleasant life seems incomplete as an explanation of happiness, since pleasure is not under the control of the individual and it is short-lived (Peterson et al., 2005).

The second orientation towards happiness is engagement. A good life refers to being engaged in activities, either at work or play and intrinsic enjoyment and fulfilment (Peterson et al., 2005). There are no shortcuts to the engaged life as compared to the pleasant life. The engaged life results from knowing what your signature strengths are and recrafting your life to use them at work, in love, in leisure, parenting and friendship. One of the psychological mechanisms underlying engagement might be the state of flow, which occurs when an individual experiences the optimal combination between skills and challenges (Moneta & Csikszentmihalyi, 1996). When an individual experiences flow, time passes quickly, attention is focused on the activity, and the sense of self is lost. According to Peterson et al. (2005), flow is distinct from sensual pleasure. Flow is not immediately present during the activity itself, and might be incompatible with pleasure.

The third orientation to happiness is meaning and purpose. A meaningful life consists of knowing what your biggest strengths and talents are and using them in the service of something you believe is bigger than you are (Peterson et al., 2005). Meaning is related to external goals and self-transcendence (Park et al., 2009), builds social connections and provides purpose (Schueller & Seligman, 2010). A meaningful life is individually judged by what is desirable in life and what is morally good (King, Eells, & Burton, 2004). It involves a sense of purpose and that what one does, is for the improvement of the self and the community at large. It is a feeling that what one does is what makes life worth living. It is a subjective judgment of meaning in life and what is desirable for the moral good and, as such, meaningfulness correlates significantly with subjective well-being. This desirability suggests an affective judgment of what enhances positive affect and decreases negative affect (Diener, Lucas, & Oishi, 2005).

Peterson et al. (2005) found that the three orientations to happiness (i.e. pleasure, engagement and meaning) are empirically distinguishable. Not all activities which are engaging (e.g.

practising in a sport) are used in service of something bigger than you are. Conversely, not all activities in service of something bigger than you are (e.g. serving on a committee) will contribute to engagement. Vella-Brodrick et al. (2009) reported that the three orientations to happiness predicted life satisfaction beyond socio-demographical variables and personality in American and Australian samples. Peterson et al. (2005) found that each orientation to happiness (i.e. pleasure, engagement and meaning) is associated with life satisfaction.

Studies showed that engagement and meaning have stronger relationships with life satisfaction than pleasure (Peterson et al., 2005; Schueller & Seligman, 2010; Vella-Brodrick et al., 2009). Engagement and meaning are seen to be under the control of the individual, build social and psychological resources, and lead to longer-lasting fulfilment (Schueller & Seligman, 2010; Seligman, 2002). Pleasure, on the other hand, does not build resources. Although engagement and meaning as routes to happiness are distinct, they can be pursued simultaneously.

Engagement and meaning were found to predict subjective well-being better, inclusive of all three components, i.e. satisfaction with life, positive affect and negative affect, and then also beyond the measure of pleasure (Vella-Brodrick et al., 2009). Schueller and Seligman (2010) confirmed these results by stating that those individuals who had high orientations to happiness, showed the highest levels of subjective well-being, hence indicating that all three orientations are important in predicting subjective well-being.

Hypothesis 1. Orientations to happiness (pleasure, meaning and engagement) relate positively to subjective well-being.

Happiness and individual and organisational outcomes

Modern-day managers are involved in many life domains, i.e. leisure, family, recreation, sport, politics and many more (Hecht & Boies, 2009). Reciprocal interferences and enrichments of any one or more of these domains to the manager's general well-being and work behaviour will occur. Various theories can be used to understand why happiness can affect individual and organisational outcomes.

Fredrickson (2001) developed the “broaden-and-build” theory of positive emotions. In terms of this theory, people’s lives are characterised by moments of positive emotions, such as joy, elation, contentment and love as well as negative emotions, such as despair, sadness, anger and anxiety. The balance of these moments predicts a person’s subjective well-being. A perpetuation of positive emotions, i.e. in terms of a continuous balance over negative emotions, leads to flourishing. People hence nurture these positive emotions, broaden them to all domains of life and build their personal physical, emotional, social, psychological and cognitive resources.

According to Hecht and Boies (2009), spillover from one domain (e.g. life) to another (e.g. work) could occur, and explain the relationship between happiness and individual and organisational outcomes (Hecht & Boies, 2009). Therefore, happiness of employees could spill over to their work, impacting job satisfaction, organisational commitment, and organisational citizenship behaviour,

Job satisfaction

Bakker and Oerlemans (2012) found that high levels of subjective well-being are associated with high levels of job satisfaction, frequent experiences of positive emotions and infrequent experiences of negative emotions. Job satisfaction is defined as a positive emotional state emanating from the appraisal of one’s job (Katsikea, Theodosiou, Perdakis, & Kehagias, 2011). Various studies (Boehm & Lyubomirsky, 2008; Russell, 2008) showed that subjective well-being indices correlate with higher levels of job satisfaction.

Recent research by Bowling et al. (2010) examined the relationship between subjective well-being and job satisfaction. They offered the spill-over hypothesis, which suggests that experiences in one or more life domains have similar effects on other domains. As they regard subjective well-being as multi-faceted, they also examined the effect of each variable within subjective well-being and its relationship with job satisfaction. They found that the combination of the facets of subjective well-being has a stronger relationship with job satisfaction than the individual parts thereof. With regard to the latter, they found that life satisfaction and positive affect had similar loadings on job satisfaction, whereas negative affect had a lower loading. With regard to the reciprocal effect, they conclusively found a strong effect of subjective well-being on job satisfaction.

Hypothesis 2. Subjective well-being is positively related to job satisfaction

Organisational commitment

Organisational commitment is an individual affective state that represents the employee's desire to stay with the organisation even when alternative employment prospects present themselves. This desire by the employee emanates from the relationship between the positive inherent nature of the job and the organisation allowing the employee to function as such within the confines of the organisational structure, policies and procedures. Katsikea et al. (2011) showed that job satisfaction is a predictor of organisational commitment and not a consequence thereof. Studies by Fisher (2010), Shore and Martin (1989) and Ting (2010) confirm that job satisfaction is a significant predictor of organisational commitment. Dirani and Kuchinke (2011) found a correlation of 0.73 between job satisfaction and organisational commitment.

Hypothesis 3. Job satisfaction is positively related to organisational commitment.

Organisational citizenship behaviour

Although research confirms a positive causal link between job satisfaction and organisational commitment, organisations need employees that excel beyond the parameters of their formal job descriptions in order to gain a competitive edge in the global market. Organisations have become dependent upon those employee work behaviours and attitudes that go beyond the call of duty – so-called organisational citizenship behaviours (Chiaburu & Byrne, 2009; Lavelle, 2010; Lavelle et al., 2009). Organ and Ryan (1995) and Paillé (2009) posit that organisational citizenship behaviours include five components, i.e. altruism, conscientiousness, sportsmanship, courtesy and civic virtue. The frequency and depth of presentation of these components have both individual and organisational manifestations and, indeed, combinations thereof. Lavelle et al. (2009) cite extensive research indicating that organisational citizenship behaviours are motivated by positive job attitudes and inclusive of commitment. Gurbuz (2009) confirmed the antecedent role of organisational commitment to organisational citizenship behaviour.

Hypothesis 4. Organisational commitment is positively related to organisational citizenship behaviour.

Ting (2010) is of the opinion that research indicates organisational commitment as a predictor of employee turnover, a high level of organisational commitment is associated with improved individual performance, and organisational commitment is a good indicator of organisational efficacy. Research by Fisher (2010) suggests that the inherent characteristics of the job and individual happiness resulting from perceptions of the job will allow goal attainment. Although organisational commitment is clearly positively related to organisational citizenship behaviour, research by Foote and Tang (2008) also found that commitment mediates the relationship between job satisfaction and organisational citizenship behaviour.

Since organisational citizenship behaviour has both individual and organisational perspectives, the employee's level of engagement and attachment with the organisation, over and above the compliance of the job description, will largely determine perceived, ultimate superior, job satisfaction and performance (Chiaburu & Byrne, 2009). Organisational commitment is defined as the process whereby the individual aligns personal goals with those of the organisation and the level of engagement is primarily determined by this alignment and the sustenance thereof (Jackson, Rothmann, & Van de Vijver, 2008). Work engagement can, hence, be seen as an antecedent to organisational commitment. However, research by Peterson et al. (2005) found engagement and meaning to be highly reliable predictors of subjective well-being. It hence seems quite reasonable and, indeed, essential to consider the mediating role of subjective well-being between orientations to happiness and organisational commitment. It might be argued that the eventual outcome, both intrinsic and extrinsic, will have a reciprocal effect on the employee's happiness and continued satisfaction within the organisation.

Diener (1994) states that life satisfaction generally affects all life domains and that the composite of domain-specific satisfactions, e.g. social, work and leisure, can be interpreted as general life satisfaction. Following from this, one would argue that experiencing satisfaction in the specific domains and eventual overall life satisfaction will increase the manager's level of engagement in and meaningfulness of the job. Affect has a significant influence on life satisfaction (Pavot & Diener, 2008). As subjective well-being comprises of life satisfaction, positive and negative affect, it seems reasonable to suggest that the mediating effect of subjective well-being between orientations to happiness and organisational outcomes should be considered.

Hypothesis 5. Subjective well-being mediates the relationship between orientations to happiness and job satisfaction, organisational commitment and organisational citizenship behaviour.

METHOD

Research design

A cross-sectional survey design was used with managers in the agricultural sector (Terre Blanche, Durrheim, & Painter, 2006).

Participants

Eight agricultural companies participated in the study and the number of participants varied from, as few as, four per company, to 199 in the case of the larger companies. The companies included formal secondary agricultural companies, previously referred to as cooperatives, a large fertiliser producer to the agricultural sector and fruit packaging companies. The ages of the participants varied from 23 to 63 (Mean = 42.42, *SD* = 9.45). The length of service in the various companies varied between one and 45 years (Mean = 19.35, *SD* = 9.93). The characteristics of the participants are reported in Table 1.

Table 1 shows that males represented 80.1% of the total sample. With regard to race, whites dominated the sample with 89.7%, followed by Africans being 3.2%, Coloureds being 5.7% and Indians were 1%. A total of 92.7% of the participants were Afrikaans-speaking and English and African were 4.1% and 3.2% respectively. With regard to education, 38.3% of the participants had a Grade 12 level of education, 9.1% a technical college qualification, 12.4% diplomas, 20.5% university degrees and 19.7% postgraduate degrees. A total of 47.1% of the participants were on middle management level, while 33.1% were on junior management level, 14.6% on senior management level and 5.1% on executive level. Finally, 68.2% of the participants were married or living with a partner, with children.

Table 1

Characteristics of the Participants (N=507)

Item		Frequency	Percentage
Gender	Male	406	80.1
	Female	101	19.9
Race	White	455	89.7
	African	16	3.2
	Coloured	29	5.7
	Indian	5	1.0
	Other	2	0.4
Home language	Afrikaans	470	92.7
	English	21	4.1
	African	16	3.2
Education	Grade 12	194	38.3
	Technical college diploma	46	9.1
	Technikon diploma	63	12.4
	University degree	104	20.5
	Postgraduate degree	100	19.7
Job level	Executive management	26	5.1
	Senior management	74	14.6
	Middle management	239	47.1
	Junior management	168	33.1
Marital status	Single	63	12.4
	Single parent	13	2.6
	Married/living with a partner, without children	76	15.0
	Married/living with partner, with children	346	68.2
	Divorced	9	1.8

Measuring instruments

The Orientations to Happiness Questionnaire (OHQ), Satisfaction with Life Scale (SWLS), Job Satisfaction Scale (JSS), Organisational Citizenship Behaviour Scale (OCBS) and Organisational Commitment Scale (OCS) were administered.

An adapted version of the *Orientations to Happiness Questionnaire* (OHQ; Peterson et al., 2005) was used to measure managers' orientations to happiness. The OHQ consists of 18 items (six items for each of the three subscales). Rothmann (in press) analysed the psychometric properties of the OHQ and found that the engagement subscale was not suitable for use in Southern Africa. The adapted questionnaire comprises 12 items reflecting three orientations, namely pleasure (5 items), engagement (3 items) and meaning (4 items). Examples of the items are as follows: "Life is too short to postpone the pleasures it can provide" (pleasure); "I seek out situations that challenge my skills and abilities" (engagement); "In choosing what to do, I always take into account whether it will benefit other people" (meaning). Each item requires the respondent to answer on a scale which varies from 1 (*very much unlike me*) to 5 (*very much like me*). Peterson et al. (2005) found the following alpha coefficients for the three scales in samples in the United States and Switzerland: pleasure = 0.84, engagement = 0.77, and meaning = 0.88.

The *Satisfaction with Life Scale* (SWLS; Diener, 1994) was used to measure the cognitive component of subjective well-being. The SWLS consists of five items which measure the individual's evaluation of satisfaction with life in general (e.g. "I am satisfied with my life" and "If I could live my life over, I would change almost nothing"). Responses range from 1 (*strongly disagree*) to 7 (*strongly agree*) for each question. Research has established acceptable psychometric properties for the SWLS (Diener, 1994). Reliability by means of consistency was satisfactory within a population of 167 participants, 67 of which were retested after one month, with a correlation coefficient of 0.82 and coefficient alpha of 0.87 being found (Diener, Emmons, Larsen, & Griffin, 1985).

The *Affect Balance Scale* (ABS; Bradburn, 1969) was used to measure the affective component of subjective well-being. The ABS consists of 10 items designed to assess positive affect, negative affect and overall psychological well-being or affect balance. Positive affect items include feelings of being particularly excited or interested in something, or proud subsequent to having been given a compliment. The items on the positive affect scale reflect one's social life, esteem for others, focus on friends and objects outside oneself. Negative affect items include feelings of restlessness, and being bored or depressed. These items focus on the self and one's mental health. McGloshen and O'Bryant (1988) found Cronbach alpha coefficients of 0.62 for the positive affect scale and 0.74 for the negative

affect scale. The two scales were relatively independent with a correlation of 0.14. Bolin and Dodder (2001) found that test-retest reliability of the ABS was above 0.70.

The *Job Satisfaction Scale* (JSS) was used to measure job satisfaction. The JSS consists of four items which measure the individual's satisfaction with his or her work (e.g. "Most days I am enthusiastic about my work"). Responses range from 1 (*totally disagree*) to 5 (*totally agree*) for each question.

Organisational commitment was measured by the *Organisational Commitment Scale* (OCS, Rothmann, 2010). The OCS consists of six items. The scale measures attachment (loyalty, e.g. "I feel personally attached to my work organisation") and pride (identification, e.g. "I feel proud to be an employee of this organisation"). Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha coefficient for the OCS was 0.85.

Organisational citizenship behaviour was measured by *Organisational Citizenship Behaviour Scale* (OCBS; Rothmann, 2010). The OCBS consists of six items, three which measure assistance to co-workers in the organisation (e.g. "I give up time to help co-workers who have work or non-work problems") and assistance to the organisation (e.g. "I take action to protect the organisation from potential problems"). Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha coefficient for the two scales were 0.78 (assistance to co-workers) and 0.80 (assistance to the organisation).

Research procedure

The research project was evaluated and accepted by the Ethics Committee of the North-West University (Vaal Triangle Campus). The researcher provided the participants with a consent form stating that the information obtained via the research would be used for research purposes only. The research process was explained to the participants and they were given an opportunity to ask questions and raise concerns about the project before considering participation. The roles and responsibilities of all the parties involved were outlined. Participation in the project was voluntary and anonymous. Participants were allowed an opportunity to receive feedback on the results of the study.

Participants were sourced via the human resources functions of various agribusinesses. The researcher administered electronic questionnaires on participants in the different organisations. The questionnaires were completed anonymously by participants. A web-based survey was used. All ethical guidelines in the treatment of human subjects in research were observed and executed in all the steps of the study.

Statistical analysis

Structural equation modelling (SEM) methods, as implemented in AMOS (Arbuckle, 2008), was used to test the factorial models and structural equivalence of the measuring instruments by using the maximum likelihood analyses. The following indexes produced by AMOS were used in this study (Hair, Black, Babin, & Andersen, 2010): the Chi-square statistic, which is the test of absolute fit of the model, the Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root-Means-Square Error of Approximation (RMSEA).

Analyses of descriptive statistics and Pearson correlations were carried out with the SPSS19 program (SPSS, 2011). The level of statistical significance was set at $p < 0.05$. Indirect effects were assessed using the procedure explained by Hayes (2009). Bootstrapping was used to construct two-sided bias-corrected confidence intervals to evaluate mediation effects. The statistical significance of bootstrap-estimated indirect effects is assessed (Preacher & Hayes, 2008). Furthermore, 90% bootstrap confidence intervals (5000 trials) for all indirect effects were computed to assess whether they include zeros. The significance of mediation steps are stated in terms of zero and nonzero coefficients, not in terms of statistical significance.

RESULTS

Testing the measurement model

Evidence was sought for the construct validity of the exogenous and endogenous variables. Using confirmatory factor analysis (CFA), a hypothesised measurement model was tested to

assess whether each of the measurement items would load significantly onto the scales with which they were associated. Each latent variable included three to four observed variables (Hair et al., 2010).

Seven measurement models were tested. Model 1 consisted of five latent variables, namely a) orientations to happiness, consisting of three latent variables, namely pleasure (measured by six observed variables), meaning (measured by six observed variables) and engagement (measured by three observed variables); b) subjective well-being, consisting of three latent variables, namely satisfaction with life (measured by five observed variables), positive affect (measured by five observed variables) and negative affect (measured by five observed variables); c) organisational commitment, consisting of two latent variables, namely affective commitment (measured by four observed variables) and normative commitment (measured by four observed variables); d) job satisfaction (measured by four observed variables); and e) organisational citizen behaviour (measured by five observed variables).

Models 2 and 3 were the same as model 1, but with the following differences: model 2 was specified with 15 observed variables measuring orientations to happiness (without the three first-order latent variables, namely pleasure, meaning and engagement); model 3 was specified with 15 observed variables measuring subjective well-being (without the three first-order latent variables, namely satisfaction with life, positive affect and negative affect). Model 4 consisted of three latent variables, but differed from model 1 in the sense that no first-order latent variables were specified for organisational commitment, job satisfaction and organisational citizenship behaviour. Model 5 consisted of four latent variables, but differed from model 1 in the sense that the six latent variables were specified for the second-order latent factor (happiness). Model 6 consisted of one latent variable (measured by 48 observed variables). This model was expected to assess the extent of common-method variance overall. Model 7 consisted of two latent variables, namely happiness (measured by 30 observed variables) and organisational outcomes (measured by 21 observed variables). Table 2 presents fit statistics for the test of the various models on the sample.

Table 2

Fit Statistics of Competing Measurement Models

Model	χ^2	df	TLI	CFI	RMSEA	SRMR	AIC	BIC
Model 1	1804.90	1016	0.90	0.91	0.04	0.06	2028.90	2052.37
Model 2	2350.46	1019	0.84	0.84	0.05	0.07	2568.46	3029.37
Model 3	2275.27	1019	0.84	0.85	0.05	0.07	2493.27	2954.18
Model 4	2811.50	1026	0.78	0.79	0.06	0.08	3015.50	3446.81
Model 5	1858.41	1020	0.90	0.90	0.04	0.06	2074.41	2531.09
Model 6	5149.72	1034	0.50	0.52	0.09	0.09	5337.72	5735.20
Model 7	4535.94	1033	0.57	0.59	0.08	0.09	4725.94	5127.65

df= degrees of freedom; TLI= Tucker-Lewis Index; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation; SRMR= Standardised Root Mean Square Residual; AIC = Akaike Information Criterion; BIC = Bayes Information Criterion

Two fit statistics, namely the AIC and BIC were used in addition to other fit indices in this study. The AIC, which is a comparative measure of fit, is meaningful when different models are estimated. The lowest AIC is the best fitting model. The BIC provides an indication of model parsimony (Kline, 2010). Comparison of the fit indices indicates that Model 1 fitted the data best. All the other models (except model 5) showed a poor fit to the data. Table 2 shows that a χ^2 value of 1804.90 ($df = 1016$, $p < 0.01$) was obtained for Model 1, which was subsequently used as a baseline model to decide whether the other five models represented a statistically significant improvement. The following changes in chi-square ($\Delta\chi^2$) were found: Model 1 and 2 ($\Delta\chi^2 = 545.56$, $\Delta df = 3$, $p < 0.01$); model 1 and 3 ($\Delta\chi^2 = 470.37$, $\Delta df = 3$, $p < 0.01$), model 1 and 4 ($\Delta\chi^2 = 1006.60$, $\Delta df = 10$, $p < 0.01$), model 1 and 5 ($\Delta\chi^2 = 53.51$, $\Delta df = 4$, $p < 0.01$), model 1 and 6 ($\Delta\chi^2 = 3344.82$, $\Delta df = 18$, $p < 0.01$), and model 1 and 7 ($\Delta\chi^2 = 2731.04$, $\Delta df = 17$, $p < 0.01$).

In summary, the hypothesised five-factor measurement model had a better fit with the data than did the alternative models. Standardised coefficients from items to factors ranged from 0.54 to 0.94. Furthermore, the results indicated that the relationship between each observed

variable and its respective construct was statistically significant ($p < 0.01$), establishing the posited relationships among indicators and constructs (see Hair et al., 2010).

Testing the structural model

The descriptive statistics and alpha coefficients of the constructs of the structural model are reported in Table 3. The results in Table 3 show that seven scales, namely pleasure, meaning, engagement, satisfaction with life, affective organisational commitment, job satisfaction and organisation citizenship behaviour had acceptable alpha coefficients (> 0.70), while the alpha coefficient of three scales namely positive affect, negative affect and normative organisational commitment was below the cut-off of 0.70 (see Nunnally & Bernstein, 1994).

Evaluating the hypothesised model

The structural model was tested using model 1 (see Table 2), which was the best fitting and most parsimonious measurement model. The hypothesised relationships were tested using structural equation modelling as implemented by AMOS (Arbuckle, 2008). Results indicated a fair fit of the structural model compared to the measurement model ($\chi^2 = 1805.69$, $df = 1019$, $TLI = 0.90$, $CFI = 0.91$, $RMSEA = 0.04$ and $SRMR = 0.06$). The standardised regression coefficients are given in Figure 1.

Hypothesis 1

Figure 1 shows the standardised path coefficients estimated by AMOS for the proposed theoretical model. For the portion of the model predicting subjective well-being, the path coefficient was significant and had the expected sign. Orientations to happiness had a positive relation with subjective well-being. The ML-estimated equation counted for a large proportion of the variance in subjective well-being ($R^2 = 0.82$). Hypothesis 1 is, therefore, accepted.

Hypothesis 2

For the portion of the model predicting job satisfaction, the path coefficient was significant and had the expected sign. Subjective well-being had a positive relation with job satisfaction. The ML-estimated equation counted for a large proportion of the variance in job satisfaction ($R^2 = 0.89$). These results provide support for Hypothesis 2.

Hypothesis 3

For the portion of the model predicting organisational commitment, the path coefficient was significant and had the expected sign. Job satisfaction had a positive relation with organisation commitment. The ML-estimated equation counted for a large proportion of the variance in job satisfaction ($R^2 = 0.80$). Hypothesis 3 is, therefore, accepted.

Hypothesis 4

For the portion of the model predicting organisational citizenship behaviour, the path coefficient was significant and had the expected sign. Organisational commitment had a positive relation with organisational citizenship behaviour. The ML-estimated equation counted for a large proportion of the variance in job satisfaction ($R^2 = 0.47$). These results provide support for Hypothesis 4.

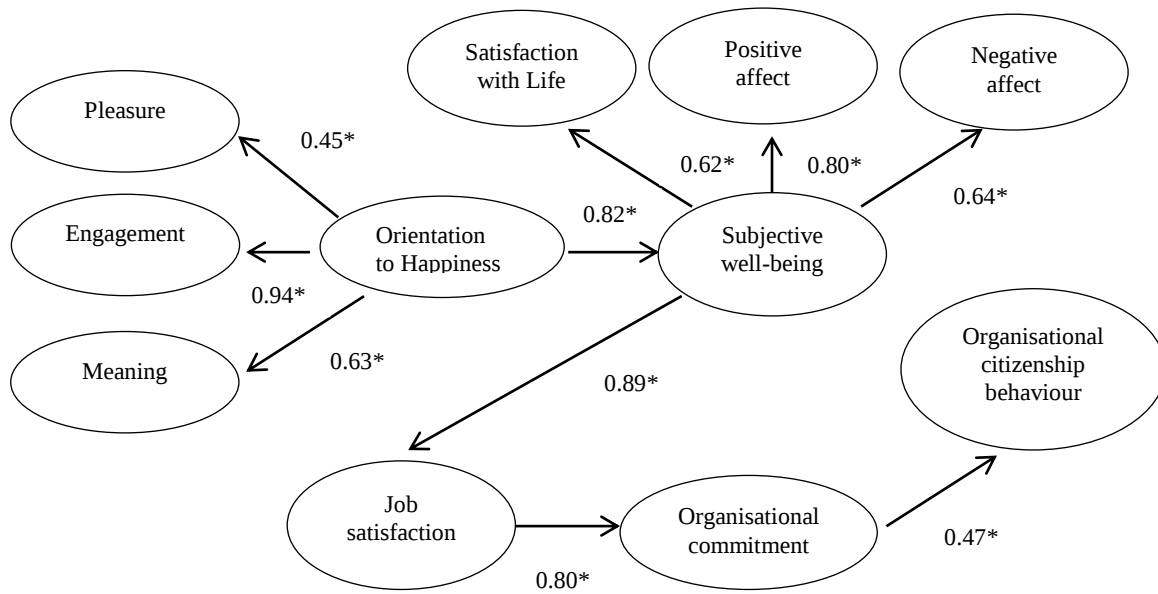
Table 3

Descriptive Statistics, Alpha Coefficients and Correlations of the Scales

Variable	Mean	SD	α	1	2	3	4	5	6	7	8	9
1. Meaning	3.75	0.59	0.79	-	-	--	-	-	-	-	-	-
2. Pleasure	3.33	0.64	0.74	0.41**	-	-	-	-	-	-	-	-
3. Engagement	5.46	0.93	0.77	0.46**	0.28**	-	-	-	-	-	-	-
4. Satisfaction with life	3.98	1.14	0.88	0.34**	0.26**	0.37**	-	-	-	-	-	-
5. Positive affect	0.83	0.24	0.64	0.31**	0.28**	0.40**	0.44**	-	-	-	-	-
6. Negative affect	0.21	0.30	0.62	-0.17**	-0.10*	-0.37**	-0.33**	-0.37**	-	-	-	-
7. Affective organisational commitment	4.12	0.56	0.81	0.29**	0.12**	0.49**	0.32**	0.37**	-0.28**	-	-	-
8. Normative organisational commitment	2.48	0.67	0.69	-0.11*	-0.01	-0.23**	-0.28**	-0.35**	0.28*	-0.58**	-	-
9. Job satisfaction	3.78	0.64	0.80	0.27**	0.13**	0.59**	0.43**	0.49**	-0.46**	0.56**	-0.43**	-
10. Organisational citizenship behaviour	3.87	0.97	0.80	0.36**	0.33**	0.39**	0.26**	0.29**	-0.15**	0.37**	-0.22**	0.31**

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

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



* $p < 0.01$

Figure 1. The hypothesised model

It was hypothesised that subjective well-being would mediate the relationships between orientations to happiness and job satisfaction, organisational commitment and organisational citizenship behaviour. To test the conditions for mediation (Preacher & Hayes, 2009), three different models were analysed using the AMOS18 program (Arbuckle, 2008). The three competing models were as follows: a) Model 1 ('Indirect effects' model) estimated paths from each independent variable to its hypothesised mediator and from each mediator to the dependent variables (i.e. job satisfaction, organisational commitment and organisational citizenship behaviour); b) Model 2 ('Direct effects' model) estimated direct paths from each independent variable to its hypothesised mediator and to job satisfaction, organisational commitment and organisational citizenship behaviour; c) Model 3 ('Full' model) estimated direct and indirect paths from each independent variable to its proposed mediators and outcome variables. The fit statistics and standardised regression coefficients are reported in Table 4.

Path analysis was used to examine the fit of these models to the data. Because the indirect effects model and the direct effects model are both hierarchically nested within the full model, differences in fit can be determined using the chi-square (i.e. $\Delta\chi^2$) test described by Kline (2010). The fit statistics for the different models are reported in Table 4. The

significant χ^2 difference tests indicate that the hypothesised model (model 1) has a better overall fit to the data than the direct effects model ($\Delta\chi^2 = 149.55$, $\Delta df = 2$, $p < 0.01$). However, the full model (model 3) has a better overall fit than the indirect effects model (model 3; $\Delta\chi^2 = 59.04$, $\Delta df = 6$, $p < 0.01$). This suggests that mediation as conceived in the original theoretical framework does not explain the covariation in the data better than a model allowing partial mediation (i.e. model 3). The paths between the following variables are not statistically significant ($p > 0.05$) in the full model: from subjective well-being to organisational commitment, orientations to happiness to organisational commitment, from subjective well-being to organisational citizenship behaviour, and from job satisfaction to organisational citizenship behaviour.

Table 4

Initial Framework Fit Indices and Standardised Path Coefficients

Measures		Indirect effects (Model 1)	Direct effects (Model 2)	Direct and indirect effects (Model 3)
Fit Indices	χ^2	1863.94	2013.49	1804.90
	df	1022	1020	1016
	TLI	0.90	0.88	0.90
	CFI	0.90	0.88	0.91
	RMSEA	0.04	0.04	0.04
	SRMR	0.07	0.10	0.06
Direct effects on subjective well- being	Orientation to happiness	0.82*	-	0.75*
Direct effects on job satisfaction	Orientation to happiness	0.89*	-	0.31*
	Subjective well-being	0.80*	0.70*	0.58*
Direct effects on organisational commitment	Orientation to happiness	-	0.39*	0.02
	Subjective well-being	-	0.62*	0.10
	Job satisfaction	0.80*		0.72*
Direct effects on organisational citizenship behaviour	Orientation to happiness	-	0.48*	0.63*
	Subjective well-being	-	0.14	0.05
	Job satisfaction	-	-	0.41*
	Organisational commitment	0.47*	-	0.36*

* $p < 0.01$

Revised model

Given that the full model fits the data better than the originally theorised model, it was decided to examine whether a revised model based on the original framework could improve its explanatory power and overall fit with the data. The researcher was concerned with the theoretical issue of mediation and was therefore interested in model revision that would provide a clearer understanding of mediation by subjective well-being and job satisfaction. The paths which were not statistically significant in the revised model were deleted. The revised model showed acceptable fit: $\chi^2 = 1805.69$, $df = 1019$, $TLI = 0.90$, $CFI = 0.91$, $RMSEA = 0.04$ and $SRMR = 0.06$. The non-significant chi-squared difference tests, after these path deletions, indicated that the removal of these paths did not significantly impact the model's degree of overall fit ($\Delta\chi^2 = 0.79$, $\Delta df = 3$, $p > 0.01$). Compared with the hypothesised model, the revised model still showed a statistically significant improvement ($\Delta\chi^2 = 58.25$, $\Delta df = 3$, $p < 0.01$).

To determine whether any relationships in the revised model were, indeed, fully mediated by subjective well-being, the standardised path coefficients shown in Table 4 were evaluated. To determine what form of mediation might be present, the path coefficients in the direct effects and revised (full) models were compared. Following the procedure explained by Hayes (2009), bootstrapping was used to construct two-sided bias-corrected confidence intervals so as to evaluate mediation effects (see Table 5).

Table 5

Indirect (Mediation Effects) of Orientations to Happiness and Subjective Well-being

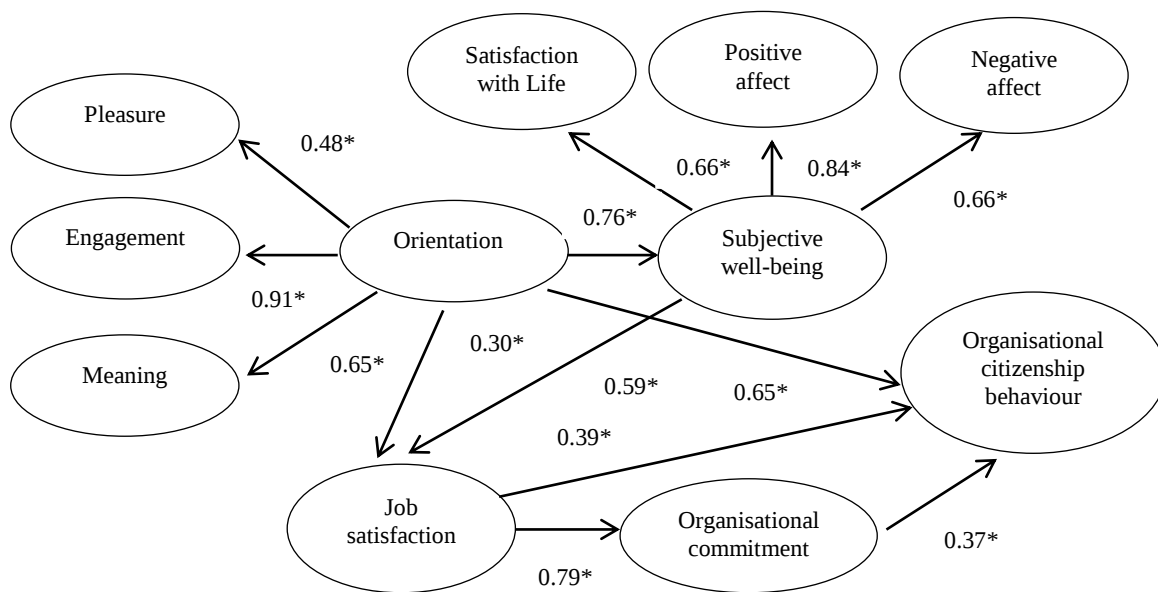
	Orientation to happiness			Subjective well-being		
	Estimate	SE	90% CI	Estimate	SE	90% CI
Job satisfaction	0.45*	0.10	0.32 to 0.65			
Organisational commitment	0.59*	0.04	0.52 to 0.65	0.47*	0.10	0.33 to 0.63
Organisational citizenship behaviour	0.08	0.08	0.04 to 0.24	0.06	0.07	0.04 to 0.18

* $p < 0.01$

Table 5 shows that the bootstrap-estimated indirect effects of orientations to happiness on job satisfaction and organisational commitment were statistically significant ($p < 0.01$) and did not include zeros (Preacher & Hayes, 2008). Furthermore, the bootstrap-estimated indirect

effect of subjective well-being on organisational commitment was statistically significant and did not include zeros ($p < 0.001$). Although the bootstrap estimated indirect effects of orientation to happiness and subjective well-being on organisational citizenship behaviour were not statistically significant, the 90% confidence intervals did not include zeros, indicating significant indirect effects (Hayes, 2009; Preacher & Hayes, 2008).

The revised model is shown in Figure 2.



* $p < 0.01$

Figure 2. The revised model

Figure 2 shows that the relationship between orientations to happiness and job satisfaction is partially mediated by subjective well-being. The relationship between subjective well-being and organisational commitment is fully mediated by job satisfaction. Furthermore, the relationship between orientations to happiness and organisational citizenship behaviour is partially mediated by job satisfaction. The path from job satisfaction to organisational citizenship behaviour is mediated by organisational commitment.

Taken together, the model fit indices suggest that the relationships posited in the revised model account for a substantial amount of the covariation in the data. The revised model accounts for a large proportion of the variance in the mediators (58% and 71% of the variance

in subjective well-being and job satisfaction respectively), and in the dependent variables, namely organisational commitment (62%) and organisational citizenship behaviour (39%), lending more empirical support for the revised model's fit.

DISCUSSION

The aim of this study was to investigate the relationships among managers' orientations to happiness (pleasure, meaning and engagement), and individual and organisational outcomes. The results showed that orientations to happiness (i.e. pleasure, engagement and meaning) predicted subjective well-being (satisfaction with life, positive affect and low negative affect). Orientations to happiness impacted job satisfaction directly and strongly, but also indirectly through their effect on subjective well-being. Job satisfaction fully mediated the relation between subjective well-being and organisational commitment. Orientations to happiness and job satisfaction had direct effects on organisational citizenship behaviour.

The results of this study showed that meaning as an orientation to happiness was moderately associated with two dimensions of subjective well-being (i.e. life satisfaction and positive affect) and organisational citizenship behaviour. Managers who know what their strengths are and who use them in the service of something they believe is bigger than they are, experience higher subjective well-being and get involved in assisting others and their organisations (Peterson et al., 2005). Indeed, as Park et al. (2009) as well as Schueller and Seligman (2010), pointed out, meaning is related to external goals and self-transcendence; it builds social connections and provides purpose.

Engagement was moderately related to the subjective well-being (i.e. satisfaction with life, positive affect and low negative affect), organisational commitment, and organisational citizenship behaviour of managers. Engagement was also strongly associated with job satisfaction. Therefore, being engaged at work seems to contribute to subjective well-being of managers, presumably through intrinsic enjoyment and fulfilment that they experience when applying their skills (Peterson et al., 2005). In addition, it is associated with outcomes, such as experiencing satisfaction with their jobs, showing commitment to their organisations and demonstrating organisational citizenship behaviour.

Orientations to happiness had a strong relation with subjective well-being. Engagement and meaning were found to predict subjective well-being better, inclusive of all three components (life satisfaction, positive affect and negative affect) and beyond the measure of pleasure (Vella-Brodrick et al., 2009). This finding supports results by Schueller and Seligman (2010) that individuals with high orientations to happiness had higher levels of subjective well-being. As expected, pleasure, as an orientation to happiness, was moderately related to subjective well-being, but showed weak correlations with job satisfaction and organisational commitment. The results support results by Peterson et al. (2005) that all three factors, i.e. engagement, meaning and pleasure contributed statistically significantly to happiness, but that meaning and engagement are the best predictors of happiness.

Orientations to happiness related strongly to job satisfaction. This finding suggests that high levels of pleasure, meaning and engagement are associated with high levels of job satisfaction. The relationship between orientations to happiness and job satisfaction is partially mediated by subjective well-being. Therefore, orientations to happiness had an indirect effect on job satisfaction via subjective well-being. This result supports the spill-over effect, i.e. positive orientations to happiness (positive engagement, meaning and experiencing work as pleasurable) and high levels of subjective well-being (life satisfaction, the presence of positive affect and the absence of negative affect) spill over onto a high level of job satisfaction (Bowling et al., 2010). These findings are in support of research by Bowling et al. (2010). Boehm and Lyubomirsky (2008) found that positive emotions and positive affect in the workplace lead to successful workplace outcomes – such as job satisfaction.

Job satisfaction was strongly related to organisational commitment. This supports findings by various researchers (Shore & Martin, 1989; Fisher, 2010; Katsikea et al., 2011; Ting, 2010). The correlation of 0.79 in this research closely resembles the correlation of 0.73 found by Dirani and Kuchinke (2011). These findings support previous research that engaged managers experience high levels of life satisfaction and this spills over in them enjoying high levels of job satisfaction. The implication for the manager is that job satisfaction cannot be simulated by the intricacies and content of the job itself, but the preceding aspects of work engagement and finding meaning in work have a significant influence on life satisfaction (most probably in different domains) and, eventually, leads to job satisfaction. This supports research by Katsikea et al. (2011) that job satisfaction is a predictor of organisational commitment.

Job satisfaction impacted organisational citizenship behaviour directly, as well as indirectly (through organisational commitment). Managers with higher levels of job satisfaction will be inclined to go beyond their formal task descriptions to go the extra mile. This supports findings by Lavelle et al. (2009), that high levels of organisational citizenship behaviour are preceded by positive job attitudes and high levels of commitment. It also supports findings by Gurbiz (2009) that positive organisational citizenship behaviour is related to positive organisational commitment. This is of significance if one considers the positive relation found between job satisfaction and organisational commitment.

The results are supportive of the spillover theory that happiness and subjective well-being have a significant role to play in improving the happiness of work lives of managers (Bowling et al., 2010). The results showed that high levels of engagement, meaning and pleasure lead to higher levels of subjective well-being. Managers who experience significant levels of life satisfaction and positive affect, as well as the absence of negative affect, experience job satisfaction. These managers are more committed to the organisation and are also inclined to exert themselves beyond the general call of duty. They are prepared to share their experiences with fellow workers and help them to ensure that the organisation maintains a competitive edge. Such levels of organisational commitment and organisational citizenship behaviour are not sustainable without happiness and subjective well-being. Managers experiencing high levels of happiness (characterised by pleasure, engagement and meaning) will tend to recraft their work in ways that would benefit themselves as well as their organisations.

This study is not without its limitations. The first limitation was that the study was limited to managers in the agricultural sector. The sample was therefore not representative of all managers in South Africa. The second limitation was that 89.7% of the population was represented by Whites and 80.1% of them males. Africans, being the focus of the future labour market, were significantly under-represented in this sample. The research design was cross-sectional. Therefore, the causality of the relationships cannot be determined. Another limitation of the study was that the researchers relied exclusively on self-reports. The engagement scale in this study measured engagement in a work context because the psychometric properties of the engagement scale of the OHQ were so poor in the Southern African context. This will influence the comparability of the results of this study with other studies that use the OHQ.

RECOMMENDATIONS

Based on the results of this study, it is expected that investing in interventions to increase orientations to happiness and subjective well-being will have a significant positive effect on the job satisfaction, organisational commitment and organisational citizenship behaviour of managers. Organisations should invest in promoting authentic happiness of managers. This can be done by implementing workshops, counseling and coaching to promote the authentic happiness of individuals. Resilience and happiness training can play an important role in this regard. Meaningful and engaging work should be promoted through workshops aimed at individual and environmental awareness, achieving person-environment fit, focusing on the purpose and significance of work, and serving the greater good.

Future studies should be more representative of the general population in order to study orientations to happiness and subjective well-being. Given the complexity of multicultural measurement, measures of happiness (e.g. the OHQ) should be adapted for future use in South Africa. Future studies should also focus on the development and evaluation of happiness interventions in terms of job satisfaction, organisational commitment and organisational citizenship behaviour. Longitudinal studies are necessary to determine the lasting effects of behavioural and attitudinal changes. Measures to assist individuals to make informed life choices through mood monitoring and by charting the consequences of choice should be researched, developed and validated.

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CHAPTER 3

ARTICLE 2

FLOURISHING OF MANAGERS: THE ROLE OF PSYCHOLOGICAL NEEDS SATISFACTION AND ANTECEDENTS THEREOF

ABSTRACT

The objective of this study was to investigate the relationships between task characteristics, supervisor relations, personal resources and remuneration, psychological need satisfaction, and job satisfaction, work engagement, and the flourishing of managers in South Africa. A cross-sectional survey design was used with managers in the agricultural sector in South Africa ($N = 507$). The Antecedents Scale, the Work-related Basic Need Satisfaction Scale, the Job Satisfaction Scale, the Work Engagement Scale and the Mental Health Continuum Short Form were administered. The results showed that task characteristics, supervisor relations, availability of resources, and remuneration impacted job satisfaction, work engagement, emotional and psychological well-being indirectly via autonomy satisfaction. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction.

Key terms: Task characteristics, supervision, resources, remuneration, psychological need satisfaction, job satisfaction, work engagement, flourishing.

The ability to recruit and retain managers who are subjectively well is of great importance for organisations (Tarique & Schuler, 2010). The subjective well-being of managers is valued in the high-commitment / high-involvement strategic human resource management approach, which aims to elicit and support behaviour that is primarily self-regulated rather than controlled by sanctions and pressures (Armstrong, 2006). Keyes (2002, 2007) distinguishes between three types of subjective well-being, namely emotional well-being (indicating whether a person is “feeling well”), and psychological and social well-being (indicating whether he or she is “functioning well”). The concepts of flourishing and languishing are used to describe opposite-end points on a continuum of mental health, indicating the well-being of individuals in terms of these three dimensions (Keyes, 2007).

Flourishing refers to a state of optimal mental health and is associated with various benefits for society, including fewer workdays lost, fewer health problems, and fewer limitations in activities (Keyes, 2007). However, the prevalence of positive mental health is relatively low, with less than a quarter of the general adult population flourishing (Keyes 2002; Keyes et al., 2010). In the work context, job satisfaction can be used as an indicator of emotional well-being (i.e. “feeling well”), while work engagement can be used as an indicator of psychological well-being (i.e. “functioning well”) (Rothmann, in press). Keyes, Dhingra, and Simoes (2010) found that gains in mental health (i.e. towards flourishing) predict declines in mental illness, while losses in mental health predict increases in mental illness. Therefore, it is of great importance to investigate the factors associated with the flourishing of people and to implement interventions to promote flourishing.

Experiences in the work environment play an important role in the flourishing of managers. Studies (Kahn, 1990; May, Gilson, & Harter 2004; Schaufeli & Bakker, 2004; Rothmann & Rothmann, 2010) stress the importance of the nature of the task, supervisor relations, the availability of physical, cognitive and emotional resources, and remuneration in the well-being of individuals at work (e.g. job satisfaction and work engagement) and in life (emotional, psychological and social well-being).

Self-determination theory (SDT; Deci & Ryan, 1985, 2008) is one theoretical framework which can explain why task characteristics, supervisor relations, the availability of physical, cognitive and emotional resources, and remuneration relate to outcomes such as job satisfaction, work engagement, and flourishing. SDT postulates that individuals have three

psychological needs, namely autonomy, competence and relatedness (Deci & Ryan, 2008). The satisfaction of these three psychological needs is essential for well-being and optimal functioning. SDT research has focused on the factors that facilitate or prevent the satisfaction of these psychological needs. Task characteristics, supervisor relations, the availability of physical, cognitive and emotional resources, and remuneration may be elements that influence psychological need satisfaction and job satisfaction, work engagement, and flourishing (Van den Broeck, Vansteenkiste, De Witte, & Lens 2008).

The current study builds on the SDT and flourishing literatures to hypothesise a model in which psychological need fulfilment mediates the relations between antecedents (task characteristics, supervisor relations, personal resources and remuneration) and job satisfaction, work engagement and flourishing. It is proposed that different antecedents satisfy different psychological needs, and that psychological need satisfaction relates to favourable employee outcomes. The current study will contribute to the literature by exploring the processes through which various antecedents influence job satisfaction, work engagement and the flourishing of managers. The study also contributes to the SDT literature by investigating different antecedents of psychological need satisfaction and by investigating the relations between psychological need satisfaction and job satisfaction, work engagement and the flourishing of managers.

The aim of this study was to investigate the relationships among task characteristics, supervisor relationships, the availability of resources, and remuneration, psychological need satisfaction and flourishing at work (job satisfaction and work engagement) and in life (emotional, psychological and social well-being).

Flourishing in life and at work

Flourishing in life

Keyes and Annas (2009) define flourishing as a state in which individuals experience high levels of emotional well-being (i.e. feeling well, as indicated by satisfaction with life and positive affect) and psychological as well as social well-being (i.e. functioning well). Keyes (2002) developed the Mental Health Continuum (MHC) on which a person's level of flourishing or languishing or a value in between can be determined. Flourishing, as a model

of positive mental health, was derived from theory, factor analysis and rational criteria (Ryff 1989; Ryff & Keyes, 1995).

Table 1 shows the diagnostic criteria and scale descriptions of the MHC. Individuals who experience emotional well-being are calm, interested in life and satisfied with life. Psychological well-being is characterized by self-acceptance, personal growth, purpose in life, environmental mastery, autonomy and positive relations with others. Social well-being is characterized by social acceptance, social actualization, social contribution, social coherence and social integration (Keyes 2007; Keyes et al., 2010).

Flourishing scores are determined by upper ratings on one of the two measures of emotional well-being, and high levels on six of the 11 scales of positive functioning, i.e. psychological and social well-being. Languishing is associated with low emotional, psychological and social well-being. Khumalo, Temane and Wissing (2012) found less than one quarter of the adult population in the North West Province of South Africa (20%) to be flourishing. A total of 67.8% of the sample were moderately flourishing, while 12.2% were languishing.

Table 1

Mental Health Continuum Diagnostic Criteria and Scale Descriptions

Diagnostic measurement	Diagnostic scale and symptoms
Emotional well-being (how often people feel positive affect and satisfaction with life)	• Positive affect (Cheerful, in good spirits, happy, calm, peaceful, satisfied, full of life) • Life satisfaction (Satisfied with life or domains thereof)
Psychological well-being (how people see themselves thriving in their personal lives)	• Self-acceptance (“I like most parts of my personality”) • Personal growth (“For me, life has been a continual process of learning, changing and growth”) • Purpose in life (“I sometimes feel as if I’ve done all there is to do in life”) • Environmental mastery (“I am good at managing the responsibilities of daily life”) • Autonomy (“I tend to be influenced by people with strong opinions”) • Positive relations with others (“maintaining close relationships has been difficult and frustrating for me”)
Social well-being (how people thrive in their social lives)	• Social acceptance (“People do not care about other people”) • Social actualization (“Society isn’t improving for people like me”) • Social contribution (“My daily activities do not create anything worthwhile for my community”) • Social coherence (“I cannot make sense of what’s going on in the world”) • Social integration (“I feel close to other people in my community”)

Flourishing at work

Job satisfaction and work engagement can be used as indicators of flourishing at work. Job satisfaction is an indicator of emotional well-being at work, while work engagement is an indicator of psychological well-being at work (Rothmann in press).

Job satisfaction is probably the most studied form of work-related subjective well-being (Bakker & Oerlemans, 2012). Overall job satisfaction reflects a pleasurable emotional state, i.e. subjective assessment of how one views one’s job, although certain facets of job satisfaction can include more cognitive evaluations. In this study, job satisfaction is defined as an overall construct. Employees experience job satisfaction when they feel they can immerse themselves in their work environment, that they are valued by others for it and that it will ultimately lead to the development of their careers.

Work engagement can be conceptualized in terms of three broad categories, namely state, trait and behavioural engagement. State engagement is relevant. State engagement (which is relevant for this study) can be defined from two perspectives, namely engagement as an extension of the self in preferred roles (Kahn, 1990), and engagement based on work activities (Bakker, Schaufeli, Leiter, & Taris, 2008). Kahn (1990) defined engagement as the extension to those preferred roles that enhance work performance. Bakker et al. (2008) conceptualized engagement as the positive antipode of job burnout and being a work-related state inclusive of three factors, namely vigour, dedication and absorption.

According to Kahn (1990) and Rothmann and Rothmann (2010), work engagement comprises at least three distinct components, namely a physical component (exerting physical energy, showing vigour and having a positive mindset), a cognitive component (being alert in one's thinking and being absorbed in what one does), and an emotional component (relating to what one wants to do, relating to others and doing it for the betterment of all). Engagement necessitates physical, cognitive and emotional energies (Rich, Lepine, & Crawford 2010) and psychological presence, i.e. being attentive, focused and connected to role performances (Rothbard & Patil, 2012).

Antecedents of flourishing in life and work

According to the affective events theory (Weiss & Cropanzano, 1996), the inherent characteristics of a task are closely related to how satisfying the employee perceives that job. Individuals will engage in jobs where the task characteristics are structured and clearly delineated, yet allow them autonomy, variation and creative opportunities. Hackman and Oldham (1976) proposed the Job Characteristics Model of motivation. The premise of this model is that intrinsic task characteristics relate to job satisfaction and work engagement. Task characteristics will lead to higher levels of satisfaction and engagement if they allows individuals to take responsibility for their work, to be involved in the job in its totality, to be engaged in different tasks with varying levels of complexity and to be given regular feedback on accomplishment (May et al., 2004). Alexander and Klein (2001) found that continuous satisfactory task characteristics lead to flourishing. Keyes (1998) states that this spills over into the private domain in that the employee is more inclined to form similar trusting and supportive relationships with neighbours, engage in social challenges and experience social well-being. Catalino and Fredrickson (2011) suggested that the nature of the task (i.e.

whether it is intrinsically rewarding) impacts on positive emotions, which results in flourishing.

The following hypotheses are set regarding the relations between task characteristics and flourishing at work and in life: Challenging task characteristics are positively related to job satisfaction (*hypothesis 1a*), work engagement (*hypothesis 1b*) and flourishing (*hypothesis 1c*).

According to social exchange theory (Blau 1964), individuals enter into social exchanges when they perceive that the other party can contribute to the relationship. If this proves to be mutually beneficial over time, both parties gradually increase their contributions to a point where there is an equitable balance between each party's contributions and the value thereof. Organisations that invest in and provide recognition for employees may be encouraging strong social exchange relationships. Employees will experience job dissatisfaction and withhold engagement when managers behave unpredictably, inconsistently or hypocritically (May et al. 2004).

The supervisor should be supportive, be sensitive to the specific needs and expectations of the individual and should facilitate engagement by creating a supportive work environment (Saks 2006; Tekleab & Chiaburu, 2011). May et al. (2004) proposed that supervisor relations (characterized by showing concern for the individual, fostering a supportive working environment, providing feedback and allowing employees to voice concerns), are essential to promote work engagement. Barak, Travis, Pyun, and Xie (2009) conducted a meta-analysis on the impact of supervision on worker outcomes. They found that task assistance, social/emotional support and interpersonal interaction significantly impacted job satisfaction and psychological well-being.

Griffen, Patterson, and West (2001) found that supportive supervisor relations correlated significantly and positively with job satisfaction. Wright, Cropanzano, and Bonett (2007) found that positive emotions within the workplace, caused by supervisor relations, related to emotional well-being of employees. They utilized the broaden-and-build theory of Fredrickson (2001) to indicate how supportive and trusting supervisor relations allow the employee to master the job, perceive personal growth and experience psychological well-being. This theory states that positive emotions broaden individuals' attention and thinking

(while negative emotions narrow their attention and thinking). Over time, the expansive mindsets that are triggered by positive emotions help people to discover and build personal resources, which contribute to well-being. Liu, Siu, and Shi (2010) found that continued positive relationships between supervisor and employee facilitated similar trustworthy and supportive relationships in social exchanges outside the workplace, and enhanced the employee's social well-being. According to Catalino and Fredrickson (2011), positive interactions with others (and specifically supervisors) result in positive emotions.

The following hypotheses are set regarding the relations between supervisor relationships and flourishing at work and in life: Supportive supervisor relations are positively related to job satisfaction (*hypothesis 2a*), work engagement (*hypothesis 2b*) and flourishing (*hypothesis 2c*).

The availability of physical, emotional and cognitive resources is an important factor impacting the job satisfaction, work engagement and flourishing of individuals in the work context (Kahn, 1990; May et al., 2004). The importance of the availability of resources is evident in the conservation of resources theory (COR; Hobfoll, 1989), the job demands-resources model (Schaufeli & Bakker, 2004), and effort recovery model (Meijman & Mulder, 1998). Cognitive resources are necessary because many managerial positions require high levels of cognitive endurance and sharpness, especially if the task is complex and intricate, and minute mistakes can lead to substantial losses (e.g. financial losses for the organisation and loss of esteem of the manager). Physical resources are necessary in order to deal with physical challenges in the work environment. A lack of physical resources can lead to disengagement from one's work role. Emotional resources are necessary because continuous emotional demands in managerial jobs could lead to exhaustion. Fatigue and lack of physical strength for whatever reason can lead to withdrawal, i.e. disengagement (Lee & Ashforth, 1996). Love, Irani, Standing, and Themistocleous (2007) state that certain positions require high levels of interaction and this, in turn, requires psychological or emotional resilience. Perpetual badgering of emotional resources can lead to disengagement, psychological ill-health and emotional dissonance (May et al., 2004).

Bakker and Demerouti (2006) found that, to the extent that employees find their personal resources waning, they become depressed, perceive their work environment negatively and become dissatisfied. Personal resources diminish when certain valued resources are lost,

when work demands cannot be met and when the anticipated return on efforts fails to materialise (Lee & Ashforth, 1996).

The following hypotheses are set regarding the relations between the availability of resources and flourishing at work and in life: The availability of resources is positively related to job satisfaction (*hypothesis 3a*), work engagement (*hypothesis 3b*) and flourishing (*hypothesis 3c*).

Much debate had been offered on the role of remuneration in job satisfaction and its role in employees' well-being and optimal functioning. The role of remuneration is generally viewed from two broad perspectives, namely motivating or maintaining behaviour. The role of remuneration can be explained by expectancy theory (Lawler, 1981; Vroom, 1994). According to expectancy theory, an employee will decide to behave or act in a certain way because they are motivated to select a specific behaviour over other behaviours based on their expectations of that particular behaviour. Employees will be satisfied and engaged if the perceived rewards are attractive and equitable, and if rewards are linked to performance. May et al. (2004) point out that individuals will be emotionally, cognitively and physically engaged if they perceive reciprocity between their efforts and perceived financial outcomes.

McCausland, Pouliakas, and Theodossiou (2005) found that remuneration affects job satisfaction depending on the level of work. In the case of higher-earning employees, they perceived incentive rewards as supportive of their efforts in their jobs and as markers of their competence and personal worth. Therefore, remuneration is a significant index of job satisfaction. Lyubomirsky, King, and Diener (2005) state that frequent positive affect (emotional well-being) makes for a happier, psychologically adjusted (functioning well) and socially adaptable employee. Such employees can overcome adversity in the workplace easier and use their positive resilience to flourish. Robitschek and Keyes (2009) state that employees perceive adequate and equitable remuneration as a significant means to social well-being, i.e. being able to afford the comforts of the social environment, such as a house, vehicles, holidays and items of daily sustenance.

The following hypotheses are set regarding the relations between remuneration and flourishing at work and in life: Sufficient remuneration is positively related to job satisfaction (*hypothesis 4a*), work engagement (*hypothesis 4b*) and flourishing (*hypothesis 4c*).

Self-determination theory: The role of psychological need satisfaction

According to Deci and Ryan (2011), the systems within which individuals are embedded impact their well-being and optimal functioning through the satisfaction of their physical and psychological needs. Psychological needs are essential nutriment for mental health and optimal functioning, and are universal to all human beings. SDT is useful in understanding how social and interpersonal relationships affect autonomous versus controlled motivation (Deci & Ryan, 2008). The functions of basic psychological needs are as follows (Deci & Ryan, 2011): They provide the energy and direction for people to engage in activities that influence need satisfaction. Psychological needs also allow observers to understand whether people will flourish, based upon knowledge of their need satisfaction. They also enable interventionists to determine which social contextual aspects should be changed to promote need satisfaction.

According to Ryan and Deci (2000), individuals have three innate basic psychological needs, i.e. autonomy, relatedness and competence. The need for autonomy is an individual's internal desire to be in control of his or her actions, to act volitionally and to take ownership of such actions. The need for autonomy could manifest in internally generated motives and choices, or condoning externally generated requests, i.e. complying with an organisational or managerial request. The need for competence satisfies the individual need to overcome challenges and goals (Patrick, Knee, Canevello, & Lonsbary 2007). The need for relatedness represents the need to interact and have companionship with others (Howell, Chenot, Hill, & Howell 2011).

Task characteristics, e.g. autonomy, variety and learning opportunities, allow individuals to experience ownership, competence, learning and growth (Kahn, 1990; May et al., 2004), contributing to autonomy and competence satisfaction (Deci & Ryan, 2008). Perpetually perceived congruence between organisational and/or managerial requests and the need for autonomy will result in spontaneous actions and need not be externally generated all the time (Robak & Nagda, 2011; Van den Broeck et al., 2008). Autonomy satisfaction is stimulated by democratic processes, which result in engagement and well-being (Deci & Ryan, 2011). Regarding relatedness needs, the employee has the desire to share successes with colleagues and also has the intimate support when envisioned successes do not materialize (Van den Broeck et al., 2008). This need for relatedness can be satisfied through interaction with

supervisors, peers and subordinates. Robak and Nagda (2011, p. 75) describe the intimate nature of these relationships as being such that "...one feels close, cared for and secure". The nature of the task and the interaction with the supervisor relate to the satisfaction of the psychological needs of autonomy and relatedness (Kahn, 1990).

If the supervisor is supportive and not controlling, employees' relatedness and autonomy needs are satisfied, which contributes to job satisfaction and work engagement (Edmondson, 2004) and well-being (Deci & Ryan, 2008). Meaningful interaction with the supervisor (characterised by trust, support and non-exploitation) contributes to individuals feeling appreciated and respected (Kahn, 1990), and results in reciprocal behaviour by them (May et al., 2004). This mutual perception of trustworthiness and the intention to sustain it contribute to satisfaction of the psychological need for belonging and relatedness. The individual who is allowed the freedom to work within agreed parameters will engage in a job, feel well and experience job satisfaction (Kahn, 1990; Rothmann & Rothmann, 2010).

An individual's ability to comply with the demands of the job depends on the emotional, physical and cognitive resources that he or she has available. The quality and level of demands vary between and within jobs. The diminishing and/or depletion of resources and inability to comply with job demands lead to exhaustion and eventual disengagement (Kahn, 1990). Sufficient resources allow the individual to execute tasks to performance standards and comply with expected competency requirements. In contrast, the individual who feels that the job demands exceed the available resources will gradually feel that he or she is unable to meet set targets, will have to endure less favourable performance appraisals, and will eventually realise that he or she is losing control of the job. If the employee experiences insufficient resources because of cognitive, emotional or physical overload, he or she will feel incompetent to cope, resulting in competence needs not being satisfied (May et al., 2004; Schaufeli & Bakker, 2004). This will lead to the employee feeling inadequate in the job and being unable to flourish. The employee's level of relatedness with the supervisor will have a profound role in managing personal resources.

Monetary rewards (e.g. remuneration) affect people's behavior, engagement and well-being. According to Deci and Ryan (2011), monetary rewards might diminish a person's engagement and well-being. Gagne and Forest (2008) proposed that compensation is an important organisational lever that influences work-related need satisfaction. However, they

distinguish between monetary and verbal compensation, and show that the two can offset one another within the context of intrinsic motivation. Financial compensation that aims to motivate people extrinsically will not contribute to psychological need satisfaction – especially not if it is awarded conditionally and without being integrated with a sound performance management system (Deci, Koestner, & Ryan 1999). Deci and Ryan (2000) caution that, whilst financial reward has a definite role to play in organisations, the overextension thereof can result in job dissatisfaction and a decrease in general well-being. They reported that the amassing of wealth eventually has a negative impact on well-being.

The following hypotheses are set regarding the relations between task characteristics, supervisor relationships, the availability of resources, and remuneration on the one hand, and psychological need satisfaction on the other: Psychological need satisfaction is positively related to challenging task characteristics (*hypothesis 5a*), supportive supervisor relations (*hypothesis 5b*), availability of personal resources (*hypothesis 5c*), and fair remuneration (*hypothesis 5d*).

Social-contextual variables impact on conscious and non-conscious psychological experiences of individuals, which are, in turn, important causes of their behaviors (Deci & Ryan, 2011). Various studies (Kahn, 1990; May et al., 2004; Greguras & Diefendorff, 2009; Patrick et al., 2007) have shown that satisfaction of psychological needs forms the basis for individual growth and development, work engagement and well-being. Satisfaction of psychological needs improves self-motivation and mental health (Deci & Ryan 2008; Howell et al., 2011; Robak & Nagda 2011).

Deci and Ryan (2008) found that the satisfaction of psychological needs directs individuals' activities via intrinsic and extrinsic motivation to long-term goals. It will eventually determine their satisfaction with jobs and levels of engagement within those jobs. Bono, Davies and Rasch (2012) found self-determination and, more specifically autonomous and intrinsic motivation to be associated with flourishing. This supports the premise that functioning well is volitional and under the control of the individual. They state that the individual's self-determination is linked to work-related elements. Higher levels of self-determination, hence lead to higher levels of engagement and, eventually, to higher job satisfaction. Therefore, satisfaction of the psychological needs for autonomy, relatedness and competence relates to job satisfaction and work engagement.

The following hypotheses are set regarding the relations between psychological need satisfaction, job satisfaction, work engagement and flourishing. The psychological needs of autonomy, competence and relatedness are positively related to job satisfaction (*hypothesis 6a*), work engagement (*hypothesis 6b*), and flourishing (*hypothesis 6c*). Finally, psychological need satisfaction mediates the relationship between task characteristics, supervisor relations, the availability of resources, and remuneration on the one hand and flourishing in work and in life on the other (*hypothesis 7*).

METHOD

Participants

Eight agricultural companies participated in the study and the number of participants varied from as few as four per company to 199 in the case of the larger companies. The companies included formal secondary agricultural companies, previously referred to as cooperatives, a large fertilizer producer to the agricultural sector and fruit packaging companies. The ages of the participants varied from 23 to 63 (Mean = 42.42, *SD* = 9.45). The length of service in the various companies varied between one and 45 years (Mean = 19.35, *SD* = 9.93). The characteristics of the participants are reported in Table 1.

Table 2

Characteristics of the Participants (N=507)

Item		Frequency	Percentage
Gender	Male	406	80.10
	Female	101	19.90
Race	White	455	89.70
	African	16	3.20
	Coloured	29	5.70
	Indian	5	1.00
	Other	2	0.40
Home language	Afrikaans	470	92.70
	English	21	4.10
	African	16	3.20
Education	Grade 12	194	38.30
	Technical college diploma	46	9.10
	Technicon diploma	63	12.40
	University degree	104	20.50
	Postgraduate degree	100	19.70
Job level	Executive management	26	5.10
	Senior management	74	14.60
	Middle management	239	47.10
	Junior management	168	33.10

Males represented 80.10% of the total sample and females 19.90%. With regard to race, whites dominated the sample with 89.70%, followed by Africans (3.20%), Coloureds (5.70%) and Indians (1%). With regard to education, 61.70% of the participants had tertiary qualifications. The distribution of participants per management level was as follows: middle management level (47.1%), junior management level (33.1%), senior management level (14.6%) and the executive level (5.1%).

Measuring instruments

The *Antecedents Scale* (AS; May et al., 2004) was used to measure participants' perceptions of themselves, their jobs, their supervisors and their remuneration. Task characteristics were measured by seven items (e.g. "Does your work make sufficient demands on all your skills and capacities?"). Each item requires the respondent to answer on a scale which varies from 1

(*never*) to 6 (*every day*). Supervisor relations were measured by 10 items (e.g. “My manager encourages employees to speak up when they disagree with a decision”). Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*). Personal resources were measured by eight items (e.g. “I feel emotionally healthy at the end of the workday”). Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*). Remuneration was measured by four items (e.g. “Do you think you are paid enough for the work that you do?”). Each item requires the respondent to answer on a scale which varies from 1 (*never*) to 6 (*every day*).

The 23-item *Work-related Basic Need Satisfaction Scale* (WBNSS; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens 2010) was used to assess the satisfaction of the needs for autonomy, competence and relatedness. Autonomy satisfaction was measured by seven items (e.g. “I feel like I can be myself at work”). Competence satisfaction was measured by six items (e.g. “I feel competent at work”). Relatedness satisfaction was measured by 10 items (e.g. “People at work care about me”). Respondents were asked to evaluate the items on a five-point scale from 1 (*totally disagree*) to 5 (*totally agree*). The general scale and the three subscales were found to be reliable, with Cronbach’s alpha coefficients of 0.86, 0.88, and 0.86 for general need satisfaction and autonomy, competence and relatedness satisfaction, respectively (Van den Broeck et al., 2010).

The *Job Satisfaction Scale* (JSS; Rothmann, 2010) was used to measure job satisfaction. The JSS consists of four items which measure the individual’s satisfaction with his or her work (e.g. “I find real enjoyment in my present job”). Responses range from 1 (*totally disagree*) to 5 (*totally agree*) for each question.

The *Work Engagement Scale* (WES; Rothmann, 2010) was used to measure work engagement. For all items, a seven-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) was used. The items reflect each of the three components of Kahn’s (1990) conceptualization of work engagement, namely cognitive, emotional and physical engagement. Cognitive engagement was measured by three items (e.g. “I am very absorbed in my work”). Emotional engagement was measured by four items (e.g. “I am passionate about my work”). Physical engagement was measured by four items (e.g. “I feel alive and vital at work”). Rothmann (2010) reported evidence for the construct validity of the WES. The following alpha coefficients for the three scales of the WES were

found: physical engagement = 0.80; emotional engagement = 0.82; and cognitive engagement = 0.78 (Rothmann, 2010).

The *Mental Health Continuum Short Form* (MHC-SF; Keyes, 2002) was used to measure emotional, social and psychological well-being. The MCH-SF consists of 14 items which measure emotional well-being (three items), psychological well-being (six items), and social well-being (five items). Items were rated using a six-point scale varying from 1 (*never*) to 6 (*every day*). The MHC-SF has shown high internal consistency (> 0.80) and discriminant validity (Keyes, 2009). The three-factor structure of the MHC-SF has been confirmed in studies in the USA (Keyes 2009) and South Africa (Keyes et al., 2008).

Statistical analysis

The analysis was carried out with the SPSS19 program (SPSS, 2011). Descriptive statistics were computed to describe the data. Pearson correlation coefficients were used to specify the relationships between the variables. The level of statistical significance was set at $p < 0.05$. Hierarchical multiple regression analyses were conducted to determine the amount of variance in the dependent variable, predicted by the independent variables.

Mediation analyses were used to simultaneously assess the mediating effects of multiple aspects of psychological need satisfaction on the relations between task characteristics, supervisor relations, personal resources, as well as remuneration and job satisfaction, work engagement and flourishing. The product of coefficients was used to quantify the size of the indirect effects (Preacher & Hayes, 2009). The *MEDIATE* procedure, developed by Hayes and Preacher (in press), was used to estimate the indirect effects of independent variables on outcomes variables through a proposed set of mediator variables. The procedure provides an omnibus effect for all the independent variables per mediator. Bootstrap procedures suggested by Preacher and Hayes (2009) were used to make inferences for indirect effects. Bootstrap percentile confidence intervals, which were used to assess whether indirect effects were different from zero, were set at 0.95 with 10000 resamples.

RESULTS

Descriptive statistics

The descriptive statistics, alpha coefficients and correlations of the constructs are reported in Table 3. Table 3 shows high alpha coefficients ranging from 0.77 to 0.95, indicating acceptable reliabilities of the scales ($\alpha > 0.70$; Nunnally & Bernstein, 1994). Concerning the level of the scores on the different scales, Table 2 shows that the participants obtained above average scores on task characteristics, supervisor relations and the availability of personal resources. The mean score on remuneration was average. The participants also obtained average scores on the three scales which measure psychological need satisfaction, with the mean score on autonomy satisfaction somewhat lower than the relatedness and competence satisfaction. The mean scores on job satisfaction and work engagement were above average.

Next, the diagnostic guidelines developed by Keyes (2009) were used to investigate which percentages of managers were languishing and flourishing. Flourishing occurs if a person has felt at least one of the three hedonic well-being symptoms, as well as six of the 11 positive functioning symptoms every day or almost every day in the past month. Languishing is the diagnosis when someone has felt one of the three hedonic well-being symptoms, as well as six of the 11 positive functioning symptoms, never or once or twice in the past month. Individuals who are neither languishing nor flourishing are then categorized as moderately mentally healthy. The results of this study showed that 3% of the managers were languishing, 48.5% were moderately flourishing, while 48.5% were flourishing.

Table 3

Descriptive Statistics, Alpha Coefficients and Correlations

Variable	Mean	SD	α	1	2	3	4	5	6	7	8	9	10	11
1. Task characteristics	4.05	0.96	0.83	-	-	-	-	-	-	-	-	-	-	-
2. Supervisor relations	5.01	1.26	0.95	0.46 ^{***+}	-	-	-	-	-	-	-	-	-	-
3. Lack of resources	2.58	1.03	0.87	-0.38 ^{***+}	-0.24 ^{**}	-	-	-	-	-	-	-	-	-
4. Remuneration	3.12	1.46	0.83	0.39 ^{***+}	0.41 ^{***+}	-0.30 ^{***+}	-	-	-	-	-	-	-	-
5. Autonomy	3.56	0.56	0.80	0.50 ^{***++}	0.50 ^{***++}	-0.50 ^{***++}	0.43 ^{***+}	-	-	-	-	-	-	-
6. Competence	4.02	0.49	0.77	0.29 ^{**}	0.16 ^{**}	-0.48 ^{***+}	0.22 ^{**}	0.55 ^{***++}	-	-	-	-	-	-
7. Relatedness	3.72	0.57	0.87	0.45 ^{***+}	0.47 ^{***+}	-0.37 ^{***+}	0.33 ^{***+}	0.60 ^{***++}	0.42 ^{***+}	-	-	-	-	-
8. Work engagement	5.36	0.84	0.91	0.38 ^{***+}	0.22 ^{**}	-0.41 ^{***+}	0.24 ^{**}	0.49 ^{***+}	0.52 ^{***++}	0.42 ^{***+}	-	-	-	-
9. Job satisfaction	3.78	0.64	0.80	0.49 ^{***+}	0.40 ^{***+}	-0.50 ^{***++}	0.39 ^{***+}	0.63 ^{***++}	0.45 ^{***+}	0.48 ^{***+}	0.61 ^{***++}	-	-	-
10. Psychological well-being	3.58	0.82	0.91	0.40 ^{***+}	0.29 ^{**}	-0.38 ^{***+}	0.28 ^{**}	0.50 ^{***++}	0.46 ^{***+}	0.44 ^{***+}	0.55 ^{***++}	0.45 ^{***+}	-	-
11. Emotional well-being	3.69	0.86	0.86	0.38 ^{***+}	0.38 ^{***+}	-0.42 ^{***+}	0.33 ^{***+}	0.51 ^{***++}	0.35 ^{***+}	0.44 ^{***+}	0.49 ^{***+}	0.52 ^{***++}	0.66 ^{***++}	-
12. Social well-being	2.73	1.04	0.83	0.35 ^{***+}	0.26 ^{**}	-0.29 ^{**}	0.28 ^{**}	0.35 ^{***+}	0.21 ^{**}	0.36 ^{***+}	0.38 ^{***+}	0.37 ^{***+}	0.65 ^{***++}	0.54 ^{***++}

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

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

⁺ Practically significant, medium effect ($r > 0.30$)

⁺⁺ Practically significant, large effect ($r > 0.50$)

Note: A low score on resources indicates the availability of resources, while a high score indicates low resources

Multiple regression analyses

With regard to the dependent variables of job satisfaction, work engagement, emotional well-being, psychological well-being and social well-being, a three-step hierarchical multiple regression procedure was used. In the first step, three of the antecedents of psychological needs (i.e. task characteristics, supervision and the availability of personal resources) were entered. In step 2, remuneration was added as a predictor. In step 3, satisfaction of the psychological needs of autonomy, competence and relatedness was entered with the other four antecedents (see Table 4).

Table 4

Regression Analyses with Antecedents as the Independent Variables and Flourishing at Work and in Life as the Dependent Variables

Variable	Job satisfaction			Work engagement			Emotional well-being			Psychological well-being			Social well-being		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	3.13			5.05			2.97	2.92	1.16	2.88	2.86	0.00	1.70	1.63	0.55
Task characteristics	0.26**	0.23**	0.15**	0.24**	0.23**	0.14**	0.15**	0.13**	0.05	0.26**	0.24**	0.16**	0.22**	0.19**	0.14**
Supervisor relations	0.20**	0.16**	0.06	0.03	0.01	-0.07	0.24**	0.21**	0.11*	0.11*	0.09	-0.00	0.12*	0.08	-0.00
Lack of resources	-0.35**	-0.33**	-0.17**	-0.31**	-0.30**	-0.09*	-0.30**	-0.28**	-0.16**	-0.26**	-0.25**	-0.07	-0.16**	-0.14**	-0.09
Remuneration	-	0.14**	0.08*	-	0.06	0.01	-	0.12**	0.08	-	0.07	0.02	-	0.14**	0.11*
Autonomy	-	-	0.33**	-	-	0.17**	-	-	0.21**	-	-	0.18**	-	-	0.11
Competence	-	-	0.10*	-	-	0.29**	-	-	0.04	-	-	0.22**	-	-	-0.04
Relatedness	-	-	0.05	-	-	0.13**	-	-	0.14**	-	-	0.14**	-	-	0.18**
R^2	0.38	0.39	0.48	0.22	0.22	0.36	0.27	0.28	0.33	0.23	0.24	0.35	0.15	0.16	0.19
F	101.17**	80.34**	66.47**	47.56**	36.07**	40.64**	60.75**	47.98**	35.69**	50.49**	38.59**	37.57**	29.34**	24.37**	17.12**
df	3/502	4/504	7/498	3/503	4/501	7/498	3/502	4/501	7/498	3/503	4/501	7/498	3/502	4/501	7/498
ΔR^2	0.38	0.01	0.09	0.22	0.00	0.14	0.27	0.01	0.06	0.23	0.00	0.11	0.15	0.01	0.03
ΔF	101.17**	11.51**	29.62**	47.56**	1.47	36.50**	60.75**	7.36*	14.24**	50.49**	2.41	27.93**	29.34**	8.19**	6.39**
df	-	1/501	3/498	-	1/501	3/498	-	1/501	3/498	-	1/502	3/498	-	5/501	7/498

$p < 0.01$

Table 4 shows that task characteristics, supervision support and resources predicted 38% of the variance in the job satisfaction of the sample ($F = 101.17, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.26, p < 0.01$), supervisor relations ($\beta = 0.20, p < 0.01$) and lack of personal resources ($\beta = -0.35, p < 0.01$) were statistically significant. When remuneration was entered as an independent variable (in step 2), it resulted in a statistically significant increase in predicting the variance in job satisfaction ($\Delta F = 11.51, p < 0.01, \Delta R^2 = 0.01$). The regression coefficients of task characteristics ($\beta = 0.23, p < 0.01$), supervisor relations ($\beta = 0.16, p < 0.01$) and availability of resources ($\beta = -0.33, p < 0.01$), and remuneration ($\beta = 0.12, p < 0.01$) were statistically significant. Entering psychological needs (in step 3) resulted in a statistically significant increase in the percentage of variance in job satisfaction ($\Delta F = 29.62, p < 0.01, \Delta R^2 = 0.09$). The regression coefficients of task characteristics ($\beta = 0.15, p < 0.01$), availability of resources ($\beta = -0.17, p < 0.01$), and remuneration ($\beta = 0.08, p < 0.01$), autonomy ($\beta = 0.33, p < 0.01$) and competence ($\beta = 0.10, p < 0.05$) were statistically significant.

Task characteristics, supervision support and resources predicted 22% of the variance in work engagement ($F = 47.56, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.24, p < 0.01$) and availability of resources ($\beta = -0.31, p < 0.01$) were statistically significant. When remuneration was entered as independent variable (in step 2), no statistically significant increase in R^2 was recorded ($\Delta F = 36.07, p > 0.01$). The regression coefficient of remuneration ($\beta = .06$) was not statistically significant. When autonomy, competence and relatedness were entered (in step 3), it resulted in a statistically significant increase in predicting the variance in engagement ($\Delta F = 36.50, p < 0.01, \Delta R^2 = 0.14$). The regression coefficients of task characteristics ($\beta = 0.14, p < 0.01$) and availability of resources ($\beta = -0.09, p > 0.01$), autonomy ($\beta = 0.17, p < 0.01$), competence ($\beta = 0.29, p < 0.01$) and relatedness ($\beta = 0.13, p < 0.01$) were statistically significant.

Table 4 shows that task characteristics, supervisor relations and the availability of resources predicted 27% of the variance in the emotional well-being of the sample ($F = 6.75, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.15, p < 0.01$), supervisor relations ($\beta = 0.24, p < 0.01$) and the availability of resources ($\beta = -0.30, p < 0.01$) were statistically significant. When remuneration was entered as independent variable (in step 2), it resulted in a statistically significant increase in the explained variance in emotional well-being ($\Delta F = 7.36, p < 0.01, \Delta R^2 = 0.01$). The regression coefficients of task characteristics ($\beta = 0.13, p$

<0.01), supervisor relations ($\beta = 0.21, p < 0.01$) and the availability of resources ($\beta = -0.28, p < 0.01$) and remuneration ($\beta = 0.12, p < 0.01$) were statistically significant. When psychological need satisfaction was entered in step 3, it resulted in a statistically significant increase in the explained variance in emotional well-being ($\Delta F = 14.24, p < 0.01, \Delta R^2 = 0.06$). The regression coefficients of supervisor relations ($\beta = .11, p < 0.01$) and the availability of resources ($\beta = -0.16, p < 0.01$), autonomy ($\beta = 0.21, p < 0.01$), and relatedness ($\beta = 0.14, p < 0.01$) were statistically significant.

Table 4 shows that task characteristics, supervisor relations and availability of resources predicted 23% of the variance in the psychological well-being of the sample ($F = 50.49, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.26, p < 0.01$), supervisor relations ($\beta = 0.11, p < 0.01$), and availability of resources ($\beta = -0.26, p < 0.01$) were statistically significant. Entering remuneration as independent variable (in step 2) did not result in a statistically significant increase in the explained variance in psychological well-being ($\Delta F = 2.41, p > 0.01$). The regression coefficient of remuneration was not statistically significant. When psychological need satisfaction was entered in step 3, a statistically significant increase in the explained variance in psychological well-being was found ($\Delta F = 27.93, p < 0.01, \Delta R^2 = 0.11$). The regression coefficients of task characteristics ($\beta = 0.16, p < 0.01$), autonomy ($\beta = 0.18, p < 0.01$), competence ($\beta = 0.22, p < 0.01$) and relatedness ($\beta = 0.14, p < 0.01$) were statistically significant.

Table 4 shows that task characteristics, supervision support and resources predicted 15% of the variance in the social well-being of the managers ($F = 29.34, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.22, p < 0.01$), supervisor relations ($\beta = 0.12, p < 0.05$) and availability of resources ($\beta = -0.16, p < 0.01$) were statistically significant. When remuneration was entered as independent variable (in step 2), a statistically significant increase in the explained variance in social well-being was recorded ($\Delta F = 8.19, \Delta R^2 = 0.01$). The regression coefficients of task characteristics ($\beta = 0.19, p < 0.01$), availability of resources ($\beta = -0.14, p < 0.01$), and remuneration ($\beta = 0.14, p < 0.01$) were statistically significant. Entering psychological needs in step 3 resulted in a statistically significant increase in the explained variance in social well-being ($\Delta F = 6.39, p < 0.01, \Delta R^2 = 0.19$). The regression coefficients of task characteristics ($\beta = 0.14, p < 0.01$) and relatedness ($\beta = 0.18, p < 0.01$) were statistically significant.

Task characteristics, supervisor relations, availability of resources and remuneration predicted 46% of the variance in autonomy satisfaction ($F = 106.00$ $p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.19$, $p < 0.01$), supervisor relations ($\beta = 0.28$, $p < 0.01$), availability of resources ($\beta = -0.32$, $p < 0.01$) and remuneration ($\beta = 0.15$, $p < 0.01$) were statistically significant. Task characteristics, supervisor relations, availability of resources, and remuneration predicted 25% of the variance in competence satisfaction ($F = 41.49$, $p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.11$, $p < 0.05$) and availability of resources ($\beta = -0.43$) were statistically significant. Task characteristics, supervisor relations, lack of resources and remuneration predicted 33% of the variance in relatedness satisfaction ($F = 61.96$, $p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.21$, $p < 0.01$), availability of resources ($\beta = -0.20$, $p < 0.01$) and supervisor relations ($\beta = 0.29$, $p < 0.01$) were statistically significant.

Mediation analyses

To test whether psychological need satisfaction functioned as mediators between the four antecedents of job satisfaction, work engagement and flourishing, mediation analyses were conducted. Lower CIs (LCIs) and upper CIs (UCIs) are reported. The indirect effects of the independent variables on job satisfaction and work engagement are reported in Table 5.

Table 5

Indirect Effects of Independent Variables on Job Satisfaction and Work Engagement via Psychological Need Satisfaction

Variable	Job satisfaction				Work engagement			
	EFF	SE	LLCI	ULCI	EFF	SE	LLCI	ULCI
AUTONOMY								
Omnibus	0.17	0.03	0.11	0.23	0.12	0.05	0.03	0.21
Task characteristics	0.04	0.01	0.02	0.07	0.03	0.01	0.01	0.06
Supervisor relations	0.05	0.01	0.03	0.07	0.03	0.01	0.01	0.06
Resources	-0.06	0.01	-0.09	-0.04	-0.05	0.02	-0.08	-0.01
Remuneration	0.02	0.01	0.01	0.03	0.02	0.01	0.01	0.03
COMPETENCE								
Omnibus	0.03	0.02	0.01	0.06	0.12	0.03	0.07	0.19
Task characteristics	-	-	-	-	0.03	0.01	0.01	0.03
Supervisor relations	-	-	-	-	-	-	-	-
Resources	-0.03	0.02	-0.05	0.01	-0.10	0.02	-0.15	-0.06
Remuneration	-	-	-	-	-	-	-	-
RELATEDNESS								
Omnibus	-	-	-	-	0.06	0.03	0.01	0.11
Task characteristics	-	-	-	-	0.03	0.01	0.01	0.05
Supervisor relations	-	-	-	-	0.03	0.01	0.01	0.05
Resources	-	-	-	-	-0.02	0.01	-0.04	-0.01
Remuneration	-	-	-	-	-	-	-	-

Regarding the indirect effects on job satisfaction, the omnibus effect (and the effects of task characteristics, supervisor relations, resources and remuneration) for autonomy did not include zeros. Therefore, autonomy mediated the relationship between task characteristics, supervisor relations, resources and remuneration on the one hand, and job satisfaction on the other. The omnibus indirect effect (as well as the effect of resources) for competence satisfaction did not include zeros. Therefore, competence mediated the relationship between resources and job satisfaction. The 95% confidence intervals for the omnibus indirect effects (and all the independent variables) for relatedness (effect = 0.02, SE = 0.02) included zeros.

Concerning the indirect effects on work engagement, the omnibus effect (and the effects of task characteristics, supervisor relations, resources and remuneration) for autonomy did not include zeros. Therefore, autonomy mediated the relationship between task characteristics, supervisor relations, resources and remuneration on the one hand, and work engagement on the other. The omnibus effect (as well as the effects of task characteristics and resources) for

competence did not include zeros. Therefore, competence mediated the relationship between task characteristics and resources on the one hand, and work engagement on the other. The omnibus effect (as well as the effects of task characteristics, supervisor relations and resources) for relatedness did not include zeros. Therefore, relatedness mediated the relationship between task characteristics, supervisor relations and resources on the one hand, and work engagement on the other.

The indirect effects of the independent variables on emotional and psychological well-being are reported in Table 6.

Table 6

Indirect Effects of Independent Variables on Emotional and Psychological Well-being via Psychological Need Satisfaction

Variable	Emotional well-being				Psychological well-being			
	EFF	SE	LLCI	ULCI	EFF	SE	LLCI	ULCI
AUTONOMY								
Omnibus	0.15	0.05	0.05	0.26	0.12	0.04	0.04	0.21
Task characteristics	0.04	0.02	0.01	0.07	0.03	0.01	0.01	0.06
Supervisor relations	0.04	0.02	0.01	0.08	0.03	0.01	0.01	0.06
Resources	-0.06	0.02	-0.10	-0.02	-0.05	0.02	-0.08	-0.01
Remuneration	0.02	0.01	0.01	0.04	0.02	0.01	0.01	0.03
COMPETENCE								
Omnibus	-	-	-	-	0.09	0.03	0.05	0.14
Task characteristics	-	-	-	-	0.02	0.01	0.01	0.04
Supervisor relations	-	-	-	-	-	-	-	-
Resources	-	-	-	-	-0.07	0.01	-0.12	-0.04
Remuneration	-	-	-	-	-	-	-	-
RELATEDNESS								
Omnibus	0.07	0.03	0.01	0.12	0.07	0.03	0.01	0.13
Task characteristics	0.03	0.01	0.01	0.05	0.03	0.01	0.01	0.05
Supervisor relations	0.01	0.01	0.01	0.06	0.03	0.01	0.01	0.05
Resources	-0.02	0.01	-0.04	-0.01	-0.02	0.01	-0.05	-0.01
Remuneration	-	-	-	-	-	-	-	-

Concerning the indirect effects on emotional and psychological well-being, the omnibus effect (and the effects of task characteristics, supervisor relations, resources and remuneration) for autonomy did not include zeros. Therefore, autonomy mediated the relationship between task characteristics, supervisor relations, resources and remuneration on

the one hand, and emotional well-being and psychological well-being on the other. The 95% confidence intervals for the omnibus indirect effects (and all the independent variables) for competence (effect = 0.02, SE = 0.02) on emotional well-being included zeros. Regarding the indirect effects on emotional and psychological well-being, the omnibus effect (as well as the effects of task characteristics, supervisor relations and resources) for relatedness did not include zeros. Relatedness mediated the relationship between task characteristics, supervisor relations and resources on the one hand, and emotional and psychological well-being on the other.

Regarding the indirect effects on social well-being, the omnibus indirect effects for autonomy and competence included zeros. The omnibus indirect effect for relatedness was 0.10 (SE = 0.04) and the confidence interval did not include zeros [95% CI = 0.03 (LCI) and 0.18 (UCI)]. Concerning the indirect effects of specific independent variables, the 95% CIs for task characteristics (effect = 0.04, SE = 0.02, LCI = 0.01, UCI = 0.07), supervision (effect = 0.04, SE = 0.02, LCI = 0.01, UCI = 0.08) and personal resources (effect = -0.04, SE = 0.02, LCI = -0.07, UCI = -0.01) did not include zeros.

Table 7 reports the outcomes of the various hypotheses.

Table 7

Results of Hypotheses Testing

Hypotheses	Results of research
Hypothesis 1a-c	Accepted. Task characteristics are positively associated with job satisfaction, work engagement and flourishing.
Hypothesis 2a	Accepted. Supervisor relations are positively associated with job satisfaction.
Hypothesis 2b	Rejected. Supervisor relations are not positively associated with work engagement when the other antecedents are controlled for.
Hypothesis 2c	Partially accepted. Supervisor relations are positively associated with emotional well-being.
Hypothesis 3a-c	Accepted. Availability of cognitive, emotional and physical resources is positively associated with job satisfaction, work engagement and flourishing.
Hypothesis 4a	Accepted. Remuneration is positively associated with job satisfaction.
Hypothesis 4b-c	Partially accepted. Remuneration is positively associated only with emotional and social well-being.
Hypothesis 5a-c	Accepted. Task characteristics, supervisor relations, availability of resources, and remuneration are positively associated with autonomy, competence and relatedness satisfaction.
Hypothesis 6a	Partially accepted. Autonomy and competence satisfaction are positively related to job satisfaction.
Hypothesis 6b	Partially accepted. Autonomy and competence satisfaction are positively related to work engagement.
Hypothesis 6c	Partially accepted. Autonomy, competence and relatedness satisfaction are positively associated with psychological well-being, autonomy and relatedness satisfaction are positively related to emotional well-being, while relatedness satisfaction is positively associated with social well-being.
Hypothesis 7	Partially accepted. Task characteristics, supervisor relations, availability of resources, and remuneration impacted job satisfaction, work engagement, emotional and psychological well-being indirectly via autonomy satisfaction. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction.

DISCUSSION

This study set out to investigate the relationships among supervisor relations, availability of resources, task characteristics and remuneration, psychological need satisfaction and flourishing at work (job satisfaction and work engagement) and in life (emotional, psychological and social well-being). The results showed that task characteristics, supervisor relationships, personal resources and remuneration impacted job satisfaction, work engagement and flourishing differentially, directly and indirectly via psychological need satisfaction. Task characteristics, supervisor relations, availability of resources, and

remuneration impacted job satisfaction, work engagement, emotional and psychological well-being indirectly via autonomy satisfaction. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction.

The results of this study showed that 3% of managers were languishing (i.e. experiencing low levels of mental health). A total of 48.5% were moderately flourishing, while the other 48.5% were flourishing. More people in this study were flourishing compared to the statistics reported by Khumalo et al. (2012) who showed that 20% of a South African sample were flourishing, while 67.8% were moderately flourishing and 12.2% were languishing. Keyes and Annas (2009) presented convincing evidence that positive mental health is threatened when no interventions are directed at it. Although a relatively large portion of managers in the current study were flourishing, this was to be expected. The level of positive mental health in a sample of managers is expected to be better than the norm, given the extensive efforts to select, train, socialize and remunerate them. However, more than 51% of the participants were not flourishing, making them a risk group that should be targeted for positive mental health interventions.

The results showed that task characteristics, supervisor relations, availability of resources, remuneration and psychological need satisfaction explained the highest percentage of variance in job satisfaction (48%), followed by work engagement (36%), psychological well-being (35%), emotional well-being (33%) and social well-being (19%). Task characteristics, supervisor relations, personal resources and remuneration impacted job satisfaction and emotional well-being significantly. Only task characteristics and personal resources impacted work engagement significantly. Employees who mastered their jobs and had the personal resources to match will engage successfully and consistently in their jobs. All the antecedents, i.e. task characteristics, supervisor relations, personal resources and remuneration, impacted significantly on emotional well-being. Task characteristics and the availability of personal resources impacted both psychological and social well-being. This is best explained by the Mental Health Continuum of Keyes (2002) in that mastery of the work and the resources within the workplace makes for an employee that thrives within the workplace, experiences growth at work and in life. This, in turn, impacts on social acceptance and integration.

Task characteristics made a significant contribution to flourishing in work (job satisfaction and work engagement), as well as to emotional, psychological and social well-being. If tasks are challenging and allow for autonomy and variety, individuals experience intrinsic enjoyment and fulfilment, which does not only contribute to feeling well (emotional well-being), but also to functioning well (as indicated by work engagement, psychological and social well-being) (Alexander & Klein, 2001; O'Connor & Vallerand 1994; May et al., 2004). From the perspective of broaden-and-build theory (Catalino & Fredrickson, 2011), the impact of an intrinsically rewarding task takes place through experiences of positive emotions, which results in flourishing.

Supervisor relations, characterised by trust and support contributed to flourishing at work and in life in this study. Managers who behave unpredictably, inconsistently or hypocritically indeed have an effect on the well-being of individuals (May et al. 2004; Saks 2006; Tekleab & Chiaburu, 2011). By showing concern for employees, fostering a supportive working environment, providing feedback and allowing employees to voice concerns, managers contribute to job satisfaction, work engagement and well-being of employees (Barak et al, 2009; Griffen et al. 2001; May et al., 2004; Wright et al., 2007). Supportive and trusting supervisor relations allow the employee to master the job, perceive personal growth and experience psychological well-being.

The availability of cognitive, emotional and physical resources also impacted flourishing in work and life significantly in this study. Positive emotions broaden individuals' attention and thinking, while negative emotions narrow their attention and thinking. Over time, the expansive mindsets that are triggered by positive emotions help people to discover and build personal resources, which contribute to well-being (Catalino & Fredrickson, 2011; Lyubomirsky et al., 2005).

When remuneration was entered as an antecedent (controlling for task characteristics, supervisor relations and available resources), the explained variance in job satisfaction, emotional and social well-being increased significantly. These results show that remuneration plays a significant role in the feeling well components of well-being (i.e. job satisfaction and emotional well-being; Rothmann, in press). While remuneration was important for emotional well-being (feeling well) in this study, it was not significantly associated with work engagement and psychological well-being, indicating that an individual is functioning well.

People engage in intrinsically motivated behaviours for the pleasure and satisfaction they derive from such behaviours, rather than for the material rewards they would receive (O'Connor & Vallerand, 1994). Keyes and Annas (2009) pointed out that the emotional component is important as a prerequisite for flourishing.

Task characteristics, supervisor relations, availability of resources, and remuneration also predicted autonomy satisfaction (46%), relatedness satisfaction (33%) and competence satisfaction (25%). The satisfaction of all three psychological needs is important in driving human behaviour (Deci & Ryan, 2011). Employees work better and thrive at work when they have autonomy and are able to act volitionally within the parameters of their work. Remuneration can play a role in psychological need satisfaction, especially if the behaviour required by the person is valued by him or her and is perceived as chosen by the self (O'Connor & Vallerand, 1994). All the antecedents were statistically significant in autonomy satisfaction, task characteristics and availability of personal resources in competence satisfaction and task characteristics, availability of personal resources and supervisor relationships in relatedness satisfaction.

Autonomy and competence impacted significantly on job satisfaction, while the satisfaction of all three psychological needs impacted work engagement significantly. Autonomy and relatedness impacted emotional well-being significantly, all three psychological needs impacted psychological well-being, and only relatedness impacted social well-being. This supports findings by Bono, Davies, and Rasch (2012) that self-determination and, more specifically, autonomous and intrinsic motivation are associated with flourishing in life and at work. Therefore, it seems that satisfaction of the psychological needs for autonomy, competence and relatedness contributed significantly to flourishing as characterized by job satisfaction, work engagement and the flourishing of individuals. According to Deci and Ryan (2008), the satisfaction of psychological needs direct individuals' activities through intrinsic and extrinsic motivation to long-term goals.

Task characteristics, supervisor relations, availability of resources, and remuneration impacted job satisfaction, work engagement, emotional and psychological well-being indirectly via autonomy satisfaction. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor

relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction.

Competence satisfaction mediated the relationship between the availability of cognitive, emotional and physical resources, and work engagement. In line with the model of Kahn (1990), the availability of resources has been found as an antecedent to psychological availability (competence) of employees, which leads to work engagement (May et al., 2004). Indeed, it is understandable that individuals' competence needs will not be satisfied if they feel that they lack the cognitive, emotional and physical resources to do their jobs. Competence satisfaction also mediated the relationship between task characteristics and resources, on the one hand, and psychological well-being on the other.

Relatedness satisfaction mediated the relationship between task characteristics, supervisor relationships, personal resources, on the one hand, and work engagement, emotional and psychological well-being on the other. People who have resources available can connect with others on a cognitive and emotional level, which will promote relatedness satisfaction. Supportive supervision that is not controlling, contributes to employees experiencing psychological safety (Edmondson, 2004; May et al., 2004), which is necessary to satisfy their needs for relatedness. Meaningful interaction with the supervisor (characterized by trust, support and non-exploitation) contributes to individuals feeling appreciated and respected (Kahn, 1990), and also contributes to the satisfaction of the need for relatedness.

Autonomy satisfaction mediated the relationship between the antecedents (task characteristics, supervisor relations, the availability of personal resources and remuneration), and emotional and psychological well-being. A supervisor who is supportive, without being controlling contributes to autonomy satisfaction (Deci & Ryan, 2008), which results in emotional and psychological well-being. An individual's ability to comply with the demands of the job depends on the emotional, physical and cognitive resources he or she has available. Monetary rewards (e.g. remuneration) affect people's behaviour, engagement and well-being. Financial compensation that aims to motivate people extrinsically will not contribute to psychological need satisfaction – especially not if it is awarded conditionally and without being integrated with a sound performance management system (Deci et al., 1999). Deci and Ryan (2000) caution that, whilst financial reward has a definite role to play in organisations, the overextension thereof can result in job dissatisfaction and a decrease in general well-

being. They reported that the amassing of wealth, eventually, has a negative impact on well-being.

The study had various limitations. First, the interpretation of the findings of the study is limited by the cross-sectional nature of the data. The findings of this study were based on correlational data, making it impossible to prove the causality of relationships. Second, the sample was not representative regarding cultural and gender groups. Third, this research relied on self-report instruments to measure variables. It is also necessary to develop and test objective measuring instruments of flourishing at work. Finally, the relationships between job satisfaction, work engagement and flourishing were not studied.

RECOMMENDATIONS

Based on the results of this study, it is recommended that interventions be developed and implemented to promote the flourishing of managers. Organisations should invest in promoting flourishing of individuals by implementing workshops, counselling and coaching, by initiating resilience training, and by building and promoting positive relationships in organisations and communities. Organisations should create an environment that supports psychological need satisfaction. This can be done by taking into account the perspectives of employees, encouraging initiative and a sense of choice, being responsive to their ideas, questions and initiatives, and promoting learning, competence and belonging (Deci & Ryan, 2008). Studies should research and implement measures to assist individuals to make informed life choices through mood monitoring and by charting the consequences of choice. Future studies should also focus on the development of measurement instruments to assess flourishing at work. It would similarly be useful to assess the spill-over effect between flourishing in life and flourishing at work, as the two can never be separated.

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CHAPTER 4

ARTICLE 3

PURPOSE AND MEANING IN LIFE AND EMPLOYEE OUTCOMES: THE MEDIATING ROLE OF PSYCHOLOGICAL NEED SATISFACTION

ABSTRACT

The aim of this study was to investigate the relationships among factors contributing to meaningful work (i.e. work role fit, task characteristics, co-worker relationships and work beliefs), psychological need satisfaction, meaning and purpose in life, organisational citizenship behaviour and turnover intention. A cross-sectional survey design was used with managers in the agricultural sector in South Africa ($N = 507$). Measures included the Meaning and Purpose in Life Scales, a Task Characteristics Scale, the Work Role Fit Scale, the Work-Life Questionnaire, the Work-related Basic Need Satisfaction Scale, the Organisational Citizenship Behaviour Scale and the Turnover Intention Scale. The results showed that work role fit, good co-worker relations, meaningful tasks and work beliefs had direct effects on psychological need satisfaction, purpose and meaning in life, organisational citizenship behaviour and turnover intention. Work role fit, co-worker relations, task characteristics and career orientation (as a work belief) impacted meaning and purpose in life indirectly through competence satisfaction.

Key terms: Work role fit, co-worker relations, task characteristics, work beliefs, psychological need satisfaction, purpose, meaning, organisational citizenship behaviour, turnover intention

Optimal functioning of managers is needed if organisations want to motivate and retain their staff and maintain a competitive edge in the marketplace. Regarding well-being and optimal functioning, Ryan, Huta, and Deci (2008) contrast the eudaimonic well-being perspective (which emphasises meaning and self-realisation) with the hedonic perspective (which emphasises maximum pleasure). People seek meaning and purpose in their lives, and because more than half of an employed person's life is spent at work, meaning in work is also pursued (Steger, Kawabata, Shimai, & Otake, 2008; Steger, Oishi, & Kashdan, 2009). Meaning and purpose in life and in work are associated with engagement (Kahn, 1990; May, Gilson, & Harter, 2004), psychological well-being (Ryff, 1989), authentic happiness (Peterson, Park, & Seligman, 2005), life satisfaction (Park, Peterson, & Ruch, 2009) and flourishing (Keyes & Annas, 2009; Seligman, 2011).

Meaningful work contributes to meaning and purpose in life (Steger & Dik, 2009), which could impact outcomes such as organisational citizenship behaviour and turnover intention. According to Steger and Dik (2010) and Pratt and Ashforth (2003), four factors could contribute to meaningful work, namely the fit between individuals and their work, task characteristics, work beliefs and the nature of relations with co-workers. Firstly, work is meaningful when there is a fit between individuals' and the organisation's values and mission. Secondly, the nature of the task (e.g. the significance, purposefulness and comprehensibility thereof) contributes to meaningful work. Thirdly, the camaraderie people experience in their workplace relationships results in experiences of meaningful work. Fourthly, meaningful work is associated with work beliefs (e.g. whether work is believed to be a job, a career or a calling), resulting in a serving orientation (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). It is expected that managers who experience work role fit, significant, purposeful and comprehensible tasks, camaraderie, and who believe that their work is a calling, will be less inclined to resign from their organisations and will show organisational citizenship behaviour (Avey, Wernsing, & Luthans, 2008; Littman-Ovadia & Steger, 2010; Rosso, Dekas, & Wrzesniewski, 2010).

Self-determination theory (SDT; Deci & Ryan, 2008a) can be used as a theoretical framework to explain how work role fit, task characteristics, co-worker relationships and work beliefs and psychological need satisfaction, which is derived from these factors, relate to meaning and purpose in life organisational citizenship behaviour and turnover intention. SDT postulates that, in order for individuals to function optimally, they must satisfy three

psychological needs, i.e. autonomy, competence and relatedness (Deci & Ryan, 2008b). SDT can therefore be viewed as the psychological conduit through which certain aspects in the working environment, i.e. work role fit, task characteristics, work beliefs and co-worker relations, relate to meaning and purpose in life and organisational outcomes – in this instance, organisational citizenship behaviour and turnover intention (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). It is proposed that SDT mediates the relationships between factors which are regarded as contributing to meaningful work, meaning and purpose in life and outcomes (low turnover intention and high organisational citizenship behaviour), in that each antecedent satisfies one or more psychological need, and this need, in turn relates to positive outcome(s). This study will contribute to the literature by exploring how factors such as work role fit, task characteristics, work beliefs and co-worker relations influence organisational citizenship behaviour and turnover intention. Furthermore, the study will contribute to the SDT literature by investigating how the antecedents of work role fit, task characteristics, co-worker relationships and work beliefs, i.e. viewing work as a job, career or calling, satisfy the three psychological needs of autonomy, relatedness and competence.

The aim of this study was to investigate the relationships among work role fit, task characteristics, co-worker relationships and work beliefs, meaning and purpose in life, psychological need satisfaction and organisational citizenship behaviour and turnover intention.

Meaning and purpose in life

Meaning refers to a contemplation of the significance of life based on experiences of how one fits into the bigger picture of life (Park et al., 2009); lives a life in accordance to one's *daimon* (King, Eells, & Burton, 2004); and applies one's strengths and virtues in the service of something larger than oneself (Seligman, 2011). Steger (2009) refers to two approaches in studying meaning in life as a motivational (or purpose-centred) definition and a cognitive (significance-centred) definition. Meaning as purpose is based on Frankl's (1992) notion that people have some unique purpose for their lives, and meaning is experienced as what people are trying to do to enact their values. Meaning as significance implies that people experience meaning in life when their lives make sense, or convey some comprehensible information. The motivational approach explains how people construct short to long-term goals in life, and the cognitive component considers the conceptualisation of how people understand

themselves and the world in which they live and how they prioritise and manage the most important life events. Purpose in life is often sought under circumstances of adversity (e.g. traumatic experiences and adverse life conditions) and it gives direction when adversarial circumstances are present. Meaning refers to peoples' contemplations on why they are in this world and what they do to make sense of it and, more particularly, their lives.

Antecedents of meaning and purpose

Experiences in different life domains affect purpose and meaning in life. An important domain is that of work, which provides purpose and meaning through work role fit, task characteristics, work beliefs and the nature of relations with co-workers (Steger & Dik, 2009).

Work role fit

Work role fit refers to the fit between a person's self-concept and the job (Greguras & Diefendorff, 2009; Macey & Schneider, 2008). Work role fit instils an individual belief that the working environment is conducive to what the organisation wants, and eventually leads to positive outcomes for the employee and the organisation (Greguras & Diefendorff, 2009). A good work role fit allows the employee to express his or her beliefs and values within the workplace (May et al., 2004). Shamir (1991) found that employees seek out work roles where they can live out their authentic self-concepts, i.e. who and what they are and stand for and not simply to achieve work-related goals.

Studies (May et al., 2004; Olivier & Rothmann, 2007) showed that employees who have good work role fits experience more psychological meaning, assist co-workers and are less inclined to leave the organisation. Kahn (1990) found that employees who experience acceptance for their contributions are inclined to share more readily with those that credit them for these contributions and are more inclined to engage in organisational citizenship behaviour, i.e. assisting fellow workers to achieve mutual organisational goals and doing so with no regard for time or financial reward. The following hypotheses are therefore formulated: Work role fit is positively related to purpose in life (*hypothesis 1a*), meaning in life (*hypothesis 1b*) and organisational citizenship behaviour (*hypothesis 1c*), and negatively related to turnover intention (*hypothesis 1d*).

Task characteristics

Kahn (1990) and Hackman, Oldham, Janson, and Purdy (1995) found that a person experiences meaningfulness in work if the task is challenging, offers creative opportunities, promises variety, and if the person perceives the job as important and his or her contribution as causal to that importance. This positive attitude to work invokes internal motivation, spurs continuous attempts to take responsibility for the task, and attempts to continuously improve the task and to perform optimally. Pierce, Jussila, and Cummings (2009) refer to this as taking psychological ownership of tasks. Csikszentmihalyi (1990) found that individuals are more motivated by fun, mastery and potential growth of the self in the task itself than by the outcomes thereof. Meaningful tasks result in improved interpersonal relationships, improved general attitude towards the work, decreased inclination and attempts to secure alternative employment (Hackman et al., 1995; Kahn, 1990).

The following hypotheses are therefore formulated: Challenging task characteristics are positively related to purpose in life (*hypothesis 2a*), meaning in life (*hypothesis 2b*) and organisational citizenship behaviour (*hypothesis 2c*), and negatively related to turnover intention (*hypothesis 2d*).

Co-worker relations

The acceptance of the individuals by their fellow workers has a significant influence on the meaning that individuals experience in their work and life (Steger & Dik, 2009). May et al. (2004) and Kahn (1990) are of the opinion that when employees experience co-worker relations as rewarding, they will experience greater meaningfulness in the workplace. Employees perform better if they are included in the social activities of that group – both internal and external to the working environment. May et al. (2004) found that the culmination of these factors relate to a stronger identity with the workplace, the job, co-workers and the organisation as a whole. This, in turn, relates to a stronger sense of social identity as the employee endeavours to seek similar relationships in the social environment and build those relationships on the principles of mutual trust and respect. The strong relations with co-workers and the meaning derived from that contribute to an employee being less inclined to leave the organisation. Rewarding social exchanges affect organisational citizenship behaviours (Ma & Qu, 2011). Tepper, Duffy, Hoobler, and Ensley (2004) found that co-workers' organisational citizenship behaviours related positively to the intention to

stay with the organisation, and that favourable relations between employees resulted in more frequent organisational citizenship behaviours.

The following hypotheses are formulated: Supportive co-worker relationships are positively related to meaning in work (*hypothesis 3a*) and organisational citizenship behaviour (*hypothesis 3b*), and negatively related to turnover intention (*hypothesis 3c*).

Work beliefs

According to Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) and Wrzesniewski et al. (1997), individuals might perceive their work as a job (performing the work with a focus on financial rewards and the necessity of sustenance of living), a career (with the focus on advancement to the highest possible position – inclusive of financial gain, where such advancements are viewed as success in competition with fellow workers) and a calling (with a focus on achievement, doing fulfilling work, where they relate to colleagues and share with friends and family). Although any given occupation might include elements of a job, career or calling, it is the latter that is most closely related to a meaningful and lasting working relationship. Jobs and careers are typically associated with a stance of going to the highest bidder, going to where promotion is easier to achieve or simply going from one organisation to the next for ulterior motives (Wrzesniewski et al., 1997). Conversely, those employees that perceive their work as a calling attach meaning and purpose to it and have a perspective of remaining with the organisation, despite adversarial conditions at times. People who experience their jobs as callings enjoy sharing what they do with friends and co-workers. They share this with their family after work and they are proud to inform those who are interested when they are on holiday or on work visits.

Kraimer, Seibert, Wayne, Liden, and Bravo (2011) state that employees who perceive matching between job opportunities within the organisation and their personal career goals and interests are inclined to stay with the organisation. London (1983) proposes that employees' work behaviour and career decisions are motivated by their desires to achieve perceived career goals. They will only engage in jobs and the associated activities when growth in those jobs is compliant with future career goals. The following hypotheses are formulated: Believing that work is a calling is positively related to purpose in life (*hypothesis 4a*), meaning in life (*hypothesis 4b*) and organisational citizenship behaviour (*hypothesis 4b*), and negatively related to turnover intention (*hypothesis 4d*).

Self-determination and psychological need satisfaction

Self-determination theory (SDT; Deci & Ryan, 1985, 2000) can be used to explain the causality between the source of human behaviour and the outcomes thereof (Ryan & Deci, 2006). The basic premise of SDT is that the source of nutrients of intrinsic motivation and internalisation is the satisfaction of three basic psychological needs, namely autonomy, relatedness and competence (Deci & Ryan, 2008a, 2008b). According to SDT, the satisfaction rather than the strength of psychological needs influence well-being (Deci & Ryan, 2000).

According to Deci and Ryan (2008a, 2008b), the need for autonomy reflects the desire to be in charge of one's actions, to act volitionally, to have choices, and to accomplish a specific, pre-determined goal. Competence satisfies the basic need for personal mastery, seeking challenges and overcoming them. Relatedness or belongingness satisfies the need to share with others, to be close to them, to assist and to be assisted when necessary. This relatedness applies to all domains of life – including the work situation (Van den Broeck et al., 2008). The work environment represents social-contextual variables which either contribute to or hinder satisfaction of the needs for autonomy, competence and relatedness (Deci & Ryan, 2008b). Various conditions contribute to an environment which is need-supportive, namely providing a meaningful rationale for performing tasks, acknowledging that activities might be important but not intrinsically interesting, emphasising choice rather than control, providing clear feedback, acknowledging feelings, and showing concern for employees' needs (Deci & Ryan, 2008b).

Work role fit is described as the “fit” between the employee's self-concept and personal goals and how it relates to the organisational goals. Perceiving the workplace to be conducive to the attainment of personal goals within an organisation contributes to autonomy and competence satisfaction (Greguras & Diefendorff, 2009). Relatedness needs could be satisfied when individuals feel that they fit in their roles. A good work role satisfies all three psychological needs of the employee, i.e. the need to act autonomously, to belong to and be accepted by the group (relatedness) and to master the working environment (competence) (Chalofsky & Krishna, 2009; Gregurias & Diefendorff, 2010; Ryff & Singer, 2008).

To sustain productivity and comply with mutually agreed and commonly shared organisational goals, employees work within groups and are reliant on the inputs and assistance of fellow workers (McKnight & Kashdan, 2009). Deci and Ryan (2008b) state that the social climate of the working environment facilitates intrinsic motivation. Employees will engage and find meaning in their work if they can share the successes thereof with fellow workers. Similarly, they must also have trust in fellow workers to acquire assistance, guidance and counselling. The employee engages in co-worker relationships if they are rewarding, and if his or her inputs and contributions are appreciated (May et al., 2004). Gagné and Deci (2005) and La Guardia and Patrick (2008) state that the social context within which work takes place is essential not only for intrinsic motivation, but also for the internalisation of extrinsic behaviour, i.e. those behaviours partially or wholly determined by external circumstances. Therefore, the need for individual acceptance and kinship with fellow workers is closely related to the satisfaction of the psychological need for relatedness.

According to Csikszentmihalyi (1990), intrinsic motivation to execute a task will occur if the employee can relate to the task, understands the inherent characteristics thereof, can master the requirements of the task, and is allowed to grow and develop within the controlled environment of the workplace. This implies that employees must be informed of new developments that affect the task and should be involved in decision-making that affects the task. Being continuously informed enhances personal security. Being acknowledged as an asset and being allowed to redesign and alter work procedures with supervisors and fellow workers satisfies the psychological needs of autonomy, relatedness and competence (Deci & Ryan, 2008a; Hackman et al., 1995).

Perceiving one's work as a job, career or calling has a significant impact on the relation of the psychological needs to these three states of work. In the case of a job, the incumbent is less inclined to be concerned about autonomy as the work is extensively regulated by extrinsic motivation, e.g. remuneration. The incumbent is also less concerned about forming close relationships as he or she does not see it as being beneficial to the attainment of targets. Work is seen as a means to an end (Bellah et al., 1985; Greguras & Diefendorff, 2010; Wrzesniewski et al., 1997). Greguras and Diefendorff (2010) and Wrzesniewski et al. (1997) state that employees who perceive their work as careers are intrinsically motivated and more readily engage in relationships to pursue that calling. They believe their jobs are larger than

themselves and that what they do will benefit the larger community, i.e. fellow workers, the organisation and social environment (Bellah et al., 1985).

Attainment of occupational goals for career-minded individuals relates to psychological need satisfaction (Greguras & Diefendorff, 2010). Perceiving work as a career means that psychological needs are satisfied for as long as the employee experiences continuous advancement. The needs for autonomy and relatedness are relative in the sense that they will simply prevail for as long as progression is experienced. In the absence of such progression, the employee will become frustrated and attempt alternative positions. Guay, Senécal, Gauthier, and Fernet (2003) state that career indecision relates to dissatisfaction of the psychological need for autonomy and hence the inclination to seek it elsewhere.

SDT proposes that intrinsic motivation, integration of extrinsic regulations and movement towards well-being operate optimally to the extent that nutriment is immediately present, or to the extent that individuals have sufficient personal resources to find the necessary nourishment (Deci & Ryan, 2000). Therefore, the following hypotheses are formulated regarding the relations between psychological need satisfaction, work role fit, co-worker relations, task characteristics and work beliefs: Psychological need satisfaction is positively related to work role fit (*hypothesis 5a*), good co-worker relationships (*hypothesis 5b*), task characteristics (*hypothesis 5c*) and work beliefs (*hypothesis 5d*).

The satisfaction of psychological needs leads to higher levels of psychological well-being (Ryan & Deci, 2006), and purpose and meaning in life are components of psychological well-being. Greguras and Diefendorff (2010) state that employees gain purpose and meaning in their lives by applying autonomously regulated behaviour, i.e. striving for goals within the parameters of the workplace which are consistent with their life goals, values and purpose in life. Psychological needs are considered essential for understanding the content and process of goal pursuits (Deci & Ryan, 2000). The workplace is a significant domain to accomplish purpose and meaning (Littman-Ovadia & Steger, 2010).

The following hypotheses are formulated regarding the relationships between psychological need satisfaction and meaning and purpose in life: Autonomy, competence and relatedness satisfaction is positively related to purpose in life (*hypothesis 6a*) and meaning in life (*hypothesis 6b*). Psychological need satisfaction mediates the relation between factors

contributing to meaningful work and purpose in life (*hypothesis 6c*). Psychological needs satisfaction mediates the relation between factors contributing to meaningful work and meaning in life (*hypothesis 6d*).

Meaningful work has a positive impact on work values and has been shown to be negatively associated with work alienation and turnover intention (Sivanathan, Arnold, Turner, & Barling, 2003). Maharaj and Schlechter (2007) found that meaning in life is associated with exerting energy at work, being goal oriented (purposeful) in a career, and showing organisational citizenship behaviour. If individuals find meaning in life through meaningful work, they will demonstrate organisational citizenship behaviours (Chalofsky & Krishna, 2009). Csikszentmihalyi (1990) found that meaningfulness through task behaviour and good work role fit relates to high levels of intrinsic motivation that essentially make people stay with their organisation. Employees who find meaning in their jobs and lives through higher levels of intrinsic motivation are less likely to express turnover intentions. Such employees also value their interdependence on co-workers and are reciprocally valued for their contributions, which facilitates organisational citizenship behaviour (Wrzesniewski et al., 1997).

Organisations have come to realise that in order to retain employees, they have to create the conditions supportive of satisfying the psychological needs for autonomy, competence and relatedness (Chalofsky & Krishna, 2009; Ryan & Deci, 2000). Patrick, Knee, Canevello, and Lonsbary (2007) found that the satisfaction of all three psychological needs individually and collectively contributes to higher levels of attachment to the organisation, better relationships with co-workers, and attempts to practise organisational citizenship behaviour. When an individual employee's purpose and meaning in life are accepted by fellow workers, and theirs are reciprocally accepted by the employee, this leads to high levels of organisational citizenship behaviour and general well-being (Greguras & Diefendorff, 2010). The organisation is perceived as instrumental in achieving work-related life goals and in the employee's belief that staying with the organisation is essential in attaining life goals, i.e. over and above work-related goals.

Given that human needs specify the basic conditions for well-being (Deci & Ryan, 2000), their satisfaction is associated with more effective functioning (including having purpose and meaning in life). SDT suggests that human organisms are designed to engage in interesting

activities, to pursue connectedness in social groups and to integrate experiences. Purpose and meaning in life are strongly facilitated through purpose and meaning at work (Steger et al. 2008).

The following hypotheses are formulated regarding the relationship between psychological need satisfaction, purpose and meaning in life, and organisational outcomes: Autonomy, competence and relatedness satisfaction are positively related to organisational citizenship behaviour (*hypothesis 7a*), and negatively related to turnover intention (*hypothesis 7b*). Purpose in life is positively related to organisational citizenship behaviour (*hypothesis 7c*), and negatively related to turnover intention. Meaning in life is positively related to organisational citizenship behaviour (*hypothesis 7d*), and negatively related to turnover intention (*hypothesis 7e*). Purpose and meaning in life mediate the relation between psychological need satisfaction and organisational citizenship behaviour (*hypothesis 7f*), as well as the relation between psychological need satisfaction and turnover intention.

METHOD

Participants

Eight agricultural companies participated in the study and the number of participants varied from as few as four per company to 199 in the case of one of the larger companies. The ages of the participants varied from 23 to 63 (Mean = 42.42, *SD* = 9.45). The length of service in the various companies varied between one and 45 years (Mean = 19.35, *SD* = 9.93). The characteristics of the participants are reported in Table 1. Males represented 80.10% of the total sample and females 19.90%. With regard to race, whites dominated the sample with 89.70%, followed by Africans (3.20%), Coloureds (5.70%) and Indians (1%). With regard to education, 61.70% of the participants had tertiary qualifications. The distribution of participants per management level was as follows: on the middle management level (47.1%), on junior management level (33.1%), on senior management level (14.6%) and on the executive level (5.1%).

Table 1

Characteristics of the Participants (N=507)

Item		Frequency	Percentage
Gender	Male	406	80.10
	Female	101	19.90
Race	White	455	89.70
	African	16	3.20
	Coloured	29	5.70
	Indian	5	1.00
	Other	2	0.40
Home language	Afrikaans	470	92.70
	English	21	4.10
	African	16	3.20
Education	Grade 12	194	38.30
	Technical college diploma	46	9.10
	Technicon diploma	63	12.40
	University degree	104	20.50
	Postgraduate degree	100	19.70
Job level	Executive management	26	5.10
	Senior management	74	14.60
	Middle management	239	47.10
	Junior management	168	33.10

Measuring instruments

The Meaning subscale of the *Orientations to Happiness Questionnaire* (OHQ; Peterson et al., 2005) was used to measure meaning in life. The subscale consists of six items (e.g. “In choosing what to do, I always take into account whether it will benefit other people”). Each item requires the respondent to answer on a scale which varies from 1 (*very much unlike me*) to 5 (*very much like me*). Peterson et al. (2005) found the following alpha coefficient for the three scales in samples in the United States and Switzerland: 0.88.

Purpose was measured by four items on the *Questionnaire for Eudaimonic Well-being* (QEWB; Waterman, 2010). An example of an item is: “I can say that I have found my purpose in life.” Response options range from 0 (*strongly disagree*) to 4 (*strongly agree*). The Cronbach alpha coefficient for these questions was 0.83.

The *Work Role Fit Scale* (WRFS; May et al., 2004) was used to measure work role fit. Work role fit was measured by averaging four items (e.g. “My job ‘fits’ how I see myself”) which measure individuals’ perceived fit with their jobs and self-concept. For all items, a five-point agreement-disagreement Likert scale varying from 1 (*never*) to 5 (*always*) was used. Olivier and Rothmann (2007) confirmed the reliability of the WRFS in a petrochemical company ($\alpha = 0.90$).

The *Antecedents Scale* (AS; May et al., 2004) was used to measure participants’ perceptions of their tasks and co-worker relations. Task characteristics were measured by seven items. An example of the items is as follows: “Does your work make sufficient demands on all your skills and capacities?” Each item requires the respondent to answer on a scale which varies from 1 (*never*) to 6 (*every day*). Co-worker relationships were measured by ten items. An example of the items is as follows: “My co-workers value my input”. Each item requires the respondent to answer on a scale which varies from 1 (*strongly disagree*) to 7 (*strongly agree*).

The *Work-Life Questionnaire* (WLQ; Wrzesniewski et al., 1997) was used to measure the levels of meaning managers associate with their work. According to Wrzesniewski et al. (1997), the WLQ is a self-report measure which aims to classify an individual’s orientation to work into three main categories, namely (a) work as a job, (b) work as a career, and (c) work as a calling. The WLQ contains three paragraphs representing the three main beliefs regarding meaning of work, in which the respondent is encouraged to rate his level of association with each paragraph on a scale of 1 (*very much like me*) to 4 (*not at all like me*).

The 23-item *Work-related Basic Need Satisfaction Scale* (WRBNS; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010) was used to assess the satisfaction of the psychological needs for autonomy, competence and relatedness. Autonomy satisfaction was measured by six items (e.g. “I feel like I can pretty much be myself at work”). Competence satisfaction was measured by six items (e.g. “I feel competent at work”). Relatedness satisfaction was measured by seven items (e.g. “People at work care about me”). Respondents were asked to evaluate the items on a five-point scale from 1 (*totally disagree*) to 5 (*totally agree*). The general need satisfaction scale and the three subscales are reliable, with Cronbach alpha coefficients of 0.89, 0.86, 0.88, and 0.86 for general need satisfaction and autonomy, competence and relatedness satisfaction, respectively.

Organisational citizenship behaviour was measured by *Organisational Citizenship Behaviour Scale* (OCBS; Rothmann, 2010). The OCBS consists of six items, three which measure assistance to co-workers in the organisation (e.g. “I give up time to help co-workers who have work or non-work problems”) and assistance to the organisation (e.g. “I take action to protect the organisation from potential problems”). Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha coefficient for the two scales were .78 (assistance to co-workers) and 0.80 (assistance to the organisation).

The *Turnover Intention Scale* (TIS; Sjöberg & Sverke, 2000) was used to measure intention to leave. The TIS consists of three items (e.g. “If I was completely free to choose, I would leave this job”). Response options range from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach alpha coefficient for the TIS was 0.83.

Statistical analysis

The analysis was carried out with the SPSS19 program (SPSS, 2011). Descriptive statistics (means and standard deviations) were computed to describe the data. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. The level of statistical significance was set at $p < .05$. Hierarchical multiple regression analyses were conducted to determine the amount of variance in the dependent variable, predicted by the independent variables. Indirect effects were assessed using the procedure explained by Hayes (2009). Bootstrapping was used to construct two-sided bias-corrected confidence intervals to evaluate mediation effects. The statistical significance of bootstrap-estimated indirect effects is assessed (Preacher & Hayes, 2008, 2009). Furthermore, 90 per cent bootstrap confidence intervals (10 000 trials) for all indirect effects were computed to assess whether they included zeros. The significance of mediation steps are stated in terms of zero and nonzero coefficients, not in terms of statistical significance.

RESULTS

Descriptive statistics

The descriptive statistics, alpha coefficients and Pearson correlations of the constructs are reported in Table 2. The results in Table 2 show acceptable alpha coefficients for all scales. All alpha coefficients were higher than the recommended value of 0.70 (Nunnally & Bernstein, 1994).

Table 2

Descriptive Statistics, Alpha Coefficients, and Correlations of the Constructs

Variable	Mean	SD	α	1	2	3	4	5	6	7	8	9	10	11	12
1. Work Role Fit	5.18	1.17	0.91	-	-	-	-	-	-	-	-	-	-	-	-
2. Co-worker Relations	5.31	0.93	0.95	0.52 ^{***+}	-	-	-	-	-	-	-	-	-	-	-
3. Task Characteristics	4.05	0.96	0.83	0.38 ^{***+}	0.41 ^{***+}	-	-	-	-	-	-	-	-	-	-
4. WLQ: Job	3.27	0.86	0.83	-0.52 ^{***+}	-0.31 ^{***+}	-0.29 ^{**}	-	-	-	-	-	-	-	-	-
5. WLQ: Career	2.32	1.03	0.80	-0.13 ^{**}	-0.08	-0.08	-0.08	-	-	-	-	-	-	-	-
6. WLQ: Calling	2.59	1.00	0.77	-0.37 ^{***+}	0.22 ^{**}	0.19 ^{**}	0.34 ^{***+}	-0.05	-	-	-	-	-	-	-
7. Autonomy	3.56	0.56	0.80	0.55 ^{***+}	0.51 ^{***+}	0.50 ^{***+}	-0.45 ^{***+}	-0.12 ^{**}	0.21 ^{**}	-	-	-	-	-	-
8. Competence	4.02	0.48	0.82	0.32 ^{***+}	0.36 ^{***+}	0.29 ^{**}	-0.24 ^{**}	0.08	0.15 ^{**}	0.55 ^{***+}	-	-	-	-	-
9. Relatedness	3.72	0.57	0.87	0.41 ^{***+}	0.63 ^{***+}	0.45 ^{***+}	-0.32 ^{***+}	-0.05	0.16 ^{**}	0.60 ^{***+}	0.42 ^{***+}	-	-	-	-
10. Purpose	2.77	0.61	0.83	0.50 ^{***+}	0.44 ^{***+}	0.29 ^{**}	-0.33 ^{***+}	-0.02	0.27 ^{**}	0.46 ^{***+}	0.49 ^{***+}	0.40 ^{***+}	-	-	-
11. Meaning	3.75	0.59	0.79	0.28 ^{**}	0.29 ^{**}	0.25 ^{**}	-0.25 ^{**}	0.19 ^{**}	0.21 ^{**}	0.26 ^{**}	0.32 ^{***+}	0.29 ^{**}	0.43 ^{***+}	-	-
12. Organisational Citizenship Behaviour	3.87	0.97	0.80	0.31 ^{***+}	0.38 ^{***+}	0.31 ^{***+}	-0.18 ^{**}	-0.06	0.22 ^{**}	0.26 ^{**}	0.32 ^{***+}	0.32 ^{***+}	0.30 ^{***+}	0.36 ^{***+}	-
13. Turnover Intention	1.96	0.87	0.80	-0.49 ^{***+}	-0.34 ^{***+}	-0.32 ^{***+}	0.41 ^{***+}	0.20 ^{**}	-0.19 ^{**}	-0.51 ^{***+}	-0.33 ^{***+}	-0.43 ^{***+}	-0.35 ^{***+}	-0.08	-0.22 ^{**}

* $p < 0.05$ ** $p < 0.01$ ⁺ $r > 0.30$ (Practically significant: medium effect)⁺⁺ $r > 0.50$ (Practically significant effect: large effect)

Table 3 shows the percentages of managers who endorsed the four response alternatives on the WBQ.

Table 3

Frequencies of Work Beliefs

Response	Job	Career	Calling
1. Very much like me	4.9	26.6	15.2
2. Somewhat like me	12.4	30.2	32.9
3. A little like me	33.7	27.6	29.2
4. Not at all like me	48.9	15.6	22.7

Table 3 shows that managers were more inclined to view their work as a career as opposed to a job or a calling. However, 48.1% of the participants selected the options “very much like me” and “somewhat like me” when they were asked whether their work was a calling.

Multiple regression analyses

With regard to the constructs of purpose and meaning as dependent variables, a two-step hierarchical multiple regression procedure was followed. Regarding the constructs of organisational citizenship behaviour and turnover intention as dependent variables, a three-step multiple regression procedure was followed. In step 1 of assessing the contribution to the two dependent variables of meaning and purpose, work role fit, co-worker relations, task characteristics and work beliefs (job, calling and career) were entered. In step 2, the contribution of the SDT constructs of autonomy, competence and relatedness was entered. The same steps were followed in the hierarchical multiple-regression analyses with organisational citizenship behaviour and turnover intention as dependent variables, but in step 3, meaning and purpose in life were entered into the regression equation. The results of the hierarchical multiple-regression analyses are reported in Table 4.

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Table 4

Regression Analysis with Antecedents as the Independent Variables and Purpose, Meaning, Organisational Citizenship Behaviour and Turnover Intention as the Dependent Variables

Variable	Meaning		Purpose		Organisational Citizenship Behaviour			Turnover Intention		
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Constant	2.86	2.21	1.02		1.91	0.88	0.14	4.78	5.86	5.36
Work Role Fit	0.09	0.07	0.31**	0.26**	0.11*	0.12*	0.11*	-0.30**	-0.24**	-0.23**
Task Characteristics	0.12*	0.09	0.05	-0.01	0.17**	0.17**	0.15**	-0.11**	-0.02	-0.03
Co-worker Relations	0.16**	0.10	0.22**	0.12*	0.24**	0.22**	0.19**	-0.06	0.09	-0.08
WLQ: Job	-0.11*	-0.10*	-0.07	-0.04	0.03	0.02	0.04	-0.19**	0.14**	0.15**
WLQ: Career	0.23**	0.21**	0.05	0.01	0.10*	0.07	0.03	-0.13**	0.14**	0.11**
WLQ: Calling	0.06	0.07	0.07	0.08	0.10*	0.10*	0.09*	-0.02	0.00	0.00
Autonomy	-	-0.06	-	0.03	-	-0.15*	-0.13*	-	-0.18**	-0.17**
Competence	-	0.18**	-	0.32**	-	0.21**	0.18**	-	-0.09*	-0.09
Relatedness	-	0.08	-	0.05	-	0.06	0.04	-	-0.19**	-0.19**
Purpose	-	-	-	-	-	-	-0.02	-	-	0.07
Meaning	-	-	-	-	-	-	0.20**	-	-	0.14**
R^2	0.18	0.21	0.31	0.40	0.20	0.24	0.27	0.30	0.37	0.39
F	18.58**	14.71**	37.05**	36.92**	21.30**	17.02**	16.31**	36.17**	32.25**	28.10**
df	6/499	9/496	6/499	9/496	6/499	9/496	11/494	6/499	9/496	11/494
ΔR^2	0.18	0.03	0.31	0.09	0.20	0.03	0.03	0.30	0.07	0.12
ΔF	18.58**	5.88**	37.05**	25.66**	21.30**	6.92*	10.29**	36.17**	17.32**	6.32**
df	-	3/496	-	3/496	-	3/496	2/494	3/496	-	2/494

$p < 0.01$

Table 4 shows that work role fit, task characteristics, co-worker relations and work beliefs (job, career, calling) predicted 18% of the variance in meaning in life ($F = 18.58, p < 0.01$). The regression coefficients of task characteristics ($\beta = .12, p < .05$), co-worker relations ($\beta = 0.16, p < 0.01$), job orientation ($\beta = -0.11, p < 0.01$) and career orientation ($\beta = 0.23, p < 0.01$) were statistically significant. When autonomy, competence and relatedness were entered as independent variables (in step 2), it resulted in a statistically significant increase in predicting the variance in meaning ($\Delta F = 5.88, p < 0.01, \Delta R^2 = 0.03$). The regression coefficients of competence satisfaction ($\beta = 0.18, p < 0.01$), job orientation ($\beta = -0.10, p < 0.05$) and career orientation ($\beta = 0.21, p < 0.01$) were statistically significant.

Work role fit, task characteristics, co-worker relations and work beliefs (job, career, calling) predicted 31% of the variance in purpose in life ($F = 37.05, p < 0.01$). The regression coefficients of work role fit ($\beta = 0.31, p < 0.01$) and co-worker relations ($\beta = 0.22, p < 0.01$) were statistically significant. When autonomy, competence and relatedness were entered as independent variables (in step 2), it resulted in a statistically significant increase in the percentage of variance in purpose in life to 40% ($\Delta F = 25.66, p < 0.01, \Delta R^2 = 0.09$). The regression coefficients of work role fit ($\beta = 0.26, p < 0.01$) and co-worker relations ($\beta = 0.12, p < 0.01$) and competence satisfaction ($\beta = 0.32, p < 0.01$) were statistically significant.

Table 4 shows that work role fit, task characteristics, co-worker relations and work beliefs (job, career, calling) predicted 20% of the variance in organisational citizenship behaviour ($F = 21.30, p < 0.01$). The regression coefficients of work role fit ($\beta = 0.11, p < 0.01$), task characteristics ($\beta = 0.21, p < 0.01$), co-worker relations ($\beta = 0.24, p < 0.01$), career orientation ($\beta = 0.10, p < 0.05$) and calling orientation ($\beta = 0.10, p < 0.05$) were statistically significant. When autonomy, competence and relatedness were entered as independent variables (in step 2), it resulted in a statistically significant increase in predicting the variance in organisational citizenship behaviour ($\Delta F = 6.92, p < 0.05, \Delta R^2 = 0.03$). The regression coefficients of work role fit ($\beta = 0.12, p < 0.05$), task characteristics ($\beta = 0.17, p < 0.01$), co-worker relations ($\beta = 0.22, p < 0.01$), calling orientation ($\beta = 0.10, p < 0.05$), autonomy ($\beta = -0.15, p < 0.05$) and competence ($\beta = 0.21, p < 0.01$) were statistically significant. When purpose and meaning were entered as independent variables (in step 3), it resulted in a statistically significant increase in prediction of the variance in organisational citizenship ($\Delta F = 10.29, p < 0.01, \Delta R^2 = 0.03$). The regression coefficients of work role fit ($\beta = 0.11, p < 0.05$), task characteristics ($\beta = 0.15, p < 0.01$), co-worker relations ($\beta = 0.19, p < 0.01$),

calling orientation ($\beta = 0.09, p < 0.05$), autonomy ($\beta = -0.13, p < 0.05$), competence ($\beta = 0.18, p < 0.01$) and meaning ($\beta = 0.20, p < 0.01$) were statistically significant.

Work role fit, task characteristics, co-worker relations and work beliefs (job, career, calling) predicted 30% of the variance in turnover intention ($F = 36.17, p < 0.01$). The regression coefficients of work role fit ($\beta = -0.30, p < 0.01$), task characteristics ($\beta = -0.11, p < 0.01$), job orientation ($\beta = 0.19, p < 0.01$) and career orientation ($\beta = 0.13, p < 0.01$) were statistically significant. Entering psychological need satisfaction in step 2 resulted in a statistically significant increase in the prediction of the variance in turnover intention ($\Delta F = 17.32, p < 0.01, \Delta R^2 = 0.07$). The regression coefficients of work role fit ($\beta = -0.24, p < 0.01$), job orientation ($\beta = 0.14, p < 0.01$), career orientation ($\beta = 0.14, p < 0.01$), autonomy ($\beta = -0.18, p < 0.01$) and relatedness ($\beta = -0.19, p < 0.01$) were statistically significant. The results of step 3 were also statistically significant ($\Delta F = 6.32, p < 0.01, \Delta R^2 = .12$). The regression coefficients of work role fit ($\beta = -0.23, p < 0.01$), job orientation ($\beta = 0.15, p < 0.01$), career orientation ($\beta = 0.11, p < 0.01$), autonomy ($\beta = -0.18, p < 0.01$), relatedness ($\beta = -0.19, p < 0.01$) and purpose ($\beta = 0.14, p < 0.01$) were statistically significant.

Next, multiple-regression analyses were conducted to assess the relationships between work role fit, task characteristics, co-worker relations and work beliefs, and autonomy, competence and relatedness need satisfaction (Note: The results are not reported in Table 4.) Work role fit, task characteristics, co-worker relations and work beliefs (job, career, calling) predicted 46.3% of the variance in autonomy satisfaction ($F_{(6, 499)} = 71.75, p < 0.01$). The regression coefficients of work role fit ($\beta = 0.25, p < 0.01$), task characteristics ($\beta = 0.27, p < 0.01$), co-worker relations ($\beta = 0.22, p < 0.01$) and job orientation ($\beta = -0.18, p < 0.01$) were statistically significant. The independent variables predicted 19% of the variance in competence satisfaction ($F_{(6, 499)} = 19.25, p < 0.01$). The regression coefficients of work role fit ($\beta = 0.14, p < 0.01$), task characteristics ($\beta = 0.22, p < 0.01$), co-worker relations ($\beta = 0.14, p < 0.01$) and career orientation ($\beta = 0.13, p < 0.01$) were statistically significant. Lastly, the independent variables predicted 47% of the variance in relatedness satisfaction ($F_{(6, 499)} = 69.57, p < 0.01$). The regression coefficients of task characteristics ($\beta = 0.21, p < 0.01$), co-worker relations ($\beta = 0.51, p < 0.01$) and job orientation ($\beta = -0.11, p < 0.01$) were statistically significant.

Mediation analyses

To test whether psychological need satisfaction functioned as mediators between work role fit, task characteristics, co-worker relations and work beliefs and purpose in life, mediation analyses were conducted. Lower CIs (LCIs) and upper CIs (UCIs) are reported. The indirect effects of the independent variables on meaning and purpose in life are reported in Table 5.

Table 5

Indirect Effects of Independent Variables on Meaning and Purpose in Life via Competence Satisfaction

Variable	Purpose in Life				Meaning in Life			
	EFF	SE	LLCI	ULCI	EFF	SE	LLCI	ULCI
COMPETENCE								
Omnibus	0.07	0.02	0.04	0.12	0.04	0.01	0.02	0.07
Work Role Fit	0.02	0.01	0.01	0.05	0.01	0.01	0.01	0.03
Task Characteristics	0.03	0.01	0.01	0.05	0.02	0.01	0.01	0.03
Co-worker Relations	0.05	0.02	0.02	0.08	0.03	0.01	0.01	0.05
WBQ: Career	0.03	0.01	0.01	0.04	0.01	0.01	0.01	0.03

Regarding the indirect effects on purpose in life, the omnibus indirect effects (and the effects of all independent variables) for autonomy and for relatedness included zeros in the 95% CIs. The 95% CI for omnibus indirect effect of competence and specific independent variables (including work role fit, task characteristics, co-worker relations and career orientation as work belief) did not include zeros. Therefore, competence mediated the relationship between work role fit, task characteristics, co-worker relations and a career orientation to work on the one hand, and purpose in life on the other. Regarding the indirect effects on meaning in life, the omnibus indirect effects (and the effects of all independent variables) for autonomy and for relatedness included zeros in the 95% CIs. The 95% CIs for the omnibus indirect effect of competence and for the specific independent variables (including work role fit, co-worker relations, task characteristics, and career orientation as work belief) did not include zeros. Therefore, competence mediated the relationship between work role fit, co-worker relations, task characteristics and a career orientation to work on the one hand, and meaning in life on the other.

The indirect effects of the independent variables on organisational citizenship behaviour and turnover intention are reported in Table 6.

Table 6

Indirect Effects of Psychological Need Satisfaction on Organisational Citizenship Behaviour and Turnover Intention

Variable	Organisational Citizenship Behaviour				Turnover Intention			
	EFF	SE	LLCI	ULCI	EFF	SE	LLCI	ULCI
Purpose in Life								
Omnibus	-	-	-	-	-0.07	0.03	-0.13	-0.02
Autonomy	-	-	-	-	-0.05	0.02	-0.10	-0.01
Competence	-	-	-	-	-0.09	0.04	-0.17	-0.03
Relatedness	-	-	-	-	-0.04	0.02	-0.09	-0.01
Meaning in Life								
Omnibus	0.05	0.02	0.03	0.08	0.03	0.01	0.01	0.05
Autonomy	-	-	-	-	-	-	-	-
Competence	0.10	0.03	0.05	0.18	0.06	0.02	0.02	0.11
Relatedness	0.07	0.03	0.02	0.13	0.04	0.02	0.01	0.08

Regarding the indirect effects on organisational citizenship behaviour, the omnibus indirect effects (and the effects of all independent variables) for purpose in life included zeros in the 95% CIs. The 95% CIs for the omnibus indirect effect of meaning in life and for the specific independent variables (including competence and relatedness) did not include zeros. Therefore, meaning in life mediated the relationship between competence and relatedness satisfaction and organisational citizenship behaviour.

The 95% CIs for the omnibus indirect effect of purpose in life and for the specific independent variables (including autonomy, competence and relatedness) did not include zeros. Therefore, purpose in life mediated the relationship between psychological need satisfaction and turnover intention. The 95% CIs for the omnibus indirect effect of meaning in life and for the specific independent variables (including competence and relatedness) did not include zeros. Therefore, meaning in life mediated the relationship between competency and relatedness need satisfaction and turnover intention.

Table 7

Results of Hypotheses Testing

Hypotheses	Results of research
Hypotheses 1a, c and d	Accepted. Work role fit is positively related to purpose in work, organisational citizenship behaviour and low turnover intention.
Hypothesis 1b	Rejected. Although meaning in life is statistically significantly related to work role fit, the regression coefficient was not significant when controlling for the effects of purpose in life.
Hypothesis 2a	Rejected. Although purpose in life is statistically significantly related to task characteristics, the regression coefficient was not significant when controlling for the effects of meaning in life.
Hypotheses 2 b, c and d	Accepted. Task characteristics are positively related to meaning in work, organisational citizenship behaviour and low turnover intention.
Hypotheses 3a-c	Accepted. Co-worker relations are positively related to purpose in work, organisational citizenship behaviour and low turnover intention.
Hypotheses 4a-d	Partially accepted. Believing that work is a calling is only positively related to organisational citizenship behaviour.
Hypothesis 5a	Partially accepted. Work role fit is positively related to autonomy and competence satisfaction.
Hypotheses 5b, c	Accepted. Co-worker relations and task characteristics are positively related to autonomy, competence and relatedness satisfaction.
Hypothesis 5d	Rejected. Only a high job orientation is negatively related to autonomy satisfaction
Hypothesis 6a	Partially accepted. Only competence satisfaction predicted purpose in life significantly when other variables were controlled for.
Hypothesis 6b	Partially accepted. Only competence satisfaction predicted meaning in life significantly when other variables were controlled for.
Hypotheses 6c-d	Partially accepted. Work role fit, task characteristics, co-worker relations and career orientation (rather than calling orientation) indirectly impacted meaning and purpose in life via competence satisfaction.
Hypothesis 7a	Partially accepted. Only competence satisfaction predicted organisational citizenship behaviour. Contrary to the expectation, autonomy satisfaction negatively predicted organisational citizenship behaviour.
Hypothesis 7b	Partially accepted. Competence and relatedness satisfaction predicted low turnover intention.
Hypotheses 7c-d	Rejected. Purpose in life did not predict organisational citizenship behaviour and turnover intention when controlling for other antecedents.
Hypotheses 7e-f	Partially accepted. Meaning in life positively predicted organisational citizenship behaviour. However, contrary to the expectation, meaning in life positively predicted high turnover intention if it is considered together with the other antecedents.
Hypothesis 7g	Partially accepted. Purpose in life did not mediate the relation between psychological need satisfaction and organisational citizenship behaviour. Psychological need satisfaction impacted turnover intention indirectly and negatively through purpose in life.
Hypothesis 7h	Partially accepted. Meaning in life mediated the relationship between competence and relatedness need satisfaction and both organisational citizenship behaviour and turnover intention.

DISCUSSION

The aim of this study was to investigate the relationships among work role fit, task characteristics, co-worker relationships, work beliefs, psychological need satisfaction, meaning and purpose in life, and organisational citizenship behaviour and turnover intention. Work role fit, co-worker relations, task characteristics and work beliefs predicted positive individual outcomes of purpose and meaning in life, as well as organisational citizenship behaviour and lower rates of turnover intention. Competence satisfaction mediated the relations between work role fit, task characteristics, co-worker relations and a career orientation on the one hand, and purpose and meaning in life on the other. Purpose in life impacted turnover intention negatively via psychological need satisfaction, while meaning in life impacted organisational citizenship behaviour and turnover intention via competence and relatedness satisfaction.

The results showed that work role fit, co-worker relations, task characteristics, work beliefs and psychological need satisfaction (autonomy, competence and relatedness) explained 40% of the variance in purpose in life, and 21% of the variance in meaning in life. Work role fit, co-worker relations and competence satisfaction were significantly associated with purpose in life, while work orientation (low job orientation and high career orientation) and competence satisfaction were significantly associated with meaning in life. Therefore, factors contributing to meaning and purpose in work contribute to meaning and purpose in life (Steger & Dik, 2009). However, psychological need satisfaction both directly and indirectly impact meaning and purpose in life.

Work role fit was an important predictor of purpose in life, organisational citizenship behaviour and low turnover intention. Steger (2009) pointed out that purpose is based on the notion that people are trying to enact their values. Work role fit instils an individual belief that the working environment is conducive to what the organisation wants (Greguras & Diefendorff, 2009). Managers who experienced work role fit can express their beliefs and values at work and they perceive the workplace as conducive to living out these beliefs and values (May et al., 2004). This contributes to meaning and purpose in life, which result in an intention to stay and to being a good organisational citizen (Greguras & Diefendorff, 2009; Macey & Schneider, 2008). Work role fit also impacted meaning and purpose in life indirectly through competence satisfaction (i.e. personal mastery, seeking and overcoming

challenges). The finding that work role fit contributed to the satisfaction all three psychological needs is supported by other research findings (Chalofsky & Krishna, 2009; Ryff & Singer, 2008).

Task characteristics predicted meaning in life, organisational citizenship and low turnover intention in this study. Meaning in life concerns the significance of events. Therefore, tasks which are significant and comprehensible contribute to meaning in life (Steger & Dik, 2009). The intrinsic nature of the task also contributed to autonomy, competence and relatedness satisfaction. Analyses showed that task characteristics impacted meaning and purpose in life indirectly through competence satisfaction. Intrinsic motivation to execute a task will occur if the individual can relate to the task, understands the inherent characteristics thereof, can master the requirements of the task, and is allowed to grow and develop within the controlled environment of the workplace (Csikszentmihalyi, 1990). Being acknowledged as an asset and being allowed to redesign and alter work procedures with supervisors and fellow workers satisfies the psychological needs of autonomy, relatedness and competence (Deci & Ryan, 2008a, 2008b; Hackman et al., 1995).

Good co-worker relations impacted meaning and purpose in life, as well as organisational citizenship behaviour, directly and indirectly in this study. When managers experience camaraderie in their workplace, relationships result in experiences of meaningful work (Steger & Dik, 2009). Co-worker relations contributed strongly to relatedness satisfaction, but also impacted autonomy and competence satisfaction. Furthermore, co-worker relations impacted meaning and purpose in life via competence satisfaction. Therefore, it seems that good co-worker relations contribute to managers' needs for competence being satisfied, presumably because of the availability of instrumental and emotional support (Pratt & Ashforth, 2003).

Insofar as work beliefs are concerned, a low job orientation and high career orientation impacted meaning in work, while a high job and career orientation impacted turnover intention. Career orientation indirectly affected meaning and purpose in life via competence satisfaction. Managers were more inclined to view their work as a career compared to a job and a calling. Only 15% of the participants endorsed the option "very much like me" when they were asked whether their work was a calling. Studies by Van Zyl, Deacon, and Rothmann (2010) and Rothmann (in press) showed that 28.4% of educators in Zambia and

50% of industrial/organisational psychologists answered “very much like me” when they were asked whether they viewed their work as a calling.

Work role fit, task characteristics, co-worker relations and low job orientation explained, respectively, 46% and 47% of the variance in autonomy and relatedness satisfaction. These findings confirm that psychological need satisfaction is associated with factors that contribute to meaningful work (Chalofsky & Krishna, 2009; Deci & Ryan, 2008a; 2008b; Gregurias & Diefendorff, 2010; Ryff & Singer, 2008). Work role fit, task characteristics, co-worker relations and low job orientation contributed to autonomy satisfaction. Task characteristics, co-worker relations and low job orientation contributed significantly to relatedness satisfaction. Furthermore, work role fit, task characteristics, co-worker relations and career orientation explained 19% of the variance in competence satisfaction.

Regarding the role of psychological need satisfaction in meaning and purpose in life, the results showed that work role fit, task characteristics, co-worker relations and a career orientation indirectly impacted meaning and purpose in life via competence satisfaction. The factors that lead to meaningful work, psychological need satisfaction, and meaning in life explained 27% of the variance in organisational citizenship behaviour. Work role fit, task characteristics, co-worker relations, calling orientation, low autonomy satisfaction and competence satisfaction contributed significantly to organisational citizenship behaviour.

The factors contributing to meaningful work, psychological need satisfaction, and purpose in life explained 39% of the variance in turnover intention. Poor work role fit, a high job orientation, a high career orientation, and low autonomy and relatedness satisfaction, and a low score on purpose in life were significant predictors of turnover intention. Meaning in life mediated the relationship between competence and relatedness satisfaction and organisational citizenship behaviour and turnover intention.

Satisfaction of the needs for autonomy, competence and relatedness impacted turnover intention negatively via the experience of purpose in life. When managers’ needs for autonomy, competence and relatedness are satisfied (because they experience work role fit and good co-worker relations, and they have sufficient resources), they would perceive their social context as instrumental in achieving their life goals (Deci & Ryan, 2008a, 2008b),

which impact positively on their intention to stay in the organisation (Greguras & Diefendorff, 2010).

Work role fit seems to play an important role in psychological need satisfaction, purpose in life, organisational citizenship behaviour and low turnover intention. Macey and Schneider (2008) and Greguras and Diefendorff (2009) also found that work role fit results in lower turnover. Person-environment fit instils an individual belief that the working environment is conducive to what the organisation wants and eventually leads to positive outcomes for the employee and the organisation – both monetary and non-monetary (Greguras & Diefendorff, 2009). A good work role fit allows the employee to express his or her beliefs and values within the workplace, and the workplace is, indeed, seen as conducive to living out those beliefs and values (May et al., 2004). Shamir (1991) found that employees seek out work roles where they can live out their authentic self-concepts, i.e. who and what they are and stand for and not, simply, to achieve work-related goals. Within a South African context, Olivier and Rothmann (2007) found that work role fit was the strongest predictor of psychological meaningfulness.

Good co-worker relationships predicted autonomy, competence and relatedness satisfaction, meaning and purpose in life, and also organisational citizenship behaviour. Although good co-worker relations contributed to relatedness satisfaction, the indirect effect on meaning and purpose in life was via competence satisfaction. Rewarding interpersonal interactions contribute to meaning in work and satisfy the relatedness needs of individuals (Kahn, 1990; May et al., 2004; Olivier & Rothmann, 2007), especially when they are valued for their contributions and are treated with respect and dignity. Furthermore, individuals also develop a sense of identity if their belongingness needs are satisfied, which contributes to meaning in life.

The significant relations between competence and relatedness satisfaction and organisational citizenship behaviour support findings by Patrick et al. (2007) that individuals who are respected for their contribution perceived themselves as competent within the work group and related well with their colleagues – inside and outside the work situation. The results of the study showed that the satisfaction of all three psychological needs related to turnover intention. If managers' autonomy and relatedness needs were satisfied, they were less

inclined to consider resigning from their organisations. This is, again, supported by the research findings of Patrick et al. (2007).

An interesting finding was that autonomy satisfaction negatively predicted organisational citizenship behaviour in this study. The correlation analysis showed that autonomy satisfaction was statistically significantly related to organisational citizenship behaviour in this study. However, when it was entered with other independent variables in the regression equation, low autonomy satisfaction was associated with organisational citizenship behaviour. The results showed that work role fit, a meaningful task, supportive co-worker relations, low autonomy satisfaction, competence satisfaction and meaning predicted organisational citizenship behaviour. Therefore, managers who experienced all the factors contributing to a meaningful work, competence satisfaction and meaning in life, engaged in organisational citizenship behaviour to satisfy their autonomy needs.

In conclusion, the results of this study showed that meaningful work contributes to meaning and purpose in life (Steger & Dik, 2009; Wrzesniewski et al., 1997), which is an important pathway to happiness. Meaning and purpose in life also have important implications for outcomes in organisations, and specifically organisational citizenship behaviour and turnover intention of managers (Avey et al., 2008; Littman-Ovadia & Steger, 2010; Rosso et al., 2010). Fit between managers' and their organisation's values and missions, the nature of the task (e.g. the significance and purposefulness), camaraderie in workplace relationships and specific work beliefs (e.g. not to see work as only a job, which results in a serving orientation) contributed to meaning and purpose in life. Furthermore, it seems that the factors contributing to meaningful work affected meaning and purpose in life via the satisfaction of psychological needs, and specifically competence satisfaction. Psychological need satisfaction (autonomy, competence and relatedness) also impacted meaning and purpose in life directly.

The study had various limitations. First, the cross-sectional nature of the data limited interpretations of the findings of the study. Therefore, the causality of relationships between constructs cannot be proven. Second, although the sample size was adequate, the distribution thereof in terms of race and gender was not representative of the diverse cultural and language groups in South Africa. A third limitation is that this research relied on self-report instruments. Finally, the size of the regression coefficients in this study might not reflect the

real size of coefficients as obtained in a structural equation model. It is essential to use structural equation modelling in future studies.

RECOMMENDATIONS

Interventions should be implemented to promote managers' meaning and purpose at work and in life. Managers' levels of psychological need satisfaction, which play an important role in meaning and purpose in life, should be addressed in such interventions. Meaningful work should be promoted through workshops aimed at individual and environmental awareness, achieving person-environment fit, and focusing on the purpose and significance of work. Managers should be invited to express what parts of their job tasks provide meaning. Furthermore, managers find meaning in serving the greater good to determine how they can, through their work, be caretakers of their community, or leaders in sustainability, social justice, or corporate social responsibility. This requires the creation of a psychological needs-supportive environment and supporting continuous learning and development (Deci & Ryan, 2008a, 2008b). Managers must be assisted to engage in effective meaning-making. Meaning-making occurs when the reasons for actions are clearly provided, when individuals can participate, when a clear future is articulated to work toward, and when compatibility can be achieved among the organisation's mission, individuals' purposes and values, and the reason for events (Steger & Park, in press).

Future studies should focus on the standardisation of measuring instruments of meaning and purpose in life and work. Meaning in work and in life should be researched in other contexts, specifically also in the context of employees who are not in managerial or supervisory positions. Future studies should also focus on meaning-making as a variable in meaningful work and lives.

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CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to draw conclusions from the three articles which formed part of this study. Conclusions are drawn in accordance with the aims of the research. Furthermore, limitations of this study are discussed and recommendations for the application of the results in organisations are made. Finally, research opportunities that emanate from this research are proposed.

5.1 CONCLUSIONS

The conclusions that can be drawn from the empirical studies are documented in relation to the three research articles.

Authentic happiness of managers

The aim of the first study was to investigate orientations to happiness (pleasure, meaning and engagement) and its relationships with individual and organisational outcomes.

The results showed that orientations to happiness predicted subjective well-being (satisfaction with life, positive affect and low negative affect). Orientations to happiness had a direct impact on job satisfaction, as well as an indirect impact through subjective well-being. Job satisfaction fully mediated the relation between subjective well-being and organisational commitment. Orientations to happiness and job satisfaction impacted organisational citizenship behaviour directly.

Meaning was moderately associated with two dimensions of subjective well-being, i.e. life satisfaction and positive affect, as well as organisational citizenship behaviour. Managers found meaning by using their character strengths to improve their lives and those with whom they interact (Kings, Eells, & Burton, 2004).

Engagement was moderately related to the subjective well-being, organisational commitment, and organisational citizenship behaviour of managers, and strongly associated with job satisfaction. Engagement in work related to life satisfaction, positive affect and the absence of negative affect. Engaged managers related well to colleagues and saw the commitment to organisational goals as a means to realise their personal goals, and enjoyed what they did.

Orientations to happiness related strongly to subjective well-being, and engagement and meaning were the strongest predictors. This finding supports results by Schueller and Seligman (2010) and Vella-Brodrick, Park, and Peterson (2009). In keeping with results by Peterson, Park, and Seligman (2005) pleasure was moderately related to subjective well-being and related poorly to the organisational outcomes of job satisfaction and organisational commitment.

Orientations to happiness impacted job satisfaction directly, as well as indirectly through subjective well-being. These findings confirm the findings of Bowling, Eschleman, and Wang (2010), and Boehm and Lyubomirsky (2008) that positive emotions, positive affect and the absence of negative affect in the workplace lead to successful organisational outcomes – such as job satisfaction.

Job satisfaction was strongly related to organisational commitment. This supports findings by various researchers (Fisher, 2010; Katsikea, Theodosiou, Perdakis, & Kehagias, 2011; Shore & Martin, 1989; Ting, 2010). The correlation of 0.79 in this research closely resembles the correlation of 0.73 found by Dirani and Kuchinke (2011). Job satisfaction should be viewed as the result of the antecedent factors and this effectively culminates in job satisfaction. This supports research by Katsikea et al. (2011), that job satisfaction is a predictor of organisational commitment.

Job satisfaction impacted organisational citizenship behaviour directly, as well as indirectly, through organisational commitment. Managers with higher levels of job satisfaction will invariably attempt to include colleagues in what they do. This is supported by Lavelle et al. (2009) who found that high levels of organisational citizenship behaviour are preceded by positive job attitudes and high levels of commitment.

The results showed that happiness and subjective well-being have a significant role to play in improving the happiness of managers (Bowling et al., 2010). The results confirm previous results that high levels of engagement, meaning and pleasure lead to higher levels of subjective well-being (see Peterson, Park, & Seligman, 2005). Significant levels of life satisfaction, positive affect and the absence of negative affect led to managers' experiencing job satisfaction. Such managers were more committed to the organisation and inclined to do work beyond the parameters of their job descriptions. In doing so, they worked with and through colleagues (organisational citizenship behaviour) and committed themselves to organisational performance. Such levels of organisational commitment and organisational citizenship behaviour are probably not sustainable without the essential intervention of happiness and subjective well-being. Managers who experienced high levels of happiness (characterised by pleasure, engagement and meaning) will continuously attempt to improve working conditions, systems and policies to improve their individual and organisational performance.

Flourishing of managers: The role of psychological needs satisfaction and antecedents thereof

The aim of study 2 was to investigate the relationships among work-related antecedents (task characteristics, supervisor relationships, available personal resources, and remuneration), the role of psychological needs satisfaction (autonomy, competence and relatedness), and flourishing at work (job satisfaction and work engagement) and in life (emotional, psychological and social well-being).

The results showed that task characteristics, supervisor relationships, personal resources and remuneration impacted job satisfaction, work engagement and flourishing, differentially directly and indirectly, via psychological needs satisfaction. Autonomy mediated the impact of the antecedents on job satisfaction, work engagement, emotional and psychological well-being. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction.

The results of this study showed that 3% of managers were languishing, 48.5% were moderately flourishing and 48.5% were flourishing. More people in this study were flourishing compared to the statistics reported by Khumalo, Temane and Wissing (in press) that indicated that 20% of a South African sample was flourishing, while 67.8% were moderately flourishing and 12.2% languishing. Managers that were languishing and moderately flourishing totalled more than 51%. This poses a risk to the organisations and interventions should be directed to improve the levels of flourishing (Keyes & Annas, 2009).

The results showed that the antecedents and psychological needs satisfaction explained 48% of variance in job satisfaction, followed by work engagement (36%), psychological well-being (35%), emotional well-being (33%) and social well-being (19%). The antecedents and psychological needs satisfaction, hence, resulted in being satisfied with one's job, flourishing at work and flourishing in life. Task characteristics, supervisor relationships, personal resources and remuneration impacted job satisfaction and emotional well-being significantly, and emphasised the importance of job satisfaction and flourishing. This supports findings by Bakker and Oerlemans (2012) that job satisfaction reflects a pleasurable emotional state. Only task characteristics and personal resources impacted work engagement significantly, and this was probably as a result of the fact that these antecedents were under the direct control of the manager. All four antecedents impacted directly on emotional well-being and emphasised the importance and interaction of all four work-related antecedents on the subjective well-being of the employee. Task characteristics and the availability of personal resources impacted both psychological and social well-being. This corresponds with the diagnostic symptoms of the Health Continuum (Keyes, 2002), which indicates that mastery of the work and having the available resources allows the employee to flourish at work and in life.

Task characteristics contributed significantly to flourishing in work (job satisfaction and work engagement), as well as flourishing in life (emotional, psychological and social well-being). Challenging tasks facilitated autonomy and variety, to feel well and to function well (Alexander & Klein, 2001, May, Gilson, & Harter, 2004). This is supported by the broaden-and-build theory (Catalino & Fredrickson, 2011; Fredrickson, 2001), that experiencing the work as gratifying and fulfilling resulted in flourishing.

Supervisor relations contributed to flourishing at work and in life. Supportive and trusting supervisor relationships significantly impact the well-being of the subordinates (May et al., 2004; Saks, 2006). By enhancing interaction in work-related issues, the supervisor created trust and support among employees and this contributed to job satisfaction, work engagement and well-being of employees (Barak, Travis, Pyun, & Xie, 2009; Griffen, Patterson, & West, 2001; Wright, Cropanzano, & Bonett, 2007).

The availability of personal resources (cognitive, emotional and physical) impacted flourishing in work and life significantly. Positive emotions broaden individuals' attention and thinking, and allow them to continuously find alternative and improved ways to build their personal resources (Catalino & Fredrickson, 2011; Lyubomirsky, King, & Diener, 2005).

The results indicate the significant role of remuneration in the feeling well components of well-being (i.e. job satisfaction and emotional well-being) (Rothmann, in press). Although remuneration impacted significantly on emotional well-being, it did not impact work engagement and psychological well-being significantly. This supports findings by Keyes and Annas (2009) of the importance of the emotional component for flourishing, and O'Connor and Vallerand (1994), that people engaged in intrinsically motivated behaviours rather than for the material rewards they would receive.

Task characteristics, supervisor relations, availability of resources and remuneration declared 46% of the variance in autonomy satisfaction, 33% in relatedness satisfaction and 25% in competence satisfaction, and support findings of several authors (Deci & Ryan, 2011; Patall, Cooper, & Robinson, 2008) that the satisfaction of all three psychological needs is important in driving human behaviour. Remuneration can play a role in psychological need satisfaction if it is congruent with intended (volitional) behaviour toward goal achievement (O'Connor & Vallerand, 1994). All the antecedents were statistically significant in autonomy satisfaction, task characteristics and availability of personal resources in competence satisfaction, and task characteristics, availability of personal resources and supervisor relationships in relatedness satisfaction. This supports findings by Van den Broeck, Vansteenkiste, De Witte, and Lens (2008) that optimal human behaviour can be understood better through the process of self-determination.

Autonomy and competence impacted job satisfaction significantly and all three psychological needs impacted work engagement significantly. This supports findings by Deci and Ryan (2008) that the satisfaction of psychological needs is an essential nutriment for mental health and optimal work performance as indicated by the outcomes job satisfaction and engagement. Autonomy and relatedness impacted emotional well-being significantly, all three psychological needs impacted psychological well-being, and only relatedness impacted social well-being. This supports findings that self-determination and, more specifically, autonomous and intrinsic motivation are associated with flourishing in life and at work (Bono, Davies, & Rasch, 2012).

All four antecedents (task characteristics, supervisor relations, availability of resources, and remuneration) impacted job satisfaction, work engagement, emotional and psychological well-being indirectly via autonomy satisfaction. The availability of resources impacted work engagement and psychological well-being via competence satisfaction. Task characteristics, supervisor relations and availability of resources impacted work engagement and psychological well-being via relatedness satisfaction. Understanding the satisfaction of psychological wellbeing in humans in general and also employees specifically, allow the observers of such behaviour to predict work outcomes more favourably (Deci & Ryan, 2011).

Satisfaction of the psychological need for competence mediated the relationship between personal resources and work engagement. This is supported by findings of Schaufeli and Bakker (2004) that managers must have physical, emotional and cognitive resources to be competitive within their jobs. Relatedness mediated the relationship between task characteristics, supervisor relationships, personal resources, and work engagement. The high level of interaction vested in these three antecedents (and the absence of remuneration) is an intricate ingredient for high level and sustained work engagement (Robak & Nagda, 2011). Autonomy mediated the relationship between all the antecedents, emotional well-being and psychological well-being, and supports findings by Keyes (2007) that, both, feeling well and functioning well are essential in flourishing at work. Competence mediated the relationship between task characteristics and personal resources and psychological well-being. Managers who mastered their tasks and had the resources to support what they did, overcame challenges and used this to develop, grow and flourish (Patrick, Knee, Canevello, & Lonsbary, 2007). Relatedness mediated the relationships between task characteristics, supervisor relations and personal resources, and emotional and psychological well-being.

Feeling good and functioning well, i.e. flourishing, takes place through other people (Keyes & Annas, 2009).

Purpose and meaning in life and employee outcomes: The mediating role of psychological needs satisfaction

The aim of this study was to investigate the relationships among antecedents in work (work role fit, task characteristics, co-worker relationships and work beliefs), meaning and purpose in life, the satisfaction of psychological needs of autonomy, competence and relatedness and organisational outcomes (organisational citizenship behaviour and turnover intention). Work role fit, co-worker relations, task characteristics and work beliefs predicted purpose and meaning in work, organisational citizenship behaviour and lower rates of turnover intention. Competence satisfaction mediated the relations between work role fit, task characteristics, co-worker relations and a career orientation on the one hand, and purpose and meaning in life. Purpose in life impacted turnover intention negatively via psychological need satisfaction, while meaning in life impacted organisational citizenship behaviour and turnover intention through the satisfaction of the competence and relatedness needs.

All four antecedents and psychological needs satisfaction (autonomy, competence and relatedness) explained 40% of the variance in purpose in life and 21% of the variance in meaning in life. Work role fit, co-worker relations and competence satisfaction were significantly associated with purpose in life, while work orientation (low job orientation and high career orientation) and competence satisfaction were significantly associated with meaning in life.

Work role fit predicted purpose in life, organisational citizenship behaviour and low turnover intention significantly. The manager perceived a good fit between personal goals and organisational objectives instrumental in having purpose in life. People enact their values through their work and lives (Steger, 2009). Work role fit impacted meaning and purpose in life indirectly through competence satisfaction. Managers experienced meaning and purpose if the feedback structures in the environment confirmed them being competent (Greguras & Diefendorff, 2010). Work role fit contributed to the satisfaction of all three psychological needs and is supported by other research findings (Chalofsky & Krishna, 2009). A good work role fit allows the manager the autonomy to recraft the job to improve performance, to

improve the level of competence, and to relate with and through colleagues to achieve organisational goals (Ryff & Singer, 2008).

Task characteristics predicted meaning in life, organisational citizenship and low turnover intention. Tasks which are significant and comprehensible contribute to meaning in life (Steger & Dik, 2010). The intrinsic nature of the task also satisfied all three psychological needs. Task characteristics impacted meaning and purpose in life indirectly through competence satisfaction. Managers who mastered the inherent characteristics of the job felt competent to improve on it and related this to what they believe in life and their work. It is feeling competent to take ownership of the job (Pierce, Jussila, & Cummings, 2009).

Good co-worker relations impacted meaning and purpose in life, as well as organisational citizenship behaviour. Managers found camaraderie and support of colleagues to improve their experiences of meaningful work and, in turn, shared this with colleagues – even outside the workplace (Steger & Dik, 2010). As could be expected, co-worker relations contributed strongly and directly to relatedness satisfaction, but also impacted autonomy and competence satisfaction. Co-worker relations impacted meaning and purpose in life indirectly through competence satisfaction. This is in keeping with results by Deci and Ryan (2008) that the social climate of the working environment allows managers to feel competent and, more importantly, to be respected for it by fellow workers.

A low job orientation and high career orientation impacted meaning in work, while a high job and career orientation impacted turnover intention. Career orientation indirectly affected meaning and purpose in life via competence satisfaction. 26% of the managers indicated that they viewed their work as a career compared to a job and a calling. 15% of the participants selected the option “very much like me” when asked whether they perceived their work as a calling. Van Zyl, Deacon and Rothmann (2010) and Rothmann (in press) showed that 28.4% of educators in Zambia and 50% of industrial/organisational psychologists answered “very much like me” when they were asked whether they view their work as a calling. Wrzesniewski, McCauley, Rozin, and Schwartz (1997) found that calling is more closely related to meaningful and lasting work. The higher presence of viewing work as a career in this study (as opposed to calling) is difficult to explain, and more so if one considers that 61.7% of the sample had tertiary qualifications. One would have assumed that such qualifications were acquired to aspire to a meaningful and lasting working relationship, i.e.

calling. It might be that the distinction between career and calling was not clear enough in the questionnaire. Another explanation might be that the managers in the sample did consider the extrinsic motivational aspects of work i.e. higher remuneration, promotional prospects as foremost in their work lives.

Work role fit, task characteristics, co-worker relations and low job orientation explained 46% and 47% of the variance in autonomy and relatedness satisfaction respectively. Work role fit, task characteristics, co-worker relations and low job orientation contributed to autonomy satisfaction. Task characteristics, co-worker relations and low job orientation contributed significantly to relatedness satisfaction. Furthermore, work role fit, task characteristics, co-worker relations and career orientation explained 19% of the variance in competence satisfaction. Whilst the pathways from antecedents to outcomes are important to explain, it is as important to understand the behaviours involved and SDT has, in this study, indicated to be particularly useful (Deci & Ryan, 2000).

Competence satisfaction mediated the relationship between work role fit, task characteristics, co-worker relations and a career orientation on meaning and purpose in life. All these antecedents are intricate to the work situation and the successful achievement of all was dependent on being competent in the work, and being perceived as such by all the parties involved. In order to continuously perceive work as meaningful and having purpose in what one does, the manager must continuously perceive the work as challenging to acquire new knowledge and skills (Van den Broeck et al., 2008).

Work role fit, task characteristics, co-worker relations, calling orientation, low autonomy satisfaction and competence satisfaction contributed significantly to organisational citizenship behaviour. Managers were aware of the fact that, more than often, successful achievement in the work was through the interdependency with colleagues. This allowed the opportunity to learn from one another and to broaden fields of expertise (Wrzesniewski et al., 1997).

Poor work role fit, a high job orientation, a high career orientation, and low autonomy and relatedness satisfaction, and a low score on purpose in life, were significant predictors of turnover intention. Meaning in life mediated the relation between competence and relatedness satisfaction, and organisational citizenship behaviour and turnover intention. Managers who

felt their career aspirations incongruent with the goals of the organisation, had little variation in their jobs, had insufficient participation in work related matters, and poor interaction with all parties were bound to leave the organisation. They felt that what they did was contradictory to the satisfaction of their psychological needs and, essentially, contributed little to what they perceived as meaningful in life.

Satisfaction of the needs for autonomy, competence and relatedness impacted turnover intention negatively via the experience of purpose in life. Steger, Kawabata, Shimai, and Otake (2008) found that purpose in life is an essential ingredient to experiencing purpose in work. Managers who found that their psychological needs within the workplace were left unsatisfied, seriously considered leaving the organisation as they perceived their work activities incapable of furthering their purpose in life, primarily, and purpose in work, secondary.

This study indicated the important role of work role fit in its impact on psychological need satisfaction, purpose in life, organisational citizenship behaviour and low turnover intention. A good person-environment fit was seen as pivotal in satisfying all three psychological needs, having supportive relationships and further purpose in life through work (Greguras & Diefendorff, 2010; Macey & Schneider, 2008). Under these circumstances, there seemed to be no reason why the managers had to leave the organisation. Managers simply wanted to express what they live for in their workplaces (Shamir, 1991). Olivier and Rothmann (2007) found work role fit to be the strongest predictor of psychological meaningfulness in South African organisations and similar results were found in this study.

Good co-worker relationships predicted autonomy, competence and relatedness satisfaction, meaning and purpose in life and, also, organisational citizenship behaviour. Although good co-worker relations contributed to relatedness satisfaction, the indirect effect on meaning and purpose in life was via competence satisfaction. Co-workers relationships go significantly beyond superficial interaction and emphasis must be on interdependence of one another and perceiving membership of the group as instrumental in sustaining purpose and meaning in life – both at work and in life (May et al., 2004).

The satisfaction of all three psychological needs was moderately related to purpose and the satisfaction of the needs of competence and relatedness was moderately related to meaning.

This is in keeping with findings by Steger (2009) that human behaviour has both motivational and cognitive properties. Managers are motivated to achieve specific meaningful goals in life, but they also had to understand how and why they wanted to achieve those goals – both at work and in life. Again, SDT proved to be a most useful cognitive conduit to explain the implications of the satisfaction of psychological needs on individual and organisational outcomes.

The results of the study showed that the satisfaction of all three psychological needs related to turnover intention. Managers who found the satisfaction of their psychological needs satiated, were less inclined to leave the organisation. Under such circumstances managers saw no reason to secure alternative employment (Greguras & Diefendorff, 2010).

5.2 LIMITATIONS

The research was conducted in the agricultural sector of South Africa. The choice was based on this sector being a significant employer and also significant contributor to the Gross Domestic Product (GDP) of South Africa. The results were most gratifying in terms of number of participants and the quality of completed questionnaires. However, a final analysis of the data revealed that Whites represented 89.7% of the sample and males 80.1% of the total sample. This limits the interpretation of the results to the larger population in terms of other sectors of the economy, race and gender. We were disappointed with the under-representation of Africans in the sample. A further limitation following from this is that the questionnaire was only in English and requests for translated questionnaires could not be considered as a result of the technical structure of questionnaires in terms of reliability and validity.

The sample was also limited to the managerial job levels and this limits the interpretation of results to all employees. Future research would do well to include other and all job levels.

As a result of the research design having been cross-sectional, the causality of relationships cannot be assumed or determined. Longitudinal studies regarding happiness and its antecedents and outcomes should be conducted.

The method of sampling i.e. via electronic self-reports is a limitation in the sense that no qualitative properties were considered. Whilst longitudinal interventions might improve this, interventions following sampling could also be considered.

5.3 RECOMMENDATIONS

5.3.1 Recommendations to solve the research problems

In order to address the research problem of what the levels of happiness of managers are and how pleasure, meaning and engagement can contribute to happiness, the following recommendations are made:

- This study confirmed previous results that meaning and engagement were more prominent predictors of happiness than pleasure. Lyubomirsky (2008) found that 40% of happiness can be influenced by happiness activities and focusing on how to optimise pleasure in the workplace, but more specifically meaning and engagement. Large, medium and small group presentations and interventions to facilitate awareness and understanding of the characteristics and dynamics of happiness within the workplace should be developed. Individual workshops to enhance the character of the organisation by aligning individual happiness with organisational objectives (Cummings & Feyerherm, 1995) should be conducted. Rhee and Yoon (2012) are of the opinion that workgroups within functional units have become particularly important in understanding the dynamics and intricacies of meaning and engagement. Seligman, Steen, Park, and Peterson (2005) found that workshop interventions on identifying one's present signature strengths, dealing with unfinished business of the past by extending gratitude and designing strategies for hope and optimism in the future increased happiness for a period of at least six months. Those participants who extended these exercises enjoyed long term success. Interventions should steer away from presentations by the course facilitator and focus on multiple individual exercises (Seligman et al., 2005).
- In order to allow managers to flourish in the workplace, i.e. excel beyond the parameters of their job descriptions, the impact of work antecedents on organisational outcomes and their interaction with and through psychological need satisfaction must be investigated.

As a result of the focus being on details within the workplace, primary interventions are proposed (Kompier & Cooper, 1999). Primary interventions deal with modifying or eliminating factors inherent to the workplace to allow a better fit between the individual and organisation. Performance discussions between the supervisory manager and subordinates should place emphasis on the interaction of personal work-related aspects (as indicated by the antecedents) on the one hand, the satisfaction of needs on the other. Individual performance agreements should allow needs-promoting strategies to satisfy psychological needs and promote emotional, psychological and social well-being (flourishing). This necessitates a sound understanding of what the constructs of emotional, psychological and social well-being entail and how it relates to the general and work life. This can be conducted via small group interventions.

- The results of this study showed that the work antecedents of work role fit, co-worker relations, task characteristics and work beliefs (job, career, calling), and psychological needs satisfaction (autonomy, competence and relatedness) explained significant variances in purpose and meaning in life. Purpose and meaning within the workplace related significantly to managing the work with and through colleagues and perceiving them as integral to the work itself (organisational citizenship behaviour). Managers who had purpose and meaning in their jobs were far less inclined to leave the organisation.
- Secondary interventions i.e. those that focus on the individual on how to improve awareness and extend physical and psychological resources, should be implemented (Kompier & Cooper, 1999). Interventions should focus on how the individual job can be recrafted and enriched to facilitate an improved fit between the person and the job. Specific interventions of a small group nature within the workplace should focus on the interaction of individual person-environment fits of all the individuals in that group. The role of interdependence is essential in creating an environment that allows personal work role fit as well as facilitating the combined efforts of all the participants within a group. Caution is advised against an overwhelming emphasis on individual person-environment fit as it militates against the notion of individual effort combining in group results. Individual efforts should always be subject to the overall organisational goal.
- Improving the person-environment fit necessitates a deep understanding of how the antecedents relate to the satisfaction of psychological needs. In this regard, workshops

for those managers that supervise and manage others are proposed. The content of such workshops should consider the role of psychological needs satisfaction, how the antecedents relate to it and how the antecedents impact through it on outcomes. The manager should be made aware of what motivates the individual worker to meaning and purpose— both in life and at work. One to one interventions between manager and subordinate should facilitate actions to improve the person-work environment fit to satisfy, both, individual and organisational goal achievement. Role-plays might prove to be a useful tool in such interventions.

- Improving the person-environment fit would necessitate a re-examination of the antecedents to work performance, the performance appraisal agreement, and the way it is designed and conducted. More emphasis should be placed on how the person-environment (input to performance) can be re-designed to result in improved individual performance, as opposed to a review of past performance. A de facto approach should replace an ex post facto one, where results are reviewed long after the fact of performance had been executed.
- The nature and extent of the proposed interventions necessitate a high level of psychological knowledge and competence, and it seems reasonable to suggest that such interventions should be conducted by trained and skilled psychologists.

5.3.2 Recommendations for future research

The following recommendations are made for future research:

- Future studies should include a more even spread of participants in terms of gender and race, as well as functionality, i.e. broader than the agricultural context.
- Happiness should also be studied within the multicultural work context in South Africa. Qualitative studies and mixed method designs should be used.
- The psychometric properties of questionnaires should be studied within the multicultural context to assess the applicability, thereof, in all cultural groups.
- Future studies should make use of longitudinal experimental designs to study the effects of social-contextual variables on psychological need satisfaction, job satisfaction, work engagement and flourishing of managers.

- Future studies should focus on the design of interventions specifically tailored for improving happiness, flourishing, and meaning and purpose in work. Interventions to promote happiness and flourishing of managers should be developed and evaluated.

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