

**PSYCHOLOGICAL CONDITIONS THAT MEDIATE  
BETWEEN JOB DEMANDS AND RESOURCES, AND WORK  
ENGAGEMENT**

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## NOTE

- The reader must note that the publication and reference style used in this mini-dissertation is in accordance with the instructions for publication (4<sup>th</sup> ed.) of the American Psychological Association (APA). This is in accordance with the policy of the Programme in Industrial Psychology at the North-West University to use the APA style in all scientific documents since January 1999.
- In this mini-dissertation, the article option has been chosen.

## PREFACE

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## SUMMARY

**Subject:** Psychological conditions that mediate between job demands and resources, and work engagement.

**Key terms:** Work engagement, psychological meaningfulness, psychological safety, psychological availability.

The face of the workplace has changed dramatically over the past decade and most organisations have to survive in a fiercely competitive global economy. The impact of the changing world of work is most evident in changes in the psychological contract (agreement) between employees and organisations. Employees are expected to give more in terms of time, effort, skills and flexibility, whereas they receive less in terms of career opportunities, lifetime employment and job security. It is in view of the above work complexities that employee engagement has become a focus area, in particular, to understand the mediating effects of certain psychological conditions in relation to work engagement. “Why do some employees stay engaged at work, even whilst being challenged with consistent change and greater job insecurity and why do others’ disengage at work?”

The objective of this study was to investigate the mediating effects of three psychological conditions, namely psychological meaningfulness, psychological safety, and psychological availability on employees’ work engagement. A survey research design was used with a questionnaire as data-gathering instrument. Stratified random samples ( $N=171$ ) were taken from employees of a multinational oil company. The Work Engagement Scale and the Work Experiences Scale were administered. Descriptive statistics (e.g. means and standard deviations) were used to analyse the data. Pearson product-moment correlation coefficients were used to assess the relationships between the variables. Multiple regression analyses were used to investigate the effects of the variables in this study.

The results confirmed that psychological meaningfulness and psychological availability were significant predictors of work engagement. Meaningfulness displayed the strongest positive relation with engagement. The relation of work role fit with engagement was fully mediated by the psychological condition of meaningfulness. Cognitive, emotional and physical resources had the strongest effect on psychological availability. Feelings of self-

consciousness impacted on psychological availability, implying that someone who is less self-conscious is psychologically more available to engage at work.

It was therefore confirmed that psychological meaningfulness fully mediated the effects of work role fit on engagement and psychological availability fully mediated the effects of resources and self-consciousness on engagement.

Limitations in the research are identified and recommendations for future research are made.

## OPSOMMING

**Onderwerp:** Psigologiese kondisies wat mediërend inwerk op werkseise/hulpbronne en werksbegeestering.

**Sleutelterm:** Werksbegeestering, psigologiese betekenisvolheid, psigologiese veiligheid, psigologiese beskikbaarheid

Die openbare beeld van die werksplek het dramaties oor die afgelope dekade verander en die meerderheid van organisasies moet pogings aanwend om te oorleef binne 'n veeleisende en kompeterende wêreld ekonomie. Die uitwerking van die veranderende werksplek is veral sigbaar in die verandering van die psigologiese indiensnemingskontrak (ooreenkoms) tussen werkgever en werknemer. Werknemers word verwag om al hoe meer opofferinge te maak in terme van hulle tyd, insette, vaardighede en aanpasbaarheid, terwyl die teendeel is dat hulle al hoe minder ontvang in terme van loopbaanontwikkeling, lewenslange indiensneming en werksekuriteit. Dit is binne die konteks van kompleksiteit binne die werksplek dat werksbegeestering 'n fokusarea geword het, in besonder om begrip te ontwikkel vir die mediërende effek van sekere sielkundige kondisies in verhouding tot werksbegeestering. "Waarom bly sekere werknemers begeester ten opsigte van hulle werk, ten spyte van die konstante werksveranderinge en groter werksonsekerheid, terwyl ander werknemers van hulle werk onttrek?"

Die doel van hierdie studie was om die mediërende effek van drie sielkundige kondisies, naamlik psigologiese betekenisvolheid, psigologiese veiligheid en psigologiese beskikbaarheid op werksbegeestering te bepaal. 'n Opname-ontwerp is gebruik met 'n vraelys as metode om inligting in te samel. Gestratifiseerde ewekansige steekproewe ( $N= 171$ ) is geneem van werknemers van 'n multinasionale oliemaatskappy. Die Werkbegeesteringskaal en die Werkservaringskaal is afgeneem. Beskrywende statistiek (rekenkundige gemiddeldes en standaardafwykings) is gebruik om die data te ontleed. Pearson korrelasiekoëffisiënte is gebruik om die verhouding tussen die veranderlikes te bepaal. Meervoudige regressie-analise is gebruik om die effek van die veranderlikes in die studie te bepaal.

Die resultate het bevestig dat psigologiese betekenisvolheid en psigologiese beskikbaarheid betekenisvolle voorspellers van werksbegeestering is. Psigologiese betekenisvolheid het die sterkste positiewe korrelasie met werksbegeestering getoon. Die verwantskap tussen werk-rol-passing en werksbegeestering was ten volle gemedieer deur die kondisie van psigologiese betekenisvolheid. Kognitiewe, emosionele en fisiese hulpbronne het die sterkste effek op psigologiese beskikbaarheid gehad. Selfbewustheid het 'n positiewe effek op psigologiese beskikbaarheid getoon, wat ook tot hoër werksbegeestering gelei het.

Dit is derhalwe bevestig dat psigologiese betekenisvolheid ten volle die effek van werk-rol-passing en werksbegeestering medieer, en psigologiese beskikbaarheid ten volle die effek van hulpbronne en selfbewustheid en werksbegeestering medieer.

Tekortkominge van die navorsing is geïdentifiseer en aanbevelings vir toekomstige navorsing is gemaak.

# **CHAPTER 1**

## **INTRODUCTION**

This mini-dissertation deals with an exploration of the mediating effects of three psychological conditions, namely psychological meaningfulness, psychological safety, and psychological availability on employees' work engagement.

In Chapter 1 the motivation for the research is discussed in terms of the problem statement, aims of the research and the research method. The chapter is concluded by giving a brief overview of the division of chapters.

### **1.1 PROBLEM STATEMENT**

The face of the workplace has changed dramatically over the past decade and most organisations have to survive in a fiercely competitive global economy. Their survival depend on their ability to satisfy customer needs, while achieving quality, flexibility, innovation and organisational responsibility, through the commitment and co-operation of employees (Fay & Luhrmann 2004; Newell 2002). It almost seems ironic that practically every chief executive officer has uttered words to the effect "people are our most valuable asset", while current practices confirm organisations have taken to re-organisational activities impacting significantly on people, such as outsourcing, downsizing, rightsizing and mergers in order to adapt to the new situation (Growing, Kraft & Campbell Quick 1998). It followed logically that more flexible staffing options would become the norm for the future and that the use of contractors for non-core activities would allow permanent staff to focus on value adding work for the organisation (Havran, Visser & Crous 2003).

As noted by Martins (2000), organisations attempt to move towards greater flexibility, by expanding and shrinking the workforce, to correspond with shifting production and service demands, resulting in a sense of job insecurity. According to Maslach, Schaufeli & Leiter (2001), the impact of the changing world of work is most evident in changes in the psychological contract between employees and organisations. Employees are expected to give more in terms of time, effort, skills and flexibility, whereas they receive less in terms of career opportunities, lifetime employment and job security.

A recent study by Davis, Pawlowski & Houston (2006) showed that work is characterised by increased levels of intensity (particularly longer working hours) and significantly higher levels of interference with home life. At the heart of work/life issues is a paradox: the essential competition between the business imperative to be productive and efficient at work, and the need for employees to enjoy satisfying family and personal lives. Work requires time and effort to earn essential income and to keep businesses profitable, while families require time and energy to nurture and enjoy (Davies 2003).

South African companies are also confronted with the challenges and effects of a global economy, technological advancement and strong international competition (Bosman, Rothman & Buitendach 2005). Organisational change has become a corporate buzzword and has increased with the progression of globalisation and competition (Fay & Luhrmann 2004). Change in South Africa, over the last 10 years was not only economical, but also political. The once stable, predictable and controlled work environment has become complex and unpredictable (Van Schalkwyk 2004).

For many employees these changes cause feelings of uncertainty regarding the nature and future existence of their jobs (Snape & Redman 2003; Snoer 2005). These changes are ongoing and together with a shrinking labour market, contributes to heightened feelings of job insecurity (Viljoen, Bosman, & Buitendach 2005). Rothmann (2003) states that employees have to cope with increasing demands, often with limited resources, and a lack of control. Organisational instability might cause some employees to shift their commitment from increasingly transient work organisations to the relative stability of their occupations (Johnson 1996).

Extensive research originated in Europe and the United States (De Witte 2005a), on the psychological consequences of job insecurity (De Witte 1999; Klandermans & Van Vuuren 1999). Job insecurity is consistently associated with lower levels of relevant job attitudes, such as job satisfaction and job involvement (Naswell, Sverke, & Hellgren 2005). Job insecurity is also associated, as discussed by De Witte (2005), with higher levels of burnout, anxiety and depression, and psychosomatic complaints (Viljoen et al., 2005).

Longitudinal research confirms the causal impact of job insecurity on these indicators. (De Witte 2005b). The perception of job insecurity is frequently linked to reduced organizational

commitment, mistrust in management and intentions to leave the company (Buitendach & De Witte 2005). In view of the above identified challenges facing the world of work, it should, however, also be mentioned that not all changes within the work environment necessarily imply negative consequences for employees. Work often generates ambivalent feelings (Rothmann 2003). On the one hand work requires effort and is associated with lack of freedom and negative feelings. On the other hand work gives energy, enables development and generates positive feelings. Accordingly, it seems that work could lead to illness as well as health (Schaufeli & Bakker 2002).

With the inclusion of a focus on work-life programmes (Johnson, 1996), it has been observed that some people voluntarily choose to spend majority of their time engaging with their work, over and above their home/family life. The above conditions are related to some of the elements of Khan's psychological conditions (May et al., 2004) and interest in exploration of the mediating effect of psychological conditions in relation work engagement.

It is in view of the above work complexities that employee engagement has become a focus area, in particular, to understand the mediating effects of certain psychological conditions in relation to work engagement. The researcher primarily aims to explore the question: "Why do some employees stay engaged at work, even whilst being challenged with consistent change and greater job insecurity and why do others' disengage under the same circumstances at work?"

As has already been mentioned, the psychological contract between employers and employees is changing. There is no long-term job security anymore, and employees do not necessarily want boring day-in and day-out jobs simply to earn a big enough pension to retire. According to Harter (2001), employees want to engage with work that has meaning and is an extension of their personalities and dreams. According to Schaufeli and Bakker (2002), research showed that some individuals, regardless of high job demands and long working hours, do not show symptoms of burnout. Instead, it seemed that they found pleasure in working hard and dealing with job demands.

To date, relatively little attention has been paid to concepts that might be considered antipodes of burnout. An exception is "psychological presence", or "to be fully there", a concept, according to Kahn (1990), that emerged from role theory and is defined as an

experiential state that accompanies personally engaging behaviours, that involve the channelling of personal energies into physical, cognitive and emotional. Kahn, according to Schaufeli et al. (2000), does however, not propose an operationalisation of engagement. In Kahn's (1990) ethnographic study of a summer camp and architectural firm, he focussed on how people's experience of themselves and their work context influenced moments of personal engagement and disengagement. He argued that people ask themselves three fundamental questions in each role situation: a) How meaningful is it for me to bring myself into this performance? b) How safe is it to do so? c) How available am I to do so?

Recent work on the construct of engagement has taken two different, but related paths. Maslach and Leiter (1997) rephrased burnout as an erosion of engagement with the job. By implication, engagement is characterised by energy, involvement and efficacy, the direct opposites of the three burnout dimensions (exhaustion, cynicism and lack of professional efficacy). Schaufeli et al. (2002) have taken a different approach to the construct of engagement. They defined engagement and operationalised it in its own right. Schaufeli et al. (2002) defines engagement as a persistent, positive affective-motivational state of fulfilment in employees that is characterised by vigour, dedication and absorption. It is interesting to note the observation made by Maslach et al. (2001), that burnout is particularly related to job demands, but engagement is particularly related to job resources (Schaufeli & Bakker 2002). The central argument of Strümpfer (1990) to be considered is that there are psychological variables that enhance fortigenesis and thus create tendencies furthering resistance to burnout.

Engagement is defined as an energetic state in which the employee is dedicated to excellent performance at work and is confident of his or her effectiveness (Naudé & Rothmann 2006; Schutte, Toppinen, Kalimo & Schaufeli 2000). May et al. (2004) operationalised engagement by emphasising the importance of people bringing their physical, emotional and cognitive resources to bear on role-related tasks when they engage themselves at work. They argue that most jobs entail some level of physical exertion and challenges, as well as emotional (exhaustion) and cognitive demands, varying by job and person.

This study attempts to explore work engagement and psychological conditions from the perspective of positive psychology, with the focus on understanding the mediating effects of conditions such as psychological meaningfulness, availability and safety on work engagement in a multinational oil company.

A multinational oil company is the focus of this study. The company has been implementing change initiatives consistently over a three year period, including streamlining of business processes across its Pan African operations, downsizing, relocation of employees, and outsourcing of non-core business activities and standardisation of processes to meet global standards. Employees at all levels of the organisation and in particular within the South African context have been impacted significantly by such change initiatives. The next major change initiative involve relocation of the head office. In view of the current (constant) changing work environment, the question arises whether any psychological conditions will mediate the effects of job/personal characteristics on work engagement, within the context of the sometimes perceived, but often real workplace turmoil currently experienced.

The following research questions arise on the basis of the description of the research problem:

- How is work engagement and psychological meaningfulness, psychological safety, psychological availability conceptualised?
- Which job/personal characteristics impact on psychological meaningfulness, psychological safety, psychological availability and work engagement?
- Does psychological meaningfulness mediate the effects of job/personal characteristics on the work engagement in a multinational oil company?
- Does psychological safety mediate the effects of job/personal characteristics on the work engagement in a multinational oil company?
- Does psychological availability mediate the effects of job/personal characteristics on the work engagement in a multinational oil company?

## **1.2 RESEARCH AIMS**

The proposed project aim is to determine the mediating effects of three psychological conditions, namely psychological meaningfulness, psychological safety, and psychological availability on employees' work engagement.

### **1.2.1 General objective**

With reference to the above formulation of the problem the general objective of this research is to determine the mediating effects of three psychological conditions, namely psychological meaningfulness, psychological safety, and psychological availability on employees' work engagement.

### **1.2.2 Specific objectives**

The specific objectives of this study are:

- To conceptualise work engagement and psychological meaningfulness, psychological safety, psychological availability.
- To discuss the job/personal characteristics that impact on psychological meaningfulness, psychological safety, and psychological availability.
- To establish the mediating role of psychological meaningfulness on work engagement in a multinational oil company.
- To establish the mediating role of psychological safety on work engagement in a multinational oil company.
- To establish the mediating role of psychological availability on work engagement in a multinational oil company.

## **1.3 RESEARCH METHOD**

The research method consists of a literature review and an empirical study.

### **1.3.1 Literature review**

A literature study is conducted, with the assistance of a computer-based (catalogue) search, according to the keywords identified.

## **1.3.2 Empirical study**

### **1.3.2.1 Research design**

A survey design is used to obtain information regarding the population's current work engagement experiences. Participants were informed that the purpose of the questionnaire (research instrument) was to gather voluntary responses about how they view various aspects of their work and work situation. According to Shaughnessy and Zechmeister (1997), a survey design is well suited to evaluate interrelationships among variables, such as psychological conditions and work engagement. A limitation of the study is the exclusion of a longitudinal design study to determine causal relationships between the variables.

### **1.3.2.2 Participants**

The study population ( $N = 171$ ) consisted of a stratified random sample taken from the employees of a multinational oil company on various job levels, with work locations within South Africa.

### **1.3.2.3 Data gathering**

The Work Engagement Scale as developed by May et al. (2004) was used to gather information about how employees react to various aspects of their work and their work situation and the Work Experiences Scale developed by May et al. (2004) were administered to measure Work Role Fit, Co-worker Relations and Co-worker Norm Adherence. Three job insecurity items were added to the Work Experiences Scale to include specific items in relation to job insecurity.

General information on biographical information is collected with the biographical information sheet, such as home language, age, gender, race, qualification, years working for the company, years in the present position.

### **1.3.2.4 Data analysis**

The statistical analyses were carried out with the SPSS program (SPSS 2005). First,

descriptive statistics (e.g., means and standard deviations) are used to explore the data. Cronbach alpha coefficients ( $\alpha$ ) are used to assess the internal consistency of the measuring instruments (Clark & Watson 1995). Pearson product-moment correlation coefficients are used to specify the relationships between the variables. In terms of significance, it was decided to set the value at a 95% confidence interval level ( $p < 0,05$ ). Effect sizes (Steyn 1999) are used to decide on the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen 1988) is set for the practical significance of correlation coefficients. Multiple regression analyses are used to investigate the effects of the variables in this study.

### **1.3.3 Research procedure**

The participants were asked to complete the 41-item Work Engagement Questionnaire and Work Experience Scale.. All responses were used for data and statistical analysis. Hypotheses were tested and correlations determined and conclusions were drawn, based on a comparison with the theoretical framework of Kahn (1990) and May et al. (2004).

## **1.4 CHAPTER DIVISION**

Chapter 1: Introduction, problem statement and objectives

Chapter 2: Article

Chapter 3: Conclusions, limitations and recommendations.

## **1.5 CHAPTER SUMMARY**

In this chapter the background and motivation for the research were discussed, followed by a description of the problem statement and general and specific objectives were formulated. The research design and method were discussed, followed by the chapter division.

Chapter 2 consists of the research article.

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## **CHAPTER 2**

### **RESEARCH ARTICLE**

# **PSYCHOLOGICAL CONDITIONS THAT MEDIATE BETWEEN JOB DEMANDS AND RESOURCES, AND WORK ENGAGEMENT**

## **ABSTRACT**

The objective of this study was to investigate the mediating effects of three psychological conditions, namely psychological meaningfulness, psychological safety, and psychological availability on employees' work engagement. Stratified random samples ( $N=171$ ) were taken from employees of a multinational oil company. The Work Engagement Scale and the Work Experiences Scale were administered. The results confirmed that psychological meaningfulness and psychological availability were significant predictors of work engagement. Meaningfulness displayed the strongest positive relation with engagement. The relation of work role fit with engagement was fully mediated by the psychological condition of meaningfulness. Cognitive, emotional and physical resources had the strongest effect on psychological availability. Feelings of self-consciousness impacted positively on psychological availability, implying that someone who is to a lesser amount self-conscious is psychologically more available to engage at work.

## **OPSOMMING**

Die doel van hierdie studie was om die mediërende effek van drie sielkundige kondisies, naamlik psigologiese betekenisvolheid, psigologiese veiligheid en psigologiese beskikbaarheid op werksbegeestering te bepaal. Gestratifiseerde ewekansige steekproewe ( $N=171$ ) is geneem van werknemers van 'n multinasionale oliemaatskappy. Die Werkbegeesteringskaal en die Werkserveringskaal is afgeneem. Die resultate het bevestig dat psigologiese betekenisvolheid en psigologiese beskikbaarheid betekenisvolle voorspellers van werksbegeestering is. Psigologiese betekenisvolheid het die sterkste positiewe korrelasie met werksbegeestering getoon. Die verwantskap tussen werk-rol-passing en werksbegeestering was ten volle gemedieer deur die kondisie van psigologiese betekenisvolheid. Kognitiewe, emosionele en fisiese hulpbronne het die sterkste effek op psigologiese beskikbaarheid gehad. Selfbewustheid het 'n positiewe effek op psigologiese beskikbaarheid getoon, wat op sy beurt weer tot hoër werksbegeestering gelei het.

The face of the workplace has changed dramatically over the past decade and most organisations have to survive in a fiercely competitive global economy. Their survival depend on their ability to satisfy customer needs, while achieving quality, flexibility, innovation and organisational responsibility, through the commitment and co-operation of employees (Fay & Luhrmann 2004; Newell 2002). It almost seems ironic that practically every chief executive officer has uttered words to the effect “people are our most valuable asset”, while current practices confirm organisations have taken to re-organisational activities impacting significantly on people, such as outsourcing, downsizing, rightsizing and mergers in order to adapt to the new situation (Growing, Kraft & Campbell Quick 1998). It followed logically that more flexible staffing options would become the norm for the future and that the use of contractors for non-core activities would allow permanent staff to focus on value adding work for the organisation (Havran, Visser & Crous 2003).

As noted by Martins (2000), organisations attempt to move toward greater flexibility, by expanding and shrinking the workforce, to correspond with shifting production and service demands, resulting in a sense of job insecurity. According to Maslach, Schaufeli & Leiter (2001), the impact of the changing world of work is most evident in changes in the psychological contract between employees and organisations. Employees are expected to give more in terms of time, effort, skills and flexibility, whereas they receive less in terms of career opportunities, lifetime employment and job security.

A recent study by Davis, Pawlowski & Houston (2006) showed that work is characterised by increased levels of intensity (particularly longer working hours) and significantly higher levels of interference with home life. At the heart of work/life issues is a paradox: the essential competition between the business imperative to be productive and efficient at work, and the need for employees to enjoy satisfying family and personal lives. Work requires time and effort to earn essential income and to keep businesses profitable, while families require time and energy to nurture and enjoy (Davies 2003).

Work often generates ambivalent feelings (Rothmann 2003). On the one hand work requires effort and is associated with lack of freedom and negative feelings. On the other hand work gives energy, enables development and generates positive feelings. Accordingly, it seems that work could lead to illness as well as health (Schaufeli & Bakker 2001). Carr (2004) states

that employment status is related to happiness, with those being employed and in professional and skilled jobs, being happier than those in unskilled jobs or unemployed.

South African companies are also confronted with the challenges and effects of the world economy, technological advancement and strong international competition (Bosman, Rothman & Buitendach 2005). Organisational change has become a corporate buzzword and has increased with the progression of globalisation and competition (Fay & Luhrmann 2004). Change in South Africa, over the last 10 years was not only economic, but also political. The once stable, predictable and controlled work environment has become complex and unpredictable (Van Schalkwyk 2004). For many employees these changes cause feelings of insecurity regarding the nature and future existence of their jobs (Snape & Redman 2003; Snoer 2005). These changes are ongoing and together with a shrinking labour market, contributes to heightened feelings of job insecurity (Viljoen, Bosman & Buitendach 2005). Rothmann (2003) confirms that employees have to cope with increasing demands, often with limited resources, and a lack of control. Organisational instability might cause some employees to shift their commitment from increasingly transient work organisation to the relative stability of their occupations (Johnson 1996).

It is in view of the above work complexities that employee engagement has become a focus area, in particular, to understand the mediating effects of certain psychological conditions in relation to work engagement. The primary question explored by the researcher entails: “Why do some employees stay engaged at work, even whilst being challenged with consistent change and greater job insecurity and why do others’ disengage given the same circumstances at work?”

A movement in the direction of positive psychology is evident in South Africa (Rothmann & Storm 2003; Strümpfer 1990, 2003). The focus of Occupational Health Psychology has traditionally been in relation to the negative effects of work that contribute to burnout. The question supported by Rothmann and Storm (2003) relates to why certain workers can accomplish large amounts of work, with enthusiasm and pleasure, without becoming sick or being burned out. Research on work engagement could contribute towards better understanding of the above question.

As has already been mentioned, the psychological contract between employers and employees is changing. There is no long-term job security anymore, and employees do not necessarily want boring day-in and day-out jobs simply to earn a big enough pension to retire. According to Harter (2001), employees want to engage with work that has meaning and is an extension of their personalities and dreams. According to Schaufeli and Bakker (2001), research showed that some individuals, regardless of high job demands and long working hours, do not show symptoms of burnout. Instead, it seemed that they found pleasure in working hard and dealing with job demands.

This study attempts to explore work engagement and psychological conditions from the perspective of positive psychology, with the focus on understanding the mediating effects of conditions such as psychological meaningfulness, availability and safety on work engagement in a multinational oil company. The company has been implementing change initiatives consistently over a three year period, including streamlining of business processes across its Pan African operations, downsizing, relocation of employees, and outsourcing of non-core business activities and standardisation of processes to meet global standards.

The question might be asked: “Why bother to support research on work engagement?” Bleeker and Roodt (2002) stated that engagement is important for managers to cultivate, given that disengagement or alienation is central to the problem of worker’s lack of commitment, motivation and performance. May, Gilson & Harter (2004) state that there are practical reasons (e.g. turnover and customer satisfaction) as well as humanistic reasons (motivation and attachment to work) for managers and researchers of organisations to be concerned with employee engagement in work.

Peters and Waterman (2006) found that one of the major qualifying characteristics of the best run American companies is their ability to create a culture where individuals find the opportunity for self determination and expression. They claim that attention to employees, not work conditions per se, has the dominant impact on productivity. Harter (2001) used meta-analysis to combine the results of many diverse studies. The correlation between engagement results and business outcomes were substantially meaningful. Highly engaged individuals were most often found in the high-performance units. Employee engagement is far from the only driver of desirable business outcomes, however, this study proved robust links between engagement and the “bottom line”.

Carr (2004) added that work can potentially provide an optimal level of stimulation that people find pleasurable, an opportunity to fulfil their drive for curiosity and skills development, a social support network and a sense of identity and purpose. From a positive psychology perspective such individuals can be described as engaged in their work (Seligman 2002).

### **Work engagement**

Kahn (1990) describes engagement as the simultaneous employment and expression of a person's "preferred self" in task behaviours that promote connections to work and to others, personal presence (physical, cognitive and emotional) and active, full role performances. During engagement people are observed to become physically involved in tasks, whether alone or with others. cognitively vigilant, and empathically connected to others in the service of the work they are doing, in ways that display what they think and feel, their creativity, their beliefs and values and their personal connections to others. May et al. (2004) operationalised engagement by emphasising the importance of people bringing their physical, emotional and cognitive resources to bear on role-related tasks when they engage themselves at work. They argue that most jobs entail some level of physical exertion and challenges, as well as emotional (exhaustion) and cognitive demands, varying by job and person.

Engagement is generally defined as an energetic state in which the employee is dedicated to excellent performance at work and is confident of his or her effectiveness (Naudé & Rothmann 2006; Schutte, Toppinen, Kalimo & Schaufeli 2000). According to the analysis of Maslach et al. (2001), work engagement is distinct from constructs such as organisational commitment, job satisfaction, or job involvement. While organisational commitment refers to an employee's association with the organisation that provides employment, the focus is on the organisation, whereas engagement focuses on the work itself. Job satisfaction is the extent to which work is a source of need fulfilment and contentment, or a means of freeing employees from hassles or dissatisfaction; it does not encompass the person's relationship with the work itself. Job involvement is similar to the involvement aspect of engagement with work, but does not include the energy and effectiveness dimensions (Brown 1996; Van Wyk, Boshoff & Cilliers 2003).

According to Brown (1996), research on job involvement and job enrichment has neglected to examine the role of psychological conditions identified by Kahn (1990) and May et al. (2004). They stated that engagement is different from job involvement in that it is concerned more with how the individual employs him-/herself during the performance of his/her job.

Engagement is most closely associated with the existing construct flow (Carr 2004; Nakamura & Csikszentmihalyi, 2005; Seligman 2002). Seligman (2002) predicted that enjoying the resulting state of flow on the job will soon overtake material reward as the primary reason for working. He distinguished between three kinds of work orientation: a job, a career and a calling. Although both engagement and flow have self-employment underpinnings (Kahn 1990), there are differences between the concepts. Flow has been conceptualised and measured primarily as cognitive involvement with an activity and represents a unique “peak” experience of total cognitive absorption. The construct of engagement provides a more complex and thorough perspective on an individual’s relationship with work (Maslach et al., 2001).

Schaufeli, Salanova, Gonzalez-Roma & Bakker (2000) defined engagement and operationalised it in its own right (Schaufeli et al., 2000). Schaufeli defines engagement as a persistent, positive affective-motivational state of fulfilment in employees that is characterised by vigour, dedication and absorption. May et al. (2004) conceptualised engagement by emphasising the importance of people bringing their physical, emotional and cognitive resources to bear on role-related tasks when they engage themselves at work. They argue that most jobs entail some level of physical exertion and challenges, as well as emotional (exhaustion) and cognitive demands, varying by job and person.

In Kahn’s (1990) ethnographic study of a summer camp and architectural firm, he focussed on how people’s experience of themselves and their work context influenced moments of personal engagement and disengagement. He argued that people ask themselves three fundamental questions in each role situation: a) How meaningful is it for me to bring myself into this performance? b) How safe is it to do so? c) How available am I to do so?

### **Psychological meaningfulness, safety and availability**

May et al. (2004) stated that we still know little about how the elements of Kahn's (1990) theoretical framework contributes to the three psychological conditions and employees' engagement at work. The three psychological conditions explored by May et al. (2004) include psychological meaningfulness, psychological safety and psychological availability.

Meaningfulness has to do with how valuable a work goal is in relation to an individual's own ideals or standards. Psychological safety is believed to lead to engagement, because it reflects one's belief that a person can employ him-/herself without fear of negative consequences. In conclusion May et al. (2004) indicates individuals must believe that they have the necessary physical, emotional and cognitive resources in order to immerse themselves in their roles.

The research of May et al. (2004) addresses the current void in literature and explores the research question of whether the three psychological conditions actually explain the effects of their determinants on individual engagement at work. They hypothesised that if we understand the psychological conditions of engagement, we may be able to better predict why some individuals come to psychologically identify with their jobs. It contributes to current literature by exploring the relations among these elements.

Psychological meaningfulness is understood to be influenced by workplace dimensions such as job enrichment, work role fit and co-worker relations. Kahn (1990) maintained that the characteristics of one's job could influence the degree of meaningfulness an employee experienced at work. Newell (2002) suggested that both the content of a job (task characteristics) and the context in which the job is undertaken (satisfaction with supervision) influences affective commitment, general job satisfaction and intrinsic motivation.

Strümpfer (2003) highlights studies by various researchers indicating that people need to believe that they are significant in the larger, cosmic scene of things, a need a religion could fill. However, with the dilution or absence of religion for many, work has become a frequently chosen alternative source of meaning. Antonovsky (1987) explains meaningfulness (within the contexts of sense of coherence) as an experience when stimuli are perceived as motivationally relevant, in the form of welcome challenges that are worth engaging with and investing one self in. In the context of meaningfulness the dedication component of Schaufeli's engagement construct also becomes relevant (Schaufeli et al., 2000). A tentative conclusion could be that meaning providing variables, such as job

characteristics (Newell 2002), job satisfaction (De Witte 2005a), job enrichment (Malherbe & Pearse 2003), person-environment interaction (Carless 2005), work relationships (De Bruin & Taylor 2005), and sense of coherence (Strümpfer 2003) could strengthen meaning and engagement inclinations. Researchers have long been interested in the relation of the individual employee to the role that he/she assumes in an organisation.

A number of authors argue that a perceived “fit” between an individual’s self-concept and his/her role will lead to an experienced sense of meaning, due to the ability of the individual to express his/her values and beliefs (Strümpfer 2003). Carless (2005) found in a longitudinal field study that there was a direct relationship between person-job fit perceptions and intentions, while person-organisation fit perceptions were unrelated to intentions to accept a job offer.

The psychological condition of safety and its antecedents and outcomes have received little attention in the literature to date. May et al. (2004) included the antecedents’ supervisory relations, co-worker relations and behavioural norms as determinants of psychological safety. Individuals with rewarding interpersonal interactions, as well as the presence of co-worker interactions that foster a sense of belonging and stronger sense of social identity should experience increased psychological meaningfulness (Kahn 1990). De Bruin and Taylor (2005) highlighted the importance of relationships with colleagues and supervisors at work when having to spend the entire day surrounded by these people. Relationships at work characterised by trust, a perception of support and safety, as well as flexibility in behavioural norms is believed to play an important role with regards to the psychological safety experienced by an employee.

Psychological availability is primarily related to the individual’s belief that he/she has the physical, emotional or cognitive resources to engage at work (Kahn 1990). It is interesting the observation made by Maslach et al. (2001), that burnout is particularly related to job demands, but engagement is particularly related to job resources (Schaufeli & Bakker 2002). Self-consciousness about how others perceive and judge a person at work is also perceived to play a role with regards to availability. It is likely that a person with high self-consciousness will be more focused on external cues and is likely to get distracted. Time demands due to external (outside) organisations may impact negatively on psychological availability.

This study will finally explore, according to the research question of May et al. (2004), whether the three psychological conditions actually explain the effects of their determinants on an individual's engagement at work.

The hypotheses of this study are as follows:

Hypothesis 1 Work engagement is predicted by psychological meaningfulness, psychological safety, and psychological availability.

Hypothesis 2 Work role fit and co-worker relations predict psychological meaningfulness.

Hypothesis 3 Supervisory relations, co-worker relations and co-worker norms predict psychological safety.

Hypothesis 4 Resources and self-consciousness predict psychological availability.

Hypothesis 5 Psychological meaningfulness, safety and availability will mediate the effect of the job/personal characteristics on work engagement.

## **METHOD**

### **Research design**

A survey design was used to obtain information regarding the population's current work engagement experiences. Participants were informed that the purpose of the questionnaire (research instrument) was to gather voluntary responses on how they view various aspects of their work and work situation. According to Shaughnessy and Zechmeister (1997), a survey design is well suited to evaluate interrelationships among variables, such as psychological conditions and work engagement. A limitation of the study is the exclusion of a longitudinal design study to determine causal relationships between the variables.

### **Participants**

The participants were employees of a multinational oil company based at different locations across South Africa. Random sampling was used to send the questionnaire to 200 employees, whereof 171 participated ( $N=171$ ). Participation was voluntary and confidentiality was maintained. Employees from all departments, job groups and educational levels ranging from

semi-skilled to professional were included. The respondents were mostly female (67,3%), married (58,5%) and English speaking (69%). The majority of respondents fell into the 31-50 years age group (59%), with the minority (7,6%) of respondents older than 50 years. Educational level revealed that the majority (49,1%) of participants have a Grade 10, 11, 12 qualification. The majority of participants worked for the company for 6-10 years (23,40%) and mostly permanent employees (97,1%) participated in the survey.

The characteristics of the participants are reported in Table 1.

Table 1

*Characteristics of Participants (N=171)*

<b>Item</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Gender	Male	56	32,7
	Female	115	67,3
Marital status	Single/widow/widower	36	21,1
	Engaged/in a relationship	15	8,8
	Married/Remarried	100	58,5
	Divorced	17	9,9
	Separate	3	1,8
Language	Afrikaans	27	15,8
	English	118	69,0
	Xhosa	8	4,7
	Sotho	6	3,5
	Zulu	5	2,9
	Other	7	4,1
Age	20-30 years	24	14,0
	31-40 years	59	34,5
	41-50 years	57	33,3
	Older than 50 years	13	7,6
Education level	Grade 10,11,12	84	49,1
	3 year degree	42	24,6
	4 year degree and more	45	26,3
Years of employment	1-5 years	33	19,3
	6-10 years	40	23,4
	11-15 years	23	13,4
	16-20 years	10	5,8
	21 years and more	21	12,4

### **Measuring instrument**

The *Work Engagement Scale* as developed by May et al. (2004) was used to gather information about how employees react to various aspects of their work and their work situation. All items used for the scale, used a 5-point agreement-disagreement Likert format varying from 1 (*strongly disagree*) to 5 (*strongly agree*). The items reflected each of the three

components of Kahn's (1990) conceptualisation of psychological engagement, namely cognitive, emotional and physical engagement. Work engagement was measured by 13 items ( $\alpha = 0,77$ ). Structural equation modelling was used to test the factorial model of work engagement. The results showed that a one-factor model ( $\chi^2 = 42,27$ ;  $\chi^2 / df = 2,11$ ; GFI = 0,95; AGFI = 0,90; CFI = 0,90; RMSEA = 0,08) was superior to a three-factor model. The one-factor model included eight items, inclusive of all three aspects of engagement (cognitive, emotional and physical) as operationalised by May et al. (2004).

The Work Experiences Scale as developed by May et al. (2004) was used to measure Work Role Fit ( $\alpha = 0,92$ ), Co-worker Relations ( $\alpha = 0,93$ ) and Co-worker Norm Adherence ( $\alpha = 0,61$ ) and were measured by averaging 3-10 items. Supportive supervisor relations was measured by items drawn from Oldham and Cunnings (1996) and Butler (1991) with  $\alpha = 0,95$  for the 10 items. The alpha coefficients for resources, self-consciousness and outside activities varied between 0,83 and 0,91. Factor analysis of the variables identified 14 factors with eigenvalues larger than one. The largest factor explained 23,9% of the variance and was composed of all the supervisor relations items. All scale items loaded on their respective constructs and did not cross-load on the other factors.

The Work Experience Scale of May et al. (2004) has not been used in the South African context and for this study all the subscales were included, i.e. Psychological Meaningfulness was measured by six items (e.g. "the work I do is very important to me"). Psychological Safety was measured by 3 items (e.g. "I'm not afraid to be myself at work"). Psychological Availability was measured by averaging 5 items (e.g. "I am confident in my ability to think clearly at work"). A principal component analysis was conducted on the 14 items of the psychological processes (conditions) subscale of the Work Engagement Questionnaire. The results showed that three factors (explaining 65,48% of the variance) had eigenvalues larger than one as confirmed and suggested by the scree plot. A principal axis factor analysis with a direct oblimin rotation was subsequently carried out and resulted in the following factors being included: Psychological Meaningfulness (6 items), Psychological Availability (5 items) and Psychological Safety (2 items). The alpha coefficients for the psychological conditions, namely Psychological Meaningfulness, Psychological Safety and Psychological Availability items varied between 0,71 and 0,90 in the study of May et al. (2004).

Work Role fit was measured by 4 items, rewarding co-worker relations by 10 items, supportive supervisor relations by 10 items, co-worker norms by 3 items. The degree to which individuals possess the resources to become available for engagement was assessed by averaging 8 items. Self-consciousness was measured by 3 items and outside activities was measured by a single item. Three items measuring “job insecurity” were added to the questionnaire as the employees’ current work circumstances were primarily characterised by job insecurity. A principal component analysis was conducted on the 41 items of the Job/Personal Characteristics subscale of the Work Experience Questionnaire. The results showed that eight factors had eigenvalues larger than one (explaining 73,91% of the variance), but the scree plot suggested that seven factors could be extracted. Principal axis factors analysis (with a varimax rotation) was subsequently conducted, and resulted in the following factors: Supervisor Relations, Co-worker Relations, Resources, Work Role Fit, Job Insecurity, Self-consciousness and Co-worker Norms. Two factors, namely Self-consciousness and Co-worker Norms had only two items with loadings higher than 0,30. One item of each these factors (which had loadings lower than 0,30) were excluded from further analysis.

Specific questions were included to gather information about the demographic characteristics of the participants, such as: gender, marital status, language, age, educational level, years of employment at the company and employment type.

### **Statistical analyses**

The statistical analyses were carried out with the SPSS program (SPSS 2005). First, descriptive statistics (e.g., means and standard deviations) were used to explore the data. Cronbach alpha coefficients ( $\alpha$ ) were used to assess the internal consistency of the measuring instruments (Clark & Watson 1995). Pearson product-moment correlation coefficients were used to specify the relationships between the variables.

In terms of significance, it was decided to set the value at a 95% confidence interval level ( $p < 0,05$ ). Effect sizes (Steyn 1999) were used to decide on the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen 1988) was set for the practical significance of correlation coefficients.

Multiple regression analyses were used to investigate whether job/personal characteristics predict (e.g. work role fit) the psychological conditions (e.g. psychological meaningfulness), and whether these predict work engagement.

## **RESULTS**

### **Descriptive statistics**

The descriptive statistics, alpha coefficients, and correlation coefficients of the scales of the measuring instruments are reported in Table 2.

The scores on the Work Experience Scale are normally distributed. The Cronbach alpha coefficients were obtained on all the measuring scales, varying from 0,41 to 0,92. The Cronbach alpha coefficient of Psychological Safety ( $\alpha = 0,41$ ) was lower than the guideline of 0,70 (Nunnally & Bernstein 1994), and was consequently excluded from statistical analysis.

Table 2

*Descriptive Statistics and Product-moment Correlations*

Scale	Mean	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10
1. Psychological Meaningfulness	23,95	4,90	0,92	-	-	-	-	-	-	-	-	-	-
2. Psychological Availability	20,87	3,17	0,85	0,40 <sup>++</sup>	-	-	-	-	-	-	-	-	-
3. Psychological Safety	7,46	1,96	0,41	0,27 <sup>*</sup>	0,21 <sup>*</sup>	-	-	-	-	-	-	-	-
4. Work Role Fit	12,66	4,10	0,90	0,68 <sup>++</sup>	0,39 <sup>++</sup>	0,28 <sup>*</sup>	-	-	-	-	-	-	-
5. Co-worker Relations	36,31	8,42	0,95	0,31 <sup>++</sup>	0,38 <sup>++</sup>	0,32 <sup>++</sup>	0,36 <sup>++</sup>	-	-	-	-	-	-
6. Supervisor Relations	32,50	10,36	0,96	0,15 <sup>*</sup>	0,09	0,39 <sup>++</sup>	0,28 <sup>*</sup>	0,42 <sup>++</sup>	-	-	-	-	-
7. Resources	25,67	7,39	0,91	0,37 <sup>++</sup>	0,45 <sup>++</sup>	0,41 <sup>++</sup>	0,40 <sup>++</sup>	0,30 <sup>++</sup>	0,30 <sup>++</sup>	-	-	-	-
8. Co-worker Norms	7,00	1,70	0,71	0,29 <sup>*</sup>	0,17 <sup>*</sup>	0,20 <sup>*</sup>	0,34 <sup>++</sup>	0,29 <sup>*</sup>	0,39 <sup>++</sup>	0,32 <sup>++</sup>	-	-	-
9. Self-consciousness	5,27	2,40	0,86	-0,15 <sup>*</sup>	-0,40 <sup>++</sup>	-0,18 <sup>*</sup>	-0,17 <sup>*</sup>	-0,25 <sup>*</sup>	0,08	-0,31 <sup>++</sup>	0,08	-	-
10. Job Insecurity	8,85	3,84	0,91	-0,07	-0,21 <sup>*</sup>	-0,26 <sup>*</sup>	-0,11 <sup>*</sup>	-0,13 <sup>*</sup>	-0,04	-0,19 <sup>*</sup>	0,10 <sup>*</sup>	0,37 <sup>++</sup>	-
11. Work Engagement	31,40	4,46	0,72	0,59 <sup>++</sup>	0,34 <sup>++</sup>	0,17 <sup>*</sup>	0,35 <sup>++</sup>	0,25 <sup>*</sup>	0,12 <sup>*</sup>	0,21 <sup>*</sup>	0,23 <sup>*</sup>	-0,11 <sup>*</sup>	-0,07

\*  $p < 0,05$  – statistically significant

+  $r > 0,30$  – practically significant (medium effect)

++  $r > 0,50$  – practically significant (large effect)

A significant correlation was found between Psychological Meaningfulness and Work Engagement ( $p < 0,05$ ; large effect). Furthermore, a significant correlation was found between Psychological Availability and Work Engagement ( $p < 0,05$ ; medium effect).

Regarding the correlations between job/personal characteristics and psychological processes (conditions) significant relationships were found between Work Role Fit and Work Engagement. ( $p < 0,05$ ; large effect); Co-worker Relations and Psychological Availability ( $p < 0,05$ ; medium effect). Supervisor Relations indicated a statistically but not practically significant correlation with Psychological Meaningfulness ( $p < 0,05$  medium effect), while Resources and Co-worker Norms were found to have significant correlations with both Psychological Availability and Psychological Meaningfulness ( $p < 0,05$  medium effect). Self-consciousness was found to have a significant correlation with Psychological Availability ( $p < 0,05$ ; medium effect), as well as Psychological Meaningfulness ( $p < 0,05$ ).

Correlations between job/personal characteristics and work engagement indicated a significant relationship between Work Role Fit and Work Engagement ( $p < 0,05$ ; medium effect), Co-worker Relations, Supervisor Relations, Resources, Norms, and Self-consciousness and Work Engagement ( $p < 0,05$ )

No statistically significant correlations were found between Self-consciousness and Supervisor Relations, Supervisory Relations and Psychological Availability, and Job Insecurity and Work Engagement or Psychological Meaningfulness.

### **Multiple regression analyses**

Multiple regression analyses were carried out with Psychological Meaningfulness and Psychological Availability (as measured by the Work Experience Questionnaire) as independent variables and Work Engagement (as measured by the Work Engagement Questionnaire) as dependent variable (see Table 3).

Table 3

*Regression Analysis with Psychological Availability and Psychological Meaningfulness as Independent Variables and Work Engagement as Dependent Variable*

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
	B	SE	Beta						
1						22,23*	0,34	0,12	0,12*
	(Constant)	21,36	2,15	9,93					
	Psychological Availability	0,48	0,10	0,34	4,71	0,00*			
						48,68*	0,61	0,37	0,25*
2	(Constant)	15,90	1,95	8,17					
	Psychological Availability	0,17	0,94	0,12	1,82	0,23			
	Psychological Meaningfulness	0,50	0,06	0,55	8,15	0,00*			

\*  $p < 0,05$  – statistically significant

The results in Table 3 show that approximately 12% of the variance in Work Engagement (as measured by the Work Engagement Scale) is predicted by Psychological Availability. A statistically significant increase in the  $R^2$  was obtained when Psychological Meaningfulness was entered into the regression analysis (change in  $R^2 = 25\%$ ). The standardised regression coefficient for Psychological Meaningfulness ( $\beta = 0,55$ ) was strong when compared to the coefficient for Availability ( $\beta = 0,34$ ). Table 3 demonstrates that both Psychological Meaningfulness and Psychological Availability are predictors of Work Engagement, but that Psychological Meaningfulness is the strongest predictor.

Based on these results partial support was found for Hypotheses 1.

The results of a multiple regression analysis with Psychological Meaningfulness and Psychological Availability (as measured by the Work Experience Questionnaire) as dependent variables are reported in Table 4.

Table 4

*Regression Analysis with Psychological Meaningfulness and Psychological Availability as Dependent Variable*

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
	B	SE	Beta						
Psychological Meaningfulness									
Model						142,50*	0,68	0,46	0,45
(Constant)	13,73	0,90		15,25					
Work Role Fit	0,81	0,68	0,68	11,94	0,00*				
Psychological Availability									
Model						32,00*	0,52	0,28	0,27
(Constant)	18,96	1,04		18,27					
Self-consciousness	-0,38	0,09	-0,29	-4,20	0,00*				
Resources	0,15	0,03	0,36	5,16	0,00*				

\*  $p < 0,05$  – statistically significant

The results in Table 4 show that 46% of the variance in Psychological Meaningfulness (as measured by the Work Experience Questionnaire) is predicted by Work Role Fit. The standardised regression coefficients for Consciousness ( $\beta = -0,29$ ) and Resources ( $\beta = 0,36$ ) confirm they are strong predictors for Psychological Availability and predicts 28% of the variance in Psychological Availability. It consequently implies that if a person is not overly conscious and has resources, the person will be more psychologically available. The standardised regression coefficients of all three Job/personal Characteristics, namely Work Role Fit ( $\beta = 0,68$ ), Self-consciousness ( $\beta = -0,29$ ) and Resources ( $\beta = 0,36$ ) measured strong and confirm statistical significance ( $p < 0,05$ ).

Based on the se results support was found for Hypotheses 2 and 4.

Next the possible mediating effects of psychological processes (such as Psychological Meaningfulness and Psychological Availability) in terms of the job/personal characteristics and Work Engagement as dependent variable were analysed.

Table 5 reports the results of the regression analysis with Work Role Fit and Psychological Meaningfulness as independent variables and Work Engagement (as measured by the Work Engagement Questionnaire) as dependent variable.

Table 5  
*Regression Analysis with Work Role Fit and Psychological Meaningfulness as Independent Variables and Work Engagement as Dependent Variable*

Model		Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
		B	SE	Beta						
1	(Constant)	26.62	1.04		25,53		23,15*	0,35	0,12	0,11
	Work Role Fit	0,38	0,08	0,35	4,81	0,00*	47,28*	0,60	0,36	0,35
2	(Constant)	18.32	1.37		13,32					
	Work Role Fit	-0,11	0,09	-0,10	-1,22	0,23				
	Psychological Meaningfulness	0.60	0.08	0.66	7,93	0,00*				

\*  $p < 0,05$  – statistically significant

The results in Table 5 indicate that Work Role Fit ( $\beta = 0,35$ ) statistically significantly predict Work Engagement. However, when both Psychological Meaningfulness and Work Role Fit were entered into the regression equation, the regression coefficient for Work Role Fit was no longer statistically significant.

Work Role Fit was a statistically significant predictor of Psychological Meaningfulness (see Table 4) and Work Engagement (see Table 5). However, the regression coefficient of Work Role Fit was not statistically significant when it was entered with Psychological Meaningfulness into the regression equation (see Table 5). Therefore, it can be deduced that Psychological Meaningfulness mediates the relationship between Work Role Fit and Work Engagement.

Table 6

*Regression Analysis with Consciousness and Resources and Psychological Availability as Independent Variables and Work Engagement as Dependent Variable*

Model		Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
		B	SE	Beta						
1	(Constant)	28,82	1,67		17,21		23,15*	0,22	0,05	0,38*
	Self-consciousness	-0,10	0,15	-0,05	-0,65	0,52				
	Resources	0,12	0,05	0,20	2,51	0,01*				
2	(Constant)	20,28	2,80		7,27		47,28*	0,35	0,12	0,12*
	Self-consciousness	0,08	0,15	0,04	0,51	0,61				
	Resources	0,51	0,05	0,08	1,04	0,30				
	Psychological Availability	0,45	0,12	0,32	3,75	0,00*				

\* $p < 0,05$  – statistically significant

Table 6 demonstrates that 5% of the variance in Work Engagement is explained by Self-Consciousness and Resources. When Psychological Availability was entered into the analysis, 12% of the variance in Work Engagement was explained. Only the regression coefficient of Psychological Availability ( $\beta = 0,32$ ) was statistically significant when it was entered with Self-consciousness and Resources into the regression equation.

Self-consciousness and Resources were statistically significant predictors of Psychological Availability (see Table 4) and Work Engagement (see Table 6). However, the regression coefficients of Self-consciousness and Resources were not statistically significant when they were entered with Psychological Availability into the regression equation (see Table 6). Therefore, it can be deduced that Psychological Availability mediates the relationship between Self-consciousness and Resources on the one hand, and Work Engagement on the other hand.

Based on the results of Table 5 and 6, partial support is offered for Hypotheses 5.

## DISCUSSION

The objective of this study was to investigate the mediating effects of three psychological conditions, i.e. meaningfulness, safety and availability on work engagement, as per Kahn's (1990) theoretical framework and job/personal characteristics. The results from the revised theoretical framework and research conducted by May et al. (2004) confirmed that all three psychological conditions showed significant positive relations with engagement.

The results of this study confirmed the mediating effect of two psychological conditions, i.e. meaningfulness and availability on work engagement. Similar to the findings of May et al. (2004) it was found during this study that meaningfulness was the strongest predictor of engagement. This finding confirms previous research on engagement and the mediating effect of meaningfulness (Kahn 1990; May et al., 2004; Schaufeli 2002).

The study finding with regards to the job/personal characteristic of work role fit that was found to be significantly related (strongest predictor) of meaningfulness is consistent with previous research (May et al., 2004; Strümpfer 2003) and with the view that when people see their roles as opportunities to express themselves they will experience a sense of meaning (Snyder & Lopez 2005).

The above finding therefore highlights the importance of people experiencing their work as meaningful. A strong predictor of meaningfulness, as mentioned, is work role fit. Strümpfer (2003) highlights the view of work becoming a frequently chosen alternative source of meaning. This happens particularly in the lives of idealistic and highly motivated individuals who work hard because they expect their work to give meaning to their existence.

The results of this study also confirmed the role of availability as predictor of work engagement. Revision of the original framework of Kahn (1990) and research by Schaufeli et al. (2002) explain that psychological availability is the sense of having the resources to personally engage at a particular moment. Availability was found to mediate the effect of resources and self-consciousness on engagement. Cognitive, emotional and physical resources, measured as a one factor structure construct had the strongest effect on psychological availability, according to the study findings, while feelings of self-consciousness impacted on psychological availability, implying that someone who is less

self-conscious is psychologically more available to engage at work.

The above finding is supported by the research of Schaufeli & Bakker (2004) whereby it was found that job resources led to a motivational process, where the presence of adequate job resources reduces job demands, fosters goal accomplishment and stimulates personal growth and development. In turn this may lead to motivational outcomes, such as a stronger involvement in terms of organisational commitment and dedication to one's work. Research findings in the burnout/work engagement literature indicate that work engagement is mainly predicted by job resources (Demerouti et al., 2001; Schaufeli & Bakker 2004).

Psychological safety was not included in further analysis because of its low  $\alpha$  ( $\alpha = 0.41$ ) and was not identified as a statistically significant predictor of work engagement. It did not mediate the relationship between any job/personal characteristics and work engagement. This is inconsistent with the findings of May et al. (2004), where it was found that safety displayed a strong relation with work engagement and partially mediated the effect of adherence to co-worker norms and work engagement. A possible reason might be due to misunderstanding of the wording of some of the items on the Work Experience Questionnaire.

The results of this study not only indicated that work role fit was a statistically significant predictor of psychological meaningfulness and work engagement, but also that psychological meaningfulness mediates the relationship between work role fit and work engagement. This finding is in line with the findings of May et al. (2004) whereby the strong relationship between work role fit and meaningfulness was confirmed and the mediating effect on work engagement was statistically proven.

Similarly, the results of this study confirmed that self-consciousness and resources (in particular) were statistically found to be significant predictors of psychological availability and work engagement. It was again statistically deduced that psychological availability mediates the relationship between self-consciousness and resources on the one hand, and work engagement on the other hand.

It therefore implies that even if job/personal characteristics such as work role fit, resources and self-consciousness were present and could act as predictors of engagement, the effect of

such characteristics could only be mediated if meaningfulness and availability are present. People therefore need to find their work meaningful and have the resources to make themselves available to engage with their work.

This study therefore found partial support for the findings of May et al. (2004) 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. Work role fit was positively linked with meaningfulness and the availability of job resources and less self-consciousness were positively linked with psychological availability, which mediates the effect on work engagement. The above findings contribute to our understanding of the psychological conditions relating to work engagement.

Limitations identified from this study include a need for more extensive research with regards to psychological safety as a construct. Safety was not a reliable construct to be included in the study and for future research it is recommended that the measurement of psychological safety be developed further in terms of research method, sample and generalisation to other industries.

## **RECOMMENDATIONS**

This study explored the mediating effects of three psychological conditions on work engagement. Through increased understanding of the effects of these mediators, possible reasons for disengagement at work can be isolated, or with the shift of focus in positive psychology, opportunities can be identified to optimise the specific job/personal characteristics and psychological conditions to increase and maintain engagement at the workplace. Several suggestions for future research are derived from the present findings, to increase our understanding of work engagement, as well as the usefulness of the concept.

The findings of this study have important implications for organisations and managers in terms of design of jobs, employee selection and relations with employees. May et al. (2004) discussed in detail ways in which managers can foster meaningfulness, safety and availability to enhance engagement. Based on the findings of this study, managers are advised to consider ways to enhance meaningfulness by ensuring effective design of jobs, selecting the proper employees for particular work roles and taking more time to learn about personal aspirations

and desires of employees in order to fit them to roles that will allow self expression. Maslach and Leiter (1997) also suggest the promotion of human values whereby it is the responsibility of leaders to model, mentor and coach employees along the lines of value clarification and implementation. Availability should be supported by ensuring there is sufficient support for employees to invest in the development of their own skills and resources (cognitive, emotional and physical) to improve perceptions of psychological availability.

Within the context of consistent change in the world of work and the constant impact on people and organisations, as well as the shift towards meaningfulness, dedication, job satisfaction, subjective well-being and positive emotions (Strümpfer 2003), the field of positive psychology can contribute to a better understanding of the mediating and causal effects of psychological conditions such as meaningfulness, safety and availability on engagement at work.

It is recommended for future research to include further investigation of the mediating effects of psychological conditions such as meaningfulness, safety and availability on work engagement in other contexts, as well as with larger samples, or even by the use of longitudinal studies to establish causal relations.

Research is needed to determine the reliability and validity of the Work Experience Scale in other samples in South Africa. Large sample sizes might provide increased confidence that study findings would be consistent across other similar groups. Further construct validity research is required to establish the factorial validity of the Work Experience Scale, in particular within a South African context. This issue can be clarified in future research that compares samples from different populations. The findings of this study also suggest the need for possible improvement of item content. This implies that the wording of certain items must be modified in order to make it more appropriate for the South African context.

The assessment of individual or organisational interventions impacting on psychological conditions such as meaningfulness, safety and availability should ideally be done, most likely as part of longitudinal studies to identify and prioritise effective interventions leading to enhanced work engagement.

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## **CHAPTER 3**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

In this chapter conclusions drawn regarding the results of the empirical study are given, limitations are pointed out and recommendations for future research are made.

#### **3.1 CONCLUSIONS**

The following conclusions with regard to the specific objectives set out at the beginning of the study are arrived at:

##### **Conceptualisation of work engagement**

Trying to find a single, agreed upon definition for engagement is like trying to find the proverbial needle in a haystack. In line with the shift to the positive pole of employee well-being, the burnout concept has been supplemented and enlarged by its positive antitheses, namely work engagement (Maslach et al., 2001). The literature review clarified key job/person characteristics and mediating factors with regards to engagement, such as Schaufeli's (2000) differentiation of vigour, dedication and absorption and list of eight characteristics of engaged workers, Kahn's (1990) theoretical framework of engagement and Maslach and Leiter's (1997) view on engagement as the opposites of the components of burnout measures.

The concept of work engagement contributes to our understanding why certain employees can accomplish large amounts of work, within a changing world of work, with enthusiasm and pleasure, without becoming sick or being burned out.

##### **Mediating effects of psychological conditions on work engagement**

Revision of the original theoretical framework of Kahn (1990) and operationalisation of the framework by May et al. (2004) suggest that all three psychological conditions exhibited significant positive relations with engagement. This study, however, did not confirm a significant correlation, or mediating effect of psychological safety towards engagement. The

reason could be related to misunderstanding of the wording of specific items and therefore contributing to the result that the Cronbach alpha coefficient of psychological safety ( $\alpha = 0,41$ ) scored too low and was subsequently excluded from statistical analysis for this study

The mediating effect of two psychological conditions, namely meaningfulness and availability on employee work engagement were confirmed during this study. In support of the work of Khan (1990) and May et al. (2004), work role fit was found to be the strongest predictor of psychological meaningfulness and meaningfulness displayed the strongest positive relation with engagement.

The amount of a person's cognitive, emotional and physical resources had the strongest effect on psychological availability. Feelings of self-consciousness impacted on psychological availability, implying that someone who is less self-conscious, is psychologically more available to engage at work

It was concluded that psychological meaningfulness fully mediated the effects of work role fit on engagement and psychological availability fully mediated the effects of resources and self-consciousness on engagement. Through increased understanding of the effects of these mediators, possible reasons for disengagement at work can be isolated, minimised and remedial or preventive action can be taken in the workplace. Several suggestions for future research are derived from the present findings, to increase our understanding of work engagement, as well as the usefulness of the concept.

It is in view of the above work complexities that employee engagement has become a focus area, in particular, to understand the mediating effects of certain psychological conditions in relation to work engagement. "Why do some employees stay engaged at work, even whilst being challenged with consistent change and greater job insecurity and why do others' disengage at work?"

### **3.2 LIMITATIONS OF THE RESEARCH**

The following limitations regarding this research have been identified:

- Research is needed to determine the reliability and validity of the Work Experience

Scale in other samples in South Africa. Large sample sizes might provide increased confidence that study findings would be consistent across other similar groups.

- Further construct validity research is required to establish the factorial validity of the Work Experience Scale, in particular within a South African context. This issue can be clarified in future research that compares samples from different populations. The findings of this study also suggest the need for possible improvement of item content, for example the psychological safety subscale. This implies that the wording of certain items must be modified in order to make it more appropriate for the South African context.
- Limitations identified from this study include a need for more extensive research with regards to psychological safety. Safety was not a reliable item to be included in the study and for future research it is recommended that psychological safety be developed further, for inclusion in future studies.
- The assessment of individual or organisational interventions impacting on psychological conditions such as meaningfulness, safety and availability should ideally be done, most likely as part of longitudinal studies to identify and prioritise effective interventions impacting positively on work engagement.

### **3.3 RECOMMENDATIONS**

The following recommendations regarding the research can be made:

It is recommended for future research to include further investigation of the mediating effects of psychological conditions such as meaningfulness, safety and availability on work engagement in other contexts, as well as with larger samples, or even by the use of longitudinal studies to establish causal relations.

The findings of this study have important implications for organisations and managers in terms of design of jobs, employee selection and relations with employees. May et al. (2004) discussed in detail ways in which managers can foster meaningfulness and availability to enhance engagement. Based on the findings of this study, managers are advised to consider

ways to enhance meaningfulness by ensuring effective design of jobs, selecting the proper employees for particular work roles and taking more time to learn about personal aspirations and desires of employees in order to fit them to roles that will allow self expression.

Maslach and Leiter (1997) also suggest the promotion of human values whereby it is the responsibility of leaders to model, mentor and coach employees along the lines of value clarification and implementation. Availability should be supported by ensuring there is sufficient support for employees to invest in the development of their own skills and resources (cognitive, emotional and physical) to improve perceptions of psychological availability.

Within the context of consistent change in the world of work and the constant impact on people (organisations), as well as the shift towards meaningfulness, dedication, job satisfaction, subjective well-being and positive emotions (Strümpfer 2003), the field of positive psychology can contribute to a better understanding of the mediating and causal effects of psychological conditions such as meaningfulness, safety and availability on engagement at work.

In view of increased flexibility with regards to work arrangements, Janssen et al. (2004) suggests together with other researchers that work-home interaction could possibly mediate the relationship between job characteristics and certain aspects of well-being (including work engagement). Future research could consider studies on the mediating role of positive work-home interaction between job resources and work engagement.

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