

THE RELATIONSHIP BETWEEN PSYCHOLOGICAL OWNERSHIP, WORK ENGAGEMENT AND HAPPINESS

by

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DECLARATION

I, Katherine George, declare that “The Relationship between Psychological Ownership, Work Engagement and Happiness” is my own unaided work both in content and execution. All the resources I used in this study are cited and referred to in the reference list by means of a comprehensive referencing system. Apart from the normal guidance from my study leaders, I have received no assistance, except as stated in the acknowledgements. I declare that the content of this thesis has never been used before for any qualification at any tertiary institution.

I, Katherine George, declare that the language in this thesis was edited by Ms Tharina Hansmeyer who is an academic editor for the University of Pretoria.

Katherine George

Date

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THE RELATIONSHIP BETWEEN PSYCHOLOGICAL OWNERSHIP, WORK ENGAGEMENT AND HAPPINESS

ABSTRACT

As a new generation of employees floods the market, loyalty has been redefined. The days of employees staying in one organisation for their entire career are long gone. Loyalty is now shown by the amount of effort and dedication that is put into the job at that moment in time. With that said, organisations need to find ways to retain employees for as long as possible by ensuring that employees feel ownership towards their jobs, are engaged and happy.

In order to achieve this, organisations should shift their focus towards positive organisational behaviour and positive psychology as a preventative approach to retaining employees. The outcome could result in happy, engaged employees who possess psychological ownership towards their jobs. The ideal outcome for organisations is for employees to remain with the organisation for as long as possible.

The purpose of this study was twofold; first, it aimed to investigate if there was a positive relationship between psychological ownership, work engagement and happiness and secondly, whether psychological ownership can predict work engagement and consequently the happiness of employees in the organisation. A quantitative, non-experimental, cross-sectional survey design was used on a non-probability purposive sample ($N = 365$) consisting of professional, white-collar employees in the professional services industry in an audit firm in South Africa. The data for the study were collected by using a questionnaire containing a combination of measuring instruments such as the Satisfaction with Life Scale, Well-being Questionnaire for the measurement of happiness, the Utrecht Work Engagement Scale and the Psychological Ownership Questionnaire.

Pearson product-moment correlations and structural equation modelling confirmed significant positive relationships between psychological ownership, work engagement and happiness. It showed that psychological ownership acted as a predictor of work engagement, which had an influence on happiness.

Keywords: Psychological ownership; work engagement; happiness; positive psychology; satisfaction with life; well-being; relationship; enable; influence; autonomy.

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CHAPTER 1

INTRODUCTION

In this chapter the justification for the research is explained. The background highlights the benefits of promoting positive organisational behaviour and positive psychology in the workplace. The purpose of this study is explained and the academic value and contributions of the study are discussed. The chapter ends with a list of definitions explaining key terms used throughout the document and points out possible delimitations of the study.

1.1 BACKGROUND

When organisations analyse turnover trends, they often realise too late that there was actually something they could have done to prevent the employees from leaving. This reactive approach could cost organisations thousands in replacement costs. Taking a preventative approach could save organisations valuable time, resources and money. In the modern working world, financial benefits are no longer the sole motivators for employees to stay with organisations (Nicholson & Nairn, 2006). Generation X and Y employees are more inclined to stay with an organisation for the culture and experience (Nicholson & Nairn, 2006). Fitting into an organisation's culture and feeling content in one's workplace contribute towards an employee's intentions to stay with an organisation (Luthans, 2002). This makes sense as most of one's day is spent at the workplace.

A preventative approach that organisations could take to ensure that their employees have a positive experience is to create an environment of positive states of being (Luthans, 2002). Positive states of being can include feeling happy, engaged at work and feeling psychological ownership towards a person's job. Previous research looked at the relationship between happiness, work engagement and organisational commitment, but there is limited evidence of how these three constructs relate to one another. When looking at the relationships between these constructs, the scientific data available would be essential for contributing to the continuously growing discipline that forms part of

positive organisational behaviour in the working environment. Positive organisational behaviour is the investigation into and implementation of positively aligned human capital qualities and quantified psychological abilities, established and successfully guided for performance enhancement in the current working environment (Luthans, 2002). Organisations should take a proactive, positive approach by putting emphasis on the strengths rather than focusing on negativity and development areas of their employees. The same sentiment is shared by the concept of positive psychology. According to Seligman and Csikszentmihalyi (2000), the objective of positive psychology is not to concentrate on the weaknesses of people but to focus on their strengths. This allows one to accentuate strengths (as opposed to weaknesses), to be attentive to resilience (instead of vulnerability), and to focus on the development and the enhancement of wellness, success and the good life (as opposed to the corrective action of pathology).

In recent years a link has been proven between positive psychology, happiness and well-being (Field & Buitendach, 2011). Field and Buitendach (2011) claim that happiness is characterised by a state that is of an affective emotional, positive and psychological nature. Positive psychology has been linked to work engagement in a study by Bakker, Schaufeli, Leiter and Taris (2008), who claim that employees with a positive psychological state are engaged, experience enthusiasm and are caught up in what they are doing. Psychological ownership can produce effects such as positive attitudes and behaviours in the organisation, as stated by Pierce, Kostova and Dirks (2001) and empirically proven by Alok and Israel (2012); Avey, Avolio, Crossley, and Luthans (2009); Olckers and Du Plessis (2012); Ozler, Yilmaz and Ozler (2008); and Vandewalle, Van Dyne, and Kostova (1995).

The objective of this study was to investigate the relationship between psychological ownership, work engagement and happiness and whether psychological ownership has an effect on employees' work engagement and consequently on their happiness.

1.2 RESEARCH PROBLEM

Based on the discussion above, there is no empirical proof in a South African context that psychological ownership, work engagement and happiness are related. Thus it was

important to conduct such a study to see if there is a positive relationship between psychological ownership, work engagement and happiness and whether psychological ownership can predict work engagement and consequently the happiness of employees in the organisation. This will hold great value in that these three constructs, independently, are important for employees to maintain being happy, balanced and productive in the workplace. But more importantly, looking at the relationship they have with one another can be beneficial, especially in terms of seeing where and how psychological ownership fits in with happiness and work engagement to help in the improvement of performance and the retention of employees, as well as possibly being an enabler of the other two constructs.

1.3 PURPOSE OF THIS STUDY

The purpose of this study was twofold; first it aimed to investigate if there is a positive relationship between psychological ownership, work engagement and happiness and secondly, whether psychological ownership can predict work engagement and consequently happiness in the organisation.

1.4 RESEARCH QUESTIONS

The research questions for this study are as follows: Is there a positive relationship between psychological ownership, work engagement and happiness? Can psychological ownership predict work engagement and consequently happiness?

Given the research questions above and based on the literature review, the following hypotheses were set for this study:

H0₁: Psychological ownership is positively related to work engagement.

H0₂: Work engagement is positively related to happiness.

1.5 ACADEMIC VALUE AND CONTRIBUTION OF THE STUDY

Psychological ownership was found to be positively related to organisational commitment (Avey et al., 2009; Olckers 2011; Pierce et al., 2001; Vandewalle, Van Dyne & Kostova, 1995) and to intentions to stay in the organisation (Avey et al., 2009; Olckers & Du Plessis, 2012). Alok and Israel (2012) found in their study that psychological ownership can predict work engagement. It was discovered that work engagement had a positive relationship with commitment (Hakanen, Bakker & Schaufeli, 2006). It was discovered that happiness had a positive relationship with commitment (Field & Buitendach, 2011). It can therefore be surmised that psychological ownership, work engagement and happiness are all positively related to commitment.

In their study, Olckers and Du Plessis (2012) demonstrate that psychological ownership seems capable of enabling organisations to retain key talent. Studies by Boehm and Lyubomirsky (2008) indicate that happiness is positively related to retention. Bhatnagar (2007) states that good levels of engagement may lead to high retention. It is the researcher's opinion that commitment and retention are key ingredients in the recipe for a successfully functioning organisation. These are important areas that are too often overlooked by organisations.

The reason for conducting this study is that it is important to foster psychological ownership, happiness and work engagement in an organisation because these constructs can lead to commitment and retention of employees, as already proven in the studies mentioned above. Besides commitment and retention, other commonalities between psychological ownership, work engagement and happiness are that they are positively related to satisfaction, autonomy and increased performance. Therefore the intention of the research was to explore the link between psychological ownership, work engagement and happiness. Psychological ownership is often mistaken for organisational commitment. One might argue that, due to concept redundancy, psychological ownership is just a synonym for commitment. While psychological ownership is positively related to commitment, it is still a construct that can stand by itself with its own contributions to the working world. In order to prove that psychological ownership has not come about due to concept redundancy, this study builds knowledge on where psychological ownership

contributes and how it fits into the realm of positive psychology alongside happiness and work engagement.

1.6 DELIMITATIONS

The study focused on psychological ownership and not employee ownership. According to Pierce, Rubinfeld and Morgan (1991, p. 122), employee ownership is “an organisational arrangement in which there remains a clear separation between managers and workers, where shares of ownership are not necessarily distributed equally, and where a significant proportion (though not necessarily all) of the people who work in the firm, regardless of hierarchical level, or whether compensated by salary or hourly pay, possess ownership in the employing organisation”. The study focused on work engagement and not organisational commitment. Organisational commitment is the inclination of members of the workforce to put substantially more focus on representing the organisation, have a greater intention to stay in their organisations and put confidence in their key objectives and beliefs (Field & Buitendach, 2011). The study focused on happiness, and not well-being. Well-being refers to how people assess their lives (Diener, 1985). According to Diener (1985), these assessments could either be cognitions or be represented by affect. The cognitive portion is an information-centered evaluation of an individual’s life, that is, when one gives conscious critical determinations about one’s satisfaction with life in general.

The study focused on a target population of professional, white-collar employees in the professional services industry, specifically in an audit firm in South Africa. The target population excluded blue-collar and/or semi-skilled workers from the organisation where the study was conducted.

1.7 DEFINITION OF KEY TERMS

- *Psychological ownership* is characterised by the condition whereby individuals feel that the target of ownership or a portion of that target belongs to them (Pierce, Kostova, & Dirks, 2002).

- *Engagement* is when an individual experiences an ongoing positive motivational condition of fulfilment that is portrayed by vigour, dedication and absorption (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002).
- *Happiness* is considered to be having positive feelings, attitudes, emotions, moods, and a positive state of mind that lead to individuals believing that life is good (Field & Buitendach, 2011; Fisher, 2010; Gavin & Mason, 2004, Uchida, Norasakkunkit, & Kitayama, 2004).

1.8 CHAPTER OUTLINE

The study is divided into the following chapters, as outlined in Table 1.

Table 1: Chapter outline

Chapter	Content	Content of chapter
1	Introduction	This chapter sets out the background of the study, the research problem, the purpose of the study, research questions, academic value and contribution of the study, delimitations and definition of key terms.
2	Literature review	This chapter defines and discusses three constructs, namely happiness, work engagement and psychological ownership. More specifically, organisational happiness is discussed in terms of a theoretical perspective, causes of happiness, consequences of happiness and the methods organisations can adopt to foster happiness in the workplace. In terms of work engagement, the drivers of work engagement, job demands, burnout and the consequences of work engagement and disengagement are explored. Finally, psychological ownership is examined by looking at the definition, forms, dimensions, types and outcomes of the construct.
3	Research design and methodology	This chapter explains the research design and methodology that was followed in the study.
4	Results	This chapter presents the results and findings of the research.
5	Conclusions, recommendations and limitations	This chapter provides a summary of the results and findings of the study. It concludes on whether the research objectives have been met. Recommendations for future research are made and the limitations of the study are considered.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The research required a literature review of psychological ownership, work engagement and happiness. These constructs needed to be broken down into individual definitions to provide the researcher with valuable information to properly understand them. This allowed the researcher to investigate the relationship between psychological ownership, work engagement and happiness in organisations.

First, happiness is discussed from an organisational perspective in terms of a theoretical model, causes of happiness, consequences of happiness and the methods organisations can adopt to foster happiness in the workplace. In terms of work engagement, the drivers of work engagement, job demands, burnout and the consequences of work engagement and disengagement are explored. Finally, psychological ownership is examined by looking at the definition, forms, dimensions, types and outcomes of the construct.

2.2 DEFINITION OF HAPPINESS

Since its inception at the beginning of this century, the positive psychology movement has generated a huge following (Money, Hillebrand & Da Camara, 2008). In recent years a link has been established between positive psychology and concepts such as happiness and well-being (Field & Buitendach, 2011). According to Gavin and Mason (2004), positive psychology aims to assist people in holding onto and appreciating life as they live it. The aim and focus of positive psychology are to assist people to find true happiness by taking preventative as opposed to curative measures. It also helps in understanding people's lives and the factors that are associated with life satisfaction (Money et al., 2008). Positive psychology creates methods and resources to assist people in experiencing happiness within themselves and society and work (Gavin & Mason, 2004).

With regard to organisational positive psychology, initial findings suggest that elements of positive psychology seem to be relevant in the workplace (Field & Buitendach, 2011). Fisher (2010) believes that research into positive psychology in the workplace will lead to an enhanced comprehension of what pushes and encourages employees to flourish and reach their full potential in the working environment. These positive feelings and characteristics will most probably result in a considerable contribution to clarifying employee commitment, job satisfaction and overall happiness in the workplace.

In pursuit of understanding happiness, there are two major conceptual points of view that tackle the matter of what causes people to feel good and happy. These are the *hedonic* and *eudaimonic* concepts to happiness (Ryan & Deci, 2001).

Hedonic well-being is founded on the concept that more pleasure and diminished pain result in happiness. Hedonic ideas are grounded in the theory of subjective well-being, which is the term that is frequently employed to indicate a happy or good life (Gavin & Mason, 2004). According to Diener (1985), hedonic well-being is composed of an affective element (high positive affect and low negative affect) and a cognitive element (satisfaction with life). It is suggested that a person feels happy when positive affect and satisfaction with life are simultaneously at a peak (Gavin & Mason, 2004). However, eudaimonic well-being is based on the idea that people feel happy if they acknowledge a reason for living, take on challenges and experience development (Ryan & Deci, 2001).

According to Uchida, Norasakkunkit and Kitayama (2004), happiness is when feelings of positivity outweigh feelings of negativity. Fisher (2010) defines happiness as a form of enjoyable moods and emotions, well-being, and positive attitudes. Field and Buitendach (2011) claim that happiness is characterised by a positive and affective emotional and psychological state, whereas Gavin and Mason (2004) simply describe happiness as experiencing “the good life”. Looking at the various definitions of happiness, a common denominator identified among these definitions is the word *positive*. Therefore, happiness can be defined as having positive feelings, attitudes, emotions, moods, and a positive state of mind, which leads to individuals believing that life is good.

Heady (2008) adds that one's life goals effect happiness by promoting life satisfaction. Some of these goals are commitment to family, friends, social involvement and political involvement. Peterson, Park and Seligman (2005) identify three ways to being happy and satisfied with life, namely pleasure, engagement and meaning. Susniene and Jurkauskas (2009) link the quality of one's life to how happy one is. They claim that happiness is an important indicator of people's life satisfaction and that the quality of life can be objective, such as the fulfilling of societal and cultural demands, or subjective, such as feeling good about life in general. A dissensus study done on happiness by Lykken and Tellegen (1996) proposes that happiness cannot be determined and happens by chance.

2.2.1 Organisational happiness

If one considers that working people spend most of their time each day at work, being happy at work is essential (Gavin & Mason, 2004; Money et al., 2008; Rego, 2008; Van Zyl, Deacon & Rothmann, 2010; Warr, 2009). Happiness has important consequences for both employees and the organisation (Fisher, 2010; Van Zyl et al., 2010; Warr, 2009).

Organisational happiness can be found on three levels, namely person, unit and transient levels (Fisher, 2010). Focus on the individual's happiness is referred to as the *person level*. The *unit level* on the other hand looks at happiness within groups or teams, while transient levels of happiness express temporary moods and emotions that individuals might go through. According to Fisher (2010), constructs linked to happiness in general are defined and measured at person level as well as unit level; unit level constructs are presumed to be steadier in the long run.

An important question to ask is what causes happiness in the workplace? According to Fisher (2010), there are general causes and causes that are evoked by the organisation. The general causes are environmental contributors such as how individuals' current surroundings and feelings affect their mood. Secondly, there are personal contributors such as genetics and personality that may influence the levels of an individual's happiness. Thirdly, there is a combination of the person and a specific environment and lastly, there is the fact that people can choose to want to become happier through helping themselves reach happiness.

2.2.1.1 Consequences of happiness for the organisation

There are various consequences of happiness in the workplace. Fisher (2010) claims that on a transient level, workplace happiness can result in employees being proactive and creative on the particular day that happiness is experienced. This leads to an increase in productivity and work engagement. The study by Fisher (2010) also suggests that happy employees are more committed employees, implying that organisations will benefit if they focus on the happiness of employees. Boehm and Lyubomirsky (2008) add that happy employees are better performers on assignments given to them and that they will probably take on additional work, whereas their less happy colleagues are unlikely to do likewise. They also state that there will be little to no absenteeism and unemployment among happy people.

Graham, Eggers and Sukhtankar (2004) also emphasise the point that employees who are happy tend to make more money and are healthier. This can have an impact on the organisation as healthier employees will mean a reduced absenteeism rate due to sick leave. Happiness leads to increased productivity at work and a psychologically happy workforce may be a means for promoting individual performance (Gavin and Mason, 2004; Rego, 2008; Van Zyl et al., 2010).

2.2.1.2 Fostering or improving organisational happiness

The point that organisations can benefit from employees' happiness at work has been made. It is now important to discuss what organisations can do to foster or improve happiness in the workplace. Fisher (2010) suggests the following:

- Create an organisational culture that promotes respect and support.
- Ensure that capable leadership is available to all levels at all times.
- Provide equitable treatment, safety and acknowledgement.
- Create roles that are engaging, provide independence and are meaningful to the employee.
- Invest in the learning and development of employees.
- Promote a target-driven workforce.

- Ensure that an environment of trust between colleagues is established.
- Place emphasis on the occasions that make employees happy.
- Ensure that there is a good fit between the employee and the organisation.

Another way for organisations to promote happiness in the workplace is to consider the research done by Diener, Sandvik and Pavot (1999). They propose that in order for one to be happy, the frequency of feeling happy should be a central point of focus rather than the intensity. This implies that if organisations want to increase the happiness of employees, they should focus on implementing frequent measures that evoke the feeling of happiness as opposed to fewer interventions or measures that evoke a high intensity of the feeling of happiness. For example, organisations that usually budget for a large, extravagant employee conference once a year should consider spending that money on smaller events throughout the year so that frequency of happiness is evoked and not just intensity. Organisations should also take the time to show employees how their jobs add meaning to the organisation; this will result in a sense of meaning and ultimately a feeling of happiness (Gavin & Mason, 2004).

Rego (2008) advises that organisations can enhance happiness further by developing and investing in an authentic psychological environment and healthy work culture. Organisations should take note of employees' perceptions by focusing on the following areas: (a) creating a respectful and trustworthy environment; (b) creating opportunities for learning and providing personal development for employees; (c) the extent to which employees are treated as people seeking relevant and significant work; (d) the transparency when dealing with subordinates; (e) creating strategies to facilitate work-life integration; (f) ways to endorse morale and team spirit; and (g) establishing a fair recognition and reward programme.

A point noted in research by Graham et al., (2004) is that organisations need to take into consideration that it may not always be organisational circumstances that effect employee happiness. Outside influences and how employees perceive their happiness can affect levels of happiness in the organisation. Improving work situations may therefore be futile if employees' subjective happiness is low.

2.2.1.3 Consequences of happiness for the employee

Happiness at work results in job satisfaction (Boehm & Lyubomirsky, 2008; Ferreira & Coetzee, 2010; Fisher, 2010; Wright & Bonett, 2007). Research has shown that happiness improves career success for employees (Boehm & Lyubomirsky, 2008; Coetzee & Bergh, 2009; Ferreira, 2012; Lumley, 2010; Lyubomirsky, King, & Diener, 2005; Nabi, 2001; Schreuder & Coetzee, 2011). Job satisfaction and improved career success lead to employees feeling a greater sense of autonomy in their duties (Boehm & Lyubomirsky, 2008).

According to Gavin and Mason (2004), happiness derives from three characteristics: *freedom*, which is the ability to make choices; *knowledge*, which is having the required information and the ability to reason; and *virtue*, which is having a moral character. Being happy at work provides value and a sense of fulfilment and meaning to the employee. Gavin and Mason (2004) further emphasise that happiness enables employees to achieve that which they covet most – the perfect job which leads to acquiring the perfect house and car. This demonstrates that people's well-being can be derived from the workplace. Van Zyl et al. (2010) deduce that work-role fit can also have an effect on happiness in the workplace. They state that by comprehending the results of fitting specific work with a specific role, the significance of work, psychological meaningfulness and work engagement, greater awareness of happiness in the workplace can be developed.

As a general conclusion, Boehm and Lyubomirsky (2008) state that people who are happier in life tend to have greater longevity, consistent good health, and deal with life's problems with ease.

2.2.1.4 Consequences of unhappy employees

Organisations should be aware that having an unhappy workforce can have negative consequences. Warr (2009) argues that unhappiness and psychological distress in the workplace have been related to poor work performance, a decrease in work output, greater chances of accidents, disputes among colleagues, more absenteeism, increased presenteeism, abuse of sick leave, short- or long-term disability, burnout, increased

attrition, various medical conditions, and increased disability and medical costs. Stress can also manifest as a result of unhappiness (Boehm & Lyubomirsky, 2008; Warr, 2009). In the opinion of Wright & Bonett (2007) unhappiness can lead to employee turnover.

It is evident that happiness plays an important role in organisations. While there are various ways of making employees happy at work, organisations need to understand the needs of their employees and build an employee value proposition that addresses these needs. Figure 1 depicts the researcher's understanding of organisational happiness and the related areas affecting this construct.

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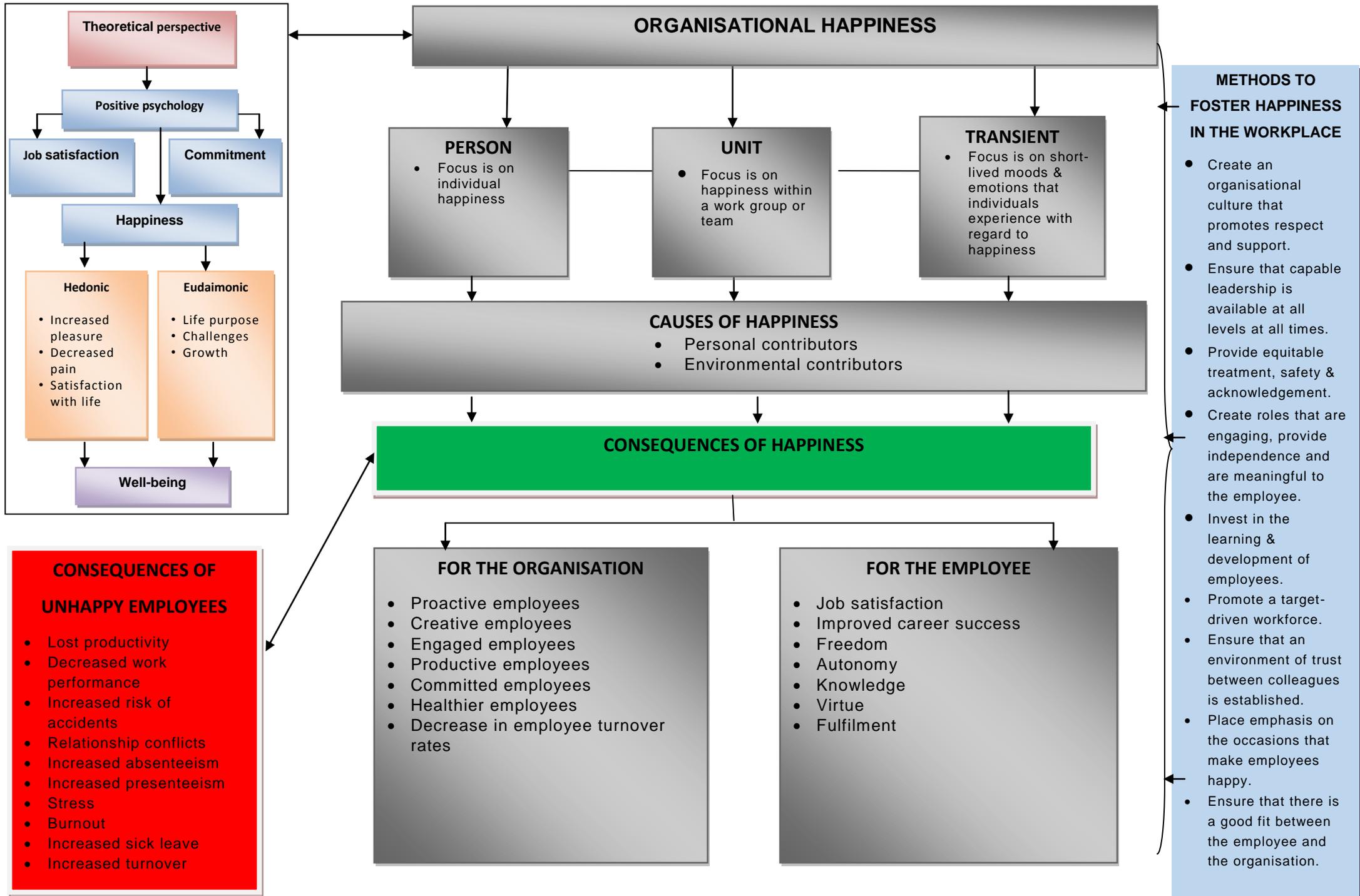


Figure 1: A model depicting organisational happiness

2.3 WORK ENGAGEMENT

2.3.1 Definition of work engagement

Other than feeling happy at work, employees also need to feel engaged in what they are doing. Organisations will surely run at a financial loss if employees arrived at work everyday but were not personally engaged in what they were doing. Kahn (1990), who was actually the first scholar to coin the term “personal engagement”, explains engagement as the harnessing of organisation members’ selves to their work roles. Schaufeli et al. (2002) define engagement as employees experiencing a determined sense of fulfilment by having a positive motivational state that is characterised by vigour, dedication and absorption. According to Schaufeli, Bakker and Rhenen (2009), *vigour* refers to increased vitality, the ability to bounce back and persevere with ease when facing tough conditions, as well as the enthusiasm to commit and devote time to one’s job. *Dedication* refers to being involved in one’s job, being eager to do the job and feeling inspired and proud of one’s job. *Absorption* refers to being so immersed in one’s job that one does not realise that time has passed and being unable to pull oneself away from one’s job. Bakker et al. (2008) claim that engagement is a positive, gratifying, affective-motivational state of well-being in the workplace where employees who are engaged tend to have high levels of energy and relate quite well with their work.

It is important to mention that there is a difference between work engagement and being a workaholic. Engaged employees work very hard but are not addicted to their work and are able to have a life outside of work and maintain a healthy work-life balance (Bakker & Demerouti, 2008). Workaholics are obsessed with work and lack autonomy (Van Beek, Schaufeli, Taris & Schreurs, 2011). Workaholics work hard because they are mainly driven or pushed by a strong need to prove themselves. They do not have a good work-life balance and often feel a sense of uneasiness when they are away from their jobs (Van Beek et al., 2008).

2.3.2 Drivers of work engagement

Work engagement cannot occur naturally. Employees require specific drivers to bring about work engagement (Bakker & Demerouti, 2008). While there are many factors that cause one to be engaged in one's work, empirical research has identified an employee's job resources and personal resources as key drivers in promoting engagement. While these are the focal drivers discussed in research, similar if not equal focus should also be placed on how an employee's physical and mental health can affect work engagement. The three drivers: job resources, personal resources and health are discussed below.

2.3.2.1 *Job resources*

According to Bakker and Demerouti (2008), job resources are the physical, social or organisational facets of a job that enable employees to cope with job demands achieving work goals (extrinsic motivational role), learning and development and personal growth (intrinsic motivational role). Job resources include autonomy, coaching and development, feedback, responsibility and task variety to name a few. There is a positive relationship between job resources and work engagement (Bakker & Demerouti, 2008; Bakker, Demerouti, Hakanen, & Xanthopoulou, 2007; Hakanen, Bakker, & Schaufeli, 2006; Koyuncu, Burke, & Fiksenbaum, 2006; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Bakker, 2004). Bakker and Demerouti (2008) point out that a link exists between job resources and job demands whereby job resources are integral to the maintenance of work engagement under conditions of high job demands. Therefore it is possible that challenging jobs produce work engagement. A further link between engagement and job resources is made by Hakanen et al. (2006) who state that work engagement mediates the consequences of job resources on organisational commitment. Bosman, Rothmann and Buitendach (2005) demonstrate the importance of job security as a job resource. Research indicates that greater cognitive job insecurity is related to decreased levels of work engagement.

Another job resource worth mentioning is work identity. Just as research shows the importance of an individual having an identity in society, employees also require a work identity (De Braine & Roodt, 2011). It is important that employees know where they fit in

and belong in an organisation. Research indicates that engaged employees undergo greater degrees of vitality and compelling association with their jobs (De Braine & Roodt, 2011; Rothmann & Rothmann, 2010).

Job resources are extremely important for employees to remain engaged at work and perform their duties. Employees who have inadequate job resources to perform their duties can end up burned-out. This has been proven in research conducted by Hakanen et al. (2006), who state that job resources are negatively related to burnout. A further discovery by Hakanen et al. (2006) that will have a significant impact on organisations is that burnout is negatively related to organisational commitment. Organisations should ensure that they understand this link and the consequences thereof and provide employees with the relevant job resources that will prevent burnout and keep employees committed to the organisation.

2.3.2.2 *Personal resources*

Bakker and Demerouti (2008, p. 213) state that “personal resources are ‘positive self-evaluations’ that are linked to resiliency and refer to an individual’s sense of their ability to control and impact upon their environment successfully”.

Personal resources comprise emotional stability, extraversion, confidence, conscientiousness as well as adaptability to name a few. Personal resources are positively related to work engagement (Bakker & Demerouti, 2008; Bakker, Gierveld, & Van Rijswijk, 2006; Mauno et al., 2007; Storm & Rothmann, 2003; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007) as employees draw upon their various personal resources to stay engaged.

Stress has a negative effect on one’s personal resources and can cause a depletion in personal resources (Van der Colff & Rothmann, 2009). If employees experience large amounts of stress at work and as a result of depleted personal resources end up with a weak perception of consistency, Van der Colff and Rothmann (2009) argue that burnout as well as diminished work engagement will arise. Driving this point further with regard to the effect of high stress levels on engagement is research conducted by Rothmann (2008) in a

South African context that confirmed that when stress is high and satisfaction is low, it leads to low energy, resulting in low work engagement.

An employee's ability to cope in a stressful job can have an impact on engagement as pointed out by Rothmann, Jorgensen and Hill (2011). Their study focused on the different types of coping strategy that employees use and how these types of strategy could affect engagement. The research found that employees who focused on coping strategies that addressed the actual problem had higher work engagement levels than employees that coped by avoiding the problem. Methods of dealing with avoidance related poorly to work engagement while problem-focused problem-solving strategies related positively to work engagement (Rothmann et al., 2011). As mentioned in the research conducted by De Braine and Roodt (2011), having a work identity is an important job resource for employees to have in order to feel engaged. Having this work identity and feeling that one fits into one's role influence how employees regard themselves as useful and valuable. This is known as psychological empowerment (Olivier & Rothmann, 2007). Olivier and Rothmann (2007) suggest that *psychological empowerment*, *psychological safety* (feeling mentally and psychologically safe in a particular surrounding) and *psychological availability* (awareness of possessing physical, emotional or psychological capabilities to engage at a given time) are altogether positively linked to work engagement. This implies that if employees feel that they are useful and valuable in their jobs, if they feel that the behavioural and emotional norms of the organisation provide them with emotional safety and if they have the physical and emotional resources to carry out their job, then they are likely to be engaged in their jobs.

2.3.2.3 Health

Work can affect one's health (Rothmann, 2003) and therefore it is important that employees are both physically and mentally healthy in the workplace. Studies show that engagement is positively related to health, and this would result in engaged employees having the ability to perform better. Van Beek, Shaufeli, Taris, and Schreurs (2011) describe engaged employees as having fewer psychosomatic grievances than their colleagues who are disengaged. Likewise, Bakker & Demerouti (2008) discovered modest adverse correlations when considering engagement and psychosomatic health grievances. Further, Hakanen et al. (2006) demonstrated that there is a positive relationship between

work engagement and self-rated health and ability to work. In addition, Schaufeli and Bakker (2004) concluded that engaged employees are less susceptible to headaches, cardiovascular problems as well as stomach-aches. Further research depicting the importance of mental health on engagement is that of Stander and Rothmann (2010) who concluded that the psychological empowerment of employees effect their engagement. As described by Stander and Rothmann (2010), psychological empowerment is present when individuals observe that they display a certain level of control in their lives. Therefore, if employees feel a lack of control over their lives, it may result in a lack of engagement at work with negative impact on the organisation and the employee. This can also be said for psychological ownership, which necessitates the likelihood of having restraint, having the ability to effect environmental change as well as possessing the ability to influence desirable outcomes (Olckers, 2011).

2.3.3 Burnout

Maslach and Jackson (1981) explain burnout as a condition of emotional fatigue and disparagement, which happen often among people in a line of work that involves dealing with other people. According to Gonzá'lez-Roma', Schaufeli, Bakker and Lloret (2006), burnout is considered a response to continuous work stress distinguished by emotional fatigue. Work engagement and burnout are significantly related and could be considered constructs that are dependent on one another and which cannot be separated because they share approximately ten to twenty-five per cent of their variance and are moderately negatively related (Du Plooy & Roodt, 2010).

Schaufeli et al. (2002) claim that burnout and engagement are antipodes. Bothma and Roodt (2012) also argue that burnout, which is deemed negative, and work engagement, which is deemed positive, are polar opposites on a continuum called work-related well-being. Schaufeli and Bakker (2004) are of the opinion that while work engagement and burnout are direct opposites, burnout should be considered as an independent state of mind that requires a unique functioning definition and the ability to be quantified.

According to Van der Colff and Rothmann (2009), burnout is a condition comprising three vital dimensions, namely experiencing emotional exhaustion, detachment and a lower level

of personal achievement. *Emotional exhaustion* is a reference to feelings of exhausted physical and emotional resources which lead to employees feeling incapable of performing their job from an emotional and cognitive perspective. This happens when employees receive large amounts of work that they cannot cope with. *Depersonalisation* involves employees distancing themselves from their roles and basically performing their roles without any purpose and with pessimistic attitudes. This disconnection results in negativity and employees become very impersonal when engaging with others at work. The third dimension, *lack of personal accomplishment*, implies that employees no longer feel that they are achieving their set goals at work; they tend to feel inadequate and are not very productive at work (Van der Colff & Rothmann, 2009).

Centered on Maslach and Leiter's (1997) model (cited in Rothmann, 2003), Rothmann (2003) theorises that there are various causes of burnout such as:

- Work overload occurs when employees have exceeded their capabilities because of high job demands while not being provided the resources or time to accomplish what was expected of them.
- Having disorganised work conditions and little or no autonomy over the work one does cause a lack of control over one's job, which could lead to burnout.
- Employees could be affected negatively by an insufficient recognition and reward programme as they will not see the link between performance and reward (both financial and non-financial).
- Community breakdown occurs once employees lose the feeling of connectivity with other employees at the workplace. Similarly, continuing and unsettled engagements with others in the workplace have the effect of a collapse of community.
- When reasonable practices that ensure mutual respect in the working environment are lacking an absence of fairness occurs. Unfairness may result when there is an imbalance regarding work load or remuneration, or when performance assessments and career advancements are dealt with incorrectly.
- If a discrepancy between the job requirements and an individual's ideologies exists, value conflict occurs.

Whether burnout is a construct that stands on its own or whether it is the antithesis of engagement, the reality is that it does occur and organisations need to be aware of this

and take the appropriate measures to prevent and combat this. Employees need the appropriate job resources, personal resources and good health to remain engaged and not burn out. It is the organisation's responsibility to ensure that this takes place. Organisations also have to participate in preventing burnout by making sure that job demands can be managed. Further, with specific reference to the South African context and the country's economic changes, globalisation and improved technology, organisations should be transparent with employees and help foster job security. A study done by Bosman et al. (2005) found a statistically significant relationship when comparing job insecurity and burnout. The above suggests that if organisations play an active role in an employee's overall well-being at work, they do have the ability to prevent or reduce employee burnout.

2.3.4 Job demands

According to Rothmann and Jordaan (2006), job demands are a reference to particular physical, psychological, social or organisational job elements that need continuous physical and/or psychological endeavours and which are connected to specific physiological and/or psychological impacts such as pressure, overloading one's role, as well as emotional demands. As already stated, employees require job resources to manage the demands of a job (Bakker & Demerouti, 2008). Rothmann and Jordaan (2006) state that there is a negative relationship between job demands and job resources, considering that job demands can hinder the deployment of job resources. It is important to note, though, that people can experience work engagement even with a demanding job. Rothmann and Jordaan's (2006) study depicted a relationship between job demands and job resources, showing a weak relationship between job demands and high job resources. Job resources decrease the consequences of high job demands. In addition, the outcomes of this research depicted a weak relationship when comparing job demands and work engagement. Bakker and Demerouti (2008) point out that when there are circumstances which result in high job demands, having job resources are advantageous in ensuring the maintenance of work engagement.

Schaufeli, Bakker and Van Rhenen (2009) show that future burnout is predicted with variations in job demands and job resources. To be explicit, an increase in job demands

and a decrease in job resources result in the probability of an increase in future burnout. The research also proved that the burnout resulting from a higher level of job demands and a lower level of job resources caused an increase in the duration of absenteeism. The Job Demand-Resources model of Bakker et al. (2007) confirmed a link between job demands and exhaustion and that an absence of job resources links to disengagement. The Job Demand-Resources model takes on two methods, namely an energetic process of tiring out and a motivational process. The former assumes that the employee's energy is exhausted by high job demands and the latter shows that absent resources discount handling job demands successfully and therefore mental withdrawal occurs. With regard to a South African perspective, research done by Levert, Lucas and Ortlepp (2000); Pretorius (1994); and Storm and Rothmann (2003) also confirm a relationship between burnout and job demands.

Generally, jobs can be demanding as long as the demands are not so intense that they lead to employee burnout. Organisations can help ensure that employees cope with these demands by providing job resources in the form of interventions ensuring organisational support. Examples of such interventions include providing a clear indication of what the role entails, facilitating positive relationships with their superiors, ensuring open and transparent communication and including employees in the decision-making process. These interventions will promote feelings of psychological safety among employees (Kahn, 1990). Management should also contribute to getting the organisation's buy-in by ensuring fairness to employees, acting in the role of coach to them and by meeting with them regularly to discuss their career and professional progression in the organisation as well as how they are coping (Rothmann & Jordaan, 2006).

2.3.5 Consequences of work engagement and disengagement

Work engagement can have incredibly positive outcomes for the employee and the organisation. Work engagement may result in a substantial difference for employees, which may give organisations an upper hand (Bakker et al., 2008). Unfortunately there will be instances, for various reasons, where employees are disengaged from their work. Hakanen et al. (2006) have shown that disengaged employees can lead to burned-out employees. Another negative outcome of disengaged employees is the intentions of these

employees to leave the organisation (Bothma & Roodt, 2012; Du Plooy & Roodt, 2010; Schaufeli & Bakker, 2004). Blizzard (2002) indicates that less engaged employees have a tendency to display lower organisational commitment.

In the battle of an ever-changing world where organisations are expected to expand on their performance and remain competitive, there is constant pressure on organisations to remain at the top of their game (Stander & Rothmann, 2010). According to Bakker et al. (2008), work engagement predicts job performance as well as client satisfaction. A further finding on positive relationships between engagement and performance was discovered through the research of Salanova, Agut and Peiro (2005). Their research proved that engagement leads to increased performance and also identified a specific behavioural performance indicator, namely an increase in service delivery, which eventually leads to an increase in customer loyalty. Bakker and Demerouti (2008) also found engagement to be positively related to performance. Their study concludes that there is a differential in the performance of engaged employees versus non-engaged employees. This is as a result of engaged employees having greater positive emotions, including happiness, joy and enthusiasm. These individuals furthermore display improved health, make provision for job and personal resources, and share their engagement with colleagues.

Van Beek, Schaufeli, Taris, and Schreurs (2011) points out that there are clear indicators of engagement-related performance. The four indicators are motivational performance indicators, HR performance indicators, economical performance indicators and behavioural performance indicators. *Motivational performance indicators* appear when employees start taking more initiative in their roles and are able to motivate themselves to get the job done. *HR performance indicators* show up in HR metrics that reveal reduced sick leave, absenteeism and turnover numbers. *Economic performance indicators* are easily recognisable in the financial performance of the organisation or department of the engaged employees. Lastly, *behavioural performance indicators* are evident when engaged employees become more innovative, improve their service delivery to clients and start achieving performance in personal goals such as academia.

Organisations should be aware of and monitor these performance indicators and also ensure that employees remain engaged so that they will always be performing at full capacity.

In order for organisations to reach a well-functioning state, they will need to be observant of their employees' work engagement levels. Managing engagement is more than distributing people engagement surveys within an organisation. Employers need to get to the crux of engagement and understand what the drivers of engagement are and what emotional, physical and mental demands employees face. Organisations should provide employees with adequate job resources to perform their jobs. Organisations should also have an understanding and awareness of employees' personal resources and try to provide opportunities and assistance for employees to acquire the personal resources required to be engaged at work. Organisations need to put employee wellness high on their strategic agenda. Too often employee wellness initiatives are seen as a "nice to have" and no link is made to the effects that poor physical and emotional health can have on the organisation's productivity and thus its bottom line. As already stated, physical and mental health can affect the organisation's absenteeism rate. A well-functioning organisation can also be achieved through having high-performing employees. The literature has shown that engaged employees have the tendency to perform better. Organisations should keep track of and monitor the linkage between engagement and performance. There are clear indicators of engagement-related performance, as mentioned previously, and organisations should track these indicators to see the tangible value that engaged employees have for the business. Figure 2 depicts the researcher's understanding of work engagement and the related areas that have an impact on this construct.

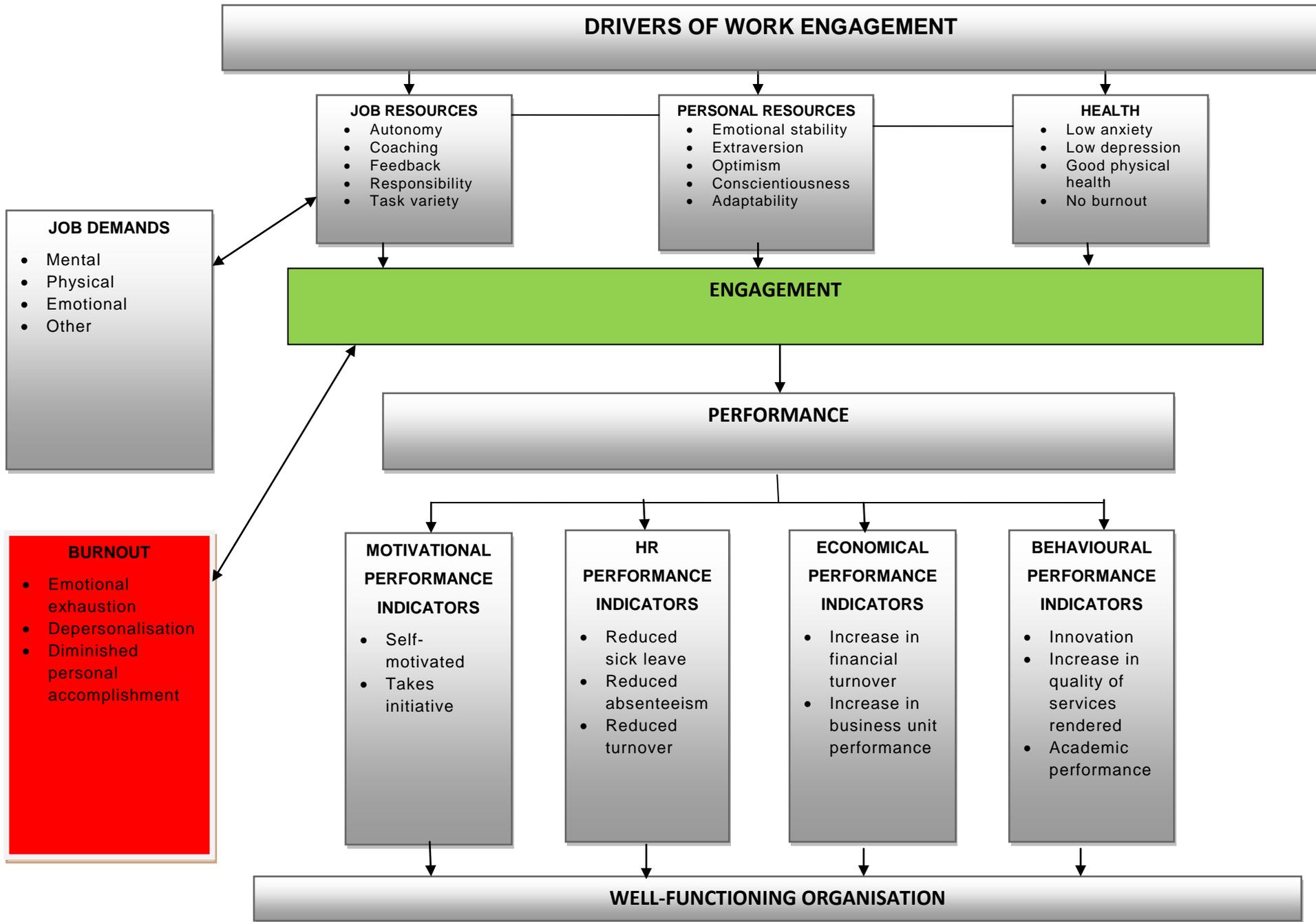


Figure 2: A model depicting engagement and its related areas

2.4 PSYCHOLOGICAL OWNERSHIP

In a market where talented employees are scarce and globalisation is dominant, it is important for organisations to foster good employee–employer relationships as this will aid in retaining these employees (Dirks, Cummings & Pierce, 1996). Employees who have good relationships with their employers are likely to remain with the organisation, remain motivated and take responsibility and ‘ownership’ of their jobs (Dirks et al., 1996). Feelings of ownership form an element of the human lifestyle, could be steered toward a diverse range of objects, and can have significant ramifications for the person concerned (Pierce et al., 2002). In the case of the employee-employer relationship, an individual’s feeling of ownership can have important consequences for the organisation as well. Formal ownership may result in positive attitudinal and behavioural effects in the working environment via the experience of psychological ownership (Olckers, 2011). Organisational ownership, which is a psychological occurrence, was introduced by Pierce et al. (1991) by establishing an employee ownership model. The concept illustrated how psychological ownership originated from formal ownership in the workplace. The psychology of possession may play an important role in the relationship between employee and employer (O’Driscoll, Pierce & Coghlan, 2006; Van Dyne & Pierce, 2004).

2.4.1 Defining psychological ownership

Pierce et al. (2002, p. 299) define psychological ownership as “the state in which individuals feel as though the target of ownership or a piece of that target is theirs”.

According to O’Reilly (2002), psychological ownership is about employees feeling that they have to take responsibility for decisions that are in the best interest of the organisation on a continuous basis. From the above, psychological ownership may be seen as feeling attachment to something but not necessarily feeling this sense of ownership toward a material object; it could also include immaterial objects. Examples of these are: feeling ownership of the portfolios that employees are responsible for at work or a committee one may chair. It may even occur that employees feel absolutely no sense of attachment or

commitment to their organisation, but feel extremely possessive of the department they work in.

2.4.2 Forms of psychological ownership

Alok and Israel (2012) and Avey et al. (2009) state that there are two forms of psychological ownership: *preventative*, which refers to a concern for what to avoid to reduce punishment and what needs to be done in order to meet duties and obligations and *promotive*, which refers to a concern of what to do to fulfil hopes and aspirations. Avey et al. (2009) illustrate that promotion-based psychological ownership contains four theory-based elements, namely self-efficacy, belongingness, self-identity and accountability.

2.4.3 Dimensions of psychological ownership

According to Avey et al. (2009), the four dimensions that form part of promotive psychological ownership are self-efficacy, self-identity, belongingness and accountability.

Self-efficacy is about somebody's acknowledgement that they have the ability to accomplish goals that they set for themselves. It shows the importance of individuals having control, possessing the capability to do something to the environment and being able to influence a required outcome of actions (Olckers, 2011).

Self-identity happens at the peak of psychological ownership and has the characteristic of an individual that personally identifies with the object of ownership, for example an organisation (Avey et al., 2009). It is at this point that individuals see the object as an extension of who they are. Therefore, significant focus is placed on this object of ownership.

Accountability is the propensity for individuals to feel responsible and to hold their organisation and colleagues accountable for a specific object of ownership (Avey et al., 2009). For example, if employees felt psychological ownership in an organisation, they may tend to question the leadership of the organisation to rationalise their decisions regarding the strategy and direction of the organisation as they believe it is their right to know what is happening with their object of ownership.

Belongingness assesses the extent to which an individual feels “at home” in the organisation (Avey et al., 2009). Those who are inclined to perceive a positive sense of ownership in the workplace will indicate that they have a place where they belong in the organisational context. According to Avey et al. (2009), the dimension that forms part of prevention-based psychological ownership is *territoriality*.

Brown, Lawrence and Robinson (2005) argue that employees can become territorial over their target at work. Brown et al. (2005) state that the more one feels psychological ownership towards an object, the more one will want to become more involved in territorial behaviours. In the opinion of Avey et al. (2009), territoriality results in people becoming so preoccupied with their targets that their performance and social behaviours at work start to decline. Furthermore, Avey et al. (2009) allege that if individuals feel that they will lose their territory, their corresponding self- and social identity may encourage the discussion of and participation in politics and prevent transparency, cooperation, and the sharing of information. However, it must be taken into consideration that there is the possibility that one’s disposition regarding territoriality may encourage positive organisational results. As an example, territoriality might result in improved performance and retention if people are of the opinion that defending their territory is regarded as the right thing to do (Altman, 1975, cited in Avey et al., 2009). Also, if the individual’s work involves more individual work and less teamwork, then a territorial tendency may lead to desirable results. The discussion above shows that territorial psychological ownership can be either negative or positive (Avey et al., 2009).

2.4.4 Types of psychological ownership

Psychological ownership is context specific and demonstrates the individual’s present frame of mind to their organisation and their job (Mayhew, Ashkanasy, Bramble & Gardener, 2007). Research conducted by Mayhew et al. (2007) explains the distinctiveness of psychological ownership and identifies organisational-based psychological ownership and job-based psychological ownership as distinctive work attitudes that differ from other work attitudes such as job satisfaction and organisational commitment. *Organisation-based psychological ownership* deals with an individual’s feelings of possession and psychological connection to the whole organisation. A number

of parameters may influence this condition, which include organisational atmosphere, behaviour of executives, organisational goals and vision, status of the organisation, as well as organisational policies and procedures. *Job-based psychological ownership* is associated with an individual who has possessive feelings regarding their jobs (Mayhew et al., 2007). This study also indicated a positive relationship between autonomy and organisational and job-based psychological ownership. O'Driscoll et al. (2006) noted that an employee's work environment effects organisational and job-based psychological ownership. It was deduced that an unstructured work environment provided an employee with more control and therefore increased their psychological ownership.

2.4.5 Outcomes of psychological ownership

Pierce et al. (2002) suggest that positive and negative behaviours are associated with psychological ownership. Positive behaviours include *citizenship* (behaviours that contribute to the community's well-being), *personal sacrifice and the assumption of risk* (the readiness to take on personal risk or render personal sacrifice on behalf of a social entity) and *experienced responsibility and stewardship* (feelings of responsibility such as being protective, caring, and nurturing). With regard to citizenship behaviours, Ozler et al. (2008) add that psychological ownership may increase organisational citizenship behaviours and organisational commitment provided that the work environment allows employees autonomy and participation whereby they have a considerable chance of developing themselves and remaining employed for an extended period of time. Negative behaviours that can emerge from psychological ownership are unwillingness to share the target, becoming obsessed with the target, expressing deviant behaviour and seeing the responsibility of the target as a burden because the individual has become too overwhelmed.

In an organisational context there are also positive and negative behaviours associated with psychological ownership (Pierce et al., 2001). Psychological ownership in the organisation makes employees feel like they have a right to own the target of which they feel ownership. They feel a sense of responsibility as if they are sharing the burden of

responsibility with the organisation. Pierce et al. (2001, p. 302) also suggest that employees may or may not be resistant to change and propose the following:

When change is self-initiated, evolutionary, and additive, employees' psychological ownership toward organizations or organizational factors results in promotion of change; when change is imposed, revolutionary, and subtractive, employees' psychological ownership results in resistance to change.

Other negative organisational behaviours related to psychological ownership include the failure to delegate leadership and impart with information; hampering the execution of involvement by management, camaraderie, and collaboration; and participating in disruptive behaviours. It also includes experiencing frustration, feelings of isolation, stress as well as physiological and mental health effects.

The above demonstrates that psychological ownership can be both beneficial and detrimental to the organisation. If organisations try to manage the psychological ownership of their employees it can result positively for both the employee and the organisation. Organisations can facilitate psychological ownership by being open and transparent regarding targets, which may improve the potential for psychological ownership. To keep psychological ownership positive, organisations should monitor employees and ensure that their attachment to their target does not become an obsession.

Literature suggests that psychological ownership has positive relationships with different constructs and predicts certain behaviours. For example, Vandewalle et al. (1995) demonstrated that there are behavioural consequences of psychological ownership. They claim that psychological ownership is significantly related to satisfaction and positively related to extra role behaviour (employees taking on more work to the benefit of the organisation). The study also shows that psychological ownership is positively related to organisational commitment. Furthermore, psychological ownership creates a sense of responsibility and leads to proactive acts like taking on extra roles. Based on the empirical evidence mentioned above, it can be assumed that employees being satisfied and committed to the organisation and taking on extra roles will lead to better performance. Van Dyne and Pierce (2004) showed that psychological ownership predicted organisational based self-esteem and organisational citizenship behaviours such as

supervisor and peer perceptions, organisational commitment and job satisfaction. This study also proved that psychological ownership is related to organisational commitment and job satisfaction. O'Driscoll et al. (2006) claim that psychological ownership is also shown to be related to organisational commitment.

Avey et al. (2009) proved that psychological ownership predicts commitment, intentions to remain with the organisation as well as job satisfaction. Olckers and Du Plessis (2011, 2012) suggest that psychological ownership among employees may have a positive effect on organisational effectiveness as well as improve talent retention and performance. Ozler et al. (2008) argue that job satisfaction, tenure, and an organisational climate that facilitates participation are positively related to psychological ownership. Alok and Israel (2012) state that psychological ownership predicts work engagement.

Psychological ownership has been defined, interpreted and dissected to gain a better understanding of the phenomenon. The value of psychological ownership to both the employee and the organisation is evident. Organisations now need to ensure that they are aware of what this construct entails to better understand its effects and to nurture and encourage it in the workplace. Figure 3 provides a snapshot and contextualises the discussion on psychological ownership in the literature review.

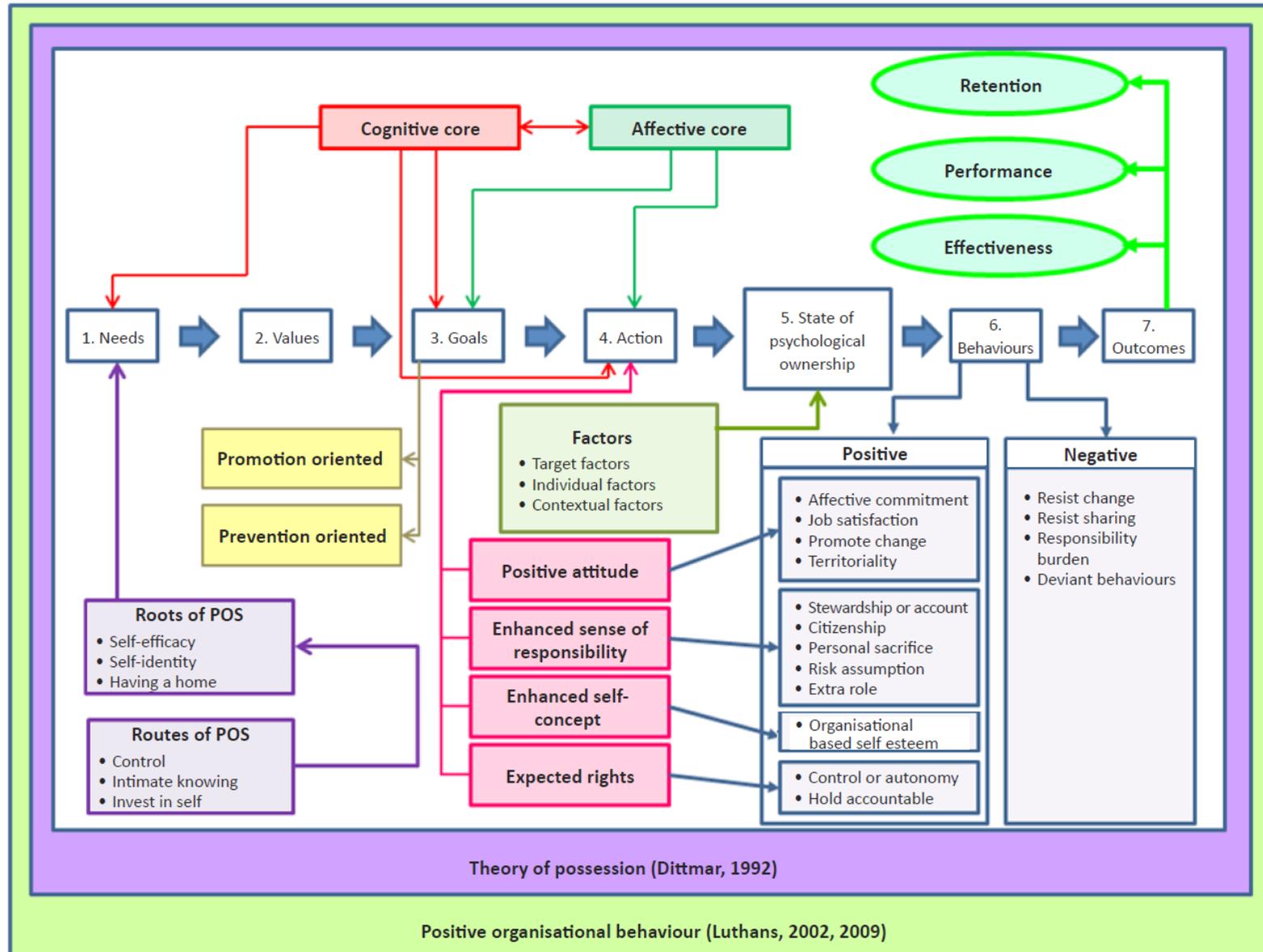


Figure 3: A multidimensional framework of psychological ownership

Source: Olckers & Du Plessis (2012, p. 7)

2.5 THE RELATIONSHIP BETWEEN PSYCHOLOGICAL OWNERSHIP, WORK ENGAGEMENT AND HAPPINESS

In terms of the present study, it is hypothesised that there is a possible link between psychological ownership, work engagement and happiness. Regarding psychological ownership, studies have shown that psychological ownership has a significant relationship with satisfaction and commitment (Vandewalle et al., 1995). Psychological ownership has been shown to predict work engagement (Alok & Israel, 2012). A study done by Olckers and Du Plessis (2012) indicates a possible relationship between psychological ownership and retention. Avey et al. (2009) claim that psychological ownership is a measurable construct that one can invest in, manage and develop to ensure high performance. Ozler et al. (2008) add that psychological ownership may increase organisational citizenship behaviours and organisational commitment provided that the work environment allows employees autonomy.

With regard to engagement, studies have shown that engagement is an affective-motivational state of work-related well-being (Bakker et al., 2008). Studies have indicated that employees who are given autonomy, control and responsibility at work are more engaged (Bakker & Demerouti, 2008). Psychological ownership also involves having control over targets of ownership and taking responsibility for them. This further enhanced the reasoning why it was worthwhile to explore the relationship between work engagement and psychological ownership as these two constructs share these commonalities. However, it was necessary to determine whether these commonalities were the same or not, and by conducting this study this could be achieved. Engaged employees lead to committed employees who have a strong identification with their job (Hakanen et al., 2006). In addition, employees who feel psychologically safe are engaged. Rothmann (2008) states that engaged employees perform better and have a greater chance of staying with the organisation. Finally, engagement has been linked to satisfaction levels and retention.

Several studies suggest that happiness leads to work engagement and higher job satisfaction. Studies demonstrate that happy employees are more productive and perform optimally in their jobs. Studies on happiness also show that employees who have autonomy and freedom in the workplace are generally happy. Happiness has also been proven to be related to commitment and retention.

In order to tie the three constructs together, Table 2 depicts a comparison of psychological ownership, work engagement and happiness.

Table 2: Comparison of psychological ownership, work engagement and happiness

Dimensions of distinctiveness	Psychological ownership	Work engagement	Happiness
Conceptual core	Possessiveness	Motivational state	Satisfaction with life
Question answered for person	What do I feel is mine?	How do I experience my work?	What makes me feel content?
Dimensions	<ul style="list-style-type: none"> • Self-efficacy • Self-identity • Belongingness • Accountability • Territoriality 	<ul style="list-style-type: none"> • Vigour • Dedication • Absorption 	<ul style="list-style-type: none"> • Freedom • Knowledge • Virtue
Type of state	Affective/cognitive	<ul style="list-style-type: none"> • Affective/emotional • Cognitive/intellectual • Social 	Affective & cognitive
Consequences	<ul style="list-style-type: none"> • Satisfaction • Commitment • Responsibility • Predicts work engagement. • Autonomy • Performance • Retention • Control 	<ul style="list-style-type: none"> • Commitment. • Autonomy • Performance • Satisfaction. • Control • Retention • Responsibility • Psychological safety • Affective state of mind 	<ul style="list-style-type: none"> • Positive state of mind • Engagement • Satisfaction. • Freedom • Autonomy • Productivity • Performance • Commitment • Retention

While the above may indicate the common outcomes of the three constructs, it is important to understand why a link or relationship between these constructs is significant. The question that needs to be asked is what a study such as this one will mean to both the employer and employee. The relationship between the employer and employee starts off with a contractual relationship. The employee is rendering his or her skills and knowledge to the employer and in return the employer will remunerate the employee. The employer will use these skills and knowledge to produce products and services of high quality and to remain profitable. While this is the primary relationship between the employer and employee, there is so much more to this transaction. An employee spends a large portion of time at work and therefore the transaction of rendering services for remuneration cannot be just a mechanical one, devoid of feelings. There is so much more involvement required from a psychological perspective. Employees must feel connected to their jobs. If there is no connection, how can employees be expected to continue rendering services and using their knowledge and skills? Employees need to feel a sense of responsibility, want to perform their work and be accountable for it. In essence, they want to feel that the job is theirs. This is where psychological ownership comes in, because having a mind-set of ownership towards what they are doing will make employees, in turn, want to do their job, that is, they are 'engaged' in what they are doing. Having the focus, being engaged in the work and actually wanting to do the job have a high probability of good quality products being delivered as well as high performance. Having the feelings and exuding the behaviours above could possibly influence an employee's levels of happiness in the workplace.

From an employer's perspective, the organisation has to ensure that it maintains a reputation of delivering high standard products and services as well as remain profitable. Thus, the onus lies with the organisation to retain employees by ensuring that interventions to promote the above constructs are developed and evaluated and that these constructs become part of the organisational culture.

With the above said as well as the findings in the literature review, it seems that psychological ownership is an enabler of engagement that could lead to happiness as an outcome. Later on in the study, the results reveal how these three constructs fare in relation to each other in terms of relationships. Understanding why the relationship between these constructs had to be examined and looking beyond the common outcomes of the constructs, we can see that a bigger picture exists, which is arriving at a mutually beneficial working relationship that goes beyond a contractual one for both the employee and employer.

The hypothesised conceptual model of this study is graphically depicted in Figure 4.



Figure 4: Theoretical hypothesised model

2.6 CONCLUSION

In the literature review, the constructs happiness, work engagement and psychological ownership were defined and looked at from a theoretical perspective. It also focused on the areas related to each of these constructs and their impact and influence on the respective constructs. The commonalities of the constructs were explored, which provided valid reasoning as to why it was worthwhile exploring the relationship between the constructs. It has been put forth that psychological ownership seems to be an enabler of engagement that could lead to happiness as an outcome.

The following chapter discusses the research design and methodology that were followed in the study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The aim of this chapter is to discuss the research design and methods that were used in identifying whether a relationship exists between psychological ownership, work engagement and happiness. Research designs and methods can be described as the different layers to uncovering the ways and means of gathering and analysing data (Saunders, Lewis, & Thornhill, 2012). Figure 5 illustrates these layers for this study.

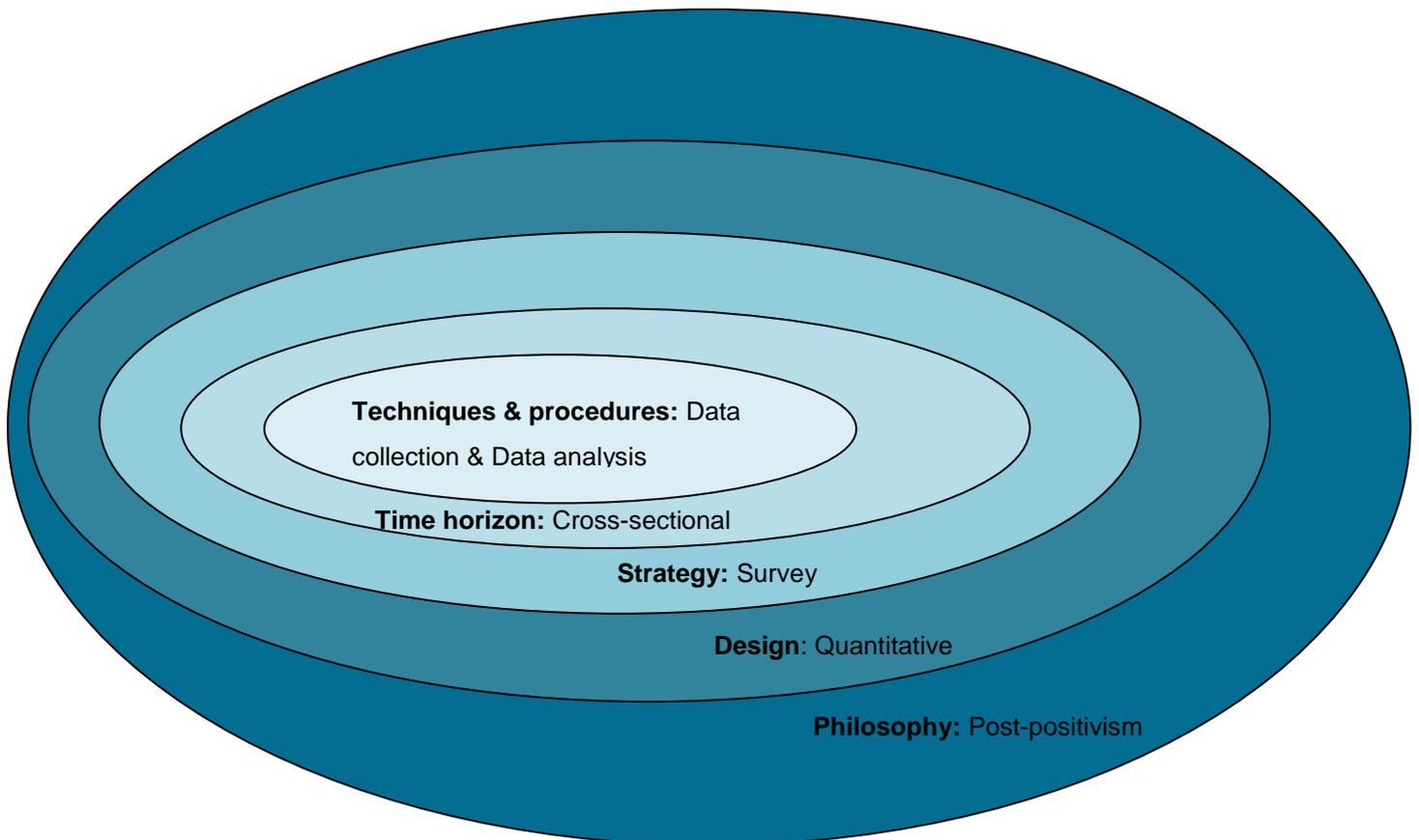


Figure 5: Research design and methods

Source: Adapted from Saunders, Lewis, & Thornhill (2012)

3.1 RESEARCH PHILOSOPHY/PARADIGM

Saunders et al. (2012) indicate that the development and nature of knowledge define what research philosophy is. A paradigm, also known as a worldview, outlines the ideas and beliefs in a way that depicts how individuals interpret and interact with the world (Guba, 1990). According to Creswell and Plano (2007), there are four worldviews, namely: post-positivism, constructivism, advocacy/participatory and pragmatism as summarised in Table 3.

Table 3: Worldviews in research

<p>Postpositivism (Quantitative dominant)</p> <p>Singular reality</p> <ul style="list-style-type: none"> •Distance & impartiality •Unbiased •Deductive, Theory verification, Work “top down” •Formal presentation style •Empirical observation & measurement 	<p>Constructivism (Qualitative dominant)</p> <p>Multiple realities</p> <ul style="list-style-type: none"> •Closeness •Biased •Inductive, Theory generation, Work “bottom up” •Informal, literary style •Understanding, Multiple participant meanings
<p>Advocacy/Participatory (Qualitative dominant)</p> <p>Political reality</p> <ul style="list-style-type: none"> •Collaboration •Biased and negotiated •Participatory •Advocacy and change-provoking style •Empowerment issue-oriented 	<p>Pragmatism (Mixed Methods dominant)</p> <p>Singular & multiple realities</p> <ul style="list-style-type: none"> •Practicality •Multiple stances (biased & unbiased) •Combining, Pluralistic approaches, Use “what works” •Formal or informal •Problem-centered, Real-world practice oriented

Source: Adapted from Creswell & Plano (2007)

A post-positivism worldview was applied to this study. To understand post-positivism one must first define positivism. According to Blumberg, Cooper and Schindler (2005), positivism, which was adopted from the natural sciences, is seen as a research philosophy that displays the following principles: 1) from a social perspective the world is seen as an external object and is viewed impartially; 2) research is regarded as not having any value; and 3) the researcher in the role of an analyst is impartial and remains objective. De Vos, Strydom, Fouche and Delport,

(2011) state that positivism is the belief of the existence of one single reality, one absolute truth. Post-positivism, on the other hand, is the belief of a single reality, but also understands the complexities of that reality (De Vos et al., 2011). Maree (2007) states that post-positivist approaches assume that reality is multiple and not a fixed entity, subjective and mentally constructed by individuals. De Vos et al. (2011) add that the focus of a post-positivist researcher is to try to understand the evolution of the study as part of the investigation phase; he or she therefore starts with a part of the study and what is relevant to that area in order to gain greater knowledge thereof.

In terms of ontology, post-positivists accept a true reality, but believe that reality cannot be captured and measured perfectly. This is known as critical realism (Ponterotto, 2005). Regarding epistemology, post-positivists underline the terms dualism and objectivism. Dualism implies that the topics being researched, those participating in the studies as well as the researchers themselves should remain independent of each other. Objectivism implies that participants in the research and the topic should be studied by the researcher without bias (Ponterotto, 2005). Concerning axiology, Ponterotto (2005) states that post-positivists continue to believe that values should not form part of the research process. The researcher should not have an emotional attachment to the study and should refrain from having any expectations of the study.

The rationale for using a post-positivist paradigm was based on research done by the researcher to investigate if a relationship exists between psychological ownership, work engagement and happiness. In doing so, a quantitative research design was used. This is congruent with a post-positivist worldview (Saunders et al., 2012). The researcher remained independent, unbiased, emotionally detached and conducted the study without influencing or being influenced by the participants.

3.2 DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN

A research design can be described as a road map of how researchers should go about responding to their research question(s) (Saunders et al., 2012). Researchers have three research designs to choose from, namely quantitative, qualitative or mixed method. Table 4 summarises the three designs.

Table 4: Research designs

Quantitative	Qualitative	Mixed Method
Experimental Between Group Designs Within Group Designs Quasi-Experimental Correlational Explanatory Prediction Survey Cross-Sectional Longitudinal	Grounded Theory Systematic Emerging Constructivist Ethnographic Realistic Critical Case Study Narrative Research Biography Phenomenology Case Study	Action Research Practical Participatory Community-Based Mixed Designs Triangulation Embedded Sequential Explanatory Exploratory

Source: Adapted from Blumberg, Cooper, & Schindler (2005); Creswell & Plano, (2007)

As mentioned above a post-positivist worldview is usually associated with a quantitative research design. The researcher uses post-positivist claims to develop knowledge by using measurement and observation and testing theories. Quantitative research is a methodical and objective way of employing numerical data from a chosen subsection of a population to generalise the outcomes to the cosmos that is being researched (Maree, 2007). Quantitative research explores relationships between numerically measured variables which are inspected by using an

assortment of statistical methods (Saunders et al., 2012). For this study, the variables are psychological ownership, work engagement and happiness.

3.2.1 Experimental vs non-experimental designs

The two main types of quantitative research design are experimental and non-experimental research designs. Experimental designs are usually applied to cause-and-effect research questions where participants are exposed to a pre-testing and post-testing. Non-experimental designs involve the selection of participants and a snapshot measurement of these participants' relevant variables, which is commonly used as a part of descriptive studies (Maree, 2007). A non-experimental survey design was used for this study as the group of participants selected to participate in the research completed a survey (questionnaire) at one particular time.

3.2.2 Survey design

According to McMillan & Schumacher (2001), a survey design is applied when information is used to elaborate on the status of occurrences in order to outline, alter and compare them.

Saunders et al. (2012) state that a survey strategy is usually used to answer the what, who, where, how much and how many questions. The survey approach enables the researcher to gather quantitative data to be analysed quantitatively. It can also be used to provide plausible explanations for specific relationships among variables and to develop models representing these relationships (Saunders et al., 2012). A survey design was used for this study. McMillan & Schumacher (2001) list the following as advantages of a survey design:

- Surveys are not difficult to administer
- The development of a survey design requires far less time than other data collection techniques
- They can be cost-effective depending on the survey method
- Virtual administration can take place via online technologies or telephone

- Virtual administration can decrease or avoid geographical reliance
- Survey designs allow the gathering of data from a great number of respondents
- The several questions posed on a particular topic can provide widespread flexibility in data analysis
- A variety of data can be gathered such as data on approaches, views, principles, values and behaviour
- Customised surveys are usually void of numerous sorts of error.

3.2.3 Cross-sectional studies

It is important for researchers to decide upfront if they want their research to be a snapshot taken at a specific time (cross-sectional) or a series of snapshots taken over a period of time (longitudinal). This is referred to as a time horizon (Saunders et al., 2012). Table 5 depicts the differences, advantages and disadvantages of cross-sectional and longitudinal studies.

Table 5: Cross-sectional vs longitudinal studies

Cross-sectional studies	Longitudinal studies
Observable	Observable
Compare many variables in a single snapshot	Several observations over a period of time
No information on cause-and-effect relationship	Suggests cause-and-effect relationship
Constructs are concrete and externally orientated	Constructs are abstract & internally orientated
Response bias low	Response bias high
Heterogeneous	Homogeneous
Start and end dates unclear	Start and end dates clear
Theoretical foundation is well developed	Theoretical foundation is emerging
Likelihood of intervening events high	Likelihood of intervening events low
Likelihood of alternative explanations low	Likelihood of alternate explanations high
Nature of the argument between subjects	Nature of the argument within subjects

Source: Adapted from Rindfleisch, Malter, Ganesan, & Moorman, (2008)

This study was a cross-sectional research study because each participant filled in a questionnaire once and the data collected represent a snapshot at one point in time.

3.3 SAMPLING

The basic idea of sampling is to choose portions of a population that will allow the researcher to reach conclusions regarding the whole population. The target population, sampling method and determination of the sample size assist the researcher in ensuring that the correct data are collected from the correct population in order to provide results for the study.

3.3.1 Target population, context and unit of analysis

A target population refers to the population being identified to conduct a study on (Blumberg, Cooper & Schindler, 2005). The target population for this study was professional, white-collar employees in the professional services industry. The South African Department of Labour (2013) defines professional employees as follows: “A professional is a person who is skillful and an expert in their field. They must conduct themselves in an ethical manner”. The study specifically focused on professional staff working in an audit firm. The reason why this population was targeted is because the researcher is employed in this audit firm, which allowed accessibility to participants. Another reason is that the organisation mostly comprises white-collar, professional individuals who are responsible for providing audit, accounting and tax services to private and public sector clients. A further reason that was considered is that the audit environment is a fast-paced, stressful, high-performance culture that provides an ideal environment and context in which the engagement levels, happiness and psychological ownership of employees can be studied.

The unit of analysis for this study is therefore professional, white-collar employees in the professional services industry specifically in an audit firm in South Africa.

3.3.2 Sampling methods

The two categories of sampling method in research are probability and non-probability sampling. The kinds of probability and non-probability sampling are indicated in Table 6.

Table 6: Different kinds of probability and non-probability sampling

Probability – Elements of the population is known	Non-Probability – Elements of the population is unknown
Simple random – each individual item has an equal chance of being selected for the sample	Convenient – nearest and most easily accessible sample of respondents
Systematic – all subsequent items are selected according to a particular interval	Purposive – based on elements that contain the most representative characteristics of a population
Cluster – random sample of clusters is drawn and elements within each cluster selected	Quota – select a sample that is as similar as possible to the replication of that population
Stratified random – randomly select group from heterogeneous population	Dimensional – list every variable in the population that is important for the research
Panel – fixed group of individuals is chosen from a population	Target – strategy for obtaining systematic information
	Snowball – select a sample of participants who refers the researcher to other similar participants
	Sequential sampling – gather data until a saturation point is reached
	Spatial – used for highly temporary populations such as a sporting event
	Key informant – people in a sample that are experts in the particular field of interest.

Source: Adapted from De Vos et al. (2011)

A non-probability purposive sampling technique was applied in this study because the researcher could not predict or guarantee that each constituent of the population would be contained in the sample. Heterogeneous purposive sampling was used because the organisation contains a diverse range of professional employees who are in an environment in which psychological ownership, work engagement and

happiness can be studied. The organisation also contains a diverse range of professions. The professions that were included in the sample population are professions in which employees can exude feelings of happiness, engagement and psychological ownership towards their jobs. The organisation also contains employees from the Baby Boomer and Generation X categories that further increased the diversity of the population. The organisation is AAA rated in terms of Black Economic Empowerment (BEE) and has a strong focus on gender diversity, thus adding to the variation and diversity of the population.

3.3.3 Sample size

Researchers offer a variety of formulas to calculate the ideal sample size. There are no definitive rules and therefore the issue of sample size is ambiguous (Saunders et al., 2012). Leedy and Ormrod (2013) offer a basic rule of sampling and that is the larger the sample, the better. De Vos et al. (2011) state that a researcher should be cautious not to use too large a sample size as this can have an effect on the statistical testing, making it overly sensitive. Similarly, if too small a sample size is used the statistical testing can be insensitive. Grinnell and Williams (1990) state that in general a ten per cent sample should be adequate for ensuring a reduction in sample errors. There are many debates as to what the minimum sample size should be. Grinnell and Williams (1990) suggest that thirty is sufficient, while others state that a minimum of one hundred is enough. Maree (2007) adds that a well-defined non-probability sampling method should contain larger sample sizes as this will represent the population better than smaller samples and the findings will be more accurate.

Considering that the population of this study is heterogeneous, the researcher used a large sample in order to adequately represent the diversity of the population. Another method that the researcher took into consideration is that of Grinnell and Williams (1990) where the researcher used a calculation of ten per cent of the total population to determine a sample size. The population consists of three thousand employees; therefore taking the heterogeneous nature of the population into

consideration as well as the calculation of ten per cent, the sample size for this study should be three hundred (300).

3.3.4 Participants

The researcher distributed 500 questionnaires to professional, white-collar employees in the organisation. The researcher was able to acquire a final sample size of 365. The response rate was 73 % ($N = 365$). Table 7 shows the characteristics of all the participants in terms of gender, race, age, tenure, education and job title.

Table 7: Characteristics of the participants ($N = 365$)

Item	Category	Frequency	Percentage	Cumulative percentage
Gender	Male	125	34.3	34.3
	Female	239	65.7	100.0
	Total	364		
	Omitted data	1		
Race	African	84	23.3	23.3
	White	170	47.2	70.6
	Indian	81	22.5	93.1
	Coloured	21	5.8	98.9
	Other	4	1.1	100
	Total	360		
	Omitted data	5		
Age	18-25	148	40.7	40.7
	26-35	155	42.6	83.2
	36-45	37	10.2	93.4
	46-55	20	5.5	98.9
	56 and above	4	1.1	100.0
	Total	364		
	Omitted data	1		

Item	Category	Frequency	Percentage	Cumulative percentage
Tenure	Less than 6 months	50	13.7	13.7
	6 months to 1 year	36	9.9	23.6
	1 to ≤ 2 years	74	20.3	44.0
	2 to ≤ 3 years	59	16.2	60.2
	3 to ≤ 4 years	30	8.2	68.4
	4 to ≤ 5 years	20	5.5	73.9
	5 to ≤ 10 years	55	15.1	89.0
	More than 10 years	40	11.0	100.0
	Total	364		
	Omitted data	1		
Education	Grade 12 (Matric)	20	5.5	5.5
	Diploma	36	9.9	15.3
	3-year degree	42	11.5	26.8
	4-year/honours degree	249	68.2	95.1
	master's degree	17	4.7	99.7
	Doctoral degree	1	0.3	100.0
	Total	365		
	Omitted data	0		
Job title	Associate Director	10	2.7	2.7
	Senior Manager	25	6.9	9.6
	Manager	43	11.8	21.4
	Assistant Manager	46	12.6	34.1
	Accountant/Consultant	194	53.3	87.4
	Other	46	12.6	100.0
	Total	364		
	Omitted data	1		

Concerning gender, 34,3 % ($n = 125$) of the sample comprised males, while 65,7 % ($n = 239$) were females.

With regards to race, 20.7 % ($n = 34$) were African, 20.0 % ($n = 81$) were Indian, 5.2 % ($n = 21$) were Coloured and 1.0 % ($n = 4$) categorised themselves as “other”, which could possibly be other Asian races. The majority of participants were white with a percentage of 42.0 % ($n = 170$).

The participant’s ages varied from 18 years to 56 years and above. Of the respondents 36.5 % ($n = 148$) were between the ages of 18-25, 38.3 % ($n = 155$) were between the ages of 26 and 35, 9.1 % ($n = 37$) were between the ages of 36 and 45, 4.9 % ($n = 20$) were between the ages of 46 and 55 and 1.0 % ($n = 4$) were 56 years or above.

In terms of tenure; 12.3 % ($n = 50$) have been working for the organisation for less than 6 months, 8.9 % ($n = 36$) have been working for 6 months to 1 year, 18.3 % ($n = 74$) for 1 to 2 years, 14.6 % ($n = 59$) for 2 to 3 years, 7.4 % ($n = 30$) for 3 to 4 years, 4.9 % ($n = 20$) for 4 to 5 years and 13.6 % ($n = 53$) for 5 to 10 years. From the sample, 9.9 % ($n = 40$) of the employees have been working for the organisation for more than 10 years.

When examining the educational levels of the sample, it was found that the majority of the participants, 61.5 % ($n = 249$) had a 4-year/honours degree. This can be attributed to the fact that a large majority of employees in the organisation are trainee accountants completing their articles and one of the key requirements to complete one’s articles is to have a 4-year/honours degree. Other information gathered from the educational data of the sample was that 4.9 % ($n = 20$) had a grade 12 education, 8.9 % ($n = 36$) had a diploma, 10.4 % ($n = 42$) had a 3-year degree, 4.2 % ($n = 17$) had a master’s degree and 0.2 % ($n = 1$) had a doctoral degree.

The final characteristic of the participants that was explored was their job titles. Of the sample, 2.5 % ($n = 10$) were associate directors, 6.2 % ($n = 25$) were senior managers, 10.6 % ($n = 43$) were managers, 11.4 % ($n = 46$) were assistant managers and 47.9 % ($n = 194$), which is the majority, fell into the category of

accountants/consultants. This correlates with the educational levels because all employees completing their articles (with a 4-year/honours degree) have the job title of accountant or consultant. Lastly, 11.4 % ($n = 46$) categorised themselves as “other” with regards to job title.

3.4 DATA COLLECTION

Quantitative research requires data to be collected from a population in forms that are easily converted into numbers. In order to yield useful data, the researcher should ensure that the data collection method used is carefully planned, constructed and executed.

3.4.1 Measuring instruments

The researcher’s data collection method consisted of four scales: The Satisfaction with Life Scale (SWLS), The Well-Being Questionnaire (WBQ), The Utrecht Work Engagement Scale (UWES) and The Psychological Ownership Questionnaire (POQ). A biographical data sheet was developed in order to collect demographic information about the participants. This information was purely used for statistical purposes. The demographic information that was collected included the participants’ gender, race, and age groups, the number of years that the participants have been working for the organisation, their educational qualifications and their job grades.

3.4.1.1 *The Satisfaction with Life Scale*

The researcher used the SWLS (Diener, Emmons, Larson, & Griffon, 1985) as one of the measures of happiness for this study. The SWLS was used to assess happiness because, according to Diener (1985), satisfaction with life is a cognitive component of hedonic well-being and hedonic well-being is based on the theory that increased pleasure and decreased pain lead to happiness. Furthermore, when satisfaction with life is high, an individual experiences happiness (Gavin & Mason, 2004). The link between happiness and satisfaction with life therefore validates the

use of the SWLS. The SWLS is a 5-point Likert-type scale that measures life satisfaction as a cognitive-judgemental process. The questionnaire comprises 5 items. The SWLS contains statements like '*the conditions of my life is excellent*', and '*If I could live my life over, I would change almost nothing*'. A study conducted in South Africa by Field and Buitendach (2011) reported a high alpha coefficient of 0.84. This showed high levels of internal consistency between the scale items.

3.4.1.2 The Well-being Questionnaire

The researcher used the WBQ12 (Bradley, 1994) as the second measure of happiness in this study. According to Fisher (2010), happiness is a form of well-being and therefore using an instrument that measures well-being would provide relevant information on happiness. The WBQ12 measures psychological well-being in people with a chronic somatic illness. However, it has also been used as a measure of well-being in the public domain (Pouwer, Snoek, Van der Ploeg, Heine, & Brand, 1998). When scoring the WBQ12, the researcher used a 5-point Likert-type scale to measure negative well-being, energy and positive well-being. The questionnaire comprises 12 items. It contains statements such as '*I have been happy, satisfied, or pleased with my personal life*'. The WBQ12 has been validated through numerous samples from varying countries (Pouwer, Snoek, Van der Ploeg, Heine, & Brand, 2000) and also for the South African context (Rothmann & Ekkerd, 2007). Prior research confirmed Cronbach alpha coefficients of between 0.92 and 0.95 (Pouwer et al., 1998).

3.4.1.3 The Utrecht Work Engagement Scale

The UWES (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) is the most frequently used scale to measure work engagement. The UWES measures three fundamental dimensions of work engagement: vigour, dedication and absorption. It comprises a 9-item, self-reported questionnaire. It differentiates three dimensions of engagement. These are 'vigour' (items such as '*At my work I feel bursting with energy*'), 'dedication' (items such as '*When I get up in the morning, I feel like going to*

work’) and ‘absorption’ (items such as ‘I get carried away when I’m working’) (Schaufeli *et al.*, 2002). The UWES is scored on a 7-point frequency scale ranging from 0 (never) to 6 (every day). Usually, the 3-factor structure has been validated for the South African context (Rothmann & Jordaan, 2006). Internal consistency and reliability for the three subscales fell between 0.68 and 0.91 (Coetzee & Rothmann, 2005).

3.4.1.4 The Psychological Ownership Questionnaire

The POQ (Avey, Avolio, Crossley, & Luthans, 2009) is used to measure psychological ownership. The questionnaire consists of 16 items. The POQ measures four promotive-related dimensions: *self-efficacy* (items such as ‘I have the confidence to suggest doing things differently in my work unit’), *accountability* (items such as ‘In my organisation I accept responsibility and take the consequences of these decisions’), *sense of belongingness* (items such as ‘I feel that I belong in this organisation’), *self-identity* (items such as ‘I feel a strong linkage between me and my organisation’) and one preventive-related dimension namely *territoriality* (items such as ‘I have almost complete responsibility for how and when the work is done’). Each item response uses a Likert-type scale anchored with 1 = strongly disagree, to 6 = strongly agree. Previous studies reported an alpha coefficient of 0.77 (Vandewalle, Van Dyne, & Kostova, 1995). The POQ has been validated for the South African context (Alberts, 2012).

3.4.1.5 Research procedure

The research procedure for this study was a survey method using structured, self-completed questionnaires. A letter was obtained from the organisation permitting the researcher to conduct the study on the organisation. Ethical clearance to conduct the study was obtained from the University of Pretoria. The questionnaire contained a cover letter explaining the purpose of the study, providing assurance to the respondents that confidentiality will be maintained and requesting informed consent for participation in an academic research study. Primary forms of data were collected

as each participant provided personal responses to the questionnaire. Hard copies of the instrument were distributed. The researcher occupied a few minutes at the end of specific training sessions at the organisation's business school to get the questionnaires completed by the participants. Therefore no training of additional administrators was required. The questionnaires were completed by a paper and pencil method (using the delivery and collection method) and thereafter the data were captured manually. Even though this was time consuming, it was convenient as the researcher had direct contact with and access to the participants. It was also beneficial because it improved the number of responses. The names of the participants were not included on the questionnaire to ensure anonymity and prevent any bias from the researcher. The data collection process took four months (January – April 2014).

3.5 STATISTICAL ANALYSIS

The aim of this data analysis section is to describe the main approaches and techniques that were used to analyse the data collected for the study. The statistical analysis was carried out using SPSS 22 (IBM Corporation, 2013) and Mplus version 7.2 (Muthen & Muthen, 2010). The data were analysed using descriptive statistics, Pearson correlations, alpha coefficients and structural equation modelling (SEM).

3.5.1 Descriptive statistics

Descriptive statistics describes the main or basic features of a set of data (Leedy & Ormrod, 2013). Descriptive statistics was appropriate for this study as knowledge on the main features of the constructs (happiness, work engagement and psychological ownership) was required. The main reasons for the use of descriptive statistics were the following (Pallant, 2010):

- To address the research question
- To describe the characteristics of the sample
- To check variables for violation of assumptions underlining statistical tests.

Descriptive statistics serves to enhance the understanding of the properties of the data as well as to identify any inaccuracies in the data. The main forms of descriptive data are the central tendency, mean, median, mode, standard deviation, skewness and kurtosis of the data gathered (Table 8). For this study the mean and standard deviation values were calculated and interpreted.

Table 8: Types of descriptive statistics

Statistic	Definition
Central tendency	Provides a general impression of values that could be seen as common, middling or average
Mean	The average of scores within a set of data
Median	The middle point in a set of data
Mode	The set of numbers that occurs most frequently in a dataset
Standard deviation	Describes and compares the extent by which values differ from the mean. The higher the standard deviation, the greater the variation from the mean.
Skewness	Is used to show the distribution of values for variables containing numerical data. When variables do not fall in a normal distribution and are either skewed to the left (positively skewed) or skewed to the right (negatively) skewed.
Kurtosis	Is used to show the distribution of values for variables containing numerical data. When variables do not fall in a normal distribution and are unusually pointy (leptokurtic) or unusually flat (platykurtic).

3.5.2 Correlation

The most widely used statistic for determining correlation is the Pearson product-moment correlation (Leedy & Ormrod, 2013) which can result in a correlation coefficient of any value between -1 and +1. For this study, the Pearson product-moment correlation coefficient was calculated and used as an analysis of the relationship between the measured variables (psychological ownership, work engagement and happiness). This provided the researcher with an analysis of the degree of linear relationship between the variables.

When determining the relationships between variables that have been measured, the significance of the difference between these groups or the significance of the relationship between these variables is usually required. To determine the importance of the differences or relationships one can make use of *effect size indices* (Cohen, 1992). Effect size indices can be used in the sense that these indices are directly proportional to the importance of the differences of means or relationship between variables. If an index is large enough, then the result is said to be *practically significant* (Cohen, 1992).

For this study, the effect size was used to determine the practical significance of the findings. The practical significant cut-off point for correlation coefficients was set at $r = 0.10$ (small effect), $r = 0.30$ (medium effect), $r = 0.50$ (large effect) as provided by Cohen (1992).

3.5.3 Reliability using alpha coefficients

As mentioned previously, the questionnaire that was used, based on the four different scales, have been validated for the South African context. However, it is the researcher's duty to ensure the reliability of the interpretation of the questions by the respondents. According to Saunders et al. (2012), there are three frequently used methods in assessing reliability, namely test retest, internal consistency and alternative form. In addition to these, Leedy & Ormrod (2013) mention interrater reliability. These forms of reliability are described in Table 9, which also depicts the test of reliability that was used for this study.

Table 9: Forms of reliability

Form of reliability	Definition	Applicable to this study
Test retest	Used to evaluate the consistency of a measure from a specific time to another	Due to time and resource constraints, the researcher will not apply this form of reliability.
Internal consistency	The extent to which all of the items within one instrument produce similar results	The researcher used this form to test the study's reliability by calculating the Cronbach alpha coefficient/s of the study. Nunnally and Bernstein (1994) suggest that a Cronbach's alpha coefficient of at least 0.70 is an acceptable level of internal consistency.
Equivalent/Parallel form	The extent to which two different variants of the same instrument produce similar results	Due to time constraints and to prevent the respondents from not completing the questionnaire (because of too many items), the researcher did not apply this form of reliability.
Interrater	The extent to which two or more individuals assessing the same data give identical judgements	As this study has not been researched before and the researcher was the only individual involved in the data analysis, this form of reliability would not be applicable.

Source: Adapted from Field and Buitendach (2011); Leedy and Ormrod (2013); Saunders et al. (2012).

3.5.4 Structural equation modelling

3.5.4.1 *Defining structural equation modelling*

For this study, structural equation modelling (SEM) was used to test measurement and structural models. According to Ullman (1996), the measurement model's main aim is to specifically explore the relationships between measured or observed variables and latent variables, while the structural model is particularly concerned with the relationships between latent variables. According to Ullman (1996), an observed variable can be both measured and observed directly. On the other hand,

a latent variable cannot be observed directly and therefore inferences must be made from measured variables. Latent variables are implied by the covariances among two or more measured variables. Schrieber, Nora, Stage, Barlow, and King (2006) state that SEM is a combination of statistical methods that make provision for relations between one or more independent variables and one or more dependent variables to be explored. Keenan and Mostert (2013) confirm that SEM is an amalgamation of multiple regression and factor analyses. If one is to use SEM as part of one's research, a considerable sample size is required. The sample size should be equal to or greater than two hundred.

3.5.4.2 *Advantages and limitations of structural equation modelling*

Western and Gore (2006) describe some of the advantages and disadvantages of SEM. When relations between factors are studied, these relations do not contain any measurement error from a theoretical perspective because the error has been approximated and eliminated. Common variance therefore remains. When dealing with complex relations, SEM is the only form of analysis that makes provision for simultaneous and completed assessments of all the relations. A well-defined benefit of SEM is its capability to assess construct level hypotheses at a suitable grade. There are also some limitations to SEM, for example, SEM does not assess the direction which the relationships go. In a structural equation model, the orientations of the arrows depict the researcher's hypotheses of causality in a system. The variables and pathways that have been chosen by the researcher resulted in a reduction of the structural equation model's capability of reconstructing the patterns for sample covariances and variances that have been observed.

3.5.4.3 *Constructing structural equation modelling*

The objective of creating a structural equation model is to obtain a good model fit for data to satisfactorily serve as a useful portrayal of reality and an accurate rationalisation of the data. Hooper, Coughlan, and Mullen (2008) list the five steps of SEM construction:

- Model specification
- Model identification
- Model estimation
- Testing model fit
- Model manipulation.

There is specific criterion that is used to determine the best possible model fit. These criteria are listed in Table 10 which describes each criterion.

Table 10: SEM criteria used for best model fit

Model fit criterion	Symbol/ Abbreviation	Interpretation	Indication of a good model fit
Chi-square	χ^2	Compares obtained χ^2 value with tabled value for given df	The lower the chi-square, the better the model fit
Degrees of freedom	df	The difference between the knowns and the free parameters used in multiple measures of fit. The degrees of freedom can be regarded as the quantity of independent over-identifying restrictions.	
Tucker-Lewis index	TLI	The incremental assessment of goodness of fit for a statistical model, which considers the magnitude of the correlations in the data and the quantity of parameters in the model.	Value ≥ 0.90 reflects a good model fit
Comparative fit index	CFI	A comparison between the fits of target models against the fits of independent models, which indicates a model where the variables are presumed to be uncorrelated.	Value ≥ 0.90 reflects a good model fit
Root mean square error of approximation	RMSEA	Measures fits or misfits in applications of structural equation modelling	Value less than 0.08 indicates a good model fit

Model fit criterion	Symbol/ Abbreviation	Interpretation	Indication of a good model fit
Standardised root mean square residual	SRMR	An exact measure of fit and classified as the standardised difference between the observed correlation and the predicted correlation	Value less than 0.05 indicates a good model fit
Akaike information criterion	AIC	A comparative measure of fit and therefore significant only when two different models are approximated	The lower the value, the better the model fit
Bayes information criterion	BIC	A criterion for model selection among a finite set of models	The lower the value, the better the model fit

Source: Adapted from De Beer, Pienaar, and Rothmann (2013); Diedericks and Rothmann (2014); Keenan and Mostert (2013); Louw and Viviers (2010); Schrieber, Nora, Stage, Barlow, and King (2010), Ullman (1996).

3.6 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE PROPOSED RESEARCH DESIGN

In order to guarantee that a research study provides you with the right information in the right context, yielding the correct results, the researcher should ensure that the research design chosen demonstrates the quality and rigour of a sound study. The researcher should take into consideration factors such as validity, bias and errors that can affect reliability when choosing a research design. These factors will be discussed below.

3.6.1 Bias and errors that can effect reliability

Any influence, state or set of states, whether in a group or individually, that distorts data is considered to be research bias (Leedy & Ormrod, 2013). Errors made by either the participant or the researcher can influence the data and therefore influence the overall results. Reliability refers to the assumption that a variable being

measured is stable or constant and will yield consistent findings if the measurement is repeated at different times and/or by different individuals (Saunders et al., 2012). There are various threats to the reliability of a study in the form of errors or biases as indicated in Table 11.

Table 11: Threats to reliability

Threat	Definition	Prevention
Participant error	Any factor that adversely alters the way in which a participant performs	The researcher ensured that the time and environment in which participants completed the questionnaire was consistent and conducive.
Participant bias	Any factor that includes a false response	The participants did not write their names on the questionnaire, thus assuring them of anonymity. Having anonymity prevented participants from answering favourably.
Researcher error	Any factor that alters the researcher's interpretation	The researcher ensured that she was alert and in a conducive environment when analysing the data retrieved.
Researcher bias	Any factor that includes bias in the researcher's recording of responses	The researcher did not incorporate her views when processing the results.
Non-response bias	Whereby, as a result of a significant amount of non-responses to questionnaires, the total respondents of a study is not representative of the sample population	The researcher kept the sample large enough to ensure a high response rate and therefore reduced non-response bias.
Measurement bias	Deliberate or unintentional distortion of data	The researcher remained ethical and stuck to the prescribed methods of measurement.
Sampling bias	Factors that influence the randomness with which a sample population has been selected	The researcher did not have control over which participants completed the questionnaire as the sampling was based on which group of employees attended training courses at the time.

Source: Adapted from Saunders et al. (2012)

3.6.2 Validity

Hair, Anderson, Tatham, and Black (1995, p. 3) define validity as “[t]he extent to which a measure or set of measures correctly represents the concept of the study and the degree to which it is free from any systematic or non random error.” Saunders et al. (2012) state that validity refers to how well a scientific test or piece of research actually measures what it set out to measure, or how well it reflects the reality it claims to represent. Should the outcomes of a study not be deemed valid then they are of no value to the study. If what was intended to be measured does not materialise then these results cannot be applied when attempting to answer the research question. A distinction can be made between two main types of validity, namely internal and external validity.

Internal validity looks at the effects in a study in order to determine if these effects are a result of manipulating the independent variable and not another factor. This demonstrates a causal relationship between the independent and dependent variable. External validity is a reference to generalised research results in different settings with other people and over a period of time (Saunders et al., 2012). These two types of validity are relevant in evaluating the legitimacy of a research study or procedure. The questionnaires for psychological ownership, work engagement and happiness have already been validated for the South African context. However, the four types of internal validity that are applicable to questionnaires are described in Table 12.

Table 12: Types of validity

Type	Definition	Applicable to this study
Face validity	The technique that looks at whether the variable that was intended to be measured is indeed measured	As all the questionnaires used in this study are established and have been validated for a South African context, face validity is applicable.
Content validity	The extent to which a measure represents all constructs within a given study	As all the questionnaires used in this study are established and have been validated for a South African context, content validity is applicable.
Criterion validity	The relative estimation or prediction of one measure to another in terms of value or quality	As all the questionnaires used in this study are established and have been validated for a South African context, criterion validity is applicable.
Construct validity	This is whether the measurements of a variable in a study behave in exactly the same way as the variable itself.	As all the questionnaires used in this study are established and have been validated for a South African context, construct validity is applicable. Construct validity can also be determined by using SEM. SEM methodology is also a powerful tool for validating psychological measurements (Yu & Hsu, 2012). In this study, the measurement model tests the validity of the constructs.

Source: Adapted from Saunders et al. (2012)

As with reliability there are a number of reasons that may threaten the internal validity of a study. Some of these reasons and the preventative measures are demonstrated in Table 13.

Table 13: Threats to internal validity

Threat	Explanation	Prevention
Past or recent events	An event that changes participants' perceptions	As this was the first study of its kind that was carried out in the organisation, there were no past events that could have altered the participants' perceptions.
Testing	The impact of testing on participants' views or actions	The researcher reassured the participants that the study was being conducted for research purposes only and that their jobs would not be affected.
Instrumentation	The impact of a change in a research instrument between different stages of a research project	The researcher stuck to the prescribed questionnaire and did not deviate from the research plan.
Mortality	The impact of participants withdrawing from studies	As this is a cross-sectional study, this did not have an influence.
Maturation	The impact on participants change in behaviour and attitude because of a change outside the influence of the study.	As this is a cross-sectional study, maturation did not have an influence.

Source: Adapted from Saunders et al. (2012)

3.7 RESEARCH ETHICS

When considering ethics in research, the fundamental underlying principle is very similar to that of the Hippocratic Oath doctors take, that is, "do no harm", whether it be to the respondents to the research questionnaire or survey, the sponsoring organisation or even the research community as a whole. Protecting the rights of these participants, ensuring that there is no loss of privacy or embarrassment should be focal points when taking ethics into consideration. Leedy & Ormrod (2013) make reference to four categories of ethical issues in research: honesty with professional colleagues, protection from harm, voluntary and informed participation, and right to

privacy. Saunders et al. (2012) add that ethics should be considered at every stage of the research process.

One cannot conduct research without using information that either directly or indirectly affects “people”. As this study required participants to complete questionnaires, consent from each of the participants was required. With regard to the organisation where the study was conducted, the researcher had obtained written permission from the relevant parties to conduct the study. The researcher informed the organisation that this research study would be conducted on its employees. Considering that the researcher is an employee of the organisation, they agreed to the study taking place provided that the researcher signed a non-disclosure agreement specifying what the research and information would be used for. Given that the researcher is an employee of the organisation, she ensured that she remained objective and unbiased throughout the study. The researcher would not disclose any results to the organisation till the study was completed and would not disclose any of the participants’ names to the organisation or any other party. There are different types of non-disclosure agreements. Blumberg et al. (2005) mention three types: sponsor non-disclosure, purpose non-disclosure and findings non-disclosure. The current study required a findings non-disclosure agreement that retains the research and findings for academic research purposes only; thus maintaining confidentiality until a management decision is made on how to deal with the findings of the research within the organisation.

When briefing participants of a study, it is important that the researcher explains the details of the study and gives the participants enough information, but at the same time tries to limit the chance of bias. Guaranteeing privacy increases the validity of the research as participants will be more honest with their feedback if they know that the information provided will be kept confidential. For example, removing the names of the respondents from questionnaires or interviews before submitting any findings will ensure that the respondents’ identity is kept confidential. It is essential that the researcher always obtains consent from the respondents first. Also, data should not

be made available if the sample population is small as it will be very easy to identify which respondent provided which data.

That said, researchers should embark on taking the “ethical course” and ensuring that ethics are not compromised throughout the duration of the research. The researcher compiled a checklist and kept referring to it during the study. In conducting this research, the researcher endeavoured to consider these factors:

- Explain the purpose of the study to the participants
- Debrief participants
- Prevent bias
- Obtain consent from participants
- Sign the appropriate non-disclosure agreements
- Reference material that has been used from other sources to prevent plagiarism
- Use the Internet as a source of data with care
- Conduct research with the organisation in an ethical manner
- Remember the ethical duty to the research community.

3.8 CONCLUSION

In this study a post-positivist paradigm was applied because the researcher investigated the relationship between psychological ownership, work engagement and happiness. The study was based on a quantitative research design with a non-experimental, cross-sectional survey design. The research group represented a non-probability purposive sample consisting of 365 professional, white-collar employees in the professional services industry in an audit firm in South Africa.

The data for the study were collected by using a combination of measuring instruments. The Satisfaction with Life Scale (SWLS) and the Well-being Questionnaire (WBQ) were used to measure happiness. The Utrecht Work Engagement Scale (UWES) was used to measure work engagement and the

Psychological Ownership Questionnaire (POQ) was used to measure psychological ownership. Using these measuring instruments, a questionnaire was formulated that was administered in hard copy format.

The main statistical approaches and techniques used were Descriptive Statistics, Pearson Product-Moment Correlation Coefficients and Structural Equation Modelling. Various aspects of bias and errors that affect reliability were described and the types and threats to validity were taken into consideration to demonstrate that rigour was present in the study. Various ethical considerations applicable to the study were discussed.

The next chapter presents the results and findings of the research.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

The main objective of this study was to test the relationship between psychological ownership, work engagement and happiness. This was determined by using SEM as a statistical technique to determine how well the sample data fitted with the hypothesised model. This section looks at the testing of both the measurement and structural model in order to find the best fit.

4.2 TESTING THE MEASUREMENT MODEL

Testing the measurement model entails determining how each instrument measures within the respective dataset. Using SEM, the measurement model was tested to assess how each of the measurement items loads on the scales used in the study. The χ^2 , df , TLI, CFI, RMSEA, SRMR, AIC and BIC were used to test model fit. Five models were tested to determine the closest fit to the hypothesised model and the outcomes (fit statistics) of each of these models are depicted in Table 14.

Table 14: Fit statistics of competing measurement models

Model	χ^2	df	TLI	CFI	RMSEA	SRMR	AIC	BIC
Model 1	1698.43	807	0.84	0.85	0.06	0.08	34645.72	35178.57
Model 2	1667.20	804	0.84	0.85	0.06	0.08	34621.16	35156.41
Model 3	2097.55	808	0.77	0.78	0.07	0.09	35152.45	35672.51
Model 4	2883.06	814	0.66	0.65	0.09	0.19	36139.13	36636.42
Model 5	1354.38	761	0.90	0.90	0.05	0.07	32102.87	32638.97

Model 1: This is a one-factor model of engagement consisting of 9 items; a two-factor model of happiness consisting of two latent variables, namely satisfaction with life (3 items) and well-being, where well-being was measured by three first-order latent factors (negative well-being (4 items), positive well-being (4 items) and energy (4 items)); and a five-factor model of psychological ownership consisting of five latent variables: territoriality (4 items), self-efficacy (3 items), accountability (3 items), belongingness (3 items) and self-identity (3 items). The model fit information revealed a chi-square value of 1698.43 based on 807 degrees of freedom (*df*).

When examining the chi-square value, one should look for the lowest value possible as the lower the value, the better the fit (Hooper, Coughlan, & Mullen, 2008). The TLI (0.84) and CFI (0.85) values were less than 0.90 and were therefore not reflecting a good model fit. The TLI and CFI values should be greater than 0.90 to reflect a good fit (Hooper et al. 2008). The RMSEA value was 0.06. According to Hair et al. (2006), the RMSEA is indicative of an acceptable model fit if these values are between 0.05 and 0.08. The model also produced an SRMR value of 0.08. According to Garson (2009), a SRMR value of less than 0.05 is considered a good fit and a value below 0.08 is an adequate fit. The model's SRMR value therefore shows a poor fit as it is neither less than 0.05 nor 0.08. The last fit statistics examined for model 1 is the AIC and BIC values. The lowest AIC and BIC values, when comparing models, is an indication of the best fitting model (Diedericks & Rothmann, 2014). The model's AIC value was 34645.72 and the BIC value was 35178.57.

Model 2: This is the theoretical model. This is a three-factor model of engagement measured by three first-order latent factors (vigour (3 items), dedication (3 items), absorption (3 items)); a two-factor model of happiness consisting of two latent variables, namely satisfaction with life (3 items) and well-being, where well-being was measured by three first-order latent factors (negative well-being (4 items), positive well-being (4 items) and energy (4 items)); and a five-factor model of psychological ownership consisting of five latent variables comprising territoriality (4 items), self-efficacy (3 items), accountability (3 items), belongingness (3 items) and self-identity (3 items).

The model fit information revealed a chi-square value of 1667.20 based on 804 degrees of freedom (*df*). The TLI (0.84) and CFI (0.85) values were less than 0.90 and were therefore not reflecting a good model fit (Ullman, 1996). The RMSEA value of 0.06 is indicative of an acceptable model fit (Hair et al., 2006). The model also produced an SRMR value of 0.08, indicating adequate fit (Ullman, 1996). The last fit statistics examined for model 2 is the AIC and BIC values, which were 34621.16 and 35156.41 respectively.

Model 1 differs from Model 2 with respect to engagement. In Model 1, engagement was depicted as a one-factor model and in Model 2, it was depicted as a three-factor model. Although the chi-square, AIC and BIC values were slightly lower, better fit can be achieved by testing subsequent models.

Model 3: This is a three-factor model of engagement measured by three first-order latent factors (vigour (3 items), dedication (3 items), and absorption (3 items)); a one-factor model of happiness consisting of 17 items; and a five-factor model of psychological ownership consisting of five latent variables: territoriality (4 items), self-efficacy (3 items), accountability (3 items), belongingness (3 items) and self-identity (3 items).

The model fit information revealed a chi-square value of 2097.55 based on 808 degrees of freedom (*df*). The TLI (0.77) and CFI (0.78) values were less than 0.90 and were therefore not reflecting a good model fit (Hooper et al., 2008). The RMSEA value was 0.07, which is indicative of an acceptable model fit (Hair et al., 2006). The model also produced an SRMR value of 0.09. The model's SRMR value therefore shows a poor fit as it is greater than 0.08. (Garson, 2009) The last fit statistics examined for model 3 is the AIC and BIC values. The model's AIC value was 35152.45 and the BIC value was 35672.51.

Model 4: This is a three-factor model of engagement measured by three first-order latent factors (vigour (3 items), dedication (3 items), and absorption (3 items)); a one-

factor model of happiness consisting of 17 items; and a one-factor model of psychological ownership consisting of 16 items.

The model fit information revealed a chi-square value of 2883.06 based on 814 degrees of freedom (*df*). The TLI (0.66) and CFI (0.65) values were less than 0.90 and were therefore not reflecting a good model fit (Hooper et al., 2008). The RMSEA value of 0.09 reflects a poor model fit (Hair et al., 2006). The model also produced an SRMR value of 0.19, which shows a significantly poor fit as the value is far greater than 0.08 (Garson, 2008). The last fit statistics examined for model 4 is the AIC and BIC values that were 36139.13 and 36636.42 respectively.

The model fit statistics conducted for models 3 and 4 shows significantly less fit when being compared to models 1 and 2. The chi-square and *df* values were higher and the TLI and CFI values were further away from the 0.90 mark for good fit. While the RMSEA value was lower than 0.08 in model 3, model 4 had a value of 0.09. The most problematic area was the SRMR values. Both model 3 and 4 had values higher than 0.05. However, model 4 had a significantly higher value (0.19), which indicates that the standardised difference between the observed correlation and predicted correlation was far too great. The changes made to model 3 and 4 in comparison to model 1 and 2 were representing happiness as a one-factor model. The other change that could have impacted the model fit was psychological ownership being represented as a one-factor model whereas psychological ownership was reflected as a five-factor model for models 1, 2 and 3.

Model 5: This is a one-factor model of engagement consisting of 9 items with some items correlated to improve fit (C2 with C1, C9 with C8, C4 with C3, and C8 with C5). Engagement has previously been used as a one-factor model as was the case in the study conducted by Shimazu, et al., (2008). A two-factor model of happiness consisting of satisfaction with life (3 items) and well-being measured by three first-order latent factors (negative well-being (4 items), positive well-being (4 items) and energy (4 items)). Items in the energy (A7 with A6) and positive well-being (A10 with A9) factors were correlated to improve fit. Model 5 is a four-factor model of

psychological ownership consisting of territoriality (4 items), self-efficacy (3 items), accountability (3 items) and identity (5 items). Identity comprised belongingness (2 items: D11 and D12) and self-identity (3 items: D14, D15, D16). This factor was labelled as such because the items of the originally developed self-identity and belongingness dimensions loaded onto one factor, as was the case in a study conducted by Olckers (2013). Item D13 was removed from the factor 'identity' because the item was problematic in that the p -value was non-significant at 0.08, there was cross-loading and there was a low R-squared value ($R^2 = 0.02$).

The model fit information revealed a chi-square value of 1354.38 based on 761 degrees of freedom (df). The TLI (0.90) and CFI (0.90) values for model 5 therefore met the requirements of a good model fit (Hooper et al., 2008). The RMSEA value was 0.05 and therefore indicative of an acceptable fit (Hair et al., 2006). The model also produced an SRMR value of 0.07, which shows an adequate fit as it is less than 0.08 (Garson, 2009). The last fit statistics examined for model 5 is the AIC and BIC values. The model's AIC value was 32102.87 and the BIC value was 32638.97.

After running the five measurement models above and conducting a comparison of the fit indices, it was apparent that model 5 fitted the data best. Model 5 hypothesised that engagement was a one-factor model consisting of 9 items with some items (C2 with C1, C9 with C8, C4 with C3, and C8 with C5) correlated to improve fit. This was done in order to estimate the most likely relationships between the variables and prove the hypothesis being tested. Model 5 hypothesised that happiness was a two-factor model consisting of satisfaction with life (5 items with a correlation of items B5 with B4) and well-being measured by three first-order latent factors (negative well-being (4 items), positive well-being (4 items with a correlation of items A10 with A9) and energy (4 items with a correlation of items A7 with A6)) and that psychological ownership was a four-factor model consisting of territoriality (4 items), self-efficacy (3 items), accountability (3 items) and identity (5 items comprising of belongingness (2 items: D11 and D12) and self-identity items (3 items: D14, D15, D16)).

Furthermore regarding model 5, the standardised regression coefficients were all statistically significant ($p < 0.01$). The beta values (β) for engagement ranged from the lowest of 0.30 to the highest of 0.87. The beta values for happiness ranged from 0.69 to 0.99, for satisfaction with life from 0.61 to 0.85 and for well-being from -0.41 to 1.00. The beta values for psychological ownership ranged from -0.33 to 0.89, for territoriality from 0.60 to 0.71, for self-efficacy from 0.74 to 0.89, for accountability from 0.76 to 0.80 and for identity from 0.64 to 0.84.

The measurement model was tested and yielded specific results. Next, the structural model which entails looking at the relationship between psychological ownership, work engagement and happiness was tested.

4.3 TESTING THE STRUCTURAL MODEL

In testing the structural model, the hypothesised model will be tested and represented graphically. This will depict the correlations between the constructs.

4.3.1 Descriptive statistics, alpha coefficients and correlations

The descriptive statistics, Cronbach alpha coefficients and correlations of the measuring instruments after adapting the measurement model are depicted in Table 14. The table reflects that the Cronbach alpha coefficient were good for happiness ($\alpha = 0.74$), work engagement ($\alpha = 0.91$) and psychological ownership ($\alpha = 0.78$) (Nunnally & Bernstein, 1994). With regard to the scales, the Cronbach alpha coefficients were all good except for well-being ($\alpha = 0.42$). As described by Kline (1999), a possible reasoning for the low alpha is that values even below 0.70 can, realistically, be expected when dealing with psychological constructs because of the diversity of the constructs being measured. This possibility may hold true as well-being comprises three latent variables, namely negative well-being, positive well-being and energy.

Table 15 indicates that positive well-being and psychological ownership have statistically significant correlations with all other variables. Engagement has highly statistically significant correlations with happiness ($r = 0.48$), well-being ($r = 0.27$), satisfaction with life ($r = 0.45$) and psychological ownership ($r = 0.56$). Happiness correlated positively with satisfaction with life ($r = 0.91$) and well-being ($r = 0.63$). Negative well-being ($r = 0.57$), energy ($r = 0.68$) and positive well-being ($r = 0.47$) also correlated positively with well-being. Territoriality ($r = 0.25$), self-efficacy ($r = 0.66$), accountability ($r = 0.67$) and identification ($r = 0.79$) all correlated positively with psychological ownership. When looking at the negative correlations, negative well-being has statistically negative correlations with engagement ($r = -0.22$), satisfaction with life ($r = -0.23$), positive well-being ($r = -0.37$), psychological ownership ($r = -0.17$), self-efficacy ($r = -0.30$), accountability ($r = -0.18$) and identification ($r = -0.17$). Territoriality has statistically negative correlations with engagement ($r = -0.24$), satisfaction with life ($r = -0.16$), positive well-being ($r = -0.18$), self-efficacy ($r = -0.18$) and identification ($r = -0.22$).

When looking at practical significant correlations, engagement has a practically significant correlation with happiness ($r = 0.48$; medium effect), well-being ($r = 0.27$; low effect), satisfaction with life ($r = 0.45$; medium effect) and psychological ownership ($r = 0.56$; large effect). Happiness has a practically significant correlation (large effect) with both satisfaction with life ($r = 0.91$) and well-being ($r = 0.63$). Well-being has a practically significant correlation (large effect) with negative well-being ($r = 0.57$) and energy ($r = 0.68$) as well as with positive well-being ($r = 0.47$; medium effect). Psychological ownership has a practically significant correlation with self-efficacy ($r = 0.66$; medium effect), identification ($r = 0.79$; medium effect), accountability ($r = 0.67$; low effect) and territoriality ($r = 0.25$; low effect).

Table 15: Descriptive statistics, alpha coefficients and Pearson correlations of the scales (N = 365)

	Variable	Mean	SD	α	1	2	3	4	5	6	7	8	9	10	11	12
1	EngTotal	36.24	8.2	0.91												
2	SWLTotal	25.59	5.5	0.87	0.45**											
3	WellbTotal	17.61	2.9	0.42	0.27**	0.27**										
4	NegWellb	3.20	2.1	0.80	-0.22**	-0.23**	0.57**									
5	Energy	6.05	1.2	0.75	0.10	0.04	0.68**	0.28**								
6	PosWellb	8.39	2.0	0.76	0.54**	0.60**	0.47**	-0.37**	0.11*							
7	Happiness	43.26	6.9	0.74	0.48**	0.91**	0.63**	0.06	0.32**	0.69**						
8	PosTotal	60.85	8.3	0.78	0.56**	0.35**	0.13*	-0.17**	0.10	0.32**	0.35**					
9	Territoriality	9.96	3.7	0.77	-0.24**	-0.16**	0.10	0.17**	0.18**	-0.18**	-0.10	0.25**				
10	Self-Efficacy	15.18	2.3	0.87	0.61**	0.39**	0.10	-0.30**	0.04	0.39**	0.34**	0.66**	-0.18**			
11	Accountability	13.59	2.7	0.83	0.34**	0.26**	-0.01	-0.18**	-0.01	0.17**	0.17**	0.67**	-0.04	0.47**		
12	Identification	22.15	5.2	0.89	0.69**	0.39**	0.13*	-0.17**	-0.03	0.38**	0.38**	0.79**	-0.22**	0.51**	0.40**	

** $p < 0.001$; * $p < 0.05$

EngTotal = Engagement total

SWLTotal = Satisfaction with Life total

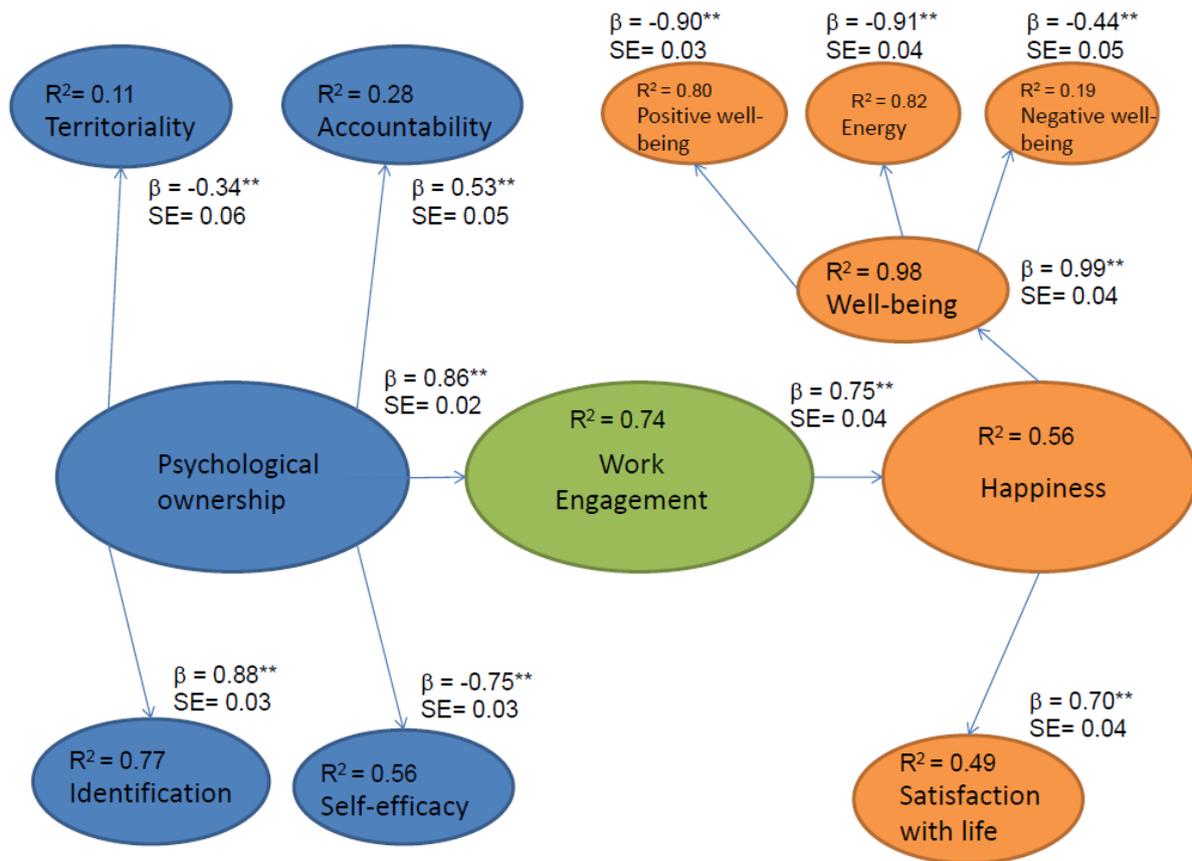
WellbTotal = Well-being total

PosWellb = Positive Well-being total

PosTotal = Psychological ownership total

4.3.2 Evaluating the hypothesised model

The structural model was tested using Model 5 (see Table 15), which was the best fitting and most parsimonious model. The hypothesised relationships were tested using latent variable modelling as implemented by Mplus 7.2 (Muthén & Muthén, 2010). The structural model (displayed in Figure 6) showed acceptable fit: $\chi^2 = 1347.07$; $df = 820$; TLI = 0.90; CFI = 0.90; RMSEA = 0.03 and SRMR = 0.07.



* $p < .05$; ** $p < .01$.

Figure 6: The hypothesised model

The hypotheses of the study were as follows:

H01: Psychological ownership is positively related to work engagement.

H02: Work engagement is positively related to happiness.

When looking at the relationships of the best fitting structural model (Model 5) in relation to these hypotheses, the following can be deduced:

Hypothesis 1

For the portion of the model predicting the relationship between psychological ownership and work engagement ($\beta = 0.86$; $p < 0.01$), the path coefficient was significant and had the expected sign. Psychological ownership related strongly with work engagement. Psychological ownership accounted for a large proportion of variance in work engagement ($R^2 = 0.74$). *Hypothesis 1 is accepted.*

Hypothesis 2

For the portion of the model predicting the relationship between work engagement and happiness ($\beta = 0.75$; $p < 0.01$), the path coefficient was also significant, indicating that work engagement had a significant positive relationship with happiness. Work engagement accounted for a large proportion of variance in happiness ($R^2 = 0.56$). *Hypothesis 2 is accepted.*

When looking at other significant relationships, the loadings of the four latent factors of psychological ownership were all significant with identity ($\beta = 0.88$; $p < 0.01$) and self-efficacy ($\beta = 0.75$; $p < 0.01$) being the highest. With regards to the latent factors of happiness, well-being explained a large portion of the variance in happiness ($R^2 = 0.98$) in comparison to satisfaction with life ($R^2 = 0.49$). This shows that well-being has a major role in determining happiness. When looking at the three latent variables measuring well-being, negative well-being ($\beta = -0.44$; $p < 0.01$) and energy ($\beta = -0.91$; $p < 0.01$) can have negative relationships with well-being because the items in the well-being questionnaire are negatively stated however positive well-being has positively stated items but the loading on well-being was still negative. An explanation for this would be that items were responded to negatively. This could possibly have been impacted by the stresses of the work environment, long hours and sacrifices made and often the struggle in finding a work/life balance. As

mentioned earlier, the organisation has a fast paced, high performance culture which requires a lot of long hours and sacrifice. The biographical data revealed that the majority of employees who filled in the survey were between the ages of 18-25. At this age, adapting to this type of working lifestyle can be taxing on employees therefore this could have led them answering the items in a negative manner.

4.4 CONCLUSION

In this chapter the results and findings of the research were presented. The measurement model was tested to assess each of the measurement items of the scales used in the study. Five models were tested to determine the closest fit to the hypothesised model. The structural model was tested in order to evaluate and test the hypothesised model. The structural model showed acceptable fit and the hypotheses were accepted: Psychological ownership related strongly with work engagement and accounted for a large proportion of variance in work engagement. Work engagement on the other hand also related strongly with happiness and accounted for a large proportion of variance in happiness.

The following chapter provides a summary of the results and findings of the study. It concludes on whether the research objectives have been met, makes recommendations for future research and considers the limitations of the study.

CHAPTER 5

DISCUSSION, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

In this chapter a discussion of the results is provided. Conclusions are drawn from what the literature review presented as well as what the results of the study revealed. Recommendations are made for future research and the limitations of this study are discussed.

5.2 BRIEF OVERVIEW OF THE STUDY

The objective of the study was to determine if there is a positive relationship between psychological ownership, work engagement and happiness and whether psychological ownership can predict the work engagement of employees and consequently their happiness in the workplace.

Chapter 1 outlined the need to investigate if there was a positive relationship between psychological ownership, work engagement and happiness as well as if psychological ownership can predict the work engagement of employees and consequently their happiness in the workplace. It explained that in order to curb high employee turnover, organisations should be proactive and preventative by taking a positive psychological approach, focusing on the strengths of their employees rather than their development areas. It further elaborated that in order to retain employees, organisations should create an environment encompassing positive states of being such as a sense of psychological ownership towards one's job, feeling happy and engaged in the workplace.

Chapter 2 discussed the pertinent literature relating to psychological ownership, work engagement and happiness.

Chapter 3 provided the justification for the research and explained the research methodology and design.

Chapter 4 presented the results and findings of the research. There is a positive relationship between psychological ownership, work engagement and happiness. Psychological ownership can predict the work engagement of employees and consequently their happiness in the workplace.

This chapter (**Chapter 5**) focuses on some of the conclusions about the research conducted and gauges whether the objectives of the research were met. It discusses the contribution of the research from a theoretical and methodological point of view. It looks at the practical implications of the study, indicates the limitations of the research and makes suggestions for future research.

5.3 DISCUSSION ON THE RESULTS

5.3.1 The relationship between psychological ownership and work engagement

The results revealed that psychological ownership correlated statistically significantly with work engagement. The results implied that psychological ownership has a huge influence on employees' levels of engagement and accounted for 74 % of the variance in work engagement. This result is in line with the studies of Alok and Israel (2012) who state that psychological ownership predicts work engagement. Studies on work engagement have indicated that employees who are given autonomy, control and responsibility at work are more engaged (Bakker & Demerouti, 2008). Psychological ownership involves having control over targets of ownership and taking responsibility for them (Pierce et al., 2001). The importance of these specific common outcomes is that they lead to improved performance and the retention of employees (Avey et al., 2009; Rothmann & Jordaan, 2006). Engaged employees

lead to committed employees who have a strong identification with their job (Hakanen et al., 2006). Rothmann (2008) states that engaged employees perform better and have a greater chance of staying with the organisation. Autonomy, control, responsibility, commitment and retention are therefore outcomes of engagement. These are common outcomes that are shared with psychological ownership. The literature review showed that if autonomy, control and responsibility are increased, engagement will increase, which will lead to commitment and retention. Furthermore, because there is a positive correlation between psychological ownership and engagement, it can be concluded that the more psychological ownership an employee has, the more engaged that employee will be. It can therefore also be concluded that psychological ownership is an enabler of work engagement.

5.3.2 The relationship between work engagement and happiness

When looking at the relationship between engagement and well-being, the results support the research of Bakker and Demerouti (2008) that shows that engagement is an affective-motivational state of work-related well-being. This will also hold true for engagement and satisfaction with life, because satisfaction with life is a cognitive component of well-being. This is shown in the results where work engagement was correlated statistically significantly to well-being and satisfaction with life. Employees are constantly faced with job demands and this affects them emotionally, physically and mentally. Employees should have low anxiety and depression levels and good physical health. In order to achieve this, literature shows that an employee should have adequate job resources and personal resources, which are integral drivers of work engagement. Should there be a lack of job and personal resources, the engagement levels will drop and psychological ownership will subsequently decrease because of the significant correlation it has with engagement. Furthermore, the health and well-being of the employee will begin to suffer and this could lead to burnout. This is indicated in the results where negative well-being had statistically negative correlations with engagement.

Engagement influences employees' level of happiness. This is confirmed in the results which show that engagement correlated statistically significantly with happiness, as well as where work engagement explained a large portion of the variance in happiness, namely 56 %. In looking at what contributes to one's happiness at work, both the *individual* and the *environment* play a role. From an individual perspective, people can choose to want to become happier through helping themselves reach happiness. Theoretical perspectives such as hedonic and eudaimonic approaches to happiness explain this. What this means in essence is that happiness is subjective and dependent on how the individual experiences happiness. Therefore, if an individual has a life purpose, experiences life as challenging and accomplishes growth (eudaimonic well-being), it can be inferred that the person is happy. Similarly, if an individual has experiences of increased pleasure, decreased pain and satisfaction with life (hedonic well-being), this will also denote that they are happy. This is indicated in the results which show that happiness explained 49 % of the variance in satisfaction with life and 98 % of the variance in well-being. From an environmental perspective, happiness can be achieved if employers foster happiness in the workplace by creating a healthy, respectful and supportive organisational culture, as well as provide interesting, challenging and autonomous jobs. Autonomy's influence on happiness further verifies the link between work engagement, psychological ownership and happiness. This can be said because engagement is increased when autonomy is provided (Bakker & Demerouti, 2008) and the relationship between psychological ownership and autonomy is supported by observed evidence which demonstrates that employees experiencing a high level of autonomy in the design of their jobs felt as if they had more influence and control than those employees experiencing low autonomy (Olckers & Du Plessis, 2011). Furthermore, studies by Mayhew et al. (2007) found that because autonomy influences all work attitudes and behaviours, it is regarded as a pertinent factor in job-related psychological ownership.

To summarise the discussion, the results of the study coupled with theoretical evidence provide empirical proof of a relationship between psychological ownership, work engagement and happiness. These results provide explanations as to why and how these relationships can exist by proving that employees who feel psychological

ownership towards their jobs and/or organisations will be more engaged and as a result their levels of happiness will be influenced.

Looking at the outcomes of what happy, engaged employees can produce, employers should play a role in ensuring that this happens by creating an environment conducive to feelings of psychological ownership. This in turn will ensure that employees remain engaged and happy. This will benefit organisations because employee turnover will be minimised and the products and services they offer to clients will be of high value, which can lead to an increase in demand and ultimately higher profit margins.

5.4 PRACTICAL IMPLICATIONS OF THE STUDY

This study showed that psychological ownership is positively related to work engagement and consequently to happiness. It is important for organisations to understand the tenet of each of these constructs so that they can be fostered in the working environment. Interventions to promote the above constructs should be developed and evaluated to ensure that they become part of the organisational culture. The organisation being an auditing firm has a culture of a strong work ethic, high job demands, many hours of overtime, and sometimes very little work-life balance. This is the nature of the auditing and accounting profession and this is why it is vital to ensure that employees are happy and engaged in their jobs. When deadlines are looming and the pressure is extremely high on these employees, a positive outcome can be achieved if employees are engaged in what they are doing, experience happiness and exude psychological ownership towards their jobs. Some ways in which organisations can foster an environment and culture where employees can encompass psychological ownership, be involved and engaged in their work and remain happy are by:

- Providing employees their own space and autonomy;
- Allowing employees to take ownership and control of their jobs;
- Showing them where and how value is being added by their contributions;
- Involving employees in decision making related to their levels of expertise;

- Allowing them to have a voice;
- Providing them with the resources to do their jobs efficiently and effectively;
- Providing support; and
- Rewarding and recognising excellence.

The results of this study complement and corroborate previous empirical research conducted on these three constructs. In addition, the results supplement the findings in the literature review with regard to psychological ownership, work engagement and happiness. The Cronbach's alpha, fit statistics and correlations were indicative of good, reliable results. It would be beneficial to study other constructs that have the same or similar outcomes than those revealed in this study, possibly looking at other positive psychological constructs and their relationships. The relationship between constructs such as job satisfaction, flourishing, thriving, and psychological capital, as examples, can be explored. Finding positive relationships and correlations between other constructs can only open the door for future research and a greater understanding of the employer-employee relationship.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

With regard to future research, it is recommended that similar studies be conducted in other professional services organisations. A larger sample size can be used to confirm the statistical results yielded from the analysis. A larger sample size could also provide further information and trends on the differences in race, gender, ethnicity and other demographical items. Future studies should employ longitudinal studies as well as experimental designs to study the causality of relationships between psychological ownership and individual and organisational outcomes. It is also recommended that the mediation effects of psychological ownership on happiness be evaluated in future studies such as the direct effect of psychological ownership on happiness and the indirect effect of psychological ownership on happiness via work engagement.

5.6 LIMITATIONS OF THE STUDY

Various limitations were identified in this study. The research design was cross-sectional and therefore limited the possibility of determining the causality of relationships. The population was taken from one organisation in the professional services industry and therefore it does not necessarily represent all organisations in the same industry. The study did not include tests for the mediation effects of psychological ownership on happiness such as the direct effect of psychological ownership on happiness and the indirect effect of psychological ownership on happiness via work engagement.

5.7 CONCLUSION FROM LITERATURE AND EMPIRICAL RESULTS

The objective of this study was to investigate if a positive relationship existed between psychological ownership, work engagement and happiness, and whether psychological ownership has an effect on the engagement of employees and consequently their happiness. From the literature it was found that psychological ownership as a construct is defined by criteria that set it apart from other constructs, for example commitment. It has strong value in that it produces positive outcomes, such as retention and increased performance, and influences and enables other positive psychology constructs, such as work engagement and happiness. The literature review provides empirical evidence showing that psychological ownership is an authentic construct and cannot be misconstrued because of concept redundancy as “old wine in a new bottle”. The study proved this by showing that psychological ownership is an enabler of work engagement, which influences happiness, and how the positive strong correlation between psychological ownership and engagement yields common outcomes such as satisfaction, responsibility, autonomy and commitment.

The results from the study and literature review confirm that work engagement correlates positively with happiness. The two latent variables of happiness, namely satisfaction with life and well-being, play a key role in ensuring happiness as shown

by the positive correlation that happiness has with them. Engagement also has a significant correlation with satisfaction with life and well-being and this relationship is important because work engagement influences happiness. It is because engagement influences happiness that employers should ensure that employees remain engaged. Literature shows that work engagement cannot occur naturally and requires specific drivers to bring about engagement. Without these drivers, job demands can affect employees physically, mentally and emotionally. Besides the positive outcomes happy employees have on organisations, the importance of having happy employees can be seen from a positive psychological perspective. Happiness is a positive psychological construct and literature shows that positive psychology is relevant in the workplace as it will lead to an improved understanding of what drives and motivates employees to thrive and accomplish their full potential at work. These positive emotions and traits are likely to contribute substantially to explanations of employee commitment, job satisfaction and overall happiness at work.

There are many consequences of happiness for both the employee and the organisation; thus it is important that organisations use various methods to foster organisational happiness. The outcomes of organisational happiness are a positive state of mind, engagement, satisfaction, freedom, knowledge, productivity, performance, commitment, retention and autonomy. Autonomy plays a crucial role as a common denominator among psychological ownership, work engagement and happiness. With psychological ownership, autonomy is a dimension of the construct and forms part of the promotion-orientation forms of psychological ownership. With work engagement, autonomy is a key job resource ensuring that engagement is maintained. Finally, as mentioned previously, happiness leads to employees feeling a greater sense of autonomy in their duties.

To sum up the findings of the research study, it can be concluded that the literature review and results from the statistical analyses confirm the objective of the study. It therefore can be surmised that psychological ownership has a positive effect on work engagement and consequently on happiness.

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ANNEXURE A

QUESTIONNAIRE