

**ENGAGEMENT AND MEANINGFULNESS AT WORK: THE MODERATING
ROLES OF LIFE SATISFACTION AND GENDER**

by

Jillian Carolyn Williamson

MINOR DISSERTATION

Submitted in the fulfilment of the requirements of the degree

MAGISTER COMMERCII

in

INDUSTRIAL PSYCHOLOGY

in the



at the

UNIVERSITY OF JOHANNESBURG



Supervisor: Doctor Madelyn Geldenhuys

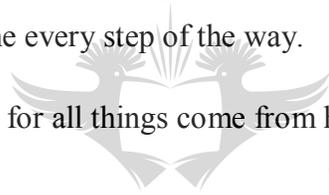
November 2011

Acknowledgement:

I would like to express my sincere gratitude to the following people:

- Dr. Madelyn Geldenhuys, my supervisor, for all the guidance and support she offered to make this project possible. Her kindness, dedication and continuous belief in me will always be appreciated. I continually joked that I started with one supervisor and ended up with two, I wish her all the best for the upcoming birth of her baby girl.
- The participating organisations' management and staff for the willingness to give of their time and effort to assist in the collection of my data.
- My friends, who have been understanding and continued to love and support me even though they have not seen much of me lately.
- Mark Dabbs, my boyfriend, whom kept me inspired and motivated throughout the year.
- Claire Simon, without whom this journey through Master's would have been a lot harder.
- My parents, Ian and Carolyn Williamson, who have stood by me, encouraged me and believed in me every step of the way.

My heavenly Father, for all things come from him.



UNIVERSITY
OF
JOHANNESBURG

ABSTRACT

Orientation: Scientific knowledge relating to the field of positive psychology within the South African workplace is required.

Purpose: The objectives of this study were (1) to investigate the relationships between work engagement, psychological meaningfulness, life satisfaction and gender and (2) to test whether life satisfaction and gender had a moderating effect on the amount of psychological meaningfulness and engagement put forth by employees at work.

Motivation: Although research on life satisfaction is abundant within the field of psychology, research within the work environment is limited. Furthermore, research is needed within South Africa to promote well-being of employees.

Method: Survey designs were used to capture a sample from various South African organisations ($n = 800$). The Satisfaction with Life Scale, the Work Engagement Scale and the Psychological Meaningfulness Scale were administered.

Results: Firstly, life satisfaction, work engagement and psychological meaningfulness were significantly correlated. Secondly, psychological meaningfulness was a significant predictor of work engagement. Thirdly, life satisfaction significantly moderated psychological meaningfulness on work engagement. Fourthly, gender significantly moderated psychological meaningfulness on work engagement. Lastly, psychological meaningfulness and work engagement were significant predictors of life satisfaction.

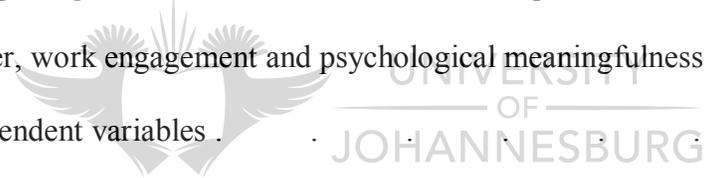
Contribution: This research created an understanding of employee wellness at work through the combination of employee's personal and work lives. Future research could focus on identifying what behaviours promote such constructs to enhance individual and organisational success.

Keywords: Psychological meaningfulness, life satisfaction, work engagement, gender, work-related well-being, happiness.

Table of contents	Page
Acknowledgement	i
Affidavit	ii
Abstract	iii
CHAPTER 1: INTRODUCTION	1
1.1. Introduction	1
1.2. Background and problem statement	1
1.3. The objective of the study	4
1.4. Conclusion	5
CHAPTER 2: LITERATURE STUDY	6
2.1. Introduction	6
2.2. Life satisfaction	6
2.3. Work engagement	10
2.4. Psychological meaningfulness	14
2.5. Gender, life satisfaction, work engagement and psychological meaningfulness	17
2.6. Conclusion	19
CHAPTER 3: RESEARCH DESIGN	21
3.1. Introduction	21
3.2. Research design	21
3.3. Research method	22
3.3.1. Sampling procedure and research participants	22
3.3.2. Measuring instruments	24
3.3.2.1. Biographical questionnaire	24
3.3.2.2. Satisfaction with Life Scale	24
3.3.2.3. Work Engagement Scale	25
3.3.2.4. Psychological Meaningfulness Scale	25
3.3.3. Research procedure	26
3.3.4. Statistical analysis	26

3.4. Conclusion	29
CHAPTER 4: RESULTS	30
4.1. Introduction	30
4.2. Results	31
4.2.1. Relationships between psychological meaningfulness, work engagement and life satisfaction	31
4.2.2. Multiple regression analyses of psychological meaningfulness, work engagement, life satisfaction and gender.	33
4.3. Conclusion	39
CHAPTER 5: DISCUSSION	40
5.1. Introduction	40
5.2. The relationships between life satisfaction, work engagement, psychological meaningfulness and gender	40
5.3. Conclusion	46
CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS	47
6.1. Introduction	47
6.2. Summary and conclusion.	47
6.3. Limitations	48
6.4. Recommendations	49
6.5. Contribution	50
6.6. Conclusion	50
References	52

List of tables	Page
Table 1: Characteristics of participants($n = 800$)	23
Table 2: Descriptive statistics and correlation coefficients of psychological meaningfulness, work engagement and life satisfaction	31
Table 3: Multiple regression of work engagement as the dependent variable and psychological meaningfulness and life satisfaction as independent variables	33
Table 4: Multiple regression of work engagement as the dependent variable and psychological meaningfulness and gender as the independent variables	36
Table 5: Multiple regression of life satisfaction as the dependent variable and gender, work engagement and psychological meaningfulness as the independent variables	38



List of figures	Page
Figure 1: Conceptual model of the effect that psychological meaningfulness has on work engagement, with the moderating factor of life satisfaction .	28
Figure 2: Conceptual model of the effect that psychological meaningfulness has on work engagement, with the moderating factor of gender .	28
Figure 3: Graphic illustration of the moderating effect of life satisfaction on psychological meaningfulness (main effect variable) and work engagement (dependent variable)	34
Figure 4: Graphic illustration of the moderating effect of gender on psychological meaningfulness (main effect variable) and work engagement (dependent variable)	37



CHAPTER 1: INTRODUCTION

1.1. Introduction

Since the beginning of this century, an increasing amount of attention has been devoted to what is described as *positive psychology*: the scientific study of human strength and potential as well as optimal functioning and happiness (Seligman, 2003; Seligman & Csikszentmihalyi, 2000). This study will focus on the positive effects of life satisfaction on meaning and engagement within the workplace by investigating such constructs in relation to overall life satisfaction and happiness. Due to the fact that positive psychology is fast becoming a growing subject within twenty-first century organisations, chapter 1 discusses the advantages, for both individuals and organisations, of introducing such positive psychological states into the workplace. The chapter briefly highlights research that has been conducted in relation to this study and furthermore draws attention to the problem that underpins the objective of this research.

1.2. Background and problem statement

From a theoretical perspective, positive psychology is defined by Seligman and Csikszentmihalyi (2000) as the science of positive subjective experiences, such as well-being, contentment, life satisfaction, happiness, hope, flow, optimism and resilience. The purpose of positive psychology is focused on enhancing and strengthening the positive as opposed to mending and correcting the negative (Seligman, 2003). Additionally, the core of positive psychology is centred on the notion of change, positive thinking as well as optimal experience.

Topics that are fundamentally associated with the core of positive psychology's optimal experiences, such as work engagement, job satisfaction and organisational commitment have

been extensively studied (Rothmann & Rothmann, 2010; Van Zyl, Deacon, & Rothmann, 2010). It is thus clear that positive psychology has become prominent within the workplace. Due to the fact that business needs are often driven by intense, global competition as well as additional demands, such as work-life conflict and family responsibilities placed on employees within the twenty-first century (Barkhuizen & Rothmann, 2008; Rothmann & Rothmann, 2010; Salmela-Aro & Nurmi, 2004; Warr, 2005), it only seems appropriate to continue to focus on positive, fulfilling and encouraging elements of human behaviour at work.

The knowledge that the achievement of life satisfaction leads to numerous benefits and advantages for individuals (Bakker, 2009) is a key aspect to consider in workplace behaviour. Briefly derived, life satisfaction or orientation to happiness, as it is often referred to, is an ultimate state of being (Seligman, 2003). As suggested by Schueller and Seligman (2010), individuals are able to achieve this state by establishing a balance amongst their experiences of pleasure, engagement and meaning. According to Lyubomirsky, King, and Diener (2005), happier people are healthier, more successful and are more inclined to be engaged and to find meaning in both a personal and work-related capacity. Individuals who are engaged and find meaning within their work tasks are generally described as highly energised by their work, passionate with regards to their work as well as committed to their work (Lyubomirsky et al., 2005). Based on the above, it can be deduced that topics such as work engagement and psychological meaningfulness have become important concepts for individuals and organisations to consider (May, Gilson, & Harter, 2004; Schaufeli & Bakker, 2004).

Work engagement is believed to harness organisational members' selves to their work role by which they employ and express themselves physically, cognitively and emotionally during role performance (Kahn, 1990). According to Cameron, Dutton, and Quinn (2003), this

type of engagement at work is important in order to ensure that employees participate in goal-directed behaviour as well as find meaning within the work that they do. In addition, psychological meaningfulness is considered to be a benefit that refers to the return on investment an individual receives with regards to his or her physical, cognitive and emotional contributions (Van Zyl et al., 2010). Meaningfulness occurs when individuals feel useful, valuable and that their contributions are making a difference (Kahn, 1990).

There are a number of studies incorporating the components of life satisfaction, work engagement and psychological meaningfulness which have respectively been conducted (cf. Lightsey & Boyraz, 2011; Park, Peterson, & Ruch, 2009; Peterson, Park, & Seligman, 2005; Peterson, Ruch, Beerman, Park, & Seligman, 2007; Rojas, 2006; Schueller & Seligman, 2010; Şimşek, 2009). The problem, however, is that the majority of these studies have not yet been applied to work and personal contexts simultaneously. From a theoretical perspective, psychological meaningfulness has been examined as having an effect on work outcomes and work engagement (Kahn, 1990; Olivier & Rothmann, 2007). However, a lack of research indicating the effect of life satisfaction on work constructs such as psychological meaningfulness and work engagement is limited. Therefore, it is important to consider the impact that overall life satisfaction can have and contribute to experiences in the workplace. Another important aspect that most of these studies have not yet focused on is the differences that occur between males and females in relation to such components.

Although it is estimated that "...individuals spend more than a third of their lives engaged in work-related activities" (Van Zyl et al., 2010, p. 1), it seems imperative to investigate the levels of satisfaction within their personal lives that could possibly enhance or hinder the amount of psychological meaningfulness and engagement experienced at work. Notwithstanding the fact

that these components are important in their own right, it has also been suggested that gender plays a role with regards to work-life balance (Burke & El-Kot, 2009), satisfaction and engagement within the workplace (Schaufeli & Bakker, 2003). Therefore, it is imperative to conduct such studies within a working environment while incorporating extraneous influences such as life satisfaction and gender.

Moreover, the majority of positive psychological studies have been conducted on an international front, thus there is a need for research on positive psychology to be conducted within a South African workplace context. The increasing interest in the field of positive psychology has also become a trend within South African organisations (Van Zyl et al., 2010), however, as a country we may lack the scientific knowledge required to fully understand the benefits of positive psychology within the workplace. Ultimately, positive psychology and the constructs associated with it are considered to be important elements for both individuals and organisations (Geldenhuis, 2009; Lyubomirsky et al., 2005), therefore the collection of scientific data within a South African context is vital.

1.3. The objective of the study

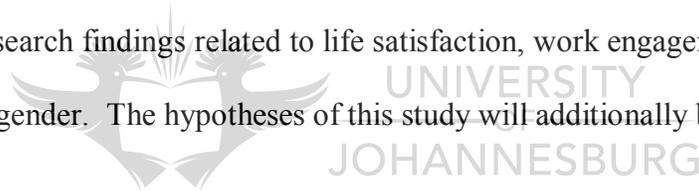
The objective of this study is to determine the link between engagement and psychological meaningfulness experienced by employees at work, while understanding the possible moderating roles that life satisfaction and gender can have on these experiences. Specific to this research is “...the study and application of positively orientated human strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p. 59).

Furthermore, an important intention of this study is to analyse how an individual’s life satisfaction and gender moderates the relationship between the amount of engagement and

meaningfulness experienced at work. Elaborating on a study conducted by Money, Hillenbrand, and da Cámara (2008), this research will additionally attempt to lead the way for future research, as it will highlight the importance of utilising positive approaches to enhance employee happiness and performance within organisations.

1.4. Conclusion

Chapter 1 introduced the background of this study as well as drew attention to the two central aims of this research. (1) To investigate the relationships between work engagement, psychological meaningfulness, life satisfaction and gender. (2) To test whether life satisfaction and gender have a moderating effect on the amount of engagement and psychological meaningfulness put forth by employees at work. The next section, chapter 2, will integrate the results of existing research findings related to life satisfaction, work engagement, psychological meaningfulness and gender. The hypotheses of this study will additionally be presented within the next section.



CHAPTER 2: LITERATURE STUDY

2.1. Introduction

This literature study discusses the existing research findings relative to the constructs of life satisfaction, work engagement, psychological meaningfulness and gender. Each of the above constructs is defined and discussed separately in terms of previous studies conducted. The purpose of this section is to integrate the results of existing research findings and to present the hypotheses of this study.

2.2. Life satisfaction

Life satisfaction is a subjective feeling of happiness and contentment with life (Medley, 1976). The life satisfaction construct has become one of the oldest and most persistently studied indicators of psychological well-being and happiness amongst adults (Lewis & Borders, 1995). As a result psychologists and societies alike have become interested and fascinated with the good life and how it can be achieved (Guignon, 1999). According to Le Blanc, de Jonge, de Rijk, and Schaufeli (2001), individual's general life satisfaction can be influenced and altered by personal as well as work-related factors.

Life satisfaction is defined by Rice (1984) as the degree to which the experiences of an individual's life satisfies both physiological and psychological needs and wants. This is believed to be attained when an individual's fulfilment of his or her goals and projects provide meaning, growth, direction and purpose to his or her life or when an individual's self-imposed cognitive assessments of his or her aspirations are in line with his or her actual achievements (Şimşek, 2009; Veenhoven, 1984). Moreover, life satisfaction can be defined as individual's judgements, thoughts and feelings concerning the overall quality of their life (Şimşek, 2009) as well as the

sense that individuals have when their life is good, meaningful and worth living (Seligman, 2002).

According to Biddle (1979), optimal experiences can occur in several domains of an individual's life, for example, when an individual takes on the role of a friend, spouse, parent or employee. Peterson et al. (2005) have identified that these optimal experiences are the essence to the attainment of life satisfaction. Furthermore, just as there are considered to be various domains of life which contribute to an individual's happiness or life satisfaction (Biddle, 1979), there are also believed to be various ways in which individuals can become happy or satisfied (Guignon, 1999; Seligman, 2002).

One route to happiness lies in the premise of hedonism, maximising pleasure and minimising pain (Peterson et al., 2007). In this pathway to happiness individuals are required to increase their levels of pleasure while simultaneously decreasing their levels of pain. It is believed that experiencing frequent increased levels of pleasure is related to long-term aspects of well-being (Schueller & Seligman, 2010). Consequently, the higher an individual's level of well-being, the closer he or she will become to experiencing life satisfaction and happiness (Leung, Cheung, & Liu, 2011).

According to Schueller and Seligman (2010), a second way in which individuals can become happy is through achieving meaning and purpose in various domains of their life. While meaning allows individuals to transcend, either through the promotion of social relationships or connecting with a higher power, purpose permits individuals to feel as though their life has value and what they do on a daily basis is part of a greater cause (Park et al., 2009). Peterson et al. (2007) suggest that individuals are able to achieve this meaning and purpose by being true to

their inner selves. This entails being able to identify their virtues, cultivate them and live in accordance with them (Peterson et al., 2007).

The last route to happiness entails individuals becoming completely engaged in what they do (Park et al., 2009). In order to experience life satisfaction, individuals are required to be passionate and enthusiastic about their daily tasks, both in their work and personal capacities. According to Csikszentmihalyi (1990), during engaging activities individuals experience an optimal state of balance or flow between skill and challenge. In this state individuals become completely focused and at the same time their sense of self is lost (Peterson et al., 2007). With reference to Peterson et al. (2007), joy is not immediately present during the activity itself; however, the aftermath of the flow experience is considered to be highly and intrinsically enjoyable.

Although these three routes or paths to a better life are primarily associated with happiness, Park et al. (2009) conducted a study which indicated that these three measures to happiness are empirically distinguishable yet positively associated with life satisfaction. However, as Cunningham (2006) stated, leading a satisfied life does not necessarily mean that individuals need to be happy all the time, it is more about individuals being able to recognise and commit to aspects that are more than just aimed at the pursuit of happiness (Cunningham, 2006). The happiest or most satisfied individuals are those who continuously direct their attention to articulating a balance between their experiences of pleasure, engagement and meaningfulness (Peterson et al., 2007; Schueller & Seligman, 2010).

Although there may be limited knowledge regarding the relationships between life satisfaction, work engagement, psychological meaningfulness and gender required specifically for this study, there have been studies that have demonstrated a link between life satisfaction and

job performance. Jones (2006) found that the relationship between job satisfaction and job performance was not as strong as would be expected and thus added life satisfaction to the predictor model of job performance. It was found that life satisfaction significantly increased the ability to predict job performance. This study is relevant to the current research in that it advocates that job performance and other work-related variables alike should not only be measured within a narrow work context. Extraneous variables, such as the influence of life satisfaction and gender, should also be taken into account when measuring aspects that involve human behaviour.

Demerouti, Bakker, Nachreiner, and Schaufeli (2000) reported on a model involving life satisfaction and burnout amongst nurses. Results confirmed the strong effects of job demands and job resources on exhaustion and disengagement respectively, and the mediating role of burnout between working conditions and life satisfaction. The research uncovered some of the antecedents and consequences of burnout amongst nurses. Additionally, it was shown that the development of burnout, or non-existence of work engagement, plays a central and mediating role in the relationship between job resources as well as life satisfaction.

Other recent studies incorporating life satisfaction have been conducted (cf. Demerouti et al., 2000; Rojas, 2006). These studies have investigated the nature of the relationship between life satisfaction and satisfaction in the domains of life. According to Demerouti et al. (2000), as work accounts for a large amount of time occupied by an individual, there is evidence that work has a substantial influence on an individual's self-concept and self-esteem. Thus work, as a relatively important domain of life, is assumed to have significant effects on an individual's overall life satisfaction. Work is the source of income that assists individuals in achieving their needs and wants while additionally supporting the various other life roles that they may take on.

Furthermore, Linn, Yager, Cope, and Leak (1986) reported that individuals who are satisfied with their life experience significantly less conflict between their work and personal lives, fewer job stressors and significantly greater work satisfaction. Conversely, work-related feelings can also spill over into general life (Demerouti et al., 2000). Therefore, it has previously been suggested that the relationship between work factors and general life satisfaction is bi-directional (Linn et al., 1986). According to Kahn (1990), it is expected that employees who are satisfied with their life will be more likely to have an understanding of their preferred self. Such employees are generally happier, more driven and more goal-orientated (Cameron et al., 2003), therefore becoming more engaged in the work tasks that they perform (Kahn, 1990).

2.3. Work engagement

According to Simpson (2009), in recent decades, engagement at work has emerged as a potentially important employee performance and organisational management topic. A growing body of evidence supports the relationship between employee engagement at work and the effectiveness of organisational outcomes (Harter, Schmidt, & Hayes, 2002; Schaufeli & Bakker, 2004). Work engagement is considered to be a construct within the field of positive organisational behaviour (Bakker, 2009) that enhances the performance-related outcomes of both individuals and organisations respectively (Geldenhuys, 2009; Harter et al., 2002). Moreover, May et al. (2004) as well as Buys and Rothmann (2010), state that there are practical reasons as well as humanistic reasons that should encourage managers of twenty-first century organisations to be concerned with work engagement.

Work engagement was thus recognised, in this study, as the "...harnessing of organisational members' selves to their work roles" (Kahn, 1990, p. 694). According to Kahn (1990) and Simpson (2009), in engagement, individuals are known to employ and express

themselves physically, cognitively and emotionally while performing their work tasks.

Therefore, when engaged, an employee is understood to utilise varying degrees of their selves to become physically involved in their tasks, cognitively vigilant of their work, and emotionally connected to others when performing their work-related roles (Barkhuizen & Rothmann, 2006; Buys & Rothmann, 2010; Kahn, 1990; Schaufeli & Bakker, 2004).

However, since Kahn's (1990) conceptualisation of work engagement, two different yet related schools of thought have emerged concerning the construct (Bakker, Schaufeli, Leiter, & Taris, 2008). Maslach and Leiter (1997) form part of the first school of thought and have defined work engagement as a construct that is considered to be the antipode to burnout. Therefore, Maslach and Leiter (1997) observe work engagement to consist of energy, involvement and professional efficacy, the direct opposites of the three burnout dimensions. Alternatively, for the second school of thought, work engagement is defined as "...a positive, fulfilling, work-related state of mind, most commonly characterised by vigour, dedication and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002 p. 74). This research was based on the premise of the second school of thought which considers work engagement to be a unique, distinct and positive construct in its own right and separate from that of burnout (Schaufeli et al., 2002).

However, according to Barkhuizen and Rothmann (2006), regardless of the definition utilised, it is clear that the specificities of engagement lie in the combination of three dimensions. Firstly, the physical component of engagement, otherwise known as vigour, refers to the high levels of energy and mental resilience required by individuals to perform their work (Geldenhuis, 2009; Salanova, Agut, & Peiro, 2005; Schaufeli et al., 2002). According to Chughtai and Buckley (2008), higher levels of vigour suggest an individual's increased readiness

to devote effort within their work by not becoming easily fatigued and developing the tendency to remain resolute in the face of task difficulty or failure.

Secondly, dedication is identified as the emotional component of work engagement. This dimension is often characterised as „putting one’s heart into the job“ (Geldenhuys, 2009). According to Chughtai and Buckley (2008), dedication additionally refers to an individual’s strong sense of identification with his or her work and encompasses feelings of enthusiasm, passion, pride and challenge (Schaufeli et al., 2002). Moreover, dedication indicates individuals’ psychological involvement in their work, combined with a sense of significance (Geldenhuys, 2009; Schaufeli et al., 2002).

Lastly, the cognitive component of work engagement, which is often interchangeable with the absorption dimension, is characterised by individuals who are completely immersed in their work so that time appears to pass so rapidly that they forget everything else that is around them (Chughtai & Buckley, 2008; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli et al., 2002). This dimension of work engagement further refers to the full concentration, satisfaction and engrossment that individuals receive from performing their job-related tasks. Such individuals often find it difficult to disengage or detach themselves from their work (Geldenhuys, 2009; Schaufeli et al., 2002).

Again, while there is little research connecting the precise constructs relevant for this study, many studies incorporating employee engagement at work have been conducted. For example, Kahn’s (1990) study explored the conditions at work in which individuals personally engage or express their personal selves. The article describes the psychological conditions as well as the individual contextual sources that enhance an employee’s likelihood of becoming engaged at work. Kahn (1990) reported that many factors, such as task characteristics, role

characteristics, work interactions, interpersonal relationships, group dynamics, management styles and processes as well as organisational norms help shape individuals' personal engagements at work. However, Kahn (1990) additionally suggested that work engagement involves an individual's ability to keep his or herself within a role, without sacrificing any other roles that he or she may take on outside of the work context. Thus, Kahn (1990) reported that individuals' outside lives have the potential to subtract or to contribute to their work-related role experiences.

Another recent study that is deemed relevant to this particular research was conducted by Rothmann (2010). The objective of the study was to investigate the relationships between job satisfaction, occupational stress, burnout and work engagement as dimensions of work-related well-being. It was reported that work-related well-being entails more than just job satisfaction. This study indicates that other variables, such as occupational stress, burnout and work engagement are also important in ensuring the most conducive work environments for employee well-being.

In order to expand on work engagement in a South African perspective, a study conducted by Rothmann and Rothmann (2010) investigated the factors associated with employee engagement within South Africa. The results showed that two psychological conditions, namely psychological meaningfulness and psychological availability, were positively associated with employee engagement at work. The article is relative to this particular study in that it indicates that employees who are engaged are likely to be so due to the meaning that they have found within their work tasks. However, uncovering whether life satisfaction and gender are perhaps two of the reasons why some employees are more inclined to be engaged and find meaning at work is one of the objectives of this study. Rothmann and Rothmann's (2010) study indicates

that the amount to which employees experience work engagement varies in relation to their psychological perceptions. Thus, with reference to Kahn (1990), employees differ in their levels of engagement according to their perceptions of the benefits or the meaningfulness associated with their work-related roles.

2.4. Psychological meaningfulness

Meaning allows individuals to transcend, either through promoting positive social relationships or connecting to a higher power (Seligman, 2002). Additionally, individuals are observed to find meaning in their lives when they view their lives as purposeful, significant and understandable (Steger, Oishi, & Kashdan, 2009). With reference to Wolf (2010), it is rare that academic philosophers talk about and research meaningfulness in life, the term is more likely to be used by therapists or theologians. However, this construct of meaningfulness is often described to be what individuals lack in their life, what they yearn for and what they seek to find (Wolf, 2010). Researchers have often suggested that it is important for individuals to find meaning in life, as meaningfulness is a determinant of psychological well-being (Frankl, 1997).

In accordance with Wolf (2010), there are two distinct views that suggest how meaningfulness can be achieved within an individual's life. Firstly, the fulfilment view is based on the premise that a meaningful life is one in which individuals live pursuing their passions. This view suggests that individuals find purpose and meaning when they are able to pursue a passion that adds something distinctive and deeply good to their lives. By individuals doing what they love doing and by being involved in activities that they care immensely for, they will be able to cultivate a sense of joy or happiness that they would otherwise be without. Secondly, the bipartite view to a meaningful life indicates that the best sort of life is one that involves or contributes to an aspect that is larger than the individual himself. This view indicates that

individuals, who are committed to living a life that involves something that is more important than themselves, will be able to positively connect to the meaning of their existence.

As work is a place where individuals spend more than a third of their lives (Van Zyl et al., 2010), Cameron et al. (2003) consider work to be an important context in which individuals are able to find this meaning. Psychological meaningfulness has been shown to be an important contributor of work-related outcomes (Olivier & Rothmann, 2007; Van Zyl et al., 2010). Thus, psychological meaningfulness in relation to the work context is defined as the value of a work goal or purpose, judged in relation to an individual's own ideals, values and standards (Hackman & Oldham, 1980; Olivier & Rothmann, 2007; Renn & Vanderberg, 1995). Kahn (1990) additionally defines work-related meaningfulness as "...a feeling that one is receiving a return on investment of one's self in a currency of physical, cognitive and emotional energy" (p. 703-704).

Alternatively, with reference to Thomas and Velthouse (1990), meaningless work may cause individuals to feel apathy and detachment from their work roles. Thus, Seeman (1972) stated that the restoration of meaning in work is a method that is important for fostering individuals' motivation and attachment to their work roles.

In order to achieve meaning at work a number of suggestions have been proposed. Firstly, Mohan and Uys (2006) have found that individuals will experience greater meaning in their work if they have rewarding interpersonal relationships with co-workers. Secondly, Olivier and Rothmann (2007), suggest that individuals tend to experience a sense of meaningfulness when they are treated with respect, dignity and appreciation for their work contributions. Thirdly, psychological meaningfulness at work is believed to be cultivated when individuals feel useful in and valuable to their organisations (Olivier & Rothmann, 2007). Lastly, Van Zyl et al. (2010) stated that psychological meaningfulness reflects a sense of personal connection to work.

Therefore, is it expected that employees who are satisfied with their personal lives and are engaged within their work tasks will be more likely to find psychological meaningfulness; in both a personal and work-related context.

According to Money et al. (2008) if these findings relative to positive psychology hold true in the workplace, then the experience of engaging and meaningful work is likely to result in sustained happiness amongst employees. The benefits of achieving engagement and meaning at work can be justified from an individual as well as an organisational point of view (Geldenhuys, 2009; Lyubomirsky et al., 2005). With reference to Money et al. (2008) engaging and meaningful work can add to an individual's long-term satisfaction as well as contribute to organisational performance outcomes. Despite these findings, there is still believed to be limited research conducted with regard to happiness or life satisfaction, meaning and engagement at work. However, a few studies incorporating the conditions for psychological meaningfulness with work engagement have been conducted.

May et al. (2004), as well as Olivier and Rothmann (2007), have performed similar studies regarding the relationship between psychological meaningfulness and work engagement. Both studies reported that meaningfulness exhibited a significant and positive relationship with engagement and proved to be a strong predictor of employee engagement (May et al., 2004; Olivier & Rothmann, 2007).

Research performed by Kahn (1990) suggests that the more individuals are able to express their values and principles openly at work, the more likely they will be able to experience meaningfulness and engagement in their work tasks. Thus, individuals who believe that a specific work-related goal aligns with their personal values and standards will theoretically find the task more meaningful. Additionally, a study conducted by Van Zyl et al. (2010)

determined the relationship between work-role-fit, meaning and work engagement. Van Zyl et al. (2010) reported similar results to those of Kahn's (1990) as the article suggested that individuals who participated in activities that were congruent with their values and beliefs were more likely to experience psychological meaningfulness.

Furthermore, May et al. (2004) indicated that individuals who find their work meaningful will be more likely to invest their energy and other aspects of themselves within their work-related activities. These individuals will be more likely to be engaged within their work and are therefore more likely to be satisfied with their life's meaning and purpose. Although most studies focus primarily on the determinants of how individuals find meaning at work (cf. Kahn, 1990; May et al., 2004; Mohan & Uys, 2006; Olivier & Rothmann, 2007; Van Zyl et al., 2010), these studies lay the foundation for future research. It can be suggested that other variables such as life satisfaction and gender may have moderating effects on the relationship between psychological meaningfulness and engagement experienced at work.

2.5. Gender, life satisfaction, work engagement and psychological meaningfulness

Generally speaking, gender represents a dimension of diversity that relates to a sizeable portion of the twenty-first century workforce (Burke & El-Kot, 2009). According to Kular, Gatenby, Rees, Soane, and Truss (2008), as it has been recognised that gender differences occur regarding experiences within the workplace, gender can have an impact on how individuals engage and find meaning at work. It has been argued that psychological differences impact on how different individuals engage in their roles at work (Kahn, 1990; May et al., 2004). Furthermore, individual differences may play a vital role in the potential level of experiences in work engagement (Kular et al., 2008; Robinson, 2006).

There are few published studies regarding gender differences exclusively in the experiences within life satisfaction, work engagement and psychological meaningfulness. The proceeding section therefore highlights studies in which the influences of gender on relevant constructs were reported.

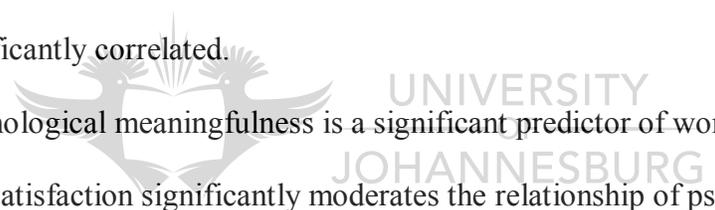
According to Brown and Duan (2007), the research that has been conducted on gender differences in the experiences of pleasure, engagement and meaning have yielded significant, yet mixed results. Evidence for this can be observed in the following studies. Johnson (2004) as well as Kular et al. (2008) reported that women tend to find more fulfilment in their work and are more engaged in their work than men. Similarly Wood, Rhodes, and Whelan (1989) found that women compared to men reported greater happiness and life satisfaction. However, Rothbard (1999) reported that men experience more enrichment from their work to home environments, while females experience a sense of depletion in adapting from their work to home life. Haring, Stock, and Okun (1984) additionally found men to be slightly happier than women.

Schaufeli and Bakker (2003) investigated the differences between men and women in terms of work engagement. The research concluded that men scored significantly higher than women in terms of the dedication and absorption components of work engagement, while no gender differences in levels of vigour seemed to exist. Additionally, Judge and Watanabe (1993) researched the impact of demographic factors as well as workplace factors that may influence life satisfaction. It was concluded that women reported seemingly higher levels of life satisfaction than men.

Despite the many studies that have reported differences in the experiences of men and women at work, various alternate studies have shown few significant differences regarding gender. Firstly, Burke and El-Kot (2009) stated that gender differences in work experiences as

well as satisfaction tend to be fewer. More specifically, the study found that, while women reported more obstacles to career advancement than men, women were generally as satisfied with their jobs as men. Secondly, Sousa and Lyubomirsky (2001) found that while no gender differences were reported in the rates of life satisfaction, men and women appeared to derive their life satisfaction from different sources. Lastly, Lee, Hwang, Kim, and Daly (2004) stated that the studies concerning life satisfaction and gender are somewhat inconsistent as the majority of these studies have utilised convenience samples on which their results are based.

Based on the problem statement and the literature study, the following five hypotheses were investigated within this research:

- 
- H1: Life satisfaction, work engagement and psychological meaningfulness are significantly correlated.
 - H2: Psychological meaningfulness is a significant predictor of work engagement.
 - H3: Life satisfaction significantly moderates the relationship of psychological meaningfulness on work engagement.
 - H4: Gender significantly moderates the relationship of psychological meaningfulness on work engagement.
 - H5: Gender, work engagement and psychological meaningfulness are significant predictors of life satisfaction.

2.6. Conclusion

The existing research findings relative to the constructs of life satisfaction, work engagement, psychological meaningfulness and gender were discussed in chapter 2. The literature study was used for the purpose of defining and presenting previously found

information relating to the constructs. Based on the problem statement as well as the „gaps“ identified in the literature study various hypotheses were put forth for this research. In the next section, chapter 3, the research design and research method, which includes the sampling procedure and research participants, measuring instruments, research procedure as well as the statistical analysis, utilised for this study will be discussed.



CHAPTER 3: RESEARCH DESIGN

3.1. Introduction

This section, chapter 3, highlights the research design and research method of this particular quantitative study. More specifically, the sampling procedure, research participants, measuring instruments, research procedure as well as the statistical analysis utilised for this study are discussed in detail. Insight into the specific characteristics of participants, including gender, marital status, ethnicity, language and age are provided in tabular form within the proceeding section.

3.2. Research design

This study was conducted by means of quantitative research. According to Gravetter and Forzano (2009) quantitative research is based solely on the measuring of variables in which individual participants obtain scores. The numerical values obtained from such scores are usually subjected to statistical analysis techniques and procedures for summary and interpretation. Thus, the interpretation of this data was done in a quantitative manner to ensure that the conclusions presumed were generated effectively (Spector, 2000).

With reference to Wegner (2007), most of the data utilised in statistical analysis is of a cross-sectional nature. This means that data is gathered from a sample survey conducted at a particular point in time (Wegner, 2007). Therefore, a single, cross-sectional research design was utilised in this study to collect the data and to obtain the specific objectives of this research. Furthermore, this study was of a non-experimental nature as no manipulation of the variables occurred.

3.3. Research method

3.3.1. Sampling procedure and research participants.

A random sample was utilised for this study. The total sample for the study consisted of 800 working adults from various organisations and across multiple industry and occupational sectors within the Gauteng region. The minimum inclusion criteria for participation were that individuals were required to be employed with a particular organisation and were only permitted, by their respective organisation, to complete the questionnaire if they had at least one year's work experience. Furthermore, the participants were required to have an adequate command of the English language in order to complete the required questionnaires efficiently. Table 1 provides an overview of the characteristics of participants included in this study.



The characteristics of participants, in terms of gender, marital status, ethnicity, language and age are reported on in Table 1 below.

Table 1

Characteristics of participants (n = 800)

Item	Characteristics	Frequency	Percentage
Gender	Female	527	65.9
	Male	269	33.6
Marital status	Single/Widow/Widower	201	25.1
	Engaged/In a relationship	130	16.3
	Married	397	49.6
	Divorced	59	7.4
	Separated	7	.9
	Remarried	5	.6
	Ethnicity	Black	208
Coloured		113	14.1
Indian		71	8.9
White		398	49.8
Other		6	.8
Language	Afrikaans	196	24.5
	English	399	49.9
	Sepedi	27	3.4
	Sesotho	30	3.8
	Setswana	45	5.6
	Siswati	1	.1
	Tshivenda	7	.9
	IsiZulu	57	7.1
	IsiNdebele	2	.3
	IsiXhosa	20	2.5
	Xitsonga	4	.5
	Other	11	1.4
Age	18-30 Years	259	32.5
	31-40 Years	227	28.5
	41-50 Years	153	19.1
	51-60 Years	114	14.3
	Older than 60 Years	10	1.3

According to Table 1, the sample included 527 (65.9%) females and 269 (33.6%) males. In terms of marital status, most of the participants (49.6%) were married ($n = 397$), 25.1% were single ($n = 201$) and 16.3% were either engaged or in a relationship. Additionally, the majority of the sample (49.8%) were White ($n = 398$), while 26.0% were African ($n = 208$) and 14.1% were Coloured ($n = 113$). In terms of language, most of the participants (49.9%) were English ($n = 399$), 24.5% were Afrikaans ($n = 196$) while 7.1% spoke IsiZulu ($n = 57$). The sample ranged from 18 to 67 years of age, with the majority of the participants (32.5%) being in the range of 18-30 years of age ($n = 259$).

3.3.2. Measuring instruments.

3.3.2.1. Biographical questionnaire.

A *biographical questionnaire* was developed for the purposes of this study in order to determine the characteristics of the participants included in the sample and to ensure that all variables were controlled for. The questions were concerned with matters such as gender, marital status, ethnicity, language as well as age. According to Schueller and Seligman (2010), demographic questions are vital in influencing the interpretation of the context and background in which the research study is conducted.

3.3.2.2. Satisfaction with Life Scale.

The *Satisfaction with Life Scale* (SWLS) (Diener, Emmons, & Griffin, 1985) is a five item scale that is utilised to measure individual's general satisfaction with their life. The items ask questions such as: "I am satisfied with my life" or "If I could live my life over, I would change almost nothing". For each of the five items, participants were required to select an answer from a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

On completion of the scale, the participant's answers were tallied to provide a total life satisfaction score.

Research compiled on the SWLS has established acceptable psychometric properties. According to Peterson et al. (2005) the SWLS is a highly reliable scale with a Cronbach alpha coefficient of .90. Furthermore, Park et al. (2010) found the SWLS to have a large network of reasonable correlates as well as a Cronbach alpha coefficient of .88.

3.3.2.3. Work Engagement Scale.

The *Work Engagement Scale* (WES) is an assessment instrument, developed by May et al. (2004), used to measure the constructs of work engagement. The WES is based on the three components of Kahn's (1990) conceptualisation of work engagement. For all items of the scale, participants were required to select an answer from a five-point Likert scale ranging from 1 = strongly agree to 5 = strongly disagree. The scale's foundations lie within the three components of work engagement, namely cognitive engagement (Sample item: "Time passes quickly when I perform my job"), emotional engagement (Sample item: "I put my heart into my job") and physical engagement (Sample item: "I take work home to do").

The WES is considered to be a valid and reliable instrument. Olivier and Rothmann (2007) found a Cronbach alpha coefficient of .72 when conducting research within a multicultural petrochemical organisation in South Africa, while Van Zyl et al. (2010) established a Cronbach alpha of .93 when utilising the computerised version of the instrument.

3.3.2.4. Psychological Meaningfulness Scale.

The *Psychological Meaningfulness Scale* (PMS) (Spreitzer, 1995) is used to measure psychological meaningfulness by the averaging of 6 items. For the 6 items, participants were

required to answer according to an „agreement-disagreement“ Likert scale ranging from 1 = totally agree to 5 = totally disagree. The 6 items are designed to measure and assess the degree of meaning that individuals attach to their work-related tasks. “The work I do on the job is very important to me” is an example of the type of sentences that the items consist of. The PMS scale was found by May et al. (2004) to have a Cronbach alpha coefficient of .92.

3.3.3. Research procedure.

An invitation was sent out by means of email communication to various organisations in order to elicit participation. Thereafter, via appropriate contracting with the various volunteer organisations, an electronic self-report survey version of the questionnaire was emailed to participants. This was done through the attachment of a web-link to each email, which provided respondents direct access to the web-based survey application. A covering letter explaining the purpose, significance and emphasising the confidentiality of the research accompanied the questionnaire.

3.3.4. Statistical analysis.

The statistical analysis was carried out using the SPSS programme (SPSS Inc 18, 2010). Descriptive statistics including the mean and standard deviation were utilised in the analysis of the data. Exploratory factor analysis and Cronbach alpha coefficients were used to assess the internal consistency, reliability, validity and the homogeneity of the measuring instruments.

Pearson correlation coefficients, which relate to the field of descriptive statistics, were used to further analyse the data. According to Van Zyl et al. (2010), these Pearson correlation coefficients are computed to specify the relationship between the variables specific to the research study. Pearson correlation coefficients were chosen for this study as the data proved to

be parametric. In relation to significance, the cut-off value was set at a 95 percent confidence interval ($p < .05$), whilst the cut-off value for the practical significance was set at .30 (medium effect) (Cohen, 1992). Furthermore, effect sizes were used to decide on the practical significance of the findings.

Multiple regression analysis was conducted to analyse the data gathered from the surveys. This multiple regression assessed the contribution of the independent variables (psychological meaningfulness, life satisfaction and gender) on the dependent variable (work engagement). Two separate three-step hierarchical multiple regression analyses were conducted with the variables in their continuous form for work engagement as a predictor, psychological meaningfulness as the main effect and life satisfaction and gender as the respective moderators.

For both the multiple hierarchical regression analyses the variables were centred. In the first step, the predictor (psychological meaningfulness) was entered into the regression equation, and the moderator (life satisfaction and gender) in the second step, followed by their interactions in the third step. The interaction term was represented by the product of the two main effects. The results accounted for the suitability of multicollinearity and homoscedasticity during the analysis of the multiple regressions.

From the statistical analysis the following diagrams were considered as conceptual models for this research study:

Figure 1 Conceptual model of the effect that psychological meaningfulness has on work engagement, with the moderating factor of life satisfaction.

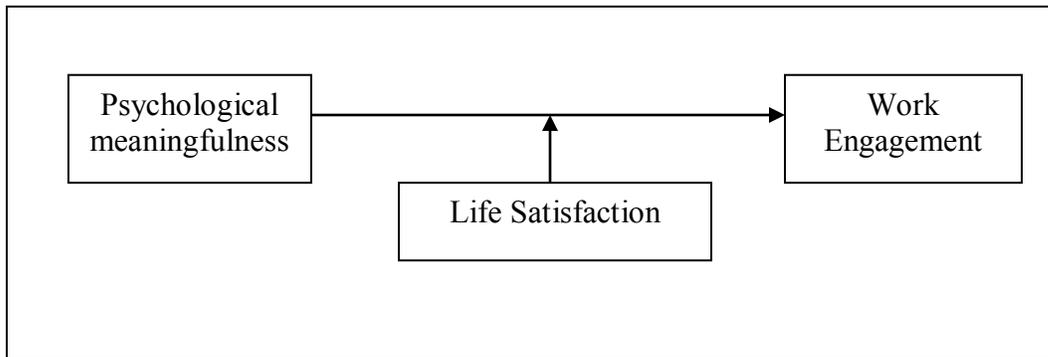
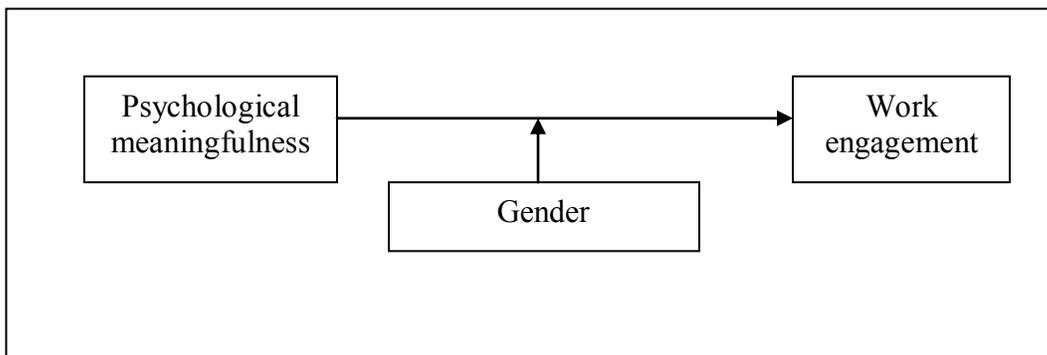


Figure 2 Conceptual model of the effect that psychological meaningfulness has on work engagement, with the moderating factor of gender.



According to Baron and Kenny (1986), a moderator is a qualitative or quantitative variable that has the ability to effect the direction or strength of the relation between an independent and dependent variable. Specifically within a correlation analysis framework, a moderator is a third variable that affects the zero or the correlation between two other variables

(Baron & Kenny, 1986). In this case, life satisfaction and gender are observed as the two moderating variables that affect the strength of the relationship between psychological meaningfulness and work engagement.

Further, a multiple regression analysis was conducted to determine the main effects of the variables on life satisfaction. More specifically, psychological meaningfulness, work engagement and gender were entered into the equation as the independent variables in order to determine their main effects on the dependent variable, life satisfaction.

3.4. Conclusion

This section highlighted the research design and research method which included the sampling procedure and research participants, measuring instruments, research procedure as well as the statistical analysis utilised for this study. The proceeding section, chapter 4, will draw attention to the results found by this study. Each of the steps conducted in the statistical analysis will be visually presented and the results will be reported on.

CHAPTER 4: RESULTS

4.1. Introduction

Each of the steps conducted in the statistical analysis are visually presented in tabular form and the results are reported in chapter 4. The relationships between Psychological Meaningfulness, Work Engagement and Life satisfaction are highlighted. More specifically, the statistical and practical significance of the correlations between constructs as well as the statistical significance of each step in the various multiple regression analyses are discussed in detail. This section assists in the accepting and rejecting of the five hypotheses formulated for this research.



4.2. Results

4.2.1. Relationships between Psychological Meaningfulness, Work Engagement and Life Satisfaction.

The correlation coefficients and descriptive statistics of the relationships between Psychological Meaningfulness, Work Engagement and Life Satisfaction are reported on in Table 2 below.

Table 2

Descriptive statistics and correlation coefficients of Psychological Meaningfulness, Work Engagement and Life Satisfaction.

Item	Mean	SD	α	1	2	3	4	5
1. Psychological Meaningfulness	24.20	4.87	.85	-	-	-	-	-
2. Work Engagement	44.24	4.63	.84	.45**00	-	-	-	-
3. Cognitive Engagement	13.55	2.37	.86	.34**00	.77**000	-	-	-
4. Emotional Engagement	15.32	2.15	.85	.52**000	.79**000	.47**00	-	-
5. Physical Engagement	15.34	1.97	.87	.08*	.56**000	.09*	.19**0	-
6. Life Satisfaction	23.23	6.71	.86	.39**00	.25**0	.23**0	.25**0	.05

*Statistically Significant Correlation $p < .05$

⁰Practically Significant Correlation: $r > .10$ (small effect)

**Statistically Significant Correlation $p < .01$

⁰⁰Practically Significant Correlation: $r > .30$ (medium effect)

⁰⁰⁰Practically Significant Correlation: $r > .50$ (large effect)

Table 2 indicates the means, standard deviations, Cronbach alpha coefficients and Pearson inter-correlation coefficients of Psychological Meaningfulness, Work Engagement,

Cognitive Engagement, Emotional Engagement, Physical Engagement as well as Life Satisfaction. It should be noted that reliable Cronbach alpha coefficients were found for all the variables. Furthermore, Table 2 shows that Psychological Meaningfulness has a practically and statistically significant relationship with Work Engagement ($r = .45; p < .01$; medium effect), Cognitive Engagement ($r = .34; p < .01$; medium effect), Emotional Engagement ($r = .52; p < .01$; large effect) and Life Satisfaction ($r = .39; p < .01$; medium effect) and a statistically significant relationship with Physical Engagement ($r = .08; p < .05$) (Cohen, 1992).

Moreover, Table 2 indicates that Work Engagement has a practically and statistically significant relationship with Cognitive Engagement ($r = .77; p < .01$; large effect), Emotional Engagement ($r = .79; p < .01$; large effect), Physical Engagement ($r = .56; p < .01$; large effect) and Life Satisfaction ($r = .25; p < .01$; small effect). Additionally, Table 2 shows that Cognitive Engagement has a practically and statistically significant relationship with Emotional Engagement ($r = .47; p < .01$; medium effect) and Life Satisfaction ($r = .23; p < .01$; small effect) and a statistically significant relationship with Physical Engagement ($r = .09; p < .05$). Also, Emotional Engagement has a practically and statistically significant relationship with Physical Engagement ($r = .19; p < .01$; small effect) and Life Satisfaction ($r = .25; p < .01$; small effect). Therefore, hypothesis 1 is accepted.

4.2.2. Multiple Regression analyses of Psychological Meaningfulness, Work Engagement, Life Satisfaction and Gender.

In Table 3 below, the main effects of Psychological Meaningfulness on Work Engagement and the moderating effect of Life Satisfaction on these variables are reported.

Table 3

Multiple Regression of Work Engagement as the Dependent variable and Psychological Meaningfulness and Life Satisfaction as the Independent variables.

Model	Unstandardised Coefficient		Standardised Coefficient	<i>t</i>	<i>P</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	<i>SE</i>	<i>Beta</i>						
1						191.39	.45	.21	.21
Constant	3.97	.15		.00	1.00				
Psychological meaningfulness	.43	.03	.45	13.84	.00*				
2						99.11	.46	.21	.01
Constant	4.20	.15		.00	1.00				
Psychological Meaningfulness	.40	.03	.42	11.87	.00*				
Life Satisfaction	.06	.02	.08	2.37	.02*				
3						67.85	.47	.22	.01
Constant	.11	.16		.69	.49				
Psychological Meaningfulness	.38	.04	.40	10.77	.00*				
Life Satisfaction	.05	.03	.08	2.18	.03*				
Psychological Meaningfulness x Life Satisfaction	-.01	.00	-.07	-2.10	.04*				

*Statistically Significant Correlation $p < .05$

The results in Table 3 show that Psychological Meaningfulness [$F_{(737)} = 191.39$; $\beta = .45$; $p < .05$] is a statistically significant predictor of Work Engagement and explained 21% of the variance in Work Engagement in step 1. In the second step, the variance in Work Engagement increased by 1% when Life Satisfaction [$\Delta F_{(736)} = 5.63$; $\beta = .08$; $p < .05$] was added to the equation. Therefore, Life Satisfaction is a statistically significant predictor of Work Engagement. The variance in Work Engagement stayed constant in the third step. The two-way interaction variable [$\Delta F_{(735)} = 4.40$; $\beta = -.07$; $p < .05$] that was entered into step 3, indicated that Life Satisfaction has a statistically significant moderating effect on the relationship between Psychological Meaningfulness and Work Engagement. Based on these results, hypotheses 2 and 3 are accepted.

Figure 3 Graphic illustration of the moderating effect of life satisfaction on psychological meaningfulness (main effect variable) and work engagement (dependent variable).

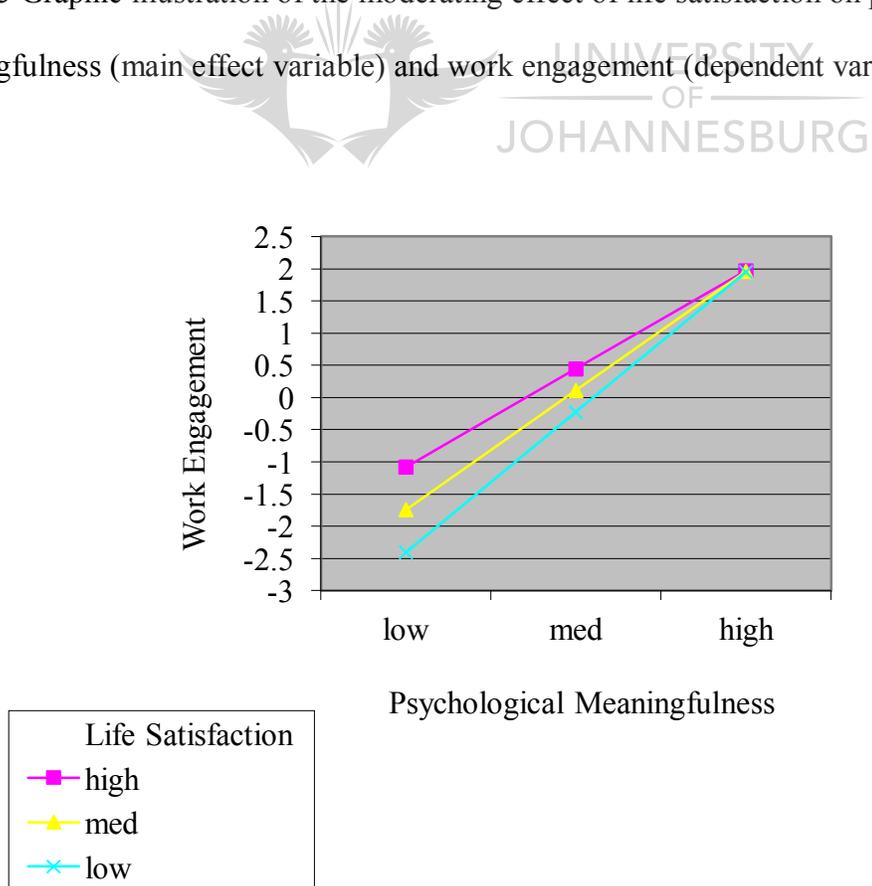


Figure 3 indicates that lower levels of Life Satisfaction result in a stronger relationship between Psychological Meaningfulness and Work Engagement. Irrespective of Psychological Meaningfulness, individuals with higher Life Satisfaction are more inclined to be engaged at work.



Table 4 below shows the moderating effect of Gender on the relationship between Psychological Meaningfulness and Work Engagement.

Table 4

Multiple Regression of Work Engagement as the Dependent variable and Psychological Meaningfulness and Gender as the Independent variables.

Model	Unstandardised Coefficient		Standardised Coefficient <i>Beta</i>	<i>t</i>	<i>P</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	<i>SE</i>							
1						192.43	.45	.21	.21
Constant	3.97	.15		.00	1.00				
Psychological meaningfulness	.43	.03	.45	13.87	.00*				
2						96.94	.46	.21	.00
Constant	.50	.45		1.09	.27				
Psychological Meaningfulness	.43	.03	.46	13.90	.00*				
Gender	-.37	.32	-.04	-1.16	.25				
3						67.86	.47	.22	.01
Constant	.51	.45		1.12	.26				
Psychological Meaningfulness	.19	.09	.20	2.01	.05*				
Gender	-.39	.32	-.04	-1.21	.23				
Psychological Meaningfulness x Gender	.18	.07	.28	2.81	.01*				

*Statistically Significant Correlation $p < .05$

Table 4 shows that in step 1, the total amount of variance explained in Work Engagement by Psychological Meaningfulness [$F_{(741)} = 192.43$; $\beta = .45$; $p < .05$] was 21%. This indicates that Psychological Meaningfulness is a significant predictor of Work Engagement. With the inclusion of Gender [$\Delta F_{(740)} = 1.35$; $\beta = -.04$; $p > .05$] in the second step of the multiple regression analysis, no additional variance in Work Engagement was accounted for. Therefore,

Gender did not show as a significant predictor of Work Engagement. In the third step however, an additional 1% of variance explained in Work Engagement was accumulated. The two-way interaction variable [$\Delta F_{(739)} = 7.89; \beta = .28; p < .05$] indicates that Gender has a statistically significant moderating effect on the relationship between Psychological Meaningfulness and Work Engagement. Therefore, hypothesis 4 is accepted.

Figure 4 Graphic illustration of the moderating effect of gender on psychological meaningfulness (main effect variable) and work engagement (dependent variable).

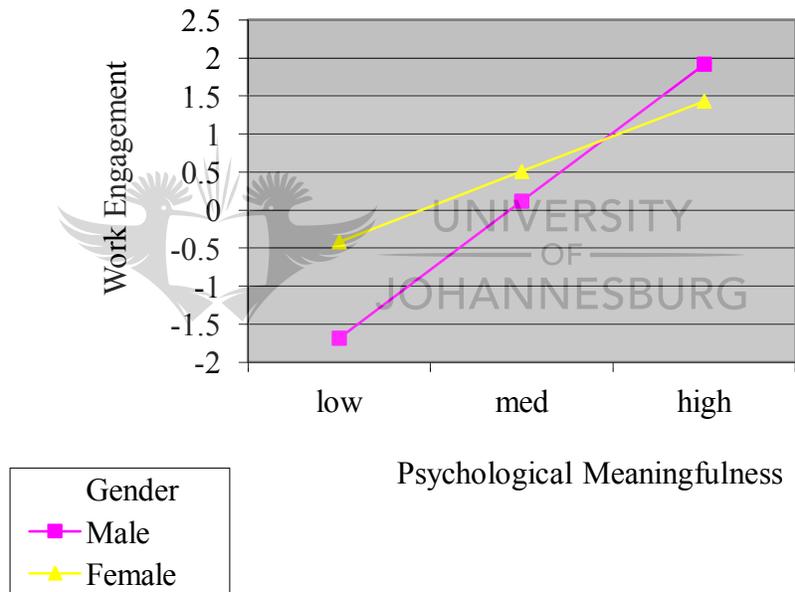


Figure 4 illustrates that males reported a stronger relationship between Psychological Meaningfulness and Work Engagement when compared to females. Irrespective to the extent of Psychological Meaningfulness, Work Engagement levels appear higher for females.

Below, Table 5 indicates the main effects of Gender, Work Engagement and Psychological Meaningfulness on Life Satisfaction.

Table 5

Multiple Regression of Life Satisfaction as the Dependent variable and Gender, Work Engagement and Psychological Meaningfulness as the Independent variables.

Model	Unstandardised Coefficient		Standardised Coefficient	<i>t</i>	<i>P</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	<i>SE</i>	<i>Beta</i>						
1						.98	.04	.00	.00
Constant	.69	.74		.93	.35				
Gender	-.51	.52	-.04	-.99	.32				
2						24.69	.25	.06	.06
Constant	.57	.72		.80	.43				
Gender	-.43	.50	-.03	-.85	.40				
Work Engagement	.36	.05	.25	6.95	.00*				
3						46.77	.40	.16	.10
Constant	.84	.68		1.24	.22				
Gender	-.63	.48	-.04	-1.31	.19				
Work Engagement	.13	.06	.09	2.33	.02*				
Psychological Meaningfulness	.48	.05	.35	9.24	.00*				

*Statistically Significant Correlation $p < .05$

Table 5 shows that Gender [$F_{(745)} = .98; \beta = -.04; p > .05$] did not account for any of the variance explained in Life Satisfaction in step 1. This means that Gender is not a statistically significant predictor of Life Satisfaction. However, after the inclusion of Work Engagement [$\Delta F_{(744)} = 48.34; \beta = .25; p < .05$] in the second step of the multiple regression analysis, 6% of the variance in Life Satisfaction was accounted for. Therefore, Work Engagement can be seen as a significant predictor of Life Satisfaction. In the third step, an additional 10% of variance

explained in Life Satisfaction was accumulated with the addition of Psychological Meaningfulness [$\Delta F_{(743)} = 85.34; \beta = .35; p < .05$] to the equation. This indicates that Psychological Meaningfulness is a statistically significant predictor of Life Satisfaction. Therefore, hypothesis 5 is only partially accepted as Work Engagement and Psychological Meaningfulness are significant predictors of Life Satisfaction while Gender is not a significant predictor of Life Satisfaction.

4.3. Conclusion

Chapter 4 reported the significant results for this research. The relationships between Psychological Meaningfulness, Work Engagement and Life Satisfaction were highlighted. The statistical and practical significance of the correlations between constructs as well as the statistical significance of each step in the various multiple regression analyses were examined. In the proceeding section, chapter 5, the results of this study are discussed and the possibilities as to why certain results were found are explained.

CHAPTER 5: DISCUSSION

5.1. Introduction

The general objectives of this study were to assess the relationships between work engagement, psychological meaningfulness, life satisfaction and gender. Furthermore, the interaction effects of life satisfaction and gender respectively were tested on the dependent and independent variables. Based on the objectives of this study, five hypotheses were formulated. These hypotheses and possible reasons for their findings are discussed in detail in chapter 5.

5.2. The relationships between life satisfaction, work engagement, psychological meaningfulness and gender

Hypothesis 1 stated that life satisfaction, work engagement and psychological meaningfulness were significantly correlated. The confirmation of this hypothesis indicates the following bi-directional relationship. An individual's level of life satisfaction has the predisposition to affect his or her level of psychological meaningfulness and work engagement. This result is therefore in line with previous research suggesting high positive correlations between work engagement and psychological meaningfulness (May et al., 2004; Olivier & Rothmann, 2007). Studies linking satisfaction and positive well-being with individual experiences of work-role fit, pleasure, meaningfulness and engagement are additionally relevant to this result (Schueller & Seligman, 2010; Van Zyl et al., 2010).

The assumptions underlying this hypothesis can be related to the fact that an extraneous variable, such as life satisfaction, can be vital to employee experiences at work. Furthermore, individuals who feel that their work is meaningful and engaging are likely to become happier and more satisfied in their non-work lives. A possible reason for this could be attributed to the fact

that people tend to spend most of their time at work, thus building personalities within their work domain (Meyers, 2007). Inevitably, individuals may find it challenging to separate their work from their non-work lives. Therefore, their non-work experiences, in this case measured through the use of life satisfaction, cannot be detached from, and will thus influence, their meaningful and engaging work experiences. Based on the similar assumption regarding the amount of time individuals spend in their work roles (Meyers, 2007), individuals may attribute meaningful and engaging work as one of the main causes of a satisfactory or unsatisfactory personal life.

According to the second hypothesis, psychological meaningfulness was seen to be a significant predictor of work engagement. The acceptance of this hypothesis suggests that individuals who find their work meaningful, either on a fulfilment or a bipartite basis, as previously discussed, are more likely to be engaged, cognitively, emotionally and physically, within their work tasks. It could additionally be suggested that individuals who find significant purpose within their work tasks will be more likely to show vigour, dedication and become more absorbed in their work activities. This result supports the findings of May et al. (2004), Olivier and Rothmann (2007) and Rothmann and Rothmann (2010) in that psychological meaningfulness was found to be a strong predictor of work engagement.

A few reasons underlying this finding could be attributed to the following possibilities. Firstly, when employees see their roles as opportunities to participate in meaningful tasks, they will most likely be able to express their personal selves in the form of engagement (Kahn, 1990; Snyder & Lopez, 2005). Secondly, if individuals observe the work that they do to be part of a greater cause (cf. Koyuncu, Burke, & Fiksenbaum, 2006), they may be more willing to invest their thoughts, feelings and energy within their work-related activities. Lastly, as with most

aspects of life, the greater an individual cares for an activity, the more likely he or she will become devoted to the result or outcome of the task.

The confirmation of hypothesis 3 indicates that life satisfaction significantly moderates the relationship of psychological meaningfulness on work engagement. While life satisfaction showed to have a statistically significant moderating effect on the relationship, it was indicated in Figure 3, to have a small effect. This result illustrates that the effects of the causal relationship between psychological meaningfulness and work engagement are stronger when life satisfaction is lower. While this result does seem unexpected as the variables included in this study are all positively orientated, the finding is consistent with, yet slightly different, from those found in previous research.

Bakker et al. (2008) suggest that personal resources, such as goal-setting, motivation and life satisfaction are predictors of work engagement. This indicates that it is likely for life satisfaction to influence work engagement via other important work-related outcomes, such as having meaning in one's work. Additionally, Fredrickson (2001) reported that a satisfying life leads to a diverse behavioural repertoire that includes pleasurable, engaging and meaningful activities. As reported by Lightsey and Boyraz (2011), both positive and negative cognitions may influence the well-being, in this case life satisfaction and meaning, of individuals.

A possible explanation for hypothesis 3 could be that individuals do not need to be satisfied with their personal lives in order to experience engagement and meaning at work, nor do they need to find engagement and meaning within their work in order to experience satisfaction within their personal lives. This could also be determined by means of personal cognitive processes (Lightsey and Boyraz, 2011). Therefore, considering thoughts towards certain domains of life could ultimately influence the meaning, engagement and life satisfaction

relationship experienced by individuals (Lightsey & Boyraz, 2011). More specifically, this result may be attributed to the fact that individuals who are extremely satisfied with alternative domains of their lives may not find it necessary to utilise work as their primary source of attaining meaning or engagement.

Alternatively, those individuals who experience high levels of psychological meaningfulness and work engagement may be investing too much of their time within work-related activities. This may result in decreased levels of life satisfaction in domains outside of their working lives. Since individuals spend more than a third of their time engaged at work (Van Zyl et al., 2010; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997), it may be easy for them to become pre-occupied with work permanently. Such individual actions may lead to greater negative consequences as the cycle of investing more energy in their work lives rather than in their personal lives will most likely not attribute to their levels of general life satisfaction.

In addition, Chen, Bliese, and Mathieu (2005) infer that relationships between similar constructs need not be in line across different levels of personal and organisational orientations. As suggested by Fisher (2010), interlinked constructs such as satisfaction, happiness and psychological states of flow are usually measured within different levels, of which happiness or satisfaction is measured on a personal level. This may therefore influence the outcome that life satisfaction can have on topics such as meaningfulness and engagement within the work environment.

Hypothesis 4 suggested that gender significantly moderates the relationship of psychological meaningfulness on work engagement. Thus, it was tested whether psychological meaningfulness increases or decreases the level of work engagement based on the differences exhibited between males and females. Figure 4 showed that the relationship between

psychological meaningfulness and work engagement is stronger for males when compared to females, while females, irrespective of psychological meaningfulness, are more engaged. Thus, the acceptance of this hypothesis indicates that the elements relevant to gender orientation will most likely affect the amount of psychological meaningfulness experienced as well as the amount of engagement displayed by employees at work.

While no recent research examining the exclusive relationship between gender and psychological meaningfulness could be located, a study by Barkhuizen and Rothmann (2006) indicated that gender has frequently been linked to work engagement. As suggested by the results, women are more engaged than males. Contrary to this result, Schaufeli and Bakker (2003) noted that men seem to be more engaged in their jobs than women. It was reported that men frequently scored significantly higher than woman on all three aspects of engagement, namely vigour, dedication and absorption. Irrespective of the fact that females are more engaged, the result indicated that males experience stronger relationships between psychological meaningfulness and work engagement. With regard to experiencing satisfaction, women tend to consider accomplishments, capabilities, past circumstances, ideals as well as requirements for contentment to contribute to the experience of satisfaction (Sousa & Lyubomirsky, 2001). Therefore, it can be assumed that more positive orientations are needed for females to link meaningfulness and engagement.

A possible cause of this result could be aligned with the perceived gender-related roles in terms of family and work-related responsibilities. On the one hand, women are most often observed as the primary caretakers for children and other household chores (Lewis-Enright et al., 2009). As a result, women may experience a higher sense of meaning regarding their general life's purpose. On the other hand, men often have the freedom to spend more time within the

workplace, thus having the liberty to take on more work-related responsibilities and possibly allowing them the opportunity to find more meaning and engagement within a work-related context (cf. Stevenson & Wolfers, 2009). According to Koekemoer and Mostert (2010) however, work and home roles are becoming increasingly „blurred“, hence it is becoming more difficult for both males and females to find a balance between work and home life.

Hypothesis 5, which relates to gender, work engagement and psychological meaningfulness as significant predictors of life satisfaction, was partially confirmed in this study. Work engagement and psychological meaningfulness were found to be significant predictors of life satisfaction; however, gender did not significantly predict the construct. This means that an individual with higher levels of work engagement and psychological meaningfulness will be more likely to experience a higher sense of life satisfaction. Additionally, while gender was shown in hypothesis 4 to significantly moderate the relationship of psychological meaningfulness on work engagement, differing levels of life satisfaction will most probably not be attributed to whether an individual is male or female.

Consistent, yet non-work-related, results were found regarding engagement and meaningfulness as predictors of life satisfaction in studies that discuss pleasure, engagement and meaning as the three routes to happiness (Park et al., 2009; Schueller & Seligman, 2010). Other studies including gender and life satisfaction were also supported by these results. For example, Sousa and Lyubomirsky (2001) reported that men and women had similar rates of global life satisfaction, while Brown and Duan (2007) stated that the vast amounts of research conducted on gender differences and life satisfaction has yielded mixed and inconclusive results. In addition, Burke and El-Kot (2009) found gender similarities, in stress and satisfaction behaviour, to be attributed to the fact that traditional stereotypes are beginning to disappear.

5.3. Conclusion

The general objectives of this study were to assess the relationships between work engagement, psychological meaningfulness, life satisfaction and gender as well as to determine the interaction effects of life satisfaction and gender respectively. Chapter 5 discussed the five hypothesis formulated for this research as well as the possible explanations for the research findings. In the next section, chapter 6, a summary and conclusion to the research as well as the limitations, recommendations and contributions associated with the study will be provided.



CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1. Introduction

Based on the literature study, research design, results and discussion, chapter 6 provides a summary and conclusion to the research. Within the proceeding chapter the limitations as well as the recommendations associated with the study are highlighted. Additionally, the contributions that the findings of this study will offer to organisations as well as to the field of positive industrial psychology will be discussed.

6.2. Summary and Conclusions

According to various authors, work is an important domain in which individuals engage in and find meaning (Cameron et al., 2003; Meyers, 2007; Van Zyl et al., 2010), hence, the importance of positive psychology in the workplace. It is evident that the positive contribution of constructs such as work engagement, psychological meaningfulness and life satisfaction can lead to higher levels of well-being in the workplace (Bakker, 2009; Fisher, 2010; May et al., 2004; Rothmann & Rothmann, 2010). In addition, gender needs to be considered in order to explain the possible causes and effects of well-being indicators within the diverse South African workplace. Research in this regard has proved the importance thereof (cf. Burke & El-Kot, 2009; Schaufeli & Bakker, 2003; Sousa & Lyubomirsky, 2001; Stevenson & Wolfers, 2006).

Accordingly, the results in this study indicated that there is a strong link between levels of work engagement, psychological meaningfulness and life satisfaction. This proves to be in line with previous research (cf. Kahn, 1990; May et al., 2004; Olivier & Rothmann, 2007; Schueller & Seligman, 2010; Van Zyl et al., 2010).

It was further indicated that life satisfaction had a significant interaction effect on the relationship between psychological meaningfulness and work engagement. Interestingly, the results indicated that lower levels of life satisfaction are indicative of a stronger relationship between psychological meaningfulness and work engagement. Furthermore, the study found that gender plays a significant part in the relationship between psychological meaningfulness and work engagement. Females reported higher levels of work engagement compared to males, whereas the relationship between psychological meaningfulness and work engagement proved to be stronger for males. Previous research indicates mixed results (cf. Brown & Duan, 2007; Sousa & Lyubomirsky, 2001).

6.3. Limitations

While this study uncovered certain positive experiences in workplace behaviour and the effect thereof on individuals and organisations, it had some limitations. Firstly, a limitation of this study could have been the manner in which respondents were sampled. All requests for participation were sent through the appropriate organisation's channels to ensure that participants were aware of their organisation's support in the completion of questionnaire. While confidentially letters did accompany the questionnaire, participants might have remained suspicious that responses may have been for organisational use. Thus, participants may have been inclined to respond in a more desirable manner.

A second limitation was the fact that the sample relied on cross-sectional data. The survey design left the casual effect of the responses unaddressed, not making it feasible to prove the causality of the obtained relationships (Rothmann & Rothmann, 2010). Additionally, the moderation effects were tested of life satisfaction in this study. It would be beneficial to refer to mediation in future research.

Thirdly, while one of the main aims of the study was to determine the moderating effect of gender on the relationship between psychological meaningfulness and work engagement, the sample was predominately female. Although a fairly large sample size was obtained to increase the reliability of the study, the unequal number of male and female respondents may have affected the conclusions drawn. Lastly, notwithstanding the fact that the study determined the relationships between psychological meaningfulness, work engagement, life satisfaction and gender, reasons as to why such differences occurred were not profoundly researched.

6.4. Recommendations

Despite these limitations, the following suggestions for future research are made. Firstly, the strategy for obtaining participation should be altered. Participation should be elicited in a manner that ensures respondents that the information collected will be entirely confidential and for research purposes only. Secondly, future research within the field of positive psychology could expand data collection to include repeated and longitudinal measures (Park et al., 2009; Rothmann & Rothmann, 2010; Schueller & Seligman, 2010). While this suggestion will not only offer further advancements to the current literature, it will assist in determining the causal relationships between life satisfaction, psychological meaningfulness, work engagement and gender.

Thirdly, it is suggested that researchers studying the impact of gender ensure that an equal sample of male and female respondents is drawn. Obtaining results from such a sample may increase the generalisability of the study. When dealing with an unequal distribution of demographic variables, it is also suggested that a relaxed criterion be used to determine the interaction effects (Aiken & West, 1991). Furthermore, future research should focus on the impact that positive psychological components have on gender in order to resolve the current

issue of mixed findings. A final recommendation is that future research could identify what behaviours, as well as the reasons that promote such behaviours, increase the amount of life satisfaction, work engagement and psychological meaningfulness experienced. Gaining insight into this could further enhance individual and organisational success.

6.5. Contribution

With reference to Cameron et al. (2003), creating abundance and human well-being are key indicators of success for any organisation. However, historically, positive psychological phenomena have received limited scholarly attention in the majority of organisational studies. Therefore, this research will attempt to contribute to the knowledge base of positive organisational psychology, particularly within a South African context.

This research has potential practical value for organisations in understanding employee wellness at work by identifying the current influential relationship between personal and work life. Understanding the role of life satisfaction and gender on psychological meaningfulness and work engagement, will add to theory in this field as well as broaden the understanding of the constructs. Moreover, it is vital to understand the contribution that employees' personal lives have on their work lives in order to establish positive approaches towards improving productivity in organisations and creating happy lives for employees.

6.6. Conclusion

This chapter covered the summary, conclusions, limitations and recommendations for this study. From the above, this study indicated that there are positive relationships between psychological meaningfulness, work engagement, life satisfaction and gender. Furthermore,

chapter 6 highlighted the fact that the results of this study are valuable in adding to the current body of positive industrial psychology knowledge within a South African perspective.



References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Bakker, A. B. (2009). Building engagement in the workplace. In R. Burke, & C. Cooper. *The peak performing organisation* (pp. 50-72). Oxon, England: Routledge.
- Bakker, A. B., Schaufeli, W. B., Leiter, M., & Taris, T. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress, 22*(3), 187-200. doi: 10.1080/02678370802393649.
- Barkhuizen, N., & Rothmann, S. (2006). Work engagement of academic staff in South African higher education institutions. *Management Dynamics: Journal of the South African Institute for Management Scientists, 15*(1), 38-46.
- Barkhuizen, N., & Rothmann, S. (2008). Burnout of academic staff in South African higher education institutes. *South African Journal of Higher Education, 22*(2), 439-456.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. doi: 0022-3514/68/\$00.75.
- Biddle, B. J. (1979). *Role therapy: Expectations, identities, and behaviours*. New York, NY: Academic press.
- Brown, C., & Duan, C. (2007). Counselling psychologists in academia: Life satisfaction and work and family role commitments. *Counselling Psychology Quarterly, 20*(3), 267-285. doi: 10.1080/09515070701420996.

- Burke, R. J., & El-Kot, G. (2009). Work intensity, work hours, satisfactions, and psychological well-being among Egyptian managers. *Education, Business and Society: Contemporary Middle Eastern Issues*, 2(3), 218-231.
- Buys, C., & Rothmann, S. (2010). Burnout and engagement of reformed church ministers. *SA Journal of Industrial Psychology*, 36(1), 1-11. doi: 10.4102/sajip.v36i1.825.
- Cameron, S., Dutton, J., & Quinn, R. (2003). *Positive organisational scholarship: Foundations of a new discipline*. San Francisco, CA: Berrett-Koehler Publishers.
- Chen, G., Bliese, P. D., & Mathieu, J. E. (2005). Conceptual framework and statistical procedures for delineating and testing multilevel theories of homology. *Organizational Research Methods*, 8, 375–409.
- Chughtai, A. A., & Buckley, F. (2008). Work engagement and its relationship with state and trait trust: A conceptual analysis. *Institute of Behavioural and Applied Management*, 1, 47-71.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. doi: 10.1037/0033-2909.112.1.155.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper & Row.
- Cunningham, I. (2006). The pursuit of happiness: A challenge. *The Journal of Development and Learning Organisations*, 20(6), 4-6. doi: 10.1108/1477280610706130.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2000). A model of burnout and life satisfaction amongst nurses. *Journal of Advanced Nursing*, 32(2), 454-464. doi: 10.1046/j.1365-2648.2000.01496.x.
- Diener, E., Emmons, R. L., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75. doi: 10.1207/s15327752jpa4901_13.

- Fisher, C. D. (2010). Happiness at work. *International Journal of Management Reviews*, 12, 384-412. doi: 10.1111/j.1468-2370.2009.00270.x.
- Frankl, V. E. (1997). *Man's search for ultimate meaning*. New York, NY: Plenum Press.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218-226. doi: 10.1037/0003-066x.56.3.218.
- Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: The case for emotional intensity. *Journal of Personality and Social Psychology*, 61(3), 427-434. doi: 10.1037/0022-3514.61.1.427.
- Geldenhuis, M. (2009). *Exploring daily variations in work engagement*. Unpublished PhD thesis, North West University, Potchestroom.
- Gravetter, F., & Forzano, L. (2009). *Research methods for the behavioural sciences (3rd ed.)*. San Francisco, CA: Wadsworth Cengage Learning.
- Guignon, C. (1999). *The good life*. Indianapolis, IN: Hackett Publishing Company.
- Hackman, J., & Oldham, G. (1980). *Work redesign*. London, England: Addison-Wesley.
- Haring, M. J., Stock, W. A., & Okun, M. A. (1984). A research synthesis of gender and social class as correlates of subjective well-being. *Human Relations*, 37(8), 645-657. doi: 10.1177/001872678403700805.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268-279. doi: 10.1037//0021-9010.87.2.268
- Johnson, G. (2004). Otherwise engaged. *Training*, 41(10), 4.

- Jones, M. D. (2006). Which is a better predictor of job performance: Job satisfaction or life satisfaction? *Institute of Behavioural and Applied Management, 1*, 20-42.
- Judge, T. A., & Watanabe, S. (1993). Another look at the job satisfaction-life satisfaction relationship. *Journal of Applied Psychology, 78*(6), 939-948. doi: 10.1037/0021-9010.78.6.939.
- Kahn, W. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692-724. doi: 10.2307/256287.
- Koekemoer, E., & Mostert, K. (2010a). An exploratory study of the interaction between work and personal life: Experiences of South African employees. *SA Journal of Industrial Psychology, 36*(1), 1-15.
- Koyuncu, M., Burke, R. J., & Fiksenbaum, L. (2006). Work engagement among women managers and professionals in a Turkish bank: Potential antecedents and consequences. *Equal Opportunities International, 25*, 299-310.
- Kular, S., Gatenby, M., Rees, C., Soane, E., & Truss, K. (2008). *Employee engagement: A literature review*. Working Paper, 19. Kingston University, London.
- Le Blanc, P. M., de Jonge, J., de Rijk, A., & Schaufeli, W. B. (2001). Well-being of intensive care nurses (WEBEIC): A job analytic approach. *Journal of Advanced Nursing, 36*(3), 460-470. doi: 10.1046/j.1365-2648.2001.01994.x.
- Lee, H., Hwang, S., Kim, J., & Daly, B. (2004). Predictors of life satisfaction of Korean nurses. *Nursing and Health Care Management and Policy, 632-641*.
- Leung, A. S. M., Cheung, Y. H., & Liu, X. (2011). The relations between life domain satisfaction and subjective well-being. *Journal of Managerial Psychology, 26*(2), 155-169. doi: 10.1108/02683941111102182.

- Lewis, V., & Borders, L. (1995). Life satisfaction of single middle-aged professional women. *Journal of Counselling and Development, 74*, 94-100.
- Lewis-Enright, K., Crafford, A., & Crous, F. (2009). Towards a workplace conducive to the career advancement of women. *SA Journal of Industrial Psychology, 35*(1), 1-9. doi: 10.4102/sajip.v35i1.832.
- Lightsey, O. R., & Boyraz, G. (2011). Do positive thinking and meaning mediate the positive affect: Life satisfaction relationship? *Canadian Journal of Behavioural Sciences, 43*(3), 203-213. doi: 10.1037/a0023150.
- Linn, L. S., Yager, J., Cope, D. W., & Leak, B. (1986). Factors associated with life satisfaction among practicing internists. *Medical Care, 24*(9), 830-837. doi: 10.1097/00005650-198609000-00004.
- Luthans, F. (2002). Positive organisational behaviour: Developing and managing psychological strengths. *Academy of Management Executive, 16*(1), 57-72. doi: 10.5465/AME.2002.6640181.
- Lyubomirsky, S., King, L., & Diener, F. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 80-85. doi: 10.1037/0033-2909.131.6.803.
- Maslach, C., & Leiter, M. P. (1997). *The truth about burnout: How organisations cause personal stress and what to do about it*. San Francisco, CA: Jossey-Bass.
- Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behaviour, 70*(1), 149-171. doi: 10.1016/j.jvb.2006.09.002.

- May, D., Gilson, R., & Harter, L. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Organisational Psychology*, 77(1), 11-37. doi: 10.1348/096317904322915892.
- Medley, M. L. (1976). Satisfaction with life among persons sixty-five years and older. *Journal of Gerontology*, 31, 448-454.
- Meyers, C. (2007). *Industrial psychology*. New York, NY: Garnsey Press.
- Mohan, D. L., & Uys, K. (2006). Towards living with meaning and purpose: Spiritual perspectives of people at work. *SA Journal of Industrial Psychology*, 32(1), 53-59.
- Money, K., Hillenbrand, C., & da Cámara, N. (2008). Putting positive psychology to work in organisations. *The Journal of General Management*, 34(2), 21-36.
- Olivier, A. L., & Rothmann, S. (2007). Antecedents of work engagement in a multinational oil company. *SA Journal of Industrial Psychology*, 33(3), 49-56.
- Park, N., Peterson, C., & Ruch, W. (2009). Orientations to happiness and life satisfaction in twenty-seven nations. *The Journal of Positive Psychology*, 4(4), 273-279. doi: 10.1080/17439760902933690.
- Peterson, C., Park, N., & Seligman, M. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6(1), 25-41. doi: 10.1007/s10902-004-1278-z.
- Peterson, C., Ruch, W., Beerman, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, 2(3), 149-156. doi: 10.1080/17439760701228938.

- Renn, W., & Vandenberg, R. (1995). The critical psychological states: An underrepresented component in job characteristics model research. *Journal of Management*, 21(2), 279-304. doi: 10.1177/014920639502100206.
- Rice, R. W. (1984). Organisational work and the overall quality of life. *Applied Social Psychology Annual*, 5, 155-178.
- Robinson, I. (2006) *Human Resource Management in Organisations*. London, England: CIPD.
- Rojas, M. (2006). Life satisfaction and satisfaction in domains of life: Is it a simple relationship? *Journal of Happiness Studies*, 7(4), 467-497. doi: 10.1007/s10902-006-9009-2.
- Rothbard, N. (1999). *Enriching or depleting? The dynamics of engagement in work and family*. Dissertation Abstracts International US: University Microfilms International, 59 (10-A).
- Rothmann, S. (2010). Job satisfaction, occupational stress, burnout and work engagement as components of work-related well-being. *SA Journal of Industrial Psychology*, 34(3), 11-16.
- Rothmann, S., & Rothmann, S. (2010). Factors associated with employee engagement in South Africa. *SA Journal of Industrial Psychology*, 36(2), 1-12. doi: 10.4102/sajip.v36i2.925.
- Salanova, M., Agut, S., & Peiro, M. (2005). Linking organisational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, 90(6), 1217-1227. doi: 10.1037/0021-9010.90.6.1217.
- Salmela-Aro, K., & Nurmi, J. (2004). Employees' motivational orientation and well-being at work: A person-orientated approach. *Journal of Organisational Change Management*, 17(5), 471-489. doi: 10.1108/09534810410554498.

- Schaufeli, W. B., & Bakker, A. B. (2003). UWES: Utrecht work engagement scale. *The Journal of Occupational Health Psychology Unit*, 1(1), 1-58.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands and job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organisational Behaviour*, 25(3), 293-315. doi: 10.1002/job.248.
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analysis approach. *Journal of Happiness Studies*, 3(1), 71-92. doi: 10.1023/A:1015630930326.
- Schueller, S., & Seligman, M. (2010). Pursuit of pleasure, engagement, and meaning: Relationships to subjective and objective measures of well-being. *The Journal of Positive Psychology*, 5(4), 253-263. doi: 10.1080/17439761003794130.
- Seeman, M. (1972). Alienation and in engagement. In A. Campbell & P. E. Converse (Eds.). *The human meaning of social change* (pp. 467-527). New York, NY: Russell Sage Foundation.
- Seligman, M. (2002). *Authentic happiness*. New York, NY: Free Press.
- Seligman, M. (2003). *Authentic happiness: using the new positive psychology to realise your potential for lasting fulfilment*. London, England: Nicholas Brealey.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14. doi: 10.1037/0003-066x.55.1.5.
- Simpson, M. R. (2009). Engagement at work: A review of the literature. *International Journal of Nursing Studies*, 46(7), 1012-1025. doi: 10.1016/j.ijnurstu.2008.05.003.

- Şimşek, O. (2009). Happiness revisited: Ontological well-being as a theory-based construct of subjective well-being. *Journal of Happiness Studies*, 10(1), 505-522. doi: 10.1007/s10902-008-9105-6.
- Snyder, C. R., & Lopez, S. J. (2005). *Handbook of positive psychology*. New York, NY: Oxford University Press.
- Sousa, L., & Lyubomirsky, S. (2001). Life satisfaction. In J, Worell (Ed.). *Encyclopaedia of women and gender: Sex similarities and differences and the impact of society on gender* (Vol. 2, pp.667-676). San Francisco, CA: Academic Press.
- Spector, P. (2000). *Industrial and organisational psychology (2nd ed)*. New York, NY: John Wiley.
- Spreitzer, G. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442-1465. doi: 10.2307/256865.
- SPSS Inc. (2010). *18.00 for windows*. Chicago, IL: SPSS Inc.
- Steger, M., Oishi, S., & Kashdan, T. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology*, 4(1), 43-52. doi: 10.1080/17439760802303127.
- Stevenson B., & Wolfers, J. (2009). The paradox of declining female happiness. *American Economic Journal: Economic Policy*, 1, 190-225.
- Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An “interpretive” model of intrinsic task motivation. *Academy of Management Review*, 15(4), 666-681. doi: 10.2307/258687.

- Van Zyl, L., Deacon, E., & Rothmann, S. (2010). Towards happiness: Experiences of work-role fit, meaningfulness and work engagement of industrial organisational psychologists in South Africa. *SA Journal of Industrial Psychology*, 36(1), 10-20.
- Veenhoven, R. (1984). *Conditions of happiness*. Dordrecht, Germany: Kluwer Academic.
- Warr, P. (2005). Work, well-being and mental health. In J. Barling, E. Kelloway, & M. Frone, *Handbook of work stress* (pp. 547-573). London, England: Sage Publications.
- Wegner, T. (2007). *Applied business statistics: Method and excel-based applications (2nd ed)*. Cape Town, South Africa: Juta.
- Wolf, S. (2010). *Meaning in life and why it matters*. Princeton, NJ: Princeton University Press.
- Wood, W., Rhodes, N., & Whelan, M. (1989). Sex differences in positive well-being: A consideration of emotional style and marital status. *Psychological Bulletin*, 106(2), 249-264. doi: 10.1037/0033-2909.106.2.249.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers and callings: People's relations to their work. *Journal of Research in Personality*, 31, 21-33.