

The nature of the psychological conditions of work engagement among employees at a university in Durban, South Africa

By

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**Submitted in partial fulfilment of the requirements for the degree of
Master of Social Science in Industrial Psychology in the School of Psychology
University of KwaZulu-Natal (Howard College Campus)**

Durban, South Africa

November 2011

Declaration

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Masters in Social Science (Industrial Psychology) in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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Acknowledgements

I would like to express my gratitude and appreciation to the following people, each of whom played a significant role in my life throughout this challenging year:

- The Lord Almighty, who blessed me with the ability and determination to complete this research.
- My supervisor Professor Joey Buitendach, whose guidance, expertise, and invaluable input I could not have done without.
- My parents, Vitalis and Rita Chikoko for their unconditional love, support, and encouragement.
- My siblings for standing by me and strengthening me throughout the year.
- My fellow classmates, lecturers and administrators of the Industrial Psychology Department 2011, without them this journey would have been difficult.
- Lastly, I would like to thank all the UKZN employees who took their time to participate in this research study. Their time and contribution have enabled me to gather information, which formed the basis of my research.

Abstract

Throughout history the discipline of psychology has been dominated by the study of mental illness as opposed to mental wellness. The introduction of positive psychology has caused a shift from the bias towards mental illness to a focus on psychological wellbeing. The aim of positive psychology is to begin to catalyse a change in the focus of psychology from preoccupation only with repairing the worst in life to building positive qualities. This has resulted in an increase of studies on positive traits and feelings. In light of this, work engagement has become a focus area particularly given that research has shown that disengagement or alienation at the workplace is central to the problem of employees' lack of commitment and motivation. It is therefore important to understand why some employees stay engaged at work even whilst facing challenges with constant change and why others disengage at work.

The objective of this study was to investigate the relationship between three psychological conditions namely psychological meaningfulness, psychological safety, and psychological availability; job characteristics; and work engagement. Furthermore, the study sought to investigate the mediating effects of psychological conditions on the relationship between work engagement and job characteristics. A survey design was used with a questionnaire as a data gathering instrument. The sample consisted of 150 employees of a university. Descriptive statistics (e.g. mean and standard deviations), Pearson product-moment correlation coefficients and multiple regressions were used to analyse the data.

The results showed that psychological meaningfulness was the strongest predictor of work engagement and that it fully mediated the relationship between job characteristics (job enrichment, work role fit and rewarding co-worker relations). Psychological availability did

not predict work engagement but indicated a statistically significant correlation with cognitive, emotional and psychical resources. Limitations in this research are identified and recommendations are made for future research.

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CHAPTER ONE

INTRODUCTION

1.1.Introduction

The chapter begins with the background to the problem of the study followed by the objectives and hypothesis of the study. It also includes a brief overview of the division of chapters and is concluded by a summary.

1.2. Background

Throughout history the discipline of psychology has been dominated by the study of mental illness as opposed to mental wellness (Seligman & Csikszentmihalyi, 2000). In a study done by Meyers (2000), results showed that fourteen more scientific articles were published on negative feelings in psychology as compared to those published on positive feelings. The introduction of positive psychology has caused a shift from the bias towards mental illness to a focus on psychological wellbeing (Seligman & Csikszentmihalyi, 2000). The aim of positive psychology is to begin to catalyse a change in the focus of psychology from preoccupation only with repairing the worst in life to building positive qualities (Seligman & Csikszentmihalyi, 2000). This has led to the increase of studies on positive traits and feelings such as resilience (Strumper, 2003); flow (Salanova, Bakker & Llorens, 2006); happiness and self-fulfilment (Martin, 2008) in the past years. One of the concepts that researchers have gained interest in over the past years is that of work engagement.

Work engagement has become particularly salient over the years given that studies have shown that disengagement or alienation at the workplace is central to the problem of employees' lack of commitment and motivation (Aktouf, 1992). It is therefore important for employers to cultivate engagement among their employees to ensure better performance especially in today's workplace that has changed. The changing world of work has had

dramatic changes in the nature of the psychological contract between employees and employers (Martin, 2008). Employees are expected to give more in terms of time and effort but they receive less in terms of employment security and career advancement (Olivier & Rothmann, 2007). According to Kahn (1990), there are three psychological conditions that can lead to work engagement and these are psychological meaningfulness, psychological safety and psychological availability. He argued that before people engage in their roles they ask themselves three questions 1) how meaningful is it for me to engage in this task? 2) Is it safe to do so? 3) Am I available to do it? Certain job characteristics such as rewarding co-worker relations, supportive supervisory relations, and job enrichment can foster psychological meaningfulness, safety, and availability (Kahn, 1990).

Worker engagement is very important in institutions of higher learning considering that higher education has become important all over the world (Kraak, 2000). In South Africa, education has been one of the key focus areas of the post-apartheid government with the aim of readdressing inequalities caused by the apartheid regime (Coetzee & Rothmann, 2005). At an institutional level this entails the introduction of policies and mechanisms aimed at redress at different levels, as well as huge demands in terms of access to education (Kraak, 2000). This has resulted in structural changes in the higher education system in South Africa which poses various challenges to the management as well as the employees of the institution (Coetzee & Rothmann, 2005).

In 2004 the University of Natal and the University of Durban-Westville merged to form the University of KwaZulu Natal. Due to this merger, new organisational cultures had to be introduced: norms, values and support systems had to be changed; diversity issues and resistance to change also surfaced. Furthermore in December 2010, after a review of the College Model, the UKZN Council accepted to implement a plan for college re-organisation

(Vice Chancellor's Communiqué, 2011). The re-organisation of colleges will see the total number of schools being reduced from 52 to 20 over the coming year. The objective of this reconfiguration is to achieve both structural and functional efficiency but it however poses a lot of challenges to the employees of the university. Issues such as job losses, uncertainty, fear, and resistance to change amongst the employees can be inevitable results of this on-going change. These changes that have taken place at this institution can potentially affect the psychological conditions and work engagement among employees.

Institutions of higher learning are important to South Africa because they help to rebuild and make a better South Africa (Coetzee & Rothmann, 2005); therefore employees of such institutions have an important role to play since they are responsible for producing the outcomes from these institutions. Both academic and support staff are important because they comprise the human capital of the higher learning institutions which contributes to the functioning of the institution (Blaise, 1996). The current changes in higher education institutions and at these specific institutions might have an impact on the work engagement of employees. It is therefore crucial to understand why some employees stay engaged at work, even whilst being challenged with consistent change and job insecurity and why others disengage at work. Research on work engagement at this specific institution therefore seems relevant.

1.3. Objectives

With reference to the background of the study, the general objective of this study is to investigate the relationship between job characteristics, psychological conditions, and work engagement, and to determine the mediating effects of the three psychological conditions of meaningfulness, availability, and safety on work engagement among university employees.

The objectives are listed below.

- To conceptualise work engagement and psychological meaningfulness, psychological safety and psychological availability.
- To establish the relationship between work engagement, psychological conditions and job characteristics amongst university employees.
- To establish the mediating role of psychological conditions on work engagement and job characteristics among university employees.

From the objectives above, the following has been hypothesised:

Hypothesis 1: Job enrichment, rewarding co-worker relations and work role fit will be positively related to psychological meaningfulness.

Hypothesis 2a: Supportive supervisor relations and rewarding co-worker relations will be positively related to psychological safety.

Hypothesis 2b: Adherence to co-worker norms will be negatively related to psychological safety.

Hypothesis 3a: Resources will be positively related to psychological availability at work.

Hypothesis 3b: Self-consciousness and outside activities will be negatively related to psychological availability at work.

Hypothesis 4: Psychological meaningfulness, psychological safety and psychological availability will be positively related to work engagement.

Hypothesis 5: Psychological conditions (meaningfulness, safety, availability) will mediate the relationship between their determinants (job characteristics) and work engagement.

1.4. Structure of the Study

Chapter 1: Introduction

This chapter introduces the foundations of the study and includes the background to the study, the research questions, objectives and hypotheses.

Chapter 2: Literature Review

This chapter comprises definitions of and a review of the research on psychological meaningfulness, psychological safety, and psychological availability, work engagement, and the job characteristics that influence them. It also includes a theoretical framework.

Chapter 3: Research Methodology

This chapter explains the method of research, research design, sampling method, data gathering, and the data analysis method.

Chapter 4: Results

This chapter presents the results of the research in the form of tables.

Chapter 5: Discussion,

This chapter discusses the results of the study within the context of the existing literature.

Chapter 6: Recommendations and conclusion

This chapter includes the suggestions for future research and the conclusions that can be drawn from the present study.

1.4. Summary

This chapter introduced the topic and gave a background to the study. The objectives and hypothesis of the study were clearly stated. The chapter included the structure and chapter division of the study. The next chapter presents a review of the literature on psychological

meaningfulness, psychological availability, psychological safety, and work engagement and a theoretical framework that aims to integrate all the concepts.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to provide an overview of general academic literature on work engagement, psychological conditions (safety, availability and meaningfulness) and job characteristics. The chapter begins by giving a discussion of psychological conditions of meaningfulness, safety and availability and then go on to discuss work engagement and its various definitions from academic literature and also the international and national research on the concept. This chapter ends with a discussion of the theoretical underpinning of the present study and a summary of the chapter.

2.2. Psychological Conditions

Kahn (1990) conducted a study to focus on how people's experience of themselves and their work contexts influenced moments of personal engagement and disengagement. His work suggests that people ask themselves three fundamental questions in each role situation which are 1) How meaningful is it for me to engage in this task? 2) Is it safe to do so? 3) Am I available to do it? This led to the three psychological conditions, meaningfulness, safety and availability. According to Kahn (1990) these psychological conditions are associated with engagement or disengagement at work. Work situations that present more psychological meaningfulness and psychological safety ensure psychological availability and results in more engaged employees.

2.2.1. Psychological Meaningfulness

In organisational research, meaningfulness has been approached with a number of different names and perspectives. In general, the research on meaningfulness has focused on topics such as work values and goals, work involvement, work orientation, work alienation and how

one copes when work is considered meaningless or when one is not able to work (Pratt & Ashforth, 2003). Psychological meaningfulness refers to “a feeling that one is receiving a return on investment of one’s self in a currency of physical, cognitive, or emotional energy” (Kahn, 1990, p.703). Psychological meaningfulness is also defined as “the extent to which an individual believes his or her job is important *vis a vis* the individual’s own value system” (Renn & Vandenberg, 1995, p.282). It involves feeling worthwhile, valued and not taken for granted. It is one among the three enabling conditions for personal engagement in work, the two others being safety and availability.

Lack of meaningfulness in one’s work could result in experiences of being undervalued and feelings of alienation or disengagement at work (Kahn, 1990). Results from the study showed that engagement was connected to higher levels of psychological meaningfulness than disengagement. Kahn (1990) identified three factors that influence psychological meaningfulness which are (1) task characteristics, for example challenge, variety, autonomy and the need for creativity, (2) work role fit, and (3) rewarding co-worker relations that provide dignity, self-appreciation and a sense of worthwhileness. May, Gilson and Harter (2004) use the same dimensions but rename the first one to ‘job enrichment’ to highlight the fact that task characteristics can be enriched in the five core dimension of The Job Characteristics Model (Hackaman & Oldham, 1980) which are skill variety, task identity, task significance, autonomy, and feedback. These can significantly influence the meaningfulness experienced by employees (May, et al., 2004).

Literature has demonstrated that characteristics of one’s job could influence the degree of meaningfulness an employee experienced at work. The presence of job enrichment dimensions mentioned above leads to perceived meaningfulness at work and in turn, it is argued that employees with a need for personal growth and development, as well as

knowledge and skill, will display a range of positive work outcomes including great worker motivation, performance, and satisfaction (Hackman & Oldham, 1996). Research done in the field of job design also show that job enrichment in the five core dimensions of the JCM can significantly influence the meaningfulness one attaches to work (Johns, Xie, & Fang, 1992; May, 2003; Renn & Vandenberg, 1995). It is important to note that the majority of the studies on job design have not examined the relationship between job enrichment and psychological meaningfulness (May et al., 2004). This research proposes that job enrichment will be positively related to psychological meaningfulness.

Psychological meaningfulness is also influenced by a perceived work role fit. There has been a long debate about the relative importance of the person versus the situation in determining behaviour (Renn & Vandenberg, 1995). Several studies have also investigated this relationship between an individual employee and the role that the individual assumes in the organisation (Kristof, 1996). A perceived fit between the individual's self-concept and the work roles in which one is assigned to will lead to an experienced sense of meaningfulness due to the ability of an individual to express his/her own values and beliefs (May et al., 2004). According to Shamir (1991) individuals are not only goal oriented but are also creative and seek to express themselves in their own way. The results from a study done by May (2003) confirm this perspective; he found that work role fit had a significant influence on meaningfulness employees attached to work in a manufacturing environment. Therefore, this research suggests that individuals will experience greater meaning in their roles if the roles allow them to bring out their self-concept. It further suggests that work role fit will be positively related to work engagement.

Individuals will also experience greater meaning in their work if they have positive and rewarding interactions with their co-workers. Literature in organisational behaviour

recognises the relatedness needs which individuals possess (Locke & Taylor, 1990). According to Kahn's (1990) studies at the camp and architectural firm, meaningful interactions promoted dignity, self-appreciation and worthwhileness. Co-worker interactions create a sense of oneness and a stronger sense of social identity (Olivier & Rothmann, 2007). A study done by Kinjerski and Skrypnek (2006) also showed the same results, positive connections among employees and a sense of community facilitates meaningfulness. A lack such interaction amongst co-workers causes meaninglessness which is related to disengagement at work (Kahn, 1990). This research therefore suggests that rewarding co-worker relations will be positively related to psychological meaningfulness.

2.2.2. Psychological Safety

Psychological safety is defined as “feeling able to show and employ oneself without fear of negative consequences to self-image, status or career” (Kahn, 1990, p. 708). People feel safe in environments which they can express themselves without fear of being penalised or victimised. Unsafe conditions exist when situations are ambiguous and unpredictable. This psychological condition has received very little attention in literature, however Kahn's (1990) results suggest that people were personally engaging in situations characterised by psychological safety than they were personally disengaging. The determinants of psychological safety are supervisory relations, co-worker relations and behavioural norms.

The relationship that one has with his supervisor has a big impact on the way one perceives safety at the place of work (May et al., 2004). Supportive, trusting supervisory relationships and not controlling relationships foster employee creativity (Edmondson, 1999). Trustworthy supervisory behaviours are expected to lead to feelings of psychological safety and willingness to invest ones' self at work (Kahn, 1990). Supervisors that are supportive are concerned about their employees' needs, provide positive feedback to them and encourages

employees to voice their opinions whether they are negative or positive (Olivier & Rothmann, 2007). Such supportive actions enhance employee self-determination and interest in work (Deci & Ryan, 1987). According to Edmondson (1999), employees are more likely to feel safe to engage themselves more fully, try out new things of doing things, and to discuss and learn from their mistakes when they are in supportive supervisory relations. Therefore, supervisory relations will be positively related psychological safety.

Supporting and trusting relationships among co-workers should also foster psychological safety (Kahn, 1990). Interpersonal trust can either be cognitive or affective. Cognitive trust meaning the reliability and dependability of others and affective trust is concerned with the emotional relationships between individuals (McAllister, 1995). Individuals who trust each other emotionally are more likely to be concerned about the welfare of one another and invest more in each other's relationship (May et al., 2004). A study done by Kinjerski and Skrypnek (2006) reported that participants felt safe in situations whereby there were positive connections and a sense of community among themselves that enabled the creation of personal relationships and working collaboratively. This research therefore suggests that employees who have supportive interpersonal relationships with co-workers are more likely to have a stronger sense of identity and a sense of belonging and increased psychological safety.

Finally psychological safety is also influenced by co-worker norms. Norms can be described as shared expectations about the general behaviours of system members (Harter, 2001). For the purposes of this study, the focus is on co-worker norms as opposed to organisational norms as they are theorised to influence the actions and behaviours of individual employees the most (Harter, 2001). It is theorised that norms are enforced if (i) they facilitate the survival of the group; (ii) make the behaviours of group members more predictable; (iii) help

the group to avoid uncomfortable interpersonal problems; and (iv) express the central values of the group and clarify the group's identity (McAllister, 1995). Kahn (1990) suggests that such group norms serve as important pillars that booster psychological safety but however can have negative consequences for group members especially when group members are forced to agree with what they do not agree with for the sake of group consensus. According to Kahn (1990), norms provide structural boundaries for appropriate behaviours which foster psychological safety. This research suggests that co-worker norms will be positively related to psychological safety.

2.2.3. Psychological Availability

Psychological availability can be defined as “the sense of having the physical, emotional or psychological resources to personally engage at a particular moment” (Kahn, 1990, p. 714). It is concerned with individuals' readiness to engage considering that they also have other social commitments. The results from Kahn's study showed that people were personally engaging in situations where there are psychologically available and disengaging in situations where they are less available. It is also important to note that burnout is particularly related to job demands whereas engagement is particularly related to job resources (Maslach, Schaufeli & Leiter, 2001). Factors that may influence psychological availability are individual resources, work role insecurities and outside activities.

Individuals bring physical, emotional and cognitive resources to perform their tasks at work. Different jobs have different demands, some jobs are more physically challenging than others. Individuals have different levels of energy, flexibility and strength to meet these physical challenges (Pratt & Ashforth, 2003). Certain jobs can be emotionally demanding, for example in the service sector and this can be overwhelming if one does not have these resources to cope with the demands (Sutton, 1991). The same is true for cognitive resources,

some jobs require more emotional labour for example in the service sector and some jobs require more cognitive information processing that some people are able to handle (May, et al., 2004). To summarise, this research suggests that the presence of emotional, cognitive and physical resources will lead to greater availability and engagement.

According to Kahn (1990), security in one's role at work is influenced by self-consciousness. Individuals who experience a high sense of self consciousness about how other people judge and perceive them at work may become distracted and unable to focus (Olivier & Rothmann, 2007). Furthermore, self-conscious individuals become more focused on the impression they leave on others and are more likely to be distracted (Schlenker, 1980). Finally, activities that one performs outside of the workplace may also influence the psychological availability of an individual. Activities such as membership in outside organisations like schools and volunteer work may influence someone's availability. This is linked to what has been termed resource drain perspective by some authors (Edward & Rothbard, 2000). Outside activities will therefore be negatively related to psychological availability at work. In summary, self-consciousness and outside activities will be negatively related to psychological availability.

The three psychological conditions explored above; meaningfulness, safety and availability; are theorised to influence the degree to which one engages in his or her role at work (Kahn, 1990; May, Gilson & Harter, 2004). This research suggests that psychological meaningfulness, safety, and availability will be positively related to work engagement. If individuals view their work roles are meaningful, they are likely to engage. Psychological safety should also lead to work engagement because it confirms the individual's belief that he/she can voice their opinions without being threatened (Olivier & Rothman, 2007). Psychological availability should also lead to work engagement because individuals are more likely to engage if they believe that they have the cognitive, emotional and psychical

resources necessary to engage. Therefore, the research suggests that all three psychological conditions will be positively related to work engagement. The concept of work engagement is discussed below.

2.3 Work Engagement

Research on burnout stirred most contemporary research on work engagement and this is because burnout is taken as the antithesis of work engagement by some authors (Simpson, 2009). Contrary to burnout employees, engaged employees have a sense of energetic and effective connection with their work (Kahn, 1990). To date there has been four lines of research that have defined work engagement. They are discussed below.

In 1990, Kahn introduced the concept of personal engagement and personal disengagement. Kahn (1990) defines personal engagement and personal disengagement as “the behaviours by which people bring in or leave out their personal selves during work role performances” (p.694). Personal engagement is also additionally described as employing and expressing one’s self physically, cognitively, emotionally and mentally during role performances (Kahn, 1990). An engaged employee is therefore one who is psychically involved, cognitively vigilant and emotionally involved. On the contrary, personal disengagement is defined as “the withdrawal or defending of oneself physically, cognitively or emotionally during their work role performance” (Simpson, 2009, p. 1018). According to Kanfer (1990), Kahn’s concept of engagement is motivational in the sense that it refers to the allocation of personal resources to role performance and also to how intensely and persistently those resources are applied. Kahn’s engagement is measured by a 14 item questionnaire which has also been used by May, Gilson and Harter (2003) and in South Africa by Olivier and Rothmann (2007) The present study adopts this definition offered by Kahn (1990) because it takes into account the

job characteristics and psychological conditions that enable work engagement and of which this study seeks to explore.

Maslach and Leiter (1997) suggested that work engagement is the direct opposite of burnout. Burnout is defined as a psychological syndrome characterised by exhaustion, cynicism and inefficacy, which is experienced as a result of chronic job stressors (Leiter & Maslach, 2004). Work engagement on the other hand is defined as an energetic state of involvement with personally fulfilling activities that enhance one's sense of professional efficacy (Leiter & Maslach, 1998). This definition of engagement contains energy, involvement and efficacy which are the direct opposites of the burnout dimensions of exhaustion, cynicism and inefficacy. They argue that in cases of burnout, energy turns into exhaustion, involvement into cynicism and efficacy into ineffectiveness (Bakker, Schaufeli, Leiter & Taris, 2008). People's psychological relationship with their jobs is therefore placed in a continuum between the negative experience of burnout and the positive experiences of burnout. The significance of such a burnout-engagement continuum is that engagement represents a desired goal for burnout interventions and leads people to consider what factors in the workplace may be targeted to increase energy, involvement and efficacy (Leiter & Maslach, 1998). According to this school of thought engagement is measured by the opposite pattern of score on the three dimensions of the Maslach Burnout Inventory (MBI).

Another definition was proposed by Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002). They argued that burnout and engagement are two distinct concepts that require independent assessment. According to Schaufeli et al. (2002), work engagement can be defined as a positive, fulfilling, work related state of mind that is characterised by vigour, dedication and absorption. It is not a momentary state but rather a more persistent and pervasive state that is not focused on any particular object, individual or behaviour (Simpson,

2009). Vigour is characterised by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even when one is faced with difficulties (Bakker & Leiter, 2010). Dedication refers to being strongly involved in one's work, and experiencing a sense of significance and enthusiasm (Bakker & Leiter, 2010).

The third dimension of work engagement is absorption and is characterised by being fully concentrated and happily immersed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Bakker & Demmerouti, 2008). With this acknowledgement of burnout and engagement being two different constructs, Schaufeli et al. (2002) suggest that employees who experience low burnout might not be experiencing high engagement and similarly employees who are highly engaged may not also be experiencing low levels of burnout. According to Schaufeli et al. (2002) vigour and dedication are the opposite of the burnout dimensions of emotional exhaustion and cynicism respectively. This conceptualisation of work engagement is measured by the Utrecht Work Engagement Scale (UWES), a self-report questionnaire which was first developed by Schaufeli and Bakker (2004).

The final line of research that has considered engagement can be found in the work of Harter, Schmidt and Hayes (2002). They refer to engagement as occurring when individuals are emotionally connected to others and cognitively vigilant and define it as "individual's involvement and satisfaction as well as enthusiasm for work" (Harter et al., 2002, p.269). according to this conceptualisation of work engagement, there are four antecedent elements that are necessary for engagement to occur and these are: 1) clarity of expectations and basic materials, and equipment provided; 2) feelings of contribution to the organisation; 3) feeling a sense of belonging to something beyond oneself, and 4) feeling as though there are

opportunities for progress and growth (Harter et al., 2002). This conceptualisation of work engagement is measured with an instrument called the Gallup Workplace Audit which comprises of twelve items.

Work engagement is a fairly new concept in within the literature (Hallberg & Schaufeli, 2006). According to Hallberg and Schaufeli (2006), for new concepts to be considered as valid contribution to given fields of research, they need to be discriminated against other already existing adjacent constructs. Within the context of the present study, distinctions need to be drawn between work engagement and those constructs to which it is closely related i.e. organisational commitment; flow; and workaholism. Organisational commitment defines an employee's loyalty to the organisations that provides employment (Meyer & Allen, 1997). Meyer and Allen (1997) suggest that organisational commitment is concerned with the relationship between the individual and the organisation while the definitions of engagement outlined above focus on the work performed by the individual in the organisation.

Engagement is also closely related to what has been termed flow by Csikszentmihalyi (1990). The term flow represents a state of optimal experience which results from hard work and meeting challenges head on (Burke, 2010). The difference between flow and engagement is that flow is more complex and refers to a rather short term experience whereas engagement is a persistent state of mind (Storm & Rothmann, 2003). A distinction between work engagement and workaholism has also been identified. Engaged employees work hard (vigour), are involved (dedication) and feel happily engrossed (absorbed) in their work and may seem similar to workaholics but are different in the sense that engaged workers lack the typical compulsive drive possessed by workaholics (Bakker, Schaufeli, Leiter & Taris, 2008).

The topic of work engagement has emerged as a critical driver of organisational success in today's competitive world and research has shown that employee engagement predicts positive organisational outcomes, including productivity, job satisfaction, motivation, commitment, low turnover intention, return on assets, profits and shareholder value (Bakker, Demerouti & Schaufeli, 2003; Harter, Schmidt & Hayes, 2002; Schaufeli & Bakker, 2004). Not only does engagement have the potential to affect the above but it is also a driver of good service delivery, organisation reputation and overall stakeholder value (Kaye & Jordan-Evans, 2003). Thus cultivating work engagement among employees in all types of organisations to ensure better performance has become critical. The importance of work engagement has also been fuelled by the increasing demand for work/life balance and the changing relationship between employers and employees which is driving employers to seek understanding on what employees really need and to seek ways of fulfilling these needs in the workplace whilst retaining talent.

This increased need to cultivate work engagement is embedded within the positive real of psychology (Harter, Schmidt & Hayes, 2002). Positive psychology uses psychological theory, research and intervention techniques to understand the positive, the adaptive, the creative, and the emotionally fulfilling elements of human behaviour (Seligman & Csikszentmihalyi (2000). It is therefore important to investigate work engagement and the psychological conditions of meaningfulness, safety, and availability in a university setting so as to ensure better performance in the high educational sector in South Africa and also to foster work/life balance among university employees. Below is a discussion of what is known about work engagement in similar settings to that of the present study.

2.3.1 Work Engagement in Educational Settings

There are several studies that have investigated work engagement in educational settings (Basikin, 2007). It is salient to discuss these studies important since the present study belongs to the same context. Internationally, Bakker, Hakanen, Demerouti and Xanthopoulou (2007) found that job resources such as supervisory support, appreciation and a supportive organisational climate were important resources that helped a sample of Finnish teachers to cope with demanding interactions with students and led to work engagement. These results are similar to those found by Bakker, Hakanen and Schaufeli (2005) that job characteristics that are supportive will provide conditions for teachers to engage. In the present study the role of resources such as supervisory support are hypothesised to lead to psychological conditions that foster work engagement amongst employees at the university.

Past research in institutions of learning has also shown that the presence of resources, either job or personal, stimulates motivation in the form of work engagement and leads to positive outcomes such as self-efficacy beliefs (Llorens, Schaufeli, Bakker & Salanova, 2007). In South Africa, Coetzee and Rothmann (2005) conducted a study on work engagement amongst employees at a higher educational institution in South Africa to determine differences between the work engagement levels of different language groups, different job categories and employees with different years of service at the institution. Work engagement was measured with the UWES and the design of the study was cross-sectional. The results from the study show that higher levels of the vigour dimension can be observed among indigenous language speaking group as compared to the group in the sample that spoke Afrikaans. Furthermore, vigour was also significantly higher among employees with 0-5 years' experience as compared to those that had 10+ years' experience (Coetzee &

Rothmann, 2005). Lastly, the results showed that administration staff shows significantly higher levels of the vigour dimension than academic staff.

Rothmann and Jordan (2006) also conducted a study amongst academics on selected higher educational institutions to investigate work engagement and the impact of job resources and job demands. Results from this study confirmed that job resources (e.g. growth opportunities, organisational support and advancement) predicted work engagement (vigour and dedication), while job demands impacted positively on dedication when organisational support was low to moderate. Job insecurity was negatively related to dedication and these results are related to what was found in the study by Martin (2008) who found that people who experienced job insecurity were less engaged in their work. In the present study, high levels of self-consciousness and a lack of personal resources are hypothesised to be negatively related to psychological availability at work and work engagement.

Another study in the educational settings was done by Bezuidenhout and Cilliers (2010). This study investigated burnout, work engagement and sense of coherence in female academics in higher education institutions in South Africa. The findings show that female academics in the sample experienced average levels of burnout, the cynicism dimension of burnout is at high levels and work engagement scores were just above average. In this study Bezuidenhout and Cilliers (2010) found that although there was manifestation of burnout, the female academics still experienced work engagement because of the work engagement dimension of vigour. Vigour is characterised by mental resilience and the willingness to invest effort in one's work, even in the face of difficulty (Schaufeli & Bakker, 2001). The female academics therefore put in effort in their work, even though they experience difficulties in the execution of these duties. These difficulties include decreasing resources to get work done and

increasing demands by faculty, students and parents (Bezuidenhout & Cilliers, 2010). The employees in the present study are faced with similar challenges, it is therefore important for this study to investigate how engaged they are.

The studies mentioned above are valuable contribution to the literature on work engagement and to the present study. No studies were reported on the manifestation of the psychological conditions of work engagement amongst employees at a university. There is clearly more research needed in the area. This research aims to extend on what is already known about work engagement and add new knowledge about work engagement and the psychological conditions that lead to it among university employees. The objective therefore is to bridge this gap in existing literature and report specifically on the psychological conditions of work engagement amongst university employees.

2.3.2. Work Engagement and psychological conditions

As mentioned above, work engagement is theorised to be positively related to the psychological conditions of meaningfulness, safety and availability. Several studies have investigated this relationship. Kahn (1990) was the most influential study done on the topic. Kahn's original theoretical model suggests that psychological meaningfulness and safety were positively related to employee engagement (Kahn, 1990). Meaning that people were most likely to engage in situations where their work roles were meaningful to them and where they felt safe. May et al. (2004), conducted a study to investigate the propositions of Kahn (1990). Their results showed that all three psychological conditions displayed significant positive relationships with engagement; meaningfulness displayed the strongest prediction. Rewarding co-worker relations and supportive supervisory relations were positively associated with psychological safety and psychological availability was positively

related to resources and negatively related to participation in outside activities (May et al., 2004).

Using a sample of 218 employees, Vinarski-Peretz and Carmeli, (2011) found that care felt amongst co-workers were positively linked to psychological conditions and psychological conditions were positively related directly to work engagement. These findings also relate to what the present study proposes that rewarding co-worker relations will lead to psychological conditions that enable employees to engage with their work. Psychological conditions are vital to personal engagement in work tasks.

In South Africa, a few studies have looked at the relationship between work engagement and psychological conditions. Olivier and Rothmann (2007) conducted a study in a multinational oil company. The results from the study showed that psychological meaningfulness was the strongest predictor of work engagement. Personal resources had the strongest effect on psychological availability, co-worker relations and co-worker norms predicted psychological safety, and the relationship between resources and work engagement was mediated by psychological availability (Olivier & Rothmann, 2007). Work role fit was positively linked with psychological meaningfulness. In another study by van Zyl, Deacon and Rothmann (2010), a positive relationship was found between psychological meaningfulness and work engagement. The results of these studies confirmed the results of May et al. (2004) and Kahn (1990) that if people experience work as meaningful, they are more likely to engage.

Ras (2006) conducted a study in a chemical industry to explore the three psychological conditions, meaningfulness, safety and availability to be determinants of work engagement. The results confirmed previous studies that showed psychological meaningfulness as the

strongest predictor of work engagement. According to Aktouf (1992), the lack of meaningfulness in one's work may result in alienation or disengagement. The results also showed that psychological meaningfulness had a significant relationship with co-worker relations and psychological availability was significantly related to resources (Ras, 2006). In reviewing the literature on work engagement and psychological conditions, there was no study that investigated this relationship in a university setting. The present study aims to fill this gap in the knowledge of work engagement.

2.4. Theoretical Framework.

The theoretical framework underlying this study is the Self Determination Theory (SDT) proposed by (Deci & Ryan, 1985). It is a theory of personality development and self-motivated behaviour change. Fundamental to this theory is the principle that people have an innate organisational tendency towards growth, integration of the self and the resolution of psychological inconsistency (Ryan & Deci, 2000). SDT proposes that motivation behaviour lies along a continuum ranging from external regulation motivation to autonomous motivation (Ryan & Deci, 2000). Autonomous motivation is proposed to be more stable and enduring, and to have more positive effects on human wellbeing than controlled regulation (Ryan & Deci, 2000). An example of autonomous regulation behaviour is intrinsic motivation and an example for external regulation behaviour is extrinsic motivation. Both autonomous motivation and controlled motivation are intentional, and together they stand in contrast to amotivation, which involves a lack of motivation and intention (Markland, Ryan, Tobin & Rollnick, 2005).

The SDT proposes that behaviours lie along a continuum of relative autonomy which reflects the extent to which a person is fully committed to what they are doing (Gagne & Deci, 2005). At the more controlled end of the continuum lie the behaviours that are motivated by external

regulation, such as punishments and rewards. Such activities are usually not interesting enough to require intrinsic motivation, so their initial enactment depends on the perception between the situation between the behaviour and the desired consequence (Gagne & Deci, 2005). Individuals who are externally regulated are most likely to exert minimal effort and perform poorly since they are not invested in the behaviour. This external regulation is a form of extrinsic motivation and lies at the opposite end of intrinsic motivation on the continuum.

Other types of extrinsic motivation result when a behavioural regulation and the value associated with it have been internalised. Internalisation can be defined as “people taking in values, attitudes, or regulatory structures, such that the external regulation of a behaviour is transformed into an internal regulation and thus no longer requires the presence of an external contingency (thus, I work even when the boss is not watching)” (Gagne & Deci, 2005, p.334). The more behaviour is internalised, the more autonomous the extrinsically motivated behaviour becomes. The theory suggests that internalisation is a broad term that refers to three processes which are introjections, identification and integration. Introjection refers to when a person is motivated not by external controls, but by internalised, self-esteem related contingencies (Markland, Ryan, Tobin & Rollnick, 2005). An introjected individual force themselves to act out behaviours, the feel shame when they fail and are proud of themselves when they succeed. Introjection reflects partial internalisation but is still a hesitant and unstable form of motivation (Ryan & Deci, 2000).

With identification, people feel greater freedom and desire because the behaviour fits their personal identity and goals (Gagne & Deci, 2005). Identification involves an acceptance of the behaviour as being important to the achievement of one’s personal goals; it then provides a strong incentive that overrides the difficulties that come with performing the behaviour.

According to Ryan and Deci (2001) identification is a stable and persistent form of motivation which brings about effort, commitment and positive experiences when individuals are performing behaviours. The most integrated form of extrinsic motivation is integration. When integrated, people have a full sense that the behaviour is an integral part of who they are that it comes from their sense of self and thus is self-determined (Gagne & Deci, 2005). Integration regulation is therefore stable and persistent.

Finally the SDT argues that behaviours that are intrinsically motivated are ones which people find interesting and exciting. According to Ryan and Deci (1985), intrinsic motivation and integration are similar in the sense that behaviour is performed willingly with no sense of coercion but are different in the sense that the motivation in integrated regulation is characterised not by the person being interested in the behaviour but because the behaviour is instrumental to achieving one's personal goals.

The SDT specifies conditions that promote or maintain autonomous forms of motivation and those that undermine autonomy and self-regulation (Ryan & Deci, 2000). The theory suggests three basic psychological needs which are the basis for self-motivation and psychological needs. These are competence, autonomy and relatedness (Ryan & Deci, 2005). Competence is concerned with "the psychological need to experience confidence in one's abilities and the capacity to affect outcomes" (Markland et al., 2005). The second need is the need for autonomy which is concerned with the need to feel that one is in control of their actions and that they are not being controlled. Lastly the need for relatedness involves the need to experience connectedness with others and to have satisfying and supportive social relationships (Deci & Ryan, 2000). These three needs, according to the theory, promote optimal functioning for growth and integration and for personal well-being. On the other hand, an environment that does not satisfy these needs by being over- controlling, over-

challenging or rejecting an individual's basic needs will curtail internalisation and self-motivation (Gagne & Deci, 2005).

In the context of the study, satisfying the psychological needs of autonomy, competence and relatedness at work, leads to individuals experiencing more meaningfulness and safety at work and becoming more available to do their jobs. Experiencing such psychological conditions will lead individuals to experience work engagement. Research on the SDT theory has shown that individuals who are "engaged" in what they are doing also experience greater physical and psychological wellbeing than those that are amotivated (Meyer & Gagne, 2008). Past research on the three basic psychological needs (competence, autonomy and relatedness) that foster intrinsic motivation has shown results that are closely related to those of the literature on the psychological conditions of work engagement. Deci & Ryan (1991) found that competence is facilitated when people are helped to develop clear and practical expectations about their work; they are encouraged to formulate realistically achievable goals and receive positive feedback on their progress. Furthermore, for competence to be motivational, Deci and Ryan (1991) found that it needs to be coupled great perceived competence. Thus a motivationally supportive environment fosters autonomy and competence. This can be linked to the psychological condition of safety from Kahn (1990) research. He found that people will feel safe to engage in situations where they can express themselves, are not controlled and are trusted. Such situations include supportive supervisory relations, supportive co-workers and strong positive behavioural norms (Kahn, 1990; May et al., 2004; Olivier & Rothmann, 2007).

Furthermore research on the three basic psychological needs has shown that work environments that foster satisfaction of the needs will enhance employees intrinsic motivation

and promote full internalisation of extrinsic motivation which will give way to the key work outcomes of effective performance especially on creativity; cognitive flexibility; job satisfaction; positive work related attitudes; organisational citizenship and; psychological adjustment and wellbeing (Gagne & Deci, 2005). Another study by Deci and Ryan (2000) in the United States of America that aimed to assess satisfaction of workers' needs for competence, autonomy and relatedness at work found a positive relationship between the satisfaction of needs and both work engagement and well-being at work.

In summary, the SDT theory posits a self-determination continuum that ranges from motivation which is lack of self-determination, to intrinsic motivation which involves full self-determination. In between the two extremes of the continuum lies the different types of extrinsic motivation which are externalised (most controlled), introjected, identified and integrated (least controlled and close to intrinsic motivation). For self-determination to occur there needs to be an environment that fosters it. The theory therefore postulates that the satisfaction of the basic psychological needs of competence, autonomy and relatedness. In the context of this study, satisfying the basic needs proposed by the theory fosters the psychological conditions of safety, availability and meaningfulness which lead to employees experiencing work engagement.

2.5. The present study

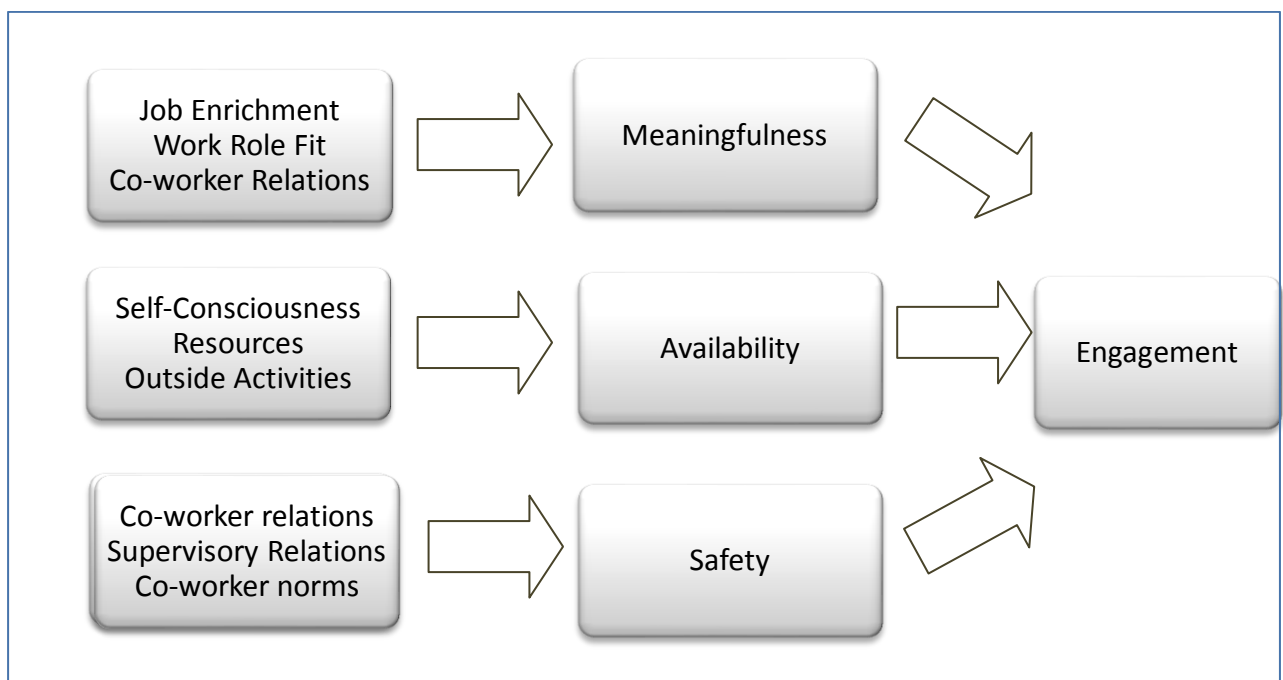
The above literature review provided a theoretical and conceptual background for the present study. The purpose of this research was to investigate job characteristic and psychological conditions that enable work engagement amongst university employees. Previous studies on psychological conditions and work engagement have focused on other areas such as oil companies (Ras, 2007; Olivier & Rothman, 2007). In reviewing the literature, no South

African study that has focused on psychological conditions of work engagement among university employees was found therefore the aim of this paper is to fill that knowledge gap.

Diagram 1 shows the model that will be tested for the purposes of this research study. This model was adapted from May et al. (2004). It shows the relationships the job characteristics that enable psychological conditions which then lead to work engagement.

Diagram 1

Psychological Conditions and Work Engagement (May et al., 2004, p.25)



Note. Adapted from May, Gilson and Harter (2004, p.25). *The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work*

2.6. Summary

The constructs psychological conditions, work engagement and job characteristics were conceptualised in this chapter. Studies that were undertaken by other researchers and possible relationships between these constructs were explored. The first aim of this study which is to establish how psychological conditions and work engagement are conceptualised in the

literature has therefore been achieved. This chapter also provided a model that will be tested in the present study.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter provides an overview of the methodology that was used in this research study. It shall look at (1) research design; (2) participants and sampling; (3) research instruments; and (4) data analysis.

3.2. Research Design

A research design is a framework or method of carrying out a research study (Leedy & Ormrod, 2010). The design of the present study is classified as a non-experimental, cross sectional design because it aims to ascertain the relationship between variables at a particular point in time. It is referred to as non-experimental owing to the fact that there is no control group and there is no manipulation of the independent variable (Leedy & Ormrod, 2010). This approach is flexible, easy to implement and is cost and time efficient. However, this approach does not allow for causal inferences to be made because the measures are administered to a single sample at a particular point in time and no repeat measures are applied.

3.3. Participants and Sampling

Table 1 shows the characteristics of the sample which data was collected from. The demographic statistics collected were age, gender, race, marital status, years worked at the organisation, highest qualification attained and position in the institution. The total population of the sample was 150 (n=150). It was interesting to note that the academic staff constituted 50% of the sample and support staff constituted the other half of the sample. Table 1 shows that the majority of the sample was female (60%) while males constituted 40% of the population.

Table 1

Characteristics of participants

Item	Category	Frequency	%
Gender	Male	60	40
	Female	90	60
Age	24years and younger	20	13.3
	25-35 years	50	33.3
	36-45 years	40	26.7
	46-55 years	27	18.0
	56 years and older	13	8.7
Race	African	69	46.0
	White	29	19.3
	Indian	32	21.3
	Coloured	18	12.0
	Other	2	1.3
Marital Status	Single	64	42.7
	Divorced	12	8.0
	Widowed	7	4.7
	Married	66	44.0
Highest Qualification	Matric Certificate	29	19.3
	Diploma	34	22.7
	Degree	25	16.7
	Postgraduate Degree	62	41.3
Position	Administration	75	50.0
	Junior Lecturer	15	10.0
	Lecturer	24	16.0
	Senior Lecturer	17	11.3
	Associate Professor	11	7.3
	Professor	8	5.3
Years worked at the organisation	Fewer than 5years	65	43.3
	6-10 years	46	30.7
	11-20years	24	16.0
	More than 20 years	15	10.0

Note. *N=150

The majority of the sample was between the ages of 25 and 35 years (33.3%) and 26.7 % of the population was between the ages 36-45 years. Africans constituted the majority of the

population with 46%. Whites constituted 19.3% of the sample, Indians 21.3% and Coloureds 12%. Table 1 also shows that most of the participants were married (44.7%) and a significant number of them are single (42.7%). Most of the participants held a postgraduate degree (41.3%) and most of them held the administration position in the university. Lastly, the majority of the sample has worked for the university for less than five years.

The type of sampling used to select the sample was convenience sampling. Convenience sampling refers to “the collection of information from members of the population who are conveniently available to provide it. Convenience sampling is “quick, convenient and less expensive” (Sekaran, 2003, p. 280). Convenience sampling was used in the sense that, the researcher went around the different campuses looking for individuals who were willing to participate in the study.

3.4. Research Instruments

The quantitative instruments used for the data collection were the Work Engagement Scale, The Psychological Conditions Scale and the Antecedent Scale (May et al., 2004). All the scales use a 5 point agreement-disagreement Likert format with 1=Strongly Disagree and 5=Strongly Agree.

3.4.1. Work engagement scale.

The Work Engagement Scale (May et al., 2004) was used to measure work engagement. The scale contains 13 items developed by May et al. (2004) for their study mentioned previously in this paper. These items are based on the 3 components of Kahn’s (1990) psychological engagement which are cognitive (performing my job is so absorbing that I forget about everything else); emotional (I really put my heart into my job); and physical engagement (I exert a lot of energy performing my job). The WES had the following alpha coefficients from

previous studies, ($\alpha= 0.77$) from Olivier and Rothmann (2007) and ($\alpha=0.93$) from van Zyl, Deacon and Rothman (2010).

3.4.2. Psychological meaningfulness scale

Six items drawn from Spreitzer (1995) were used to measure the degree of meaningfulness which individuals discover from their work. An example of the item is “My job activities are significant to me”. These six items have an alpha coefficient of ($\alpha=0.93$) from May et al. (2004) and ($\alpha=0.90$) from Spreitzer (1995). The job characteristics that influence psychological meaningfulness will be measured with the instruments below.

3.4.2.1. Job enrichment scale

Job enrichment was measured using the Job Diagnostic Survey (Hackman & Oldham, 1980). The JDS uses three items for each of the five job related dimensions which are skill variety (my job provides a lot of variety); task significance (while I am doing my job I get the opportunity to work on many interesting projects); task identity (my job lets me be left on my own to do my own work); autonomy (I am able to act independently of my supervisor in performing my job function); and feedback (I receive feedback from my co-workers). The alpha coefficient is 0.85 (May et al., 2004).

3.4.2.2. Work role fit scale

Work role fit was measured with a scale containing four items developed by May (2003) that measure individuals’ perceived fit with their roles and self-concept. Examples include “My job fits how I see myself” and “I like the identity my job gives me.” Cronbach alpha coefficients of ($\alpha=0.88$) from (Ras, 2006) and ($\alpha=0.87$) from van Zyl et al. (2010).

3.4.2.1. Rewarding co-worker relations scale

Rewarding co-worker relations were measured using a scale containing ten items developed by May (2003). The scale includes items such as “My co-workers value my input”, “I sense a real connection with my co-workers” and “I trust my co-workers.” May et al. (2004) found a coefficient of ($\alpha=0.93$) and Olivier and Rothman (2007) found ($\alpha=0.95$).

3.4.3. Psychological availability scale

Five items that were developed by May et al. (2004) were used to measure the confidence that people have regarding their ability to be cognitively, physically and emotionally available to do their work. Examples of the five statements are “I am confident in my ability to handle competing demands at work” and “I am confident in my ability to think clearly at work”. The alpha coefficient of this scale from previous studies are ($\alpha=0.90$) from Vinarski-Peretz and Carmeli (2011) and ($\alpha= 0.87$) from Ras (2006). The job characteristics that influence psychological availability are measured by the scales below.

3.4.3.1. Self-consciousness scale

Self-consciousness was measured by 3 items from May et al. (2004), these items have an alpha co-efficient of ($\alpha=0.83$) from Olivier and Rothmann (2007). It includes items such as “I worry about what others think of me at work”. The scale measures public self-consciousness not private self-consciousness (May et al., 2004).

3.4.3.2. Resources scale

Resources were measured using 8 items developed by May et al. (2004). This will assess the degree to which individuals possess resources to become psychologically available. These items have an alpha coefficient of ($\alpha=0.91$) (May et al., 2004) and ($\alpha=0.76$) (Olivier & Rothmann, 2007). It includes items such as “I feel mentally sharp at the end of the workday”,

“I feel overwhelmed by the things going on at work” and “I feel like I am at the end of my rope emotionally.

3.4.3.3. Outside activities scale

Involvement in outside activities was measured using a single item “How many hours per week do you participate in organisations other than (the company name) (i.e. other jobs, church, school, girl scouts, volunteering, etc.).

3.4.4. Psychological safety scale

Psychological safety was measured by three items which are based on the work of Kahn (1990). These items are “I am not afraid to be myself at work, “I am afraid to express my opinions at work”, “There is a threatening environment at work”. The alpha coefficient of this scale are ($\alpha=0.29$) from Ras (2006); ($\alpha= 0.74$) from Vinarski-Peretz and Carmeli (2011) and ($\alpha=0.71$) from Olivier & Rothmann (2007).

3.4.4.1. Supportive supervisory relations scale

Supportive supervisory relations were measured by ten items of which the first six were drawn from Oldham and Cummings (1996) and the last four were drawn from Butler (1991) (cited in May, et al., 2004). Some of the items included in the questionnaire include “My supervisor helps me to solve work related problems” and “My supervisor encourages me to develop new skills”. Previous studies showed reliability coefficients of ($\alpha=0.95$) (May et al., 2004) and ($\alpha=0.95$) (Olivier & Rothmann, 2007).

3.4.4.2. Co-worker norm adherence scale

co-worker norms were measure by a three item scale that measures the extent to which individuals follow co-worker norms and do what is expected of them by their fellow co-

workers (May et al., 2004). An example of the items included is “I do what is expected of me by my co-workers”. Vinarski-Peretz and Carmeli (2011) reported an alpha co-efficient of ($\alpha=0.61$).

3.4.5. Demographic Questionnaire

A demographic questionnaire was specially constructed for this research. It included the following; gender, age, race, position held at the University and tenure of work of the employees.

3.5. Ethical Issues

Before data collection could begin, permission was required from the ethics board of the University of KwaZulu Natal. Upon receiving ethical clearance, employees of the university at the two campuses, Edgewood and Howard Campuses were approached with a booklet that contained an informed consent letter and the questionnaire.

The letter served to inform the participants about the aims and purposes of the research. It stated explicitly that participation was strictly on voluntary basis and that no one would be advantaged or disadvantaged due to their participation in the study. Anonymity was guaranteed since participants were not required to provide their names on the questionnaire and were assured that group results and not individual results would be reported on. Confidentiality was also guaranteed as the completed questionnaires would only be available to the researcher and the supervisor only.

3.6. Data Analysis

Statistical analysis was carried out using the SPSS (v.19, 2002) for Windows. A number of descriptive and inferential statistics were used in order to meet the aims and the objectives of this study. Descriptive statistics summarise the general nature of the data obtained and

include the mean, maximum, standard deviation, skewness and the kurtosis (Leedy & Ormrod, 2010). The frequency (number of observations) and percentages were computed for the biological variables and all the scales used to collect data. Additionally the mean and standard deviation were also computed for each item and dimension on all the scales. The reliability of the instruments was determined by means of Cronbach alpha coefficient.

Inferential statistics help the researcher to make decisions about the data for example whether the differences between the two groups in an experiment are large enough to be attributed to the experimental intervention rather than to chance (Leedy & Ormrod, 2010). The inferential statistics computed were Pearson correlations and multiple regression analysis. The Pearson correlation coefficient is also known as the product-moment correlation coefficient. Correlation coefficients are computed for the purpose of determining whether a relationship exists between variables, what the direction of the relationship is and the strength thereof (Leedy & Ormrod, 2010). It is represented by r and falls within the range of -1 to +1 with -1 indicating a perfect negative correlation and +1 indicating a perfect positive correlation. Pearson correlations were computed to establish the relationships between the variables, which are work engagement, psychological conditions job characteristics. The level of statistical significance is set at $p \leq 0,01$. Cut-off points of 0.30 (medium effect) and 0.50 (large effect) was set for the practical significance of correlation coefficients (Cohen, 1988).

Multiple regressions are a statistical technique that allows for the prediction of a score on one variable based on their score on another variable. It allows us to examine how effectively one or more variables allow for the prediction of the value of another variable (Leedeey & Ormond, 2010). Multiple regression analysis was carried out to determine the percentage variance in the dependent variable that is predicted by the independent variables. Mediated

regressions were carried out in order to test hypotheses 5. The mediated regressions approach followed the steps of Baron and Kenny (1986). Their steps require three separate regression equations. The first equation involves regressing the mediator variable on the predictor variables. The second equation involves regressing the criterion variable on the predictor variable. The last equation involves regressing the criterion variable onto the predictor variable and the mediator variable at the same time. According to Baron and Kenny (1986), there are 4 conditions that must be met which are:

- 1) The predictor variable must be significantly related to the mediator variable.
- 2) The predictor variable must be significantly related the criterion variable.
- 3) The mediator variable must be significantly related to the criterion variable.
- 4) The effect of the predictor variable must be less in equation three than in equation two.

A full mediation is achieved when the beta weight for the predictor is significant in equation two but non-significant in equation three when the mediator is controlled for (Baron & Kenny, 1986). Partial mediation is achieved when the predictor variable influences the criterion through the mediator directly and indirectly. According to Baron and Kenny (1986), partial mediation warrants a conclusion of a mediation effect because it is unrealistic to eliminate the relationship between the predictor variable and the criterion variable totally.

3.7. Summary

The purpose of this chapter was to provide a detailed description of the methods that were used to collect data for this research. This chapter discussed the research design, the characteristics of the sample and how they were sampled, research instruments that were used to collect data, and how the data was analysed.

CHAPTER 4

RESULTS

4.1. Introduction

This chapter presents the results that were obtained from the statistical analysis of the data gathered for the research. It contains detailed descriptive statistics of the sample by the use of tables. The reliability of all the scales used is explored and the relationships between the constructs are interpreted through the use of Pearson correlation coefficients and multiple regressions. The chapter concludes with a summary.

Table 2
Descriptive Statistics

Item	Min	Max	Mean	SD	Skewness	Kurtosis	α
1 Work Engagement	23	60	43.43	5.97	-0.675	2.123	0.78
2 Meaningfulness	12	30	25.56	3.84	-0.932	1.291	0.91
3 Availability	16	25	21.77	2.09	0.212	-0.880	0.80
4 Safety	6	14	8.32	1.53	0.848	0.855	0.12
5 Job Enrichment	35	75	56.53	1.53	-0.238	-0.321	0.79
6 Co-worker relations	30	55	43.01	5.55	0.014	-0.140	0.86
7 Work role fit	4	20	15.01	3.59	-0.584	-0.024	0.90
8 Supervisory relations	20	50	5.86	9.69	-1.773	6.880	0.95
9 Resources	12	36	22.47	4.81	0.340	0.028	0.84
10 Co-worker norms	9	15	12.37	1.30	-0.047	0.312	0.42
11 Self-consciousness	3	15	8.88	2.20	-0.151	0.512	0.12
12 Outside Activities	2	5	1.83	1.32	0.005	1.312	-

Min-Minimum; Max-Maximum; SD- Standard Deviation; α - Cronbach Alpha

4.2. Descriptive Statistics

The descriptive statistics and alpha coefficients of the measuring instruments used are reported in Table 2. Table 2 indicates that job enrichment ($m=56.53$; $SD=8.47$) and work engagement ($m=43.43$; $SD=5.97$) reported the highest means. The lowest means were from

the work role fit scale (m=15.01; SD=3.59) and outside activities scale (m1.83; SD=1.32) as shown in Table 2.

The Cronbach alpha coefficients ranged from 0.12 to 0.95. Table 2 shows the alpha coefficients as follows; work engagement (0.78); meaningfulness (0.91); availability (0.80); safety (0.12); job enrichment (0.79); co-worker relations (0.86); work-role fit (0.90); supportive supervisory relations (0.95); resources (0.84); co-worker norms (0.42); self-consciousness (0.12). The Cronbach alpha coefficient of the outside activities scale could not be determined because it contains only one item. An analysis of the alpha coefficients shown in Table 2 indicates that the scales of safety, co-worker norms and self-consciousness do not meet the required alpha coefficient of 0.70 as recommended by Nunnaly and Bernstein (1994). These scales were not included in any further analysis.

Table 3
Product-momentum correlation coefficients

Item	1	2	3	4	5	6	7	8	9
1 Work Engagement	-	-	-	-	-	-	-	-	-
2 Meaningfulness	0.34**+	-	-	-	-	-	-	-	-
3 Availability	0.02	0.36**+	-	-	-	-	-	-	-
4 Job Enrichment	0.24**	0.47**+	0.39**+	-	-	-	-	-	-
5 Co-worker relations	0.09	0.40**+	0.39**+	0.45**+	-	-	-	-	-
6 Work role fit	0.09	0.48**+	0.25**	0.53**++	0.45**	-	-	-	-
7 SupervisoryRelation	0.06	0.15	0.09	0.49**+	0.27**	0.34**+	-	-	-
8 Resources	0.20*	0.15	0.22**	0.17*+	0.09	0.21**	0.01	-	-
9 Outside Activities	-0.01	0.03	0.03	0.09	-0.03	0.07	0.01	0.07	-

Note. ** Statistical significance at $p \leq 0.01$. *Statistical significance at $p \leq 0.05$.
++ Practically significant (large effect < 0.50). + Practically significant (medium effect < 0.30)

Next, the Pearson product moment correlations were calculated to test hypothesis 1 to 4 (refer to page 4). The results are shown in Table 3. However, hypothesis 2 and hypothesis 3a could

not be tested because of the unreliability of the scales of safety, co-worker norms and self-consciousness. Table 3 shows that work engagement was statistically and practically positively correlated to meaningfulness (0.342; $p \leq 0.01$), as well as statistically positively correlated to job enrichment and resources. Furthermore, Table 3 indicates that meaningfulness had statistically and practically positive correlations of medium effect with availability (0.39; $p \leq 0.01$); job enrichment (0.47; $p \leq 0.01$); co-worker relations (0.40; $p \leq 0.01$); and work role fit (0.48; $p \leq 0.01$). Psychological availability was reported a statistically positive correlation with resources (0.22, $p \leq 0.01$). Table 3 shows that outside activities did not have a practical or statistical correlation with psychological availability as hypothesised. Psychological availability however displayed practically and statistically positive correlations with job enrichment (0.39; $p \leq 0.01$) and co-worker relations (0.39; $p \leq 0.01$). Table 3 indicates that job enrichment and work role fit displayed a practically and statistically positive relationship (large effect) (0.53; $p \leq 0.01$) with work role fit and medium effect with co-worker relations (0.45; $p \leq 0.01$) and supportive supervisory relations ($r=0.49$; $p \leq 0.01$). Co-worker relations reported a practically and statistically positive correlation (medium effect) with work role fit (0.45; $p \leq 0.01$) and a statistically positive relationship with supportive supervisory relations (0.27; $p \leq 0.01$) as shown in Table 3. From the results shown in Table 3, it can be concluded that hypothesis 1 and 3a were confirmed while hypothesis 3b was rejected. Hypothesis 4 was partially confirmed because only meaningfulness displayed a positive relationship with work engagement.

4.3. Multiple Regressions

Next a series of multiple regressions were conducted to test hypothesis 5, whether job characteristics predicted work engagement and to test whether psychological meaningfulness and psychological availability mediated the relationship between work engagement and job

characteristics. The steps recommended by Baron and Kenny (1986) as described in section 3.5 were followed in testing hypothesis 5. The results are shown in Tables 4, 5, 6, and 7.

Multiple regression analyses with work engagement as a dependent variable and psychological meaningfulness and psychological availability as dependent variables were conducted respectively. The results are shown in the Table 4.

Table 4
Multiple Regression Analyses with Work Engagement as a Dependent Variable and Psychological Meaningfulness and Psychological Availability as Independent Variables

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²
	B	SE	Beta					
Work Engagement						19.54**	0.34+	0.17
(Constant)	28.87	3.10		9.63	0.00			
Meaningfulness	0.53	0.12	0.34	4.42	0.00			
Work Engagement						0.12	0.30	0.01
(Constant)	41.66	5.12		8.12	0.00			
Availability	0.08	0.23	0.02	0.34	0.12			

Note. ** Statistical significance at $p \leq 0.01$. + Practically significant (medium effect < 0.30)

The results in the Table 4 show that psychological meaningfulness statistically predicted work engagement ($F=19.54$, $p<0.05$, $R^2=0.17$). The standardised regression coefficient was medium ($\beta= 0.34$, $p<0.05$). Psychological availability did not statistically significantly predict work engagement ($F=0.12$, $p<0.05$, $R^2=0.01$). The standardised regression coefficient was not significant ($\beta=0.02$, $p<0.05$). To test whether psychological meaningfulness mediates the relationship between job characteristics and work engagement, the results provide evidence for condition number two as recommended by Baron and Kenny (1986) that the dependent variable should be predicted by the mediator. This condition is however not evidenced for the

second multiple regression therefore it is not possible test if psychological availability mediates the relationship between job characteristics and work engagement.

Table 5

Multiple Regression Analysis with Psychological Meaningfulness as Dependent Variable and Job Characteristics as Independent Variables

Model	Unstandardised Coefficients		Standardised Coefficients	t	p	F	R	R ²
	B	SE	Beta					
Meaningfulness						65.15**	0.55++	0.30
(Constant)	8.70	2.10		4.13	0.00			
Job Characteristics	0.14	0.01	0.55	8.07	0.00			

Note. ** Statistical significance at $p \leq 0.01$. ++ Practically significant (large effect < 0.50).

A multiple regression analysis with psychological meaningfulness as a dependent variable and job characteristics (i.e. job enrichment, work role fit and co-worker relations) as independent variables showed that job characteristics significantly predicted work engagement ($\beta=0.55$, $p < 0.05$) as shown in table 5. These results provide evidence for the first step of Baron and Kenny (1986) that states that the predictor variable must be significantly related to the mediator.

Table 6

Multiple Regression Analysis with Work Engagement as a Dependent Variable and Job Characteristics as Independent Variables

Model	Unstandardised Coefficients		Standardised Coefficients	t	p	F	R	R ²
	B	SE	Beta					
Work Engagement						6.34**	0.20	0.10
(Constant)	33.83	3.84		8.80	0.00			
Job Characteristics	0.84	0.03	0.20	2.51	0.00			

Note. ** Statistical significance at $p \leq 0.01$

A multiple regression analysis with Work Engagement as a dependent variable and job characteristics (job enrichment, work role fit and co-worker relations) was performed and the results are shown in Table 6 above. The results show that job characteristics ($\beta=0, 20$, $p<0.05$) significantly predicted work engagement ($F=6.34$, $p<0.05$). This finding provides evidence for the second condition of baron and Kenny (1986) that states that the predictor must be significantly related to the criterion.

Table 7

Multiple Regression Analysis with Work Engagement as a Dependent Variable and Job Characteristics and Psychological Meaningfulness as Independent Variable

Model	Unstandardised Coefficients		Standardised Coefficients	t	p	F	R	R ²
	B	SE	Beta					
Work Engagement						9.73**	0.34+	0.12
(Constant)	29.36	3.90		7.51	0.00			
Job Characteristics	0.08	0.38	0.02	0.21	0.83			
Meaningfulness	0.51	0.14	0.33	3.55	0.00			

Note. ** Statistical significance at $p\leq 0.01$. + Practically significant (medium effect <0.30)

The last multiple regressions analysis was performed with work engagement as a dependent variable and job characteristics and psychological meaningfulness as independent variables. The results which are shown in Table 7 indicate that when psychological meaningfulness was entered into the equation, job characteristics became insignificant predicting only 2% of the variance in work engagement while psychological meaningfulness predicted 33%. These results provide evidence of condition number four by Baron and Kenny (1986) which state the effect of the predictor must be less in equation 3 than equation. These findings prove that psychological meaningfulness mediates the relationship between job characteristics (job enrichment, work role fit and co-worker relations).

4.4. Summary

The purpose of this chapter was to report the results from the statistical analysis done using SPSS. The chapter reported results of the demographics, reliability tests, mean, Pearson product moment correlation coefficients and multiple regression analysis. The following chapter will discuss the results that were found in the study.

CHAPTER 5

DISCUSSION OF RESULTS

5.1. Introduction

This chapter aims to discuss the results of this study within the context of previous research. Each hypothesis will be discussed and the practical implication for the current research will be suggested. The chapter will end with a summary.

5.2. Discussion of results

It was the objective of this study to determine the relationship between work engagement, psychological conditions and job characteristics; and also to investigate whether psychological conditions mediate the relationship between work engagement and job characteristics among a sample of university employees.

An analysis of the reliability of the scales used in this research revealed that the scales of safety (0.12), self-consciousness (0.12), and co-worker norms (0.42) were unreliable with Cronbach alpha coefficients below the recommended alpha coefficient of 0.70 (Nunnally & Bernstein, 1994). These results are consistent with previous studies. The scales of psychological safety, self-consciousness and co-worker norms were found unreliable in studies by Olivier and Rothmann (2007); Ras (2007); Rothmann and Rothmann (2010). These variables were therefore excluded from the analysis and hypothesis 2 and hypothesis 3b could not be tested.

Pearson product moment correlations were conducted to investigate the relationships between the variables and to test hypothesis one to four. The first hypothesis stated that there would be a positive relation between job enrichment, rewarding co-worker relations, work-role fit, and

psychological meaningfulness. The results from the correlational analysis indicated that hypothesis one was confirmed. Job enrichment, rewarding co-worker relations and work role fit had practically significant correlations with psychological meaningfulness. The relationship between these job characteristics and work engagement is discussed below.

Employees, who experienced job enrichment, as measured by the five dimensions (skill variety, task significance, task identity, autonomy, and feedback) by Hackman and Oldham (1980), will find their work meaningful and will display a range of positive work outcomes including motivation, performance and satisfaction (Johns, Xie, & Fang, 1992; Renn & Vandenberg, 1995). The findings of the present study are consistent with those of May et al. (2004), who also found a positive correlation between job enrichment and meaningfulness. The findings also confirm the results from Kahn (1990) study that show that characteristics of one's job could influence the degree of meaningfulness that one experiences at work.

The relationship between meaningfulness and work role fit is consistent with literature and the results of previous studies. The literature states that a perceived fit between the individual's self-concept and the work roles in which one is assigned to will lead to an experienced sense of meaningfulness due to the ability of an individual to express his/her own values and beliefs (May et al., 2004). This is also consistent with the view that when people see their roles as opportunities to express their selves they will experience a sense of meaning (Shamir, 1991). Saks (2006) suggested that work role fit provides an incentive for employees to bring more of themselves into their work thereby creating meaningfulness. A positive relationship has also been found between work role fit and meaningfulness in previous research (May et al., 2004; van Zyl, Deacon & Rothmann, 2010; Rothmann & Rothmann, 2010). This therefore implies that if individuals perceive a fit between their self-

concept and their work roles, there are more likely to find their jobs meaningful which results in work engagement.

Meaningfulness also showed a significant positive correlation with rewarding co-worker relations confirming the literature that states individuals will place greater meaning in their work if they have positive relationships with their co-workers (Locke & Taylor, 1990). A study done by Kinjerski and Skrypnek (2006) also suggested that positive connections amongst co-workers facilitate a sense of community and meaningfulness at work. Furthermore, previous studies also found a positive significant relationship between rewarding co-worker relations and work role fit (Olivier & Rothman, 2007; Ras, 2006; May et al., 2004). This implies that rewarding interactions amongst co-workers promote dignity, self-appreciation and worthwhileness which will result in one experiencing psychological meaningfulness at work (Kahn, 1990).

Hypothesis 2 stated that supportive supervisory relations and rewarding co-worker relations will be positively related to psychological safety and that adherence to co-worker norms will be negatively related to psychological availability at work. Both of the hypotheses could not be tested because of the poor reliability of the psychological safety scale. It is however important to note that psychological safety is an important construct because it promotes positive emotions, enables individuals to find personal connection, and to both learn and unlearn new behaviours (Pratt & Ashforth, 2003). Future research must seek to improve the reliability of the scale so as to test its relationship with job characteristics and work engagement.

Hypothesis 3 states that, resources will be positively related to psychological availability at work and hypothesis 3b states that outside activities will be negatively related to psychological availability. Results from the correlation analysis indicated that there was a

statistically significant positive correlation between resources and psychological availability thus the confirming hypothesis 3a. The literature suggests that, if individuals believe that they have the psychical, emotional and cognitive resources available to do their work, they will be able to engage themselves with their work. These results are related to previous studies (Ras, 2006; Olivier & Rothman, 2007). However, in the study conducted by May et al. (2004), they did not find a significant relationship between psychological availability and resources but they acted as a suppressor of the relationship between availability and engagement.

The results indicated that outside resources did not have a statistically significant correlation with psychological availability. This disconfirms hypothesis 3b and suggests that university employees 'involvement in other activities outside the institution did not have a bearing on their psychological availability. This however is not consistent with what was found in the literature. The literature suggests that activities that one performs outside of the workplace may have a negative influence one's availability at work (Kahn, 1990). This negative influence has been termed the resource drain perspective by some authors (Edward & Rothbard, 2000). Furthermore, the results of the present study are not consistent with those of previous studies and the reason for this could be the difference in samples and the nature of work of the samples in previous studies. However, other studies found a significant negative correlation between outside activities and psychological availability (May et al., 2004; Olivier & Rothmann, 2007).

Hypothesis 4 states that psychological meaningfulness, psychological safety, and psychological availability will be positively related to work engagement. The results showed that meaningfulness was practically positively related to work engagement and that psychological availability did not exhibit a significant relationship with work engagement. The relationship between psychological safety and work engagement could not be tested.

These results indicate that hypothesis four was partial confirmed. Below is a discussion of the relationship between the psychological conditions and work engagement.

Meaningfulness displayed a practically and statistically positive relationship with work engagement. These results support the literature that states that that lack of meaningfulness in one's work can lead to alienation or disengagement from one's work (Aktouf, 1992) and that meaningfulness at work was connected to higher levels of work engagement (Kahn, 1990). According to Kahn (1990), individuals will ask themselves the question that “How meaningful is it for me to engage in this task?” before they engage in it. Previous studies that have investigated the relationship between meaningfulness and work engagement also found statistically and practically positive relationship (May et al.,2004; Ras, 2007, Rothmann & Rothmann, 2010; Vinarski-Peretz & Carmeli, 2011) confirming the results of this study and also possibly suggesting that the relationship between meaningfulness and work engagement can be generalised to various settings.

The results indicate that psychological availability did not have a statistically significant relationship with work engagement. These results are however not consistent with what was found in other studies and what and literature. The literature suggests that individuals will be ready to engage to their work considering that they do not have other commitments. People were more likely to engage in situations where there are psychological available and disengage in situations where they are less available (Kahn, 1990). The results of previous studies show that psychological availability and work engagement are statistically positively related (Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010). This deviation could suggests that psychological availability does not influence the work engagement of employees in university settings but however this would need further confirmation by doing more studies in university settings.

Hypothesis 5 stated that psychological conditions will mediate the relationship between their determinants (i.e. job characteristics) and work engagement. The results from multiple regression analyses showed that only meaningfulness acted as a mediator between job enrichment, work role fit, and supportive supervisory relations; and work engagement. These results partially confirms hypothesis 5.

Psychological meaningfulness fully mediated the relationship between job enrichment, work role fit and rewarding co-worker relations. Meaningfulness was also the strongest predictor of work engagement. This means that that characteristics of one's job such as skill variety, autonomy, rewarding relations with fellow employees and a perceived fit between employee characteristics and the role in which they are in will lead to psychological meaningfulness which in turn will lead to work engagement. This is consistent with the results of previous studies done on the mediating effects of meaningfulness on work engagement and job characteristics (Olivier & Rothmann, 2007; Ras, 2007; Rothmann & Rothmann, 2010).

Psychological availability did not mediate the relationship between job characteristics (resources and outside activities) and work engagement. It was not a significant predictor or work engagement meaning that work engagement amongst university employees. However, results from previous studies show that psychological availability mediates the relationship between work engagement and job characteristics (May et al., 2004; Ras, 2007; Rothmann & Rothmann, 2010). This implies that psychological availability did not make a significant contribution to the work engagement of university employees. This however needs to be confirmed by future research.

Psychological safety was not included in further analysis therefore it was not identified as a statistical predictor of work engagement and could not also be tested for mediation. The present study therefore found partial support for the studies of May et al. (2004); Olivier and

Rothmann (2007); and Ras (2007) in as far as the mediating effects of both psychological meaningfulness and availability on work engagement were confirmed, with meaningfulness as the strongest predictor of work engagement. The results discussed above contribute to our understanding of the psychological conditions that lead to work engagement and their determinants.

5.3. Summary

In this chapter, the results of the empirical study were discussed and conclusions were drawn from them. All hypotheses stated were addressed. In the next chapter, conclusions and limitations regarding this study are discussed and recommendations for the organisation and for future research are made

CHAPTER 6

CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

6.1. Introduction

In this chapter, conclusions about the literature findings and the results of the empirical study are made. Limitations of the study are discussed and specific recommendations and future research are presented.

6.2. Conclusions

Conclusions are made in the following paragraphs in accordance to the specific literature objectives and the empirical findings obtained in the present study.

6.2.1. Conclusions in terms of the specific literature objectives of the study

The following conclusions can be made with regards to the constructs of psychological meaningfulness, psychological safety, psychological availability, and work engagement.

- Psychological Meaningfulness

For the purposes of this research, meaningfulness was conceptualised as a feeling that one is receiving a return on investment of one's self in a currency of psychical, cognitive and emotional energy (Kahn, 1990). It involves feeling worthwhile and valued. Literature showed that psychological meaningfulness was connected to engagement at work. Literature identified three factors that influence psychological meaningfulness and these are job enrichment, work role fit, and rewarding co-worker relations.

- Psychological Safety

For the purpose of this research, psychological safety can be defined as feeling of being able to employ oneself without fear of negative consequences to the self-image (Kahn, 1990). The

literature states that when individuals feel safe to express themselves freely without the fear of being victimised, they are more likely to be engaged to their work (May et al., 2004). There are three job characteristics that determine psychological availability and these are supervisory relations, rewarding co-worker relations, and co-worker norms. If these three job characteristics are present, employees are more likely to feel safe to engage.

- Psychological Availability

For the purposes of this study, psychological availability was conceptualised as a sense of having physical, emotional or psychological resources to engage at a particular moment. It involves employee's readiness to engage at work considering that they have other social commitments. Factors that determine psychological availability are individual resources (e.g. emotional and cognitive), self-consciousness, and outside activities. Individual resources are positively related to psychological availability whereas self-consciousness and outside activities are negatively related to psychological availability.

- Work Engagement

For the purposes of this study, work engagement was conceptualised according to Kahn (1990). It is conceptualised as those behaviours that people bring in or leave out their personal selves during work role performances. Additionally, it involves employing and expressing one's self physically, cognitively, emotionally, and mentally during role performance. Work engagement has gained popularity over the past years because research has shown that it is a critical driver of organisational success. Evidence from the literature suggests that the three psychological conditions of meaningfulness, safety, and availability influence work engagement positively.

6.2.2. Conclusions in terms of the specific empirical results of the study

The empirical findings from the research are summarised below in terms of the hypothesis of the study:

Hypothesis 1: Job enrichment, rewarding co-worker relations and work role fit will be positively related to psychological meaningfulness. This hypothesis was confirmed. All three job characteristics had practically and statistically positive relationships with psychological meaningfulness. This suggest that if conditions such as job enrichment, rewarding co-worker relations and supportive supervisors employees are more likely to experience psychological meaningfulness at their jobs.

Hypothesis 2a: Supportive supervisory relations and rewarding co-worker relations will be positively related to psychological safety. This hypothesis could not be tested because of the unreliability of the psychological safety scale.

Hypothesis 2b: Adherence to co-worker norms will be negatively related to psychological safety. This hypothesis could not be tested due to the unreliability of the psychological safety scale.

Hypothesis 3a: Resources will be positively related to psychological availability at work. This hypothesis was confirmed, resources has a statistically positive correlation with psychological availability. This suggests that employees who have the psychical, emotional, and cognitive resources are likely to be available to engage in their work.

Hypothesis 3b: Self-consciousness and outside activities will be negatively related to psychological availability at work. This hypothesis was rejected. There was no significant correlation between outside activities and psychological availability suggesting that outside activities did not determine the psychological availability of university employees. Self-

consciousness was taken out of the study because its scale did not meet the required Cronbach alpha.

Hypothesis 4: Psychological meaningfulness, psychological safety and psychological availability will be positively related to work engagement. This hypothesis was partially confirmed. Only psychological meaningfulness displayed a practically and statistically positive correlation with work engagement. Psychological availability did not show a significant relationship with work engagement and the scale of psychological safety was taken out of the analysis due to its unreliability.

Hypothesis 5: Psychological conditions (meaningfulness, safety, availability) will mediate the relationship between their determinants (job characteristics) and work engagement. This hypothesis was partially confirmed. Psychological meaningfulness mediated the relationship between job enrichment, work role fit, and rewarding co-worker relations; and work engagement. Psychological availability did not predict work engagement therefore it did not meet the requirements for mediation analysis. Psychological meaningfulness was the best predictor of work engagement predicting 34% of the variance in work engagement.

6.3. Limitations

The study had various limitations. Firstly, only 150 questionnaires were completed and returned but two campuses within which data was collected have more than 500 employees. Therefore the results cannot be generalised to the entire population. Secondly, self-report questionnaires were used to collect the data through a survey design therefore causal inferences using the data cannot be made. The use of other designs such as longitudinal studies or analytical procedure such as structural equation modelling could aid the in establishing causality. The third limitation is that some of the scales used in the research

(safety, co-worker norms, and self-consciousness) tested unreliable on the reliability tests therefore making it impossible to test some hypothesis. As a result some of the objectives of the study could not be fulfilled.

6.4. Recommendations

This study explores the relationship between job characteristics, psychological conditions and work engagement. With an increased understanding of this relationship, possible reasons for disengagement at work can be isolated. With the shift of focus to positive psychology, opportunities can be identified to optimise the job characteristics that foster and promote engagement at work. There are several suggestions for the future that can be derived from the present study.

This study produced very important findings in terms of work engagement, psychological conditions and job characteristics. Meaningfulness was found to be positively related to work engagement. It is therefore important that employers cultivate a sense of meaningfulness in the job so as to foster work engagement. The job characteristics that were significantly related to meaningfulness are job enrichment, work role fit, and co-worker relations. This also provides crucial information to employees in terms of job design. To foster meaningfulness, jobs must be to have the five characteristics as proposed by Hackman and Oldham (1980). Furthermore, to foster meaningfulness, employees must make sure that there is a person-role fit. This could be done through designing effective selection tools and also having extensive job profiling.

Resources were found to be positively related to psychological availability. Taking this into consideration, employees must be able to cultivate personal resources amongst their employees. When designing jobs, employees must attempt to reduce the cognitive, emotional

and physical strain that could be experienced by employees. If a job involves extensive emotional, cognitive or physical resources, employers must ensure that employees have enough breaks and sufficient time off.

In future, longitudinal studies with bigger populations should be carried out to verify the results of this study. Similar studies in the same settings need to be carried out so that the relationship between psychological availability and work engagement could be investigated since the results of this study show that it is insignificant. Furthermore, the instrument used in this study need to be revised so as to suit the South African contexts because participants were not familiar with some of the statements (e.g. “rock the boat”). Overall more research is required in South Africa to fill the gap in the knowledge of how psychological conditions of meaningfulness, safety, and availability affect work engagement.

To conclude, future research must aim to assess individual or organisational interventions that impact on psychological conditions such as meaningfulness, safety, and availability so as to identify and prioritise effective intervention that lead to enhanced work engagement. This will lead to a healthier workforce and better performing organisations.

6.5. Summary

The research has been completed with the completion of Chapter 6. The objectives formulated for this research were addressed and attained within the study.

REFERENCE LIST

- Aktouf, O. (1992). Management and theories of organizations in the 1990s: Toward a critical radical humanism. *Academy of Management Review*, *17*, 407–431.
- Allen, N.J., & Meyer, J.P. (1996). Affective, continuance and normative commitment to the organisation: An examination of the construct validity. *Journal of Vocational Behaviour*, *49*, 252–276.
- Bakker, A.B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13* (3), 209-223.
- Bakker, A.B., Demerouti, E., & Schaufeli, W.B. (2005). Crossover of burnout and work engagement among working couples. *Human Relations*, *58*, 661-689.
- Bakker, A.B., & Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resource model to predict burnout and performance. *Human Resource management*, *43* (1), 83-104.
- Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, *99* (2), 274-284
- Bakker, A.B., Leiter, M.P. (Eds.). (2010). *Work engagement: a handbook of essential theory and research*. New York: Psychology Press.

Bakker, A.B., & Schaufeli, W.B. (2000). Burnout contagion processes among teachers. *Journal of Applied Social Psychology, 30*, 2289-2308.

Bakker A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress, 22*, 187-200.

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*, 1173-1182.

Basikin, B. (2007, November 25). Vigour, Dedication and Absorption: Work engagement among secondary school English teachers in Indonesia. Paper presented at the annual AARE Conference. Perth, Australia.

Bezuidenhout, A., & Cilliers, F.V.N. (2010). Burnout, work engagement and sense of coherence in female academics in higher-education institutions in South Africa. *SA Journal of Industrial Psychology, 36* (1), 21-31.

Blaise, O.N. (1996). A wellness prescription for superintendents. *The School Administrator, 533*, 34-39.

Burke, J. (2010). Flow, work satisfaction and psychological wellbeing at the workplace. *The IUP Journal of Soft Skills, 5* (1), 36-49.

- Coetzee, S.E., & Rothmann, S. (2005). Work engagement of employees at a higher education institution in South Africa. *South African Business Review*, 9 (3), 23-34.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.
- Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimum Experience*, Harper Collins: New York.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (1987). The empirical exploration of intrinsic motivational processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 39–80). New York: Academic Press.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation: Perspectives on motivation* (pp. 237-288). Lincoln, NE: University Of Nebraska Press.
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227-268.
- Edmondson, A. (1999). Psychological safety and learning behaviour in work teams. *Administrative Science Quarterly*, 44, 350–383.

- Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, 25, 178–199.
- Gagné, M., & Deci, E.L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behaviour*, 26, 331– 362.
- Hackman, J.R., & Oldham, G.R. (1980). *Work redesign*. Mass: Addison-Wesley.
- Hakanen, J.J., Bakker, A.B., & Schaufeli, W.B. (2006). Burnout and Work Engagement amongst teachers. *Journal of School Psychology*, 43 (6), 495-513.
- Hakanen, J.J., Bakker, A.B., & Demmerouti, A. (2005). How dentists cope with their job demands and stay engaged: The moderating role of job resources. *European Journal of Oral Sciences*, 113 (6), 479-487.
- Halbesleben, J. R. B., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work & Stress*, 22, 242–256.
- Hallberg, U., & Schaufeli, W.B. (2006). “Same” but different: Can work engagement be discriminated from job involvement and organizational commitment? *European Journal of Psychology*, 11, 119-127.

- Harter, J. K. (2001). Taking feedback to the bottom line. *Gallup Management Journal*, 1, 24-48.
- 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.
- Jackson, L.T.B., & Rothmann, S. (2005). An adapted model of burnout for educators in South Africa. *South African Journal of Education*, 25, 100–108.
- Jackson, L.T.B., Rothmann, S. & Van de Vijver, A.J.R. (2006). A model of work-related well-being for educators in South Africa. *Stress and Health*, 22(4), 263–274.
- Johns, G., Xie, J. L., & Fang, Y. (1992). Mediating and moderating effects in job design. *Journal of Management*, 18, 657–676.
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692-724.
- Kinjerski, V. & Skrypnek, B.J. (2006). Creating organizational conditions that foster spirit at work. *Leadership and Organization Development Journal*, 27(4), 280-295.
- Kraak, A. (2000). *Changing Modes: New Knowledge Production and its Implications for Higher Education in South Africa*. Parow: CTP Book Printers.

- Kristof, A. L. (1996). Person–organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*, 1–50.
- Leedy, P.D., & Ormrod, J.E. (2010). *Practical Research: Planning and Design*. (9th ed.) Upper Saddle River, New Jersey: Prentice Hall.
- Leiter, M.P., & Maslach, C. (1998). Burnout. In H Friedman (Ed.), *Encyclopaedia of Mental Health* (pp.347-357). San Diego, CA: Academic Press.
- Leiter, M.P., Maslach, C., 2004. Areas of work life: a structured approach to organizational predictors of job burnout. In: Perrewe, P.L., & Ganster, D.C. (Eds.), *Emotional and Physiological Processes and Positive Intervention Strategies, Research in Occupational Stress and Well Being*, (pp.91-134). Elsevier: Oxford.
- Leiter, M.P., & Bakker, A.B. (2010). Work engagement: State of the art. In A.B. Bakker & M.P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research*. New York: Psychology Press.
- Llorens, S., Bakker, A.B., Schaufeli, W.B., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in human Behaviour*, *23*, 825-841.
- Locke, E.A. & Taylor, M.S. (1990). Stress, coping and the meaning of work. In A. Brief and W.R. Nord (Eds.), *Meanings of occupational work* (pp. 135-170). Lexington, MA: Lexington Books.

- Markland, D., Ryan, R. M., Tobin, V. J., & Rollnick, S. (2005). Motivational interviewing and self-determination theory. *Journal of Social and Clinical Psychology, 24*, 811-831.
- Martin, N. (2008). Developing a trust model for assisting management during change. *Journal of Industrial Psychology, 26*(3), 27-31.
- Maslach, C. & Leiter, M.P. (1997). *The truth about burnout*. San Francisco: Jossey-Bass.
- Maslach, C., Schaufeli, W.B. & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422.
- Maslach, C., Schaufeli, W.B. & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422.
- 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.
- May, D. R. (2003). *Fostering the human spirit at work: Toward an understanding of the influences on employees' experienced meaningfulness at work*. Unpublished manuscript.
- May, R.G., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the human spirit. *Journal of Occupational and Organizational Psychology, 77*, 11-37.

- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38, 24–59.
- Meyer, J. P., & Gagné, M. (2008). Employee engagement from a self-determination theory perspective. *Industrial and Organizational Psychology*, 1, 60-62.
- Meyer, J.P. & Allen, N.J. 1997. *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage Publishing, Inc.
- Miller, R.B., Greene, B.A., Montalvo, G.P., Ravindran, B., & Nichols, J.D. (1996). Engagement in academic work. *Contemporary Educational Psychology*, 21, 388-422.
- Myers, D.G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55, 56-67.
- Nunnally, J.C. & Bernstein, I.H. (1994). *Psychometric theory* (3rd Ed.). New York: McGraw-Hill.
- Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39,607-634.
- Olivier, A., & Rothmann, S. (2007). Antecedents of engagement in a multinational oil company. *South African Journal of Industrial psychology*, 33 (3), 49-56.
- Pratt, M.G., & Ashforth, B.E. (2003). Fostering meaningfulness in work and working. In K.S. Cameron, J.E. Dutton & R.E. Quinn (Eds.), *Positive organizational scholarship*:

- Foundations of a new discipline* (pp. 309–327). San Francisco: Berrett- Koehler Publishers.
- Ras, D. (2007). Antecedents of work engagement in a chemical industry. Unpublished master's thesis, North West University, South Africa.
- Reaves, C.C. (1992). *Quantitative research for the behavioural sciences* (1st ed.). London: John Wiley and Sons.
- Renn, R. W., & Vandenberg, R. J. (1995). The critical psychological states: An under-represented component in job characteristics model research. *Journal of Management*, *21*, 279–304.
- Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, *46*, 655–684.
- Rothmann, S., & Jordaan, G.M.E. (2006). Job demands, job resources and work engagement of academic staff of South African higher education institutions. *South African Journal of Industrial Psychology*, *32*, (4), 87-96.
- Rothmann, S., & Rothmann, S. (2010). Factors associated with employee engagement in South Africa. *South African Journal of Industrial Psychology*, *36*(2), 1-12.
- Ryan, R.M., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudemonic well-being. *Annual Review of Psychology*, *52*, 141–166.

- Ryan, R.M. & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Salanova, M., Bakker, A.B. & Llorens, S. (2006). Flow at work: Evidence for an upward spiral of personal and organizational resources. *Journal of Happiness Studies*, 7, 1-22.
- Saks, A.M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21, 600-619.
- Schaufeli, W.B., & Bakker, A.B. (2003). The Utrecht Work Engagement Scale (UWES). Test manual. Utrecht, the Netherlands: Department of Social & Organizational Psychology.
- Schaufeli, W.B. & Bakker, A.B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour*, 25, 293-315.
- Schaufeli, W.B., Salanova, M., González-Romá, V. & Bakker, A.B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies*, 3(1), 71-92.
- Schlenker, B.R. (1980). *Impression management: The self-concept, social identity and interpersonal relations*. Monterey, CA: Brooks/Cole Publishers.

- Sekaran, U. (2003). *Research methods for business* (4thed.). Hoboken, U.S.A: John Wiley and Sons.
- Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology. An introduction. *American Psychologist*, 55(1), 5–14.
- Shamir, B. (1991). Meaning, self and motivation in organizations. *Organization Studies*, 12, 405-424.
- Simpson, M.R. (2008). Engagement at work: A review of the literature. *International Journal of Nursing Studies*.46, 1012-1024.
- Spreitzer, G.M. (1995). Psychological Empowerment in the Workplace: Dimensions, measurement, and validation. *The Academy of Management Journal*, 38, (5), 1442-1465
- SPSS Inc. (2010). *SPSS 19.0 for Windows*. Chicago: SPSS Inc.
- Storm, K., Rothmann, S. (2002). A psychometric evaluation of the Utrecht Work Engagement Scale in the South African Police Service. *SA Journal of Industrial Psychology*, 29 (4), 62-70.
- Strumpfer, D.J.W. (2003). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology*, 33(2), 69–79.

Sutton, R. I. (1991). Maintaining norms about expressed emotions: The case of the bill collectors. *Administrative Science Quarterly*, 36, 245–268.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Boston, MA: Allyn & Bacon.

Van Zyl, E.N., Deacon, E., & Rothmann, S. (2010). Towards happiness: Experiences of work-role fit meaningfulness and work engagement of industrial/organisational psychologists in South Africa. *South African Journal of Industrial Psychology*, 36 (1), 1-10.

Vice Chancellor's Communiqué (2011, June 13). *College re-organisation: Simplifying and streaming for success*. Retrieved September 30, 2011, from <http://crtt.ukzn.ac.za/Homepage.aspx>.

Vinarski-Peretz, H., & Carmeli, A. (2011). Linking care felt to engagement in innovative behaviours in the workplace: The mediating role of psychological conditions. *Psychology of Aesthetics, Creativity, and the Arts*, 5 (1), 43-53.

**APPENDIX A
INFORMED LETTER OF CONSENT**

My name is Gamuchirai Chikoko and I am currently completing my Master's degree at the University of KwaZulu Natal. A requirement of my degree is to complete a research study. My study is interested in the psychological conditions of work engagement which are meaningfulness, safety and availability amongst academics at this university.

You are being invited to participate in this research because of your position as an academic. There will be no direct benefit to you if you participate in this research, but your participation is likely to help generate knowledge and greater understanding on Work Engagement and the psychological conditions that lead to it amongst academics. Confidentiality will be ensured through the interviews being available to the researcher and her supervisor only. Anonymity will be ensured by omitting any identifying characteristic, such as your name, or department. Nothing that is said to me during interviews will be shared with anybody outside the research team. If you have any queries please feel free to contact me (Gamuchirai Chikoko 079 803 3884/ 207514634@ukzn.ac.za) or my supervisor (Professor Joey Buitendach: 031 260 2407/Buitendach@ukzn.ac.za).

Informed consent

I _____ have read the information about this study and understand the explanations of it given to me verbally. I have had my questions concerning the study answered and understand what will be required of me if I take part in this study.

Signature_____ Date_____

(Or mark)

**APPENDIX B
INSTRUMENT**

Section One: Biographical Data Sheet.

INSTRUCTIONS

Please answer the following questions by marking the appropriate boxes.

1. GENDER

Male Female

2. AGE GROUP

25 years and younger 26 – 35 years

36 – 45 years 46 – 55 years

56 years and older

3. MARITAL STATUS

Single Divorced

Widowed Married

Remarried

4. YEARS OF TENURE

Less than 5 years 6 – 10 years

11 – 20 years More than 20 years

5. HIGHEST ATTAINED QUALIFICATION

Matric Certificate Diploma

Degree Postgraduate Degree

6. PLEASE INDICATE YOUR POSITION

Administration Senior Lecturer

Junior Lecturer Associate Professor

Lecturer Professor

Section Two: Engagement Questionnaire.

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
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1. Performing my job is so absorbing that I forget about everything else.	1	2	3	4	5
2. I often think about other things when performing my job.	1	2	3	4	5
3. I am rarely distracted when performing my job.	1	2	3	4	5
4. Time passes quickly when I perform my job	1	2	3	4	5
5. I really put my heart into my job.	1	2	3	4	5
6. I get excited when I perform well on my job.	1	2	3	4	5
7. I often feel emotionally detached from my job	1	2	3	4	5
8. My own feelings are affected by how well I perform my job.	1	2	3	4	5
9. I exert a lot of energy performing my job	1	2	3	4	5
10. I stay until the job is done	1	2	3	4	5
11. I avoid working overtime whenever possible	1	2	3	4	5
12. I take work home to do.	1	2	3	4	5
13. I avoid working too hard	1	2	3	4	5

Section Three: Meaningfulness Scale.

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
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1. The work I do on this job is very important to me.	1	2	3	4	5
2. My job activities are personally meaningful to me.	1	2	3	4	5
3. The work I do on this job is worthwhile.	1	2	3	4	5
4. My job activities are significant to me.	1	2	3	4	5

5. The work I do on this job is meaningful to me.	1	2	3	4	5
6. I feel that the work I do on my job is valuable.	1	2	3	4	5

Section Four: Psychological Safety Scale

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
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1. I'm not afraid to be myself at work.	1	2	3	4	5
2. I am afraid to express my opinions at work	1	2	3	4	5
3. There is a threatening environment at work	1	2	3	4	5

Section Five: Psychological availability

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
--	-------------------	----------	-----------	-----------	----------------

1. I am confident in my ability to handle competing demands at work.	1	2	3	4	5
2. I am confident in my ability to deal with problems that come up at work.	1	2	3	4	5
3. I am confident in my ability to think clearly at work.	1	2	3	4	5
4. I am confident in my ability to display the appropriate emotions at work.	1	2	3	4	5
5. I am confident that I can handle the physical demands at work.	1	2	3	4	5

Section Six: Job Enrichment Scale.

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
1. Being able to keep busy all the time.	1	2	3	4	5
2. The chance to work alone on the job.	1	2	3	4	5
3. The chance to do different things from time to time.	1	2	3	4	5
4. The chance to be “somebody” in the community.	1	2	3	4	5
5. The way my boss handles his/her workers.	1	2	3	4	5
6. The competence of my supervisor in making decisions.	1	2	3	4	5
7. Being able to do things that don’t go against my conscience.	1	2	3	4	5
8. The way my job provides for steady employment.	1	2	3	4	5
9. The chance to do things for other people.	1	2	3	4	5
10. The chances to tell people what to do.	1	2	3	4	5
11. The chance to do something that makes use of my abilities.	1	2	3	4	5
12. The way company policies are put into practice.	1	2	3	4	5
13. My pay and the amount of the work I do.	1	2	3	4	5
14. The chances for advancement on this job.	1	2	3	4	5
15. The freedom to use my own judgement.	1	2	3	4	5

Section Seven: Rewarding Co-worker Relations

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. My interactions with my co-workers are rewarding.	1	2	3	4	5
2. My co-workers value my input.	1	2	3	4	5
3. My co-workers listen to what I have to say.	1	2	3	4	5
4. My co-workers really know who I am.	1	2	3	4	5
5. I believe that my co-workers appreciate who I am.	1	2	3	4	5

6. I sense a real connection with my coworkers.	1	2	3	4	5
7. My co-workers and I have mutual respect for one another.	1	2	3	4	5
8. I feel a real 'kinship' with my co-workers.	1	2	3	4	5
9. I feel worthwhile when I am around my co-workers	1	2	3	4	5
10. I feel worthwhile when I am around my co-workers.	1	2	3	4	5
11. I trust my co-workers.	1	2	3	4	5

Section Eight: Work Role Fit Scale

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Uncertain	Strongly Agree
1. My job 'fits' how I see myself.	1	2	3	4	5
2. I like the identity my job gives me.	1	2	3	4	5
3. The work I do on this job helps me satisfy who I am.	1	2	3	4	5
4. My job 'fits' how I see myself in the future.	1	2	3	4	5

Section Nine: Supportive Supervisory Relationships

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. My supervisor helps me solve work-related problems.	1	2	3	4	5
2. My supervisor encourages me to develop new skills.	1	2	3	4	5
3. My supervisor keeps informed about how employees think and feel about things.	1	2	3	4	5
4. My supervisor encourages employees to participate in important decision.	1	2	3	4	5
5. My supervisor praises good work.	1	2	3	4	5

6. My supervisor encourages employees to speak up when they disagree with a decision.	1	2	3	4	5
7. Employees are treated fairly by my supervisor.	1	2	3	4	5
8. My supervisor is committed to protecting my interests.	1	2	3	4	5
9. My supervisor does what he/she says he/she will do.	1	2	3	4	5
10. I trust my supervisor.	1	2	3	4	5

Section Ten: Co-Worker Norm Adherence

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I go along with the norms in my group of co-workers.	1	2	3	4	5
2. I don't 'rock the boat' with my co-workers.	1	2	3	4	5
3. I do what is expected of me by my coworkers.	1	2	3	4	5

Section Eleven: Resources

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I feel mentally sharp at the end of the workday.	1	2	3	4	5
2. I can't think straight by the end of my workday.	1	2	3	4	5
3. I feel overwhelmed by the things going on at work.	1	2	3	4	5
4. I feel emotionally healthy at the end of the workday.	1	2	3	4	5
5. I feel like I'm at the end of my rope emotionally.	1	2	3	4	5
6. I feel emotionally drained from my work.	1	2	3	4	5
7. I feel tired before my workday is over.	1	2	3	4	5
8. I feel physically used up at the end of the workday.	1	2	3	4	5

Section Twelve: Self Consciousness

Instructions

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I worry about how others perceive me at work.	1	2	3	4	5
2. I am afraid my failings will be noticed by others.	1	2	3	4	5
3. I don't worry about being judged by others at work.	1	2	3	4	5

Section Thirteen: Outside Activities.

Instructions

Please indicate your level of involvement in outside activities or organisations apart from your work by circling the number with the hours that you spend.

	1-5hours	6-10 hours	11-15 hours	16-20 hours	21+ hours
1. Involvement in outside activities.	1	2	3	4	5