JOB INSECURITY AND WELLNESS OF EMPLOYEES IN A GOVERNMENT ORGANISATION

By

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Dedicated to

my father, Gerrit Jan Elbert.

REMARKS

The reader is reminded of the following:

The references, as well as the editorial style as prescribed by the Publication Manual (*4th edition*) of the American Psychological Association (APA) were followed in this thesis. This practice is in line with the policy of the Programme in Industrial Psychology at the North-West University.

This thesis is submitted in the form of three research articles.

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SUMMARY

Title: Job insecurity and wellness of employees in a government organisation.

Key words: Job insecurity, negative affectivity, positive affectivity, burnout, work engagement, work wellness

The work environment in which South African employees have to function in is highly demanding, offering them little in terms of job security, but simultaneously expecting them to give more in terms of *inter alia* flexibility, competency, and effort. Tracking and addressing government employees' functioning in areas that could affect their wellness and consequent standard of service is essential. Job insecurity, affectivity, burnout and work engagement are specific focus areas in this research. It is important to use reliable and valid measuring instruments to measure these constructs. It appears that job insecurity may affect employees' levels of burnout and work engagement and that affectivity may also influence the stress-outcome relationship. A lack of South African research exists regarding job insecurity and wellness of employees, hence the importance of this research.

The objectives of this study were to investigate the relationship between job insecurity, affectivity, burnout, and work engagement of employees (N = 297) in a government organisation. A cross-sectional survey design was used. Constructs were measured by means of the Job Insecurity Inventory (JII), the Affectometer 2 (AFM 2), the Oldenburg Burnout Inventory (OLBI) and the Utrecht Work Engagement Scale (UWES). The research method for each of the three articles consists of a brief literature review and an empirical study. Exploratory factor analyses, as well as Cronbach's alphas were computed to assess the reliability and validity of the OLBI, UWES and AFM 2. Structural equation modelling was used to assess the construct validity of the JII, while alpha coefficients were computed to assess the internal consistency of its scales. Descriptive statistics were used to analyse data and Pearson product moment correlation coefficients, as well as regression analyses were used to examine the relationships between the constructs employed in this research.

Structural equation modelling results confirmed the two-factor structure of the JII, consisting of an affective and cognitive dimension, although a one-factor model also resulted in a good, but not superior fit. Exploratory factor analyses of the OLBI resulted in a two-factor model of

burnout, consisting of an Exhaustion/Disengagement and Engagement subscale and the UWES resulted in a one-factor model of engagement. Exploratory factor analyses of the AFM 2 resulted in a two-factor model, consisting of a negative and positive affect scale. All scales used in this research demonstrated adequate internal consistencies.

It was found that white participants experience higher levels of cognitive job insecurity and lower levels of engagement (OLBI) compared to black participants. Shorter tenure was associated with increased engagement (OLBI). It was furthermore found that participants who had been working in the organisation for less than one year and those who worked for two to five years demonstrated higher levels of positive affect compared to employees who had been working in the organisation for 11 years and longer. Regarding negative affect, it was established that participants with tenure less than one year presented lower negative affect levels compared to participants who had been employed in the organisation for longer.

Job insecurity and burnout were found to be statistically significantly correlated. Cognitive and affective job insecurity demonstrated a practically significant relationship with work engagement. Positive and negative affectivity showed a practically significant correlation with both the affective and cognitive job insecurity scales and work engagement. Positive affectivity partially mediated the relationship between cognitive job insecurity and exhaustion/disengagement. Furthermore, both positive and negative affectivity partially mediated the relationship between cognitive job insecurity and work engagement.

Conclusions are made, limitations of the current research are discussed and recommendations for future research are put forward.

OPSOMMING

Titel: Werksonsekerheid en gesondheid van werknemers in 'n staatsorganisasie

Sleutelwoorde Werksonsekerheid, negatiewe affektiwiteit, positiewe affektiwiteit, uitbranding, werksbegeestering, werk welstand

Die werksomgewing waarbinne Suid-Afrikaanse werknemers moet funksioneer, is hoogs veeleisend en bied min in terme van werksekerheid, maar verwag terselfdertyd van werknemers om meer te gee in terme van onder andere buigsaamheid, vaardighede en insette. Navorsing en adressering van staatswerknemers se funksionering in areas wat hul gesondheid en gevolglike standaard van diens kan beïnvloed, is essensieel. Werksonsekerheid, affektiwiteit, uitbranding en werksbegeestering is spesifieke fokusareas in hierdie navorsing. Die gebruik van betroubare en geldige meetinstrumente is belangrik vir die meting van hierdie konstrukte. Dit wil voorkom of werksonsekerheid 'n uitwerking kan hê op werknemers se vlakke van uitbranding en werksbegeestering en ook dat affektiwiteit die stres-uitkoms verhouding kan beïnvloed. Daar bestaan 'n tekort aan Suid-Afrikaanse navorsing aangaande werksonsekerheid en gesondheid van werknemers, vandaar die belangrikheid van hierdie navorsing.

Die primêre doelstellings van hierdie studie was om die verhouding tussen werksonsekerheid, affektiwiteit, uitbranding en werksbegeestering van werknemers (N = 297) in 'n staatsorganisasie te ondersoek. 'n Dwarsnee opname-ontwerp is gebruik. Konstrukte is gemeet met behulp van die "Job Insecurity Inventory" (JII), die "Affectometer 2" (AFM 2), die "Oldenburg Burnout Inventory" (OLBI) en die "Utrecht Work Engagement Scale (UWES)". Die navorsingsmetode vir elk van die drie artikels bestaan uit 'n kort literatuuroorsig en 'n empiriese ondersoek. Eksploratiewe faktor-analise, sowel as Cronbach alfakoëffisiënte is gebruik om die geldigheid en betroubaarheid van die OLBI, UWES, en AFM 2 te ondersoek. Strukturele vergelykingsmodellering, sowel as interne konsekwentheid is aangewend om die betroubaarheid en geldigheid van die JII te bepaal. Beskrywende statistiek is gebruik om die data te analiseer en Pearson produk-moment korrelasies, sowel as regressie-analise is gebruik om die verhouding tussen die konstrukte van hierdie navorsing te ondersoek.

Strukturele vergelykingsmodel resultate het die twee-faktor struktuur van die JII bevestig, alhoewel 'n een-faktor model ook goeie passing (maar nie superieur nie) getoon het. Verkennende faktorontleding met teikenrotasies van die OLBI het geresulteer in 'n twee-faktormodel van uitbranding bestaande uit Uitputting/Ontbegeestering en Begeestering en die UWES het geresulteer in 'n een-faktormodel vir begeestering. Verkennende faktorontleding met teikenrotasies van die AFM 2 het geresulteer in 'n twee-faktor model, bestaande uit 'n negatiewe en positiewe affektiwiteit skale. Alle skale wat in hierdie navorsing gebruik is, het aanvaarbare interne konsekwentheid getoon.

Daar is gevind dat die blanke deelnemers hoër vlakke van werksonsekerheid en laer vlakke van werksbegeestering (OLBI) ervaar in vergelyking met die swart deelnemers. Korter dienstydperk het 'n verband getoon met hoër vlakke van werksbegeestering (OLBI). Dit is verder bevind dat deelnemers wat in die organisasie gewerk het vir minder as een jaar en twee tot vyf jaar, hoër positiewe affektiwiteit ervaar as deelnemers wat vir 11 jaar of langer vir die organisasie gewerk het. Deelnemers wat vir minder as een jaar vir die organisasie gewerk het, het laer negatiewe affektiwiteit ervaar in vergelyking met deelnemers wat al vir 'n langer tydperk vir die organisasie gewerk het.

Daar is 'n statisties beduidende korrelasie tussen werksonsekerheid en uitbranding gevind en albei werksonsekerheidskale het 'n verhouding met werksbegeestering getoon. Negatiewe affektiwiteit het 'n prakties betekenisvolle korrelasie met albei werksonsekerheidskale en werksbegeestering getoon. Daar is bevind dat positiewe affektiwiteit 'n gedeeltelike mediërende rol speel in die verhouding tussen kognitiewe werksonsekerheid en uibranding. Verdermeer, is daar bevind dat beide positiewe en negatiewe affektiwiteit, die verhouding tussen kognitiewe werksonsekerheid en werksbegeestering gedeeltelik medieer.

Gevolgtrekkings is gemaak, beperkinge van die huidige navorsing word uiteengesit en aanbevelings vir toekomstige navorsing is aan die hand gedoen.

CHAPTER 1

INTRODUCTION

This thesis relates to job insecurity, affectivity, burnout, and work engagement of employees in a government organisation.

In this chapter, the problem statement is discussed, and an outline is provided of the research objectives, research method and chapter division.

1.1. PROBLEM STATEMENT

Transformations in the economic, social and political spheres have forced organisations worldwide to undertake a wide range of adaptive strategies in an attempt to remain competitive in an increasingly flexible labour market (Sverke, Hellgren, Näswall, Chirumbolo, De Witte & Goslinga, 2004). Organisations engage in "downsizing", "right-sizing" or restructuring; adaptive strategies which have become highly characteristic of contemporary working life, in an attempt to survive in difficult economic conditions, and this almost inevitably implies the rationalising of jobs (Mauno & Kinnunen, 1999).

A key characteristic of the recent developments is the changes that have been brought about in management practices and an increased emphasis on flexibility in the staffing of organisations (Sverke et al., 2004). Unemployment is not the solitary negative consequence of this economic recession, since simultaneously many employees have experienced the threat of job loss, job transfers, early involuntary retirement, and part-time employment; in other words, job insecurity, which in fact has become more widespread during the 1990's (OECD, 1997).

According to De Witte (1997, 1999), the subject of job insecurity relates to people in their work context who fear they may lose their jobs and become unemployed. Sverke et al. (2004) view job insecurity as a perceptual phenomenon, reflecting the fear of involuntary job loss, with job insecurity thus representing an individual's perception of the employment situation being more insecure than he or she would prefer.

According to Mauno and Kinnunen (1999), literature usually conceptualises job insecurity from three general points of view, as being (i) a global or (ii) multidimensional concept, or (iii) a job stressor. In most instances, job insecurity has been defined according to the global viewpoint, signifying the threat of job loss or job discontinuity (Caplan, Cobb, French, Van Harrison & Pinneau, 1980). Generally, this definition has been applied in the context of organisational crisis or change, in which job insecurity is considered as a first phase of the process of job loss (Ferrie, 1997; Joelson & Wahlquist, 1987). Van Vuuren (1990) emphasises that job insecurity has the following components: Firstly, it is a subjective experience or perception, as different employees might perceive the same situation differently. Secondly, job insecurity implies uncertainty regarding the future and finally, doubts about the continuation of the job as such, are central to job insecurity.

Researchers, who have adopted the multidimensional definition of job insecurity, argue that job insecurity refers not only to the degree of uncertainty, but also to the continuity of certain dimensions, such as opportunities for promotion (Ashford, Lee & Bobko, 1989; Borg & Elizur, 1992; Rosenblatt & Ruvio, 1996). According to De Witte (1999) and Van Vuuren (1990), job insecurity consistently presents itself as a stressor. With regard to consequences, a distinction is made between stress reactions and coping behaviour. According to Van Vuuren (1990), stress reactions refer to the consequences of the stressor for psychological well-being, while coping refers to the way in which the person deals with stress. Sverke et al. (2004) note that in terms of the stress theories, a stressor is considered to be the result of some type of strain reaction, with consequences for the health and well-being of the individual, as well as for the individual's work-related attitudes and behaviour.

In this research, use was made of De Witte's (2000) Job Insecurity Inventory (JII) as a measure of job insecurity, viewing job insecurity from a global, two-dimensional perspective. De Witte (2000) developed the JII based on Borg's (1992) conceptualisation of job insecurity as a two-dimensional construct, consisting of an affective and cognitive component. Cognitive job insecurity relates to the perceived likelihood of job loss, whereas affective job insecurity relates to fear of job loss.

Job insecurity is consistently associated with a reduced level of job satisfaction (Ashford, Lee & Bobko; 1989; Davy, Kinicki & Scheck, 1997), lowered organisational commitment

(Apisakkul, 2000; Ashford et al., 1989; Davy et al., 1997), reduced work-related performance at both a social and technical level (De Witte, 2000), lowered trust in management (Ashford et al., 1989), psychosomatic complaints, physiological variables and various physical strains (De Witte, 2000), decreased employee mental health and family well-being (Larson, Wilson & Beley, 1994), decreased workplace safety motivation and compliance (Probst & Brubaker, 2001), reduced work effort (Brockner, Grover, Reed & De Witt, 1992), work withdrawal behaviour (Probst, 1999) and increased intention to leave and resistance to change (Davy, Kinicki & Scheck, 1997).

Job insecurity is not only problematic for the individual employees, but also for the company in which they work. Greenhalgh and Rosenblatt (1984) found that the impact of job insecurity on individual employees could erode the effectiveness of the organisation. A downward spiral is created, whereby productivity decreases, in such a manner that the competitive strength of the company is undermined. The risk of further redundancies is increased, which in turn increases feelings of job insecurity. The impact of job insecurity as noted above, *inter alia,* lowered job satisfaction, lower trust in management, lower organisational commitment, a greater tendency to leave the organisation, increase in psychosomatic complaints and depression; spreads into negative consequences for the organisation.

Greenhalgh and Sutton (1991) found that rather than facilitating change, job insecurity inhibits it, because fear for the future is accompanied by resistance to change. Job insecurity has been known to hold negative consequences for industrial relations too, characterised by a cycle of mistrust, blame, dissatisfaction and short-term solutions, with a weakening of the abilities of both management and the workforce to engage in constructive change. Borg and Hartley (as cited in Greenhalgh & Sutton, 1991) found that insecure workers rated their companies' products more negatively. All employees have contact with people outside their organisation and are informally the ambassadors of their organisation by contributing to the outside world's impression of the organisation. Greenhalgh and Sutton (1991) report that, apart from the human resource implications of job insecurity, companies need to be wary of high levels of job insecurity, as damaging messages about the organisation may leak out. According to Cooper (1999), organisations may suffer financially from heightened employee

perceptions of job insecurity, due to the associated cost implications of heightened absenteeism and sickness, which results from lowered employee well-being.

Research conducted by Probst (2002) revealed that numerous consequences of job insecurity were mediated by job attitudes and affective reactions. Job insecurity was found to hold important negative consequences at individual and organisational levels, leading to increased organisational withdrawal, increased reported health conditions, increased psychological distress and lowered organisational commitment.

In an attempt to study the antecedents and consequences of job insecurity, one can consider the person-environment fit theory of stress, as well as the affective events theory of stress. Definitions of stress falling within the person-environment fit theory of stress emphasises the match between the person and the environmental characteristics, and that stress value depends on the perceived imbalance between an individual's perceptions of the demands made by the environment and the individual's perceived ability and motivation to cope with those demands (Probst, 2002). Based on this perspective, job insecurity is perceived by an employee as a change or antecedent to change demanding adaptation, which may be difficult to meet. Failure to cope with potential future unemployment or loss of job features may have significant consequences. From an affective events theory perspective, work environment features and events are subject to cognitive appraisal of whether or to what extent such work events and features will aid or obstruct the attainment of goals (Probst, 2002). If such a goal obstruction is identified and there is a perceived imbalance between the environmental demands and the employee's ability to cope with those demands, based on aspects such as dispositions and available resources, stress results. Resultant strain may become evident at a physiological, behavioural or psychological level, or any combination of these. For this reason, when stress exists, work attitudes and affective reactions are expected to be negative. Two additional strains that can result from stress are physical and mental health outcomes, which are expected to be mediated by work attitudes and affective reactions, but may also occur directly (Probst, 2002).

The effort-reward imbalance model, as discussed by Bakker, Kilmer, Siegrist and Schaufeli (2000), provides a theoretical approach toward explaining the adverse health effects produced by a lack of reciprocity at work. According to this model, a lack of reciprocity between costs

and gains defines a state of emotional distress with particular proclivity to autonomic arousal and associated strain reactions. Bakker et al. (2000) note that this holds especially true if poor reward is experienced in terms of poor job stability, forced occupational change, downward mobility, or lack of promotion prospects (low occupational control). From this point of view perceived job insecurity can thus be expected to produce lack of reciprocity leading to emotional distress.

The effects of the new world of work, globalisation, mergers, job loss, acquisitions, contracting and the demand for better work performance and increased competitiveness will increase job insecurity in the workplace. Higher production targets with less manpower, joined with the constant threat of job loss will negatively affect the psychological well-being of employees (Sverke & Hellgren, 2001).

Work wellness, in this research, is conceptualised as consisting of burnout, work engagement and negative affectivity. Maslach, Schaufeli and Leiter (2001) note that the difficulties that can arise when the person-work relationship goes out of kilter have long been acknowledged as a phenomenon of the modern age. Maslach et al. (2001) explain that the use of the term burnout for this phenomenon arose with some regularity during the 1970's in the United States, especially among people working in the human services. Schaufeli and Enzmann (1998) indicate that whereas burnout was initially associated with persons working in a helping environment, the concept has since been extended to include all other professional and occupational groups. Maslach et al. (2001, p. 399) continue by noting that a large amount of research on burnout has been conducted and what has emerged is a "conceptualisation of job burnout as a psychological syndrome in response to chronic interpersonal stressors of the job". Stordeur, D'hoore and Vandenberghe (2001) note that when an individual becomes unable to cope with an enduring source of stress, burnout may appear and Schaufeli and Enzmann (1998, p. 36) define burnout as "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work." Leiter and Harvie (1998) report that burnout results from the gap between the individuals' expectations to fulfil their professional roles and the structure in place within the organisation. When the workplace does not support professional goals, exhaustion and cynicism increase and professional efficacy decreases.

According to Maslach et al. (2001), the exhaustion component of job burnout relates to the basic individual stress aspect of burnout, referring to feelings of being overextended and depleted of one's emotional and physical resources. The cynicism or depersonalisation component represents the interpersonal context dimension of burnout, referring to negative, callous, or excessively detached responses to various aspects of the job. The reduced efficacy or accomplishment component is linked to the self-evaluation dimension of burnout, referring to feelings of incompetence and a lack of achievement and productivity at work. According to Bakker et al. (2000), emotional exhaustion and depersonalisation are related to job stressors whereas lack of personal accomplishment is more strongly related to lack of adequate resources.

Maslach et al. (2001) indicate that burnout has been associated with numerous important negative outcomes including heightened absenteeism, intention to leave the job, actual turnover, lower productivity and effectiveness for those who stay at work, decreased job satisfaction and commitment and a "spill over" effect to colleagues and even into the employees' home life. In terms of the antecedents of burnout, Maslach et al. (2001) report that research has indicated that burnout is related to job characteristics such as overload, role conflict, role ambiguity, and lack of social support. Burnout is furthermore related to occupational characteristics such as the requirement to be emotionally sympathetic, to suppress emotions of the job, and mismatch in terms of workload, and fairness.

Maslach et al. (2001) indicate that burnout is viewed as a psychological syndrome that develops in response to chronic interpersonal stressors on the job. Hence it is perceived that burnout may potentially develop after prolonged exposure to job insecurity. Westman, Etzion and Danon (2001), who researched job insecurity and crossover of burnout in married couples (98 couples), found a positive correlation between job insecurity and burnout, both with regard to males and females. These researchers conclude (p. 478) that, "Our findings corroborate the results of Dekker and Schaufeli (1995) and Landsbergis (1988) that the prolonged chronic exposure to job insecurity can lead to a wearing out of resources and a feeling of exhaustion". According to Lee and Ashforth (1996), exhaustion is considered to be the most important underlying aspect of burnout. In their research of female nurses working at a German university hospital, Bakker et al. (2000) found that effort-reward imbalance was

predictive of two core dimensions of burnout, being emotional exhaustion and depersonalisation.

In line with the increased focus of psychology on human strengths and optimal functioning, work engagement, although related to burnout, is viewed as the theoretical antithesis of burnout. Maslach and Leiter (1997) redefined burnout as an erosion of engagement with the job. Maslach et al. (2001) explain that in the case of burnout what started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement into cynicism, and efficacy into ineffectiveness. Accordingly engagement is characterised by energy, involvement and efficacy. Schaufeli and Bakker (2001) define engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. Schaufeli, Salanova, Gonzáles-Romá and Bakker (2002) explain that vigour (opposite pole of exhaustion) is characterised by high energy levels, mental resilience when working, willingness to exert effort into one's work and to persist even in the face of adversity; dedication (the opposite pole of cynicism) is related to enthusiasm, inspiration, pride, challenge and a sense of significance; and absorption refers to a state where time passes quickly and where the individual has difficulty in detaching him- or herself from work.

According to Hellgren, Sverke and Isaksson (1999), a growing body of literature suggests that self-reports of job stress, well-being and health are under the influence of mood dispositions such as positive and negative affectivity and consequently should be controlled. Probst (2002) identifies job importance, self-efficacy, negative affectivity and procedural justice as moderators of the outcomes of job insecurity. Greenhalgh and Rosenblatt (1984) report that it is likely that individual differences moderate the relationship between experienced job insecurity and the individuals' reactions to it, citing powerlessness, maintenance of situational continuity, importance attributed to work, attribution tendencies and security needs as potential individual differences which act as moderators. According to Meeks and Murrell (2001), negative affectivity can be defined as an intra psychic determinant, which controls an individual's view of the world, where an individual will interpret the world and see him/herself in unhappy and pessimistic terms. Mak and Mueller (2001) conceptualise negative affectivity as reflecting neuroticism, a low level of self-esteem and frequent negative emotionality, noting that individuals high in trait negative affectivity

are prone to experiencing and reporting high levels of subjective stress and strain outcomes. Conversely, positive affectivity is characterised by positive feelings experienced across situations, by sociability, social dominance, energy, venturesomeness and ambition (Meeks & Murrell, 2001). Negative and positive affectivity are viewed as relatively permanent and stable dispositions (Meeks & Murrell, 2001).

Maslach et al. (2001) are of the opinion that the impact of the changing world of work is perhaps most evident in changes in the psychological contract. 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. This violation of the psychological contract, in the opinions of Maslach et al. (2001) is likely to produce burnout and a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being. As noted by Mak and Mueller (2001) previous research has pointed toward the significant role that cognitive appraisal plays in the stress-strain link, with some researchers (Parkes, 1994) arguing that those who exhibit high negative affectivity are prone to reacting more adversely to perceived stress than those with low negative affectivity. As noted by Rothmann (2003), tracking employees' effectiveness in coping with the demands of the new world of work and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness are crucial, hence the importance of this research.

South African companies are being exposed more than ever to the effects of the world economy, technological advancement and tough international competition. Tremendous pressure is placed on organisations to improve their performance and to become increasingly competitive. In such a competitive environment, the first fundamental consideration for most organisations is their profitability. In order for them to gain a competitive advantage, companies need to determine sources of cost-savings. According to Marais and Schepers (1996), such sources include economies of scale, technology, access to raw materials and salaries and wages, the latter usually being the largest, immediate source of cost-savings.

Besides the above-noted economic implications held by globalisation, the South African labour market is also faced with changes at a political level. Furthermore, South Africans are faced with an ever-shrinking labour market, making the prospect of unemployment a

potential reality for many South Africans. The above-noted issues are not exclusive to certain groups of people or organisations and also relate to employees working in a government organisation, where this research will take place. The management of this government organisation reports concern regarding the general well-being of the workforce, noting that they present unusually high levels of absenteeism and turnover. The employees of this government organisation are reported to be generally insecure regarding their occupational futures, many not knowing how their desired occupational futures fit in with their potential career paths within the organisation.

On the basis of the above-mentioned problem statement, the following research questions have been identified:

- How are job insecurity, affectivity, burnout, and work engagement and the relationship between these constructs conceptualised in literature?
- What is the reliability and validity of the Job Insecurity Inventory (JII), the Affectometer 2 (AFM 2), the Oldenburg Burnout Inventory (OLBI), and the Utrecht Work Engagement Scale (UWES), for employees in a government organisation?
- What are the levels of job insecurity, affectivity, burnout, and work engagement of employees in a government organisation?
- What are the relationships between job insecurity, affectivity, burnout, and work engagement of employees in a government organisation?
- Does affectivity mediate the relationship between job insecurity, burnout and work engagement of government employees?

This study will contribute to industrial psychology as a science in the following ways:

- Standardised measuring instruments for job insecurity, affectivity, burnout, and work engagement, which have been proven valid and reliable, will exist for employees at a government organisation;
- Knowledge will exist regarding the relationship between job insecurity, burnout and engagement, as well as the role of affectivity in these relationships.

1.2 RESEARCH OBJECTIVES

1.2.1 General objective

The general objective of this research is to establish the relationship between job insecurity, affectivity, burnout, and work engagement of employees in a government organisation.

1.2.2 Specific objectives

The specific research objectives are:

- to conceptualise job insecurity, affectivity, burnout, and work engagement and the relationship between these constructs from literature;
- to determine the reliability and validity of the Job Insecurity Inventory, the Affectometer 2, the Oldenburg Burnout Inventory, and the Utrecht Work Engagement Scale for government employees;
- to determine the levels of job insecurity, affectivity, burnout, and work engagement of government employees;
- to determine the relationships between job insecurity, affectivity, burnout, and work engagement of government employees;
- to determine whether affectivity mediates the relationship between job insecurity, and burnout as well as work engagement.

1.3 RESEARCH METHOD

The research method for each of the three articles, which are submitted for the purposes of this thesis, consists of a brief literature review and an empirical study.

1.3.1 Research design

A cross-sectional survey design is utilised to describe the information on the population collected at that time. This design (Shaughnessy & Zechmeister, 1997) can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy

and Zechmeister (1997), this design is also ideal to describe and predict functions associated with correlative research.

1.3.2 Participants

The entire population of 500 employees working in a government organisation in Gauteng is targeted in this research. The population includes workers from all levels ranging from semi-skilled to professional level. The lowest level employees are reported to have a level of literacy adequate enough to allow for valid completion of questionnaires.

1.3.3 Measuring battery

Four questionnaires are used in the empirical study, namely the Job Insecurity Inventory (De Witte, 2000), the Affectometer 2 (Kammann & Flett, 1983), the Oldenburg Burnout Inventory (Demerouti, Bakker, Vardakou & Kantas, 2003), and the Utrecht Work Engagement Scale (Schaufeli, Salanova, Gonzáles-Romá & Bakker, 2002).

The *Job Insecurity Inventory (JII)* (De Witte, 2000) is used as a measure of job insecurity. This 11-item questionnaire summarise both the cognitive and affective dimensions of job insecurity and are arranged along a 5-point scale, varying from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of a question relating to cognitive job insecurity would be, "I think that I will be able to continue working here", whereas an example of a question relating to affective job insecurity would be, "I fear that I might lose my job". The items of the JII, measuring global job insecurity are reported to have a Cronbach alpha coefficient of 0,92 and both scales (cognitive and affective) were shown to be highly reliable, with six items measuring cognitive job insecurity, displaying a Cronbach alpha coefficient of 0,90; and five items of the affective job insecurity having a Cronbach alpha coefficient of 0,85 (De Witte, 2000). According to De Witte (2000), the content of these two scales do not overlap, but nevertheless have a high correlation (r = 0,76). Heymans (2002) obtained an alpha coefficient of 0,81 for the JII and Elbert (2002) obtained an alpha coefficient of 0,84.

The *Affectometer 2 (AFM 2)* (Kammann & Flett, 1983) is used to measure affectivity. The AFM 2 is a 20-item self-report scale measuring the balance of positive and negative feelings in recent experience. Questions are rated on a scale ranging from 1 (*not at all*) to 5 (*all the time*). Examples pertaining to the negative affect scale would include, "I wish I could change some part of my life" and "I feel like a failure", whereas items from the positive affect scale would include "My life is on the right track" and "I can handle any problems that come up". Kammann and Flett (1983) obtained Cronbach alpha coefficients of 0,95 for the scale, as well as indications of validity.

The *Oldenburg Burnout Inventory (OLBI)* (Demerouti et al., 2003), a recently developed alternative to the traditionally used Maslach Burnout Inventory (MBI) is used as a measure of burnout. The OLBI includes both core dimensions of burnout, known as exhaustion and disengagement (cynicism/depersonalisation). The OLBI consists of 16 items, which are measured on a four-point Likert-type scale, ranging from 1 (*strongly agree)* to 4 (*strongly disagree).* Eight items are phrased positively, for example "I always find new and interesting aspects in my work" and the remaining eight are phrased negatively, for example "There are days when I feel tired before I arrive at work". The exhaustion subscale, comprising of items 2, 4, 5, 8, 10, 12, 14, and 15, includes items on the affective, physical and cognitive aspects of burnout and the disengagement subscale, comprising of items 1, 3, 6, 7, 9, 11, 13 and 15, includes items that relate to distancing one from one's work. An example of an item from the exhaustion scale, would be, "During my work, I often feel emotionally drained", whereas an example of an item from the disengagement scale would be, "I find my work to be a positive challenge". The OLBI, as opposed to the MBI, includes each scale both positively and negatively phrased so as to avoid answering bias. Schaufeli (2003) indicates that in a study conducted by Demerouti, Bakker, Nachreiner and Ebbinghaus (2002) investigating the convergent validity of the MBI and OLBI, using multitrait-multimethod analyses, it was found that the latent variables representing both instruments are highly correlated and that all exhaustion and distancing/disengagement items of both instruments load on a single factor. Demerouti et al. (2002) obtained Cronbach alpha coefficients of 0,85 (exhaustion) and 0,84 (disengagement) respectively.

The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) is used to measure work engagement. This 17-item questionnaire is arranged along a seven-point frequency

scale, ranging from 0 (*never*) to 6 (*daily*). The UWES has three scales, namely vigour (6 items), dedication (5 items), and absorption (6 items). Examples of items relating to the three dimensions are the following: "I am bursting with energy in my work" (vigour); "I find my work full of meaning and purpose" (dedication); and "When I am working, I forget everything around me" (absorption). High levels of vigour, dedication and engagement point to an individual who experiences a high level of work engagement. Regarding internal consistency, Cronbach coefficients have been determined between 0,68 and 0, 91 (Schaufeli et al., 2002). Storm (2002) obtained alpha coefficients of 0,78 (vigour), 0,89 (dedication) and 0,78 (absorption) for the UWES in a sample of 2 396 members of the South African Police Services.

1.3.4 Statistical analysis

The statistical analysis is carried out with the SPSS programme (SPSS Inc, 2003).

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Exploratory factor analyses and Cronbach's alpha coefficients are computed to assess the validity and reliability of the AFM 2, OLBI and UWES. Firstly, a simple principal component analysis is conducted on the constructs that form part of the measurement model. The eigenvalues and scree plot are studied in order to determine the number of factors involved. Thereafter, a direct Oblimin rotation is used in cases where factors are related ($r >$ 0,30) or a principal factor analysis with a Varimax rotation if factors are not related ($r < 0,30$) (Tabachnick & Fidell, 2001). A second order principal component analysis will be conducted on the total scores of the subscales used in this research.

Structural equation modelling (SEM) methods as implemented by AMOS (Arbuckle, 1997) is used to test the factorial models for the JII, using the maximum likelihood method. SEM is a statistical method that takes a hypothesis-testing approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001). Hypothesised relationships are tested empirically for goodness of fit with the sample data. The χ^2 statistic and several other goodness-of-fit indices, which sum up the degree of correspondence between the inferred (hypothesised) and observed covariance matrices, are used. If used in isolation, the χ^2 statistic can lead to certain limitations. Researchers have addressed the χ^2 limitations by developing

goodness-of-fit indexes that take a more pragmatic approach to the evaluation process. One of the first fit statistics to address this problem was the χ^2/degrees of freedom ratio (CMIN/DF) (Wheaton, Muthén, Alwin & Summers, 1977), which is the minimum discrepancy per degree of freedom. These criteria, also referred to as "subjective" or "practical" indices of fit, are frequently used as additions to the χ^2 statistic.

The Goodness-of-Fit Index (GFI) indicates the relative amount of the variances/co-variances in the sample predicted by the estimates of the population. The Adjusted Goodness-of-Fit Index (AGFI), which is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables, is also used. The Normed Fit Index (NFI) is used to assess global model fit. The NFI, which is normed to fall on a 0 to 1 continuum, is considered to represent the point at which the model under evaluation falls on a scale running from a null model to perfect fit. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes cognisance of sample size. The Tucker-Lewis Index (TLI) is a relative measure of co-variation explained by the model, which is specifically developed to assess factor models (Tucker & Lewis, 1973). As suggested by Browne and Cudeck (1993), the Root Mean Square Error of Approximation (RMSEA), which estimates the overall amount of error in the hypothesised model-data fit relative to the estimated parameters of the model, and the 90% confidence interval of the RMSEA, is used.

Cronbach alpha coefficients (α) and inter-item correlation coefficients are used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) are used to analyse the data. The significance of differences between biographic groups is established by means of MANOVA, ANOVA and Tukey's HSD tests. A cut-off point of 0,50, which represents a medium effect, and 0,80 which represents a large effect, is set for practically significant differences between demographic groups (Cohen, 1988). Pearson product-moment correlation coefficients are used to specify the relationships between variables. The level of statistical significance is set at $p < 0,01$. Steyn (2002) criticises the sole use of statistical significance testing and recommends that effect sizes be established to determine the importance of a statistically significant relationship. While the reporting of effect sizes are

encouraged by the American Psychological Association (APA) in their Publication Manual (APA, 1994), most of these measures are seldom found in published reports (Kirk, 1996; Steyn, 2002). Therefore, effect sizes are computed to assess the practical significance of relationships in this study. A cut-off point of 0,30, which represents a medium effect (Cohen, 1988; Steyn, 2002), is set for the practical significance of correlation coefficients.

Regression analysis is used to determine the percentage variance in the dependent variable that is predicted by the independent variables. The correlation coefficient is used to determine the correlations between variables and R^2 is used to determine the proportion of the total variance of the dependent variable that is explained by the independent variable.

1.4 OVERVIEW OF CHAPTERS

Chapter 2 deals with the Oldenburg Burnout Inventory (OLBI) and Utrecht Work Engagement Scale (UWES). The construct validity and internal consistency of the OLBI and UWES are determined for employees in a government organisation. Demographic groups are also compared in terms of their levels of burnout and work engagement. Chapter 3 deals with the construct validity and internal consistency of the JII. Demographic groups are also compared in terms of their levels of job insecurity. Chapter 4 deals with the relationship between job insecurity, affectivity, burnout, and work engagement. Lastly, Chapter 5 provides conclusions regarding the various objectives of the research, a discussion of the limitations of this research, and makes recommendations for the organisation and future research.

1.5 CHAPTER SUMMARY

Chapter 1 provided a discussion of the problem statement and research objectives. An explanation was provided of the measuring instruments and research method, followed by a brief overview of the chapters to follow.

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CHAPTER 2

ARTICLE 1

THE VALIDATION OF THE OLDENBURG BURNOUT INVENTORY AND UTRECHT WORK ENGAGEMENT SCALE IN A GOVERNMENT ORGANISATION

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ABSTRACT

The objective of this study was to validate the Oldenburg Burnout Inventory (OLBI) and the Utrecht Work Engagement Scale (UWES) for employees (N = 275) in a government organisation. A cross-sectional survey design was used. The OLBI, UWES and a biographical questionnaire were administered. Exploratory factor analyses of the OLBI resulted in a two-factor model of burnout, consisting of Exhaustion/Disengagement and Engagement and the UWES resulted in a one-factor model of engagement. The scales demonstrated acceptable levels of internal consistencies. In terms of the OLBI, white participants showed lower levels of engagement than black participants. Shorter tenure was associated with increased engagement. Regarding the UWES, participants with post-graduate degrees displayed a higher level of engagement in comparison to those with Grade 11 and 12 qualifications and degrees.

OPSOMMING

Die doelstellings van hierdie studie was om die Oldenburg – Uitbrandingsvraelys (OLBI) en die Utrecht-Werkbegeesteringskaal (UWES) te valideer vir werknemers (N = 275) in 'n staatsonderneming. 'n Dwarssneeopname-ontwerp is gebruik. Die OLBI, UWES en 'n biografiese vraelys is afgeneem. Verkennende faktorontleding met teikenrotasies van die OLBI het geresulteer in 'n twee-faktormodel van uitbranding bestaande uit Uitputting/Sinisme en Begeestering en die UWES het geresulteer in 'n een-faktormodel vir begeestering. Die skale het aanvaarbare interne konsekwentheid getoon. Met betrekking tot die OLBI het die blanke deelnemers laer vlakke van werksbegeestering getoon as swart deelnemers. Korter dienstydperk het 'n verband getoon met hoër vlakke van werksbegeestering. Met betrekking tot die UWES, het deelnemers met nagraadse kwalifikasies hoër vlakke van werksbegeestering getoon in vergelyking met diegene met Standerd 8 tot 10 kwalifikasies, en grade.

The environment in which employees have to function demands more of them than ever before (Rothmann, 2003). Employers attempt to move toward greater flexibility by expanding and shrinking the work force to correspond with shifting production and service demands (Martins, 2000). Maslach, Schaufeli and Leiter (2001) are of the opinion that the impact of the changing world of work is perhaps most evident in changes in the psychological contract. 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. This violation of the psychological contract, in the opinions of Maslach et al. (2001) is likely to produce burnout and a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being. As noted by Rothmann (2003), tracking employees' effectiveness in coping with the demands of the new world of work and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness are therefore crucial, with burnout and engagement being specific focus areas for research and intervention, both from a pathogenic and fortigenic perspective (Maslach et al., 2001).

As noted by Antonovsky (1987), stressors are omnipresent in human existence. However, many people survive and even do well despite a high stressor load. According to Antonovsky, this is the mystery that salutogenesis seeks to unravel. The term salutogenesis, often coined as the antonym of pathogenesis, is meant to emphasise health promotion and disease prevention rather than the pathogenic origins of disease (Antonovsky, 1996). The salutogenic orientation (Antonovsky, 1987) proposes that all people, at any time, can be placed on a health-ease/dis-ease continuum. Salutogenesis refers to the "origins of health", whilst fortigenesis, which is an expansion of the salutogenesis construct and goes beyond the normal concerns of health, refers to the "origins of strength". Thus, from a fortigenic orientation, it is necessary to consider the origins of strength when researching psychological well-being.

Whereas burnout was initially associated with persons working in a helping environment, the concept has since been extended to include all other professional and occupational groups (Schaufeli & Enzmann, 1998). Burnout is a particular, multidimensional and chronic stress reaction which goes beyond the experience of mere exhaustion, being seen as the final step in a progression of unsuccessful attempts to cope with a variety of negative stress conditions (Rothmann, Jackson & Kruger, 2003). According to Maslach et al. (2001, p. 399), burnout is

conceptualised as "a psychological syndrome in response to chronic interpersonal stressors on the job". Schaufeli and Enzmann (1998, p. 36) define the concept as "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work". Burnout results from the gap between the individuals' expectations to fulfil their professional roles and the structure in place within the organisation. When the workplace does not support professional goals, exhaustion and cynicism increase and professional efficacy decreases (Leiter & Harvie, 1998).

The Maslach Burnout Inventory (MBI) is probably the most popular and frequently used measure of burnout. The MBI reflects three burnout dimensions, being emotional exhaustion, cynicism/depersonalisation and reduced efficacy/accomplishment. According to Maslach et al. (2001) the exhaustion (both helping and non helping professions) component of job burnout relates to the basic individual stress aspect of burnout, referring to feelings of being overextended and depleted of one's emotional and physical resources. These researchers furthermore note that exhaustion is considered the central quality and most obvious symptom of burnout. The cynicism (non-helping professions) or depersonalisation (helping professions) component represents the interpersonal context dimension of burnout, referring to negative, callous, or excessively detached responses to various aspects of the job. The reduced efficacy (non-helping professions) or accomplishment (helping professions) component is linked to the self-evaluation dimension of burnout, referring to feelings of incompetence and a lack of achievement and productivity at work.

From a theoretical point of view it could be argued that exhaustion and cynicism/ depersonalisation constitute the two key aspects of burnout (Schaufeli, 2003). Exhaustion refers to the fact that the employee is incapable to perform because all energy has been drained and cynicism/depersonalisation indicates that the employee is no longer willing to perform, because of increased intolerance of any effort. Relatively low correlations of professional efficacy are observed with exhaustion and cynicism, whereas exhaustion and cynicism are correlated relatively strongly. Furthermore, it appears that cynicism develops in response to exhaustion, whereas professional efficacy seems to develop independently and in parallel. Professional efficacy is the weakest burnout dimension in terms of significant

relationships with other variables, with several academics having argued that professional efficacy is rather a personality characteristic than a genuine burnout component. Schaufeli, Salanova, González-Romá and Bakker (2002) indicate that it is interesting to note that the reduced efficacy subscale was added as a constituting element of burnout on second thought after it appeared as a third factor from a factor-analysis of a preliminary version of the MBI.

The Oldenburg Burnout Inventory (OLBI) (Demerouti, Bakker, Vardakou & Kantas, 2003) has recently been developed as an alternative measure of burnout. The OLBI includes both core dimensions of burnout, known as exhaustion and disengagement (cynicism/ depersonalisation), thus conceptualising burnout as a syndrome of work-related negative experiences, including feelings of exhaustion and disengagement from work. The exhaustion subscale includes items on the affective, physical and cognitive aspects of burnout and the disengagement subscale includes items that relate to distancing one from one's work. Exhaustion is defined as a consequence of extended and intense physical, affective and cognitive strain, as the result of prolonged exposure to specific work conditions/stressor (Demerouti, Bakker, Nachreiner & Ebbinghaus, 2002). As opposed to the conceptualisation of exhaustion in terms of the Maslach Burnout Inventory, exhaustion is viewed as comprising not only affective aspects (e.g. feeling emotionally drained), but also physical and cognitive aspects (e.g. the need for a longer resting time) of exhaustion, making the OLBI more applicable to both employees who perform physical work and those whose jobs mainly relate to information processing instead of dealing with people. The disengagement scale of the OLBI refers to emotions regarding the work tasks (e.g. uninteresting), as well as to a devaluation and mechanical execution of one's work.

Upon reviewing literature of burnout, it becomes clear that there is little consensus regarding demographic variables that relate to burnout. Maslach et al. (2001) note that of all the demographic variables that have been studied, age has been most consistently related to burnout, with younger employees reporting higher levels of burnout than employees over the age of 30 and 40 years. Maslach et al. (2001) note that some studies have found that those with a higher level of education report higher levels of burnout compared to those without degrees. Schaufeli and Enzmann (1998) hypothesise that the tendency for more highly educated employees to experience burnout may be due to the fact that such employees tend to secure positions with

more responsibility. Some studies have demonstrated higher burnout levels amongst females, whilst others show higher burnout scores for men. The only consistent finding regarding burnout and gender is that females tend to score slightly higher on emotional exhaustion, whereas males tend to score slightly higher on depersonalisation. Research regarding burnout and culture is limited. According to Maslach (1987), research conducted in the United States indicated that fewer African-American participants sustained burnout compared to white participants.

Work engagement, although theoretically related to burnout, is viewed as the antithesis of burnout. Work engagement refers to a positive, fulfilling, work-related state of mind, which is characterised by vigour, dedication and absorption, with this state of mind being a persistent and pervasive affective-cognitive state as opposed to a fleeting and specific state (Demerouti et al., 2002). Schaufeli et al. (2002) explain that engaged employees have a sense of energetic and effective connection with their work activities and perceive themselves as being able to deal completely with their job demands. Maslach and Leiter (1997) redefined burnout as an erosion of engagement with the job. In the case of burnout what started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement into cynicism, and efficacy into ineffectiveness. Accordingly engagement is characterised by energy, involvement and efficacy (Maslach et al., 2001).

Vigour (the opposite pole of mental exhaustion) is characterised by high energy levels, mental resilience when working, willingness to exert effort into one's work and to persist even in the face of adversity. Dedication (the opposite pole of cynicism) is related to enthusiasm, inspiration, pride, challenge and a sense of significance; and absorption refers to a state where time passes quickly and where the individual has difficulty in detaching him- or herself from work. Schaufeli et al. (2002) view burnout and engagement as opposite constructs, conceptualising engagement in its own right, noting that burnout and engagement must be measured independently, with different instruments.

Schaufeli and Bakker (2002) identified two underlying dimensions of work-related well-being, as activation (ranging from exhaustion to vigour) and identification (ranging from cynicism to dedication). Schaufeli et al. (2002) continue by explaining that burnout (as

conceptualised by the MBI) includes reduced professional efficacy, and engagement includes absorption, but in contrast to the exhaustion/vigour and cynicism/dedication subscales, reduced efficacy and absorption are not considered as each other's direct opposites. The reduced efficacy and absorption subscales are distinct aspects that are not conceptualised as lying at the end points of an underlying continuum.

Schaufeli et al. (2001) describe eight characteristics of engaged employees being that they take initiative and actively give direction to their lives, they generate their own positive feedback as encouragement, they are also engaged outside of their work life, they have values and norms consistent with those of their employing organisation, they too become fatigued, but experience a positive fatigue (tired but satisfied), they too have sometimes been burnt out or have the potential to experience burnout, but remedy this themselves, they too on occasion want to do something else besides work and lastly they do not suffer from enslavement to work.

Storm (2002) found that Indian participants experienced the highest levels of exhaustion and cynicism, followed by white and black participants. Coloured participants experienced lowest levels of exhaustion and cynicism. No practically significant differences were found between the burnout scores of the black and white participants. No additional information pertaining to the relationship between demographic variables and engagement could be found. However, in a related sense, Wissing and van Eeden (2002) found significant differences between the scores of black and white groups on indices of psychological well-being, with the black group presenting with lower levels of psychological well-being, noting that these differences may result from different socio-cultural backgrounds, idiosyncratic factors and life circumstances. Antonovsky (1979) indicated that resistance resources are lower in historically black communities. Consequently people from these groups are more prone to stress and a lower sense of coherence. According to Wissing and Van Eeden (2002), it can be expected that the new socio-political dispensation that guarantees equity and equality for all, and ensures human rights through the Constitution, would eventually bring about higher levels of psychological well-being in the historically disadvantaged group. Regarding gender, Hobfoll (1989) is of the opinion that women have less access to resources that could help buffer stress and maintain wellness. Antonovsky (1991) argued that cultural, social and role

patterns constructed for men and women, as well as lack of socio-economic value of women's contributions to society and the labour market play a large role in females' levels of psychological well-being. However, presently, one would have to interpret these findings within the context of the Employment Equity initiatives, striving for gender equality and female empowerment.

Various South African studies, investigating the reliability and validity of the Maslach Burnout Inventory and Utrecht Work Engagement Scale exist. However, given that the OLBI is a rather recently established measure of burnout, very little research investigating the reliability and validity of the OLBI in relation to the UWES is available.

The Oldenburg Burnout Inventory (OLBI)

Originally, the OLBI consisted of 15 items, with seven items (three positively worded and four negatively worded) being representative of the exhaustion scale. A 16th item has however recently been added, in order to have an equal number in both subscales. The exhaustion subscale refers to general feelings of emptiness, overtaxing from work overload, a strong need to rest, and a state of physical exhaustion, for example, "During my work, I very often feel emotionally drained" and "After my work, I regularly feel totally fit for my leisure activities" (reversed). The disengagement scale comprises of eight items (three positively worded and five negatively worded) referring to a distancing of oneself from one's work in general and to negative, cynical attitudes and behaviours towards one's work in general, for example, "I get more and more engaged with my work" (reversed) and "I frequently talk about my work in a derogatory way".

Demerouti et al. (2002) explain that whereas the Maslach Burnout Inventory's cynicism scale restricts itself to a measurement of mainly subjective job meaninglessness and a lack of interest in a job, disengagement represents an extensive and intensive reaction in terms of an emotional, cognitive and behavioural rejection of the job and it describes an occupational disillusionment. Demerouti et al. (2002) suggest that the OLBI may be considered a more suitable measure of burnout as compared to the Maslach Burnout Inventory given that it is

applicable to virtually any occupation and includes both negatively and positively worded items, as opposed to the one-directional formulation of the items in the Maslach Burnout Inventory, thus avoiding answering bias.

Demerouti et al. (2003), who investigated the convergent validity of the MBI - GS and the OLBI, found that the latent variables representing both instruments are highly correlated and that all exhaustion and distancing/disengagement items of both instruments load on the same single factor. In this regard, Schaufeli (2003) is of the opinion that these encouraging results suggest that the OLBI might be considered as an alternative to the MBI-GS. Demerouti et al. (2002), in their study of 294 employees from 11 German organisations, found that burnout, as measured by the OLBI has a two-factor structure, with exhaustion and disengagement as separate but correlated dimensions and this structure was also similar across human services work and industrial production work. These researchers obtained Cronbach alpha coefficients of 0,85 (exhaustion) and 0,84 (disengagement) respectively.

The Utrecht Work Engagement Scale (UWES)

The Utrecht Work Engagement Scale (UWES) was developed by Schaufeli et al. (2002). This 17- item questionnaire has three scales, namely vigour (6 items), dedication (5 items), and absorption (6 items). Rothmann and Storm (2003) however found high correlations between the three dimensions of engagement, suggesting that work engagement as measured by the UWES may be a one dimensional construct. High levels of vigour, dedication and engagement point to an individual who experiences a high level of work engagement. Regarding internal consistency, Cronbach coefficients have been determined between 0,68 and 0,91 (Schaufeli et al., 2002). In a sample of 2396 members of the South African Police Services, Storm and Rothmann (2003) found that a re-specified one-factor model after deletion of Items 3, 11, 15, and 16 fitted their data the best. These researchers obtained internal consistencies of 0,78 for vigour, 0,89 for dedication and 0,78 for absorption for the UWES. Using the MBI and UWES, Storm (2002) found a canonical correlation of 0,51 between burnout and engagement, as well as negative correlations of -0,42 between cynicism and dedication and -0,28 between vigour and exhaustion.

Although a few South African studies investigating the internal consistency and construct validity UWES exist, no research regarding the internal consistency and construct validity of the OLBI in South Africa could be found. For this reason, this study is considered important and relevant. Research hypotheses related to the present study are formulated as follows:

H1: Burnout, as measured by the OLBI, can be defined as a two-dimensional construct with acceptable levels of internal consistency for each of its subscales, namely Exhaustion and Disengagement.

H2: Work engagement, as measured by the UWES, can be defined as a three-dimensional construct with acceptable levels of internal consistency for each of its subscales, namely Vigour, Absorption and Dedication.

H3: Practically significant differences, based on biographical characteristics exist regarding burnout and engagement scores.

METHOD

Research design

A cross-sectional survey design was utilised to describe the information on the population collected at that time. This design (Shaughnessy & Zechmeister, 1997) can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is also ideal to describe and predict functions associated with correlative research.

Participants

The entire population of 500 employees working in a government organisation in Gauteng was targeted in this research, although a response rate of only 297 participants was obtained. The population includes workers from all levels, ranging from semi-skilled workers to professionals. The lowest level employees are of a literacy level adequate enough to allow for

the valid completion of the questionnaires. The biographical characteristics of the study population are detailed in Table 1.

Table 1

Characteristics of the Participants (N = 297)

Item	Category	Frequency	Percentage
Cultural group	Black (1)	185	62,3
	White (2)	56	18,9
	Other (3)	34	11,4
	Total	275	92,6
Gender	Male (1)	145	48,8
	Female (2)	142	47,5
	Total	286	96,3
Age	24 years and younger (1)	27	9,1
	25 – 35 years (2)	105	35,4
	36 – 45 years (3)	69	23,2
	46 – 55 years (4)	47	15,8
	56 years and older (5)	17	5,7
	Total	265	89,2
Qualification	Grade 10 to 12 (1)	139	46,8
	Diploma (2)	77	25,9
	Degree (3)	55	18,5
	Post-graduate Degree (4)	24	8,1
	Total	295	99,3
Tenure	Less than 1 year (1)	47	15,8
	2 – 5 years (2)	74	24,9
	6 – 10 years (3)	68	22,9
	11 – 20 years (4)	59	19,9
	Longer than 20 years (5)	37	12,5
	Total	285	96,0

The sample consisted mainly of black participants (62,3%) with a Grade 10 to 12 (46,8%) level of education. The majority of the participants fell within the 25 to 35 year age group (35,4%).

Measuring instruments

The Oldenburg Burnout Inventory (OLBI) (Demerouti et al., 2003) and The Utrecht Work Engagement Scale *(UWES)* (Schaufeli et al., 2002) were used in this study. Biographical information was also gathered regarding race, age, qualifications, and tenure.

The *Oldenburg Burnout Inventory (OLBI)* (Demerouti et al., 2003), a recently developed alternative to the traditionally used Maslach Burnout Inventory (MBI) was used as a measure of burnout. The OLBI includes both core dimensions of burnout, known as exhaustion and disengagement (cynicism/depersonalisation). The OLBI consists of 16 items, which are measured on a four-point Likert-type scale, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Eight items are phrased positively, for example "I always find new and interesting aspects in my work" and the remaining eight are phrased negatively, for example "There are days when I feel tired before I arrive at work". The exhaustion subscale, comprises of 8 items measuring affective, physical and cognitive aspects of burnout. The disengagement subscale, comprises of 8 items that relate to distancing one from one's work. An example of an item from the exhaustion scale, would for example be, "During my work, I often feel emotionally drained", whereas an example of an item from the disengagement scale would for example be, "I find my work to be a positive challenge". In a study conducted by Demerouti et al. (2002) investigating the convergent validity of the MBI and OLBI, using multitrait-multimethod analyses, it was found that the latent variables representing both instruments are highly correlated and that all exhaustion and distancing/disengagement items of both instruments load on a single factor. Demerouti et al. (2002) obtained Cronbach alpha coefficients of 0,85 (exhaustion) and 0,84 (disengagement) respectively.

The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) was used to measure work engagement. This 17-item questionnaire is arranged along a seven-point frequency scale, ranging from 0 (*never*) to 6 (*daily*). The UWES has three scales, namely vigour (6 items), dedication (5 items), and absorption (6 items). Examples of items relating to the three dimensions are the following: "I am bursting with energy in my work" (vigour); "I find my work full of meaning and purpose" (dedication); and "When I am working, I forget everything around me" (absorption). High levels of vigour, dedication and engagement point to an individual who experiences a high level of work engagement. Regarding internal consistency, Cronbach coefficients have been determined between 0,68 and 0,91 (Schaufeli et al., 2002). Storm (2002) obtained alpha coefficients of 0,78 (vigour), 0,89 (dedication) and 0,78 (absorption) for the UWES in a sample of 2396 members of the South African Police Services.

Statistical analysis

The statistical analysis was carried out with the SPSS programme (SPSS Inc, 2003). Exploratory factor analyses and Cronbach's alpha coefficients were determined to assess the validity and reliability of the OLBI and UWES. Exploratory factor analyses were carried out to determine the construct validity of the measuring instruments. Firstly, a simple principal component analysis was conducted on the constructs which form part of the measurement model. The eigenvalues and scree plot were then studied in order to determine the number of factors involved. Thereafter, a direct Oblimin rotation was conducted in cases where factors were related ($r >$ 0,30) or a principal component analysis with a Varimax rotation in case where factors were not related ($r < 0,30$) (Tabachnick & Fidell, 2001). A second order principal component analysis was conducted on the total scores of the subscales used in this research. Means, standard deviations, skewness and kurtosis were determined to describe the data. The level of statistical significance was set at $p < 0,01$. The significance of differences between demographic groups was established by means of MANOVA. Next, if Wilk's Lambda values ($p < 0,01$) demonstrated statistically significant differences, the relationships were further analysed to determine practical significance using ANOVA, followed by Tukey HSD tests. In terms of practical significance, a cut-off point of 0,50 was set for difference of medium effect and 0,80 for a difference of large effect (Cohen, 1988).

RESULTS

Construct validity of the measuring instruments

A simple principal components analysis was conducted on the 16 items of the OLBI on the total sample of employees in a government organisation. Analysis of eigenvalues (larger than 1) and scree plot indicated that four factors, which explained 47,62% of the variance, could be extracted. The first two factors together explained 31,49% of the variance. Because the obtained pattern matrices for a four factor solution did not make sense and previous research (Demerouti et al., 2002) found that burnout as measured by the OLBI has a two-factor structure, with exhaustion and disengagement as separate but correlated dimensions, it was decided to specify two factors. Because an oblique rotation showed that the factors were not strongly correlated ($r =$ 0,11), it was decided to use principal factor analysis with Varimax rotation.

Table 2

Rotated Component Matrix for the Items of the OLBI

	Component	
	1	2
1. I always find new and interesting aspects in my work	0,60	-0,00
2. There are days when I feel tired before I arrive at work	0,06	0,56
3. It happens more and more often that I talk about my work in a negative way	0,33	0,55
4. After work, I tend to need more time than in the past in order to relax and feel better	-0,15	0,51
5. I can tolerate the pressure of my work very well	0,53	0,05
6. Lately, I tend to think less at work and do my job almost mechanically	-0,01	0,46
7. I find my work to be a positive challenge	0,54	0,14
8. During my work, I often feel emotionally drained	0,11	0,64
9. Over time, one can become disconnected from this type of work	-0,07	0,50
10. After working, I have enough energy for my leisure activities	0,58	0,16
11. Sometime I feel sickened by my work tasks	0,18	0,56
12. After my work, I usually feel worn out and weary	-0,04	0,51
13. This is the only type of work that I can imagine myself doing	0,12	-0,03
14. Usually, I can manage the amount of my work well	0,54	-0,12
15. I feel more and more engaged in my work	0,71	-0,03
16. When I work, I usually feel energized	0,65	0,15

Inspection of Table 2 firstly indicated that item 13 was problematic, not loading on either component. This item, "This is the only type of work that I can imagine myself doing" is ambiguous and might have been interpreted differently by participants, i.e. this is the only type of work I want to do or this is the only type of work I am able to do.

Furthermore, upon scrutinising the individual item loadings, it appeared that what had emerged were not two scales being representative of disengagement and exhaustion as expected, but rather Factor 1 as being representative of engagement (all positively phrased items) and Factor 2 as comprising of both disengagement and exhaustion items. The two related factors ($r = 0,64$) were thus labelled "exhaustion/disengagement" and "engagement".

A simple principal component analysis was conducted on the 17 items of the UWES on the total sample of employees in a government organisation. Analysis of eigenvalues (larger than 1) and scree plot indicated that only one factor could be extracted, explaining 50% of the total variance. The component matrix of the UWES is presented in Table 3.

Table 3

Component Matrix for the Items of the UWES

	Component
1. I am bursting with energy in my work	0,64
2. I find my work full of meaning and purpose	0,75
3. Time flies when I'm working	0,70
4. I feel strong and vigorous in my job	0,74
5. I am enthusiastic about my job	0,74
6. When I am working, I forget about everything else around me	0,64
7. My job inspires me	0,75
8. When I get up in the morning, I feel like going to work	0,69
9. I feel happy when I am engrossed in my work	0,72
10. I am proud of the work that I do	0,71
11. I am immersed in my work	0,72
12. In my job, I can continue working for very long periods of time	0,71
13. To me, my work is challenging	0,76
14. I get carried away by my work	0,76
15. I am very resilient, mentally, in my job	0,66
16. It is difficult for me to detach myself from my work	0,68
17. I always persevere at work, even when things do not go well	0,65

Given the above findings regarding the OLBI and UWES, it was decided that a simple principal components analysis will be conducted of the 15 items of the OLBI (excluding item 13) and the 11 items (excluding the Absorption Scale items) of the UWES.

Analysis of the eigenvalues and scree plot showed two factors that explained 37,05% of the total variance. Next, principal component analysis with a direct Oblimin rotation was used in carrying out factor analysis. The pattern matrices are reported in Table 4.

Table 4

Pattern Matrix of the OLBI and UWES for Employees in a Government Organisation (N = 275)

	Component	
	1	2
OLBI		
1. I always find new and interesting aspects in my work	-0,53	-0,23
2. There are days when I feel tired before I arrive at work	-0,03	0,45
3. It happens more and more often that I talk about my work in a negative way	-0,36	0,42
4. After work, I tend to need more time than in the past in order to relax and feel better	0,12	0,48
5. I can tolerate the pressure of my work very well	-0,47	-0,15
6. Lately, I tend to think less at work and do my job almost mechanically	-0,03	0,45
7. I find my work to be a positive challenge	-0,52	-0,03
8. During my work, I often feel emotionally drained	-0,06	0,54
9. Over time, one can become disconnected from this type of work	0,06	0,49
10. After working, I have enough energy for my leisure activities	-0,47	-0,09
11. Sometime I feel sickened by my work tasks	-0,18	0,48
12. After my work, I usually feel worn out and weary	-0,02	0,47
14. Usually, I can manage the amount of my work well	-0,49	-0,27
15. I feel more and more engaged in my work	-0,65	-0,31
16. When I work, I usually feel energized	-0,60	-0,09
UWES		
1. I am bursting with energy in my work	0,64	-0,05
2. I find my work full of meaning and purpose	0,71	-0,23
4. I feel strong and vigorous in my job	0,65	-0,25
5. I am enthusiastic about my job	0,60	-0,26
7. My job inspires me	0,69	-0,23
8. When I get up in the morning, I feel like going to work	0,55	-0,38
10. I am proud of the work I do	0,65	-0,19
12. I my job, I can continue working for very long periods at a time	0,60	-0,26
13. To me, my work is challenging	0,69	-0,20
15. I am very resilient, mentally, in my job	0,50	-0,29
17. I always persevere at work, even when things do not go well	0,42	-0,38

Inspection of Table 4 indicated that all items of the UWES, as well as items 1, 5, 7, 14, 15, and 16 of the OLBI loaded on the first factor, which can be labelled "Engagement" with items 2, 3, 4, 6, 8, 9, 11, and 12 of the OLBI, loading on the second factor, which can be labelled "Exhaustion/ Disengagement". For the purpose of interpretation, it must be noted that a high score on the engagement scale of the OLBI suggests low engagement, with a low score indicating increased work engagement, hence the negative loading of the OLBI engagement items.

Subsequently, the three factors of the OLBI and the UWES were subjected to a second-order principal component analysis. Only one factor, which explained 58,80% of the total variance,

was extracted, although the eigenvalue of the second factor was noted to only fall very slightly below 1, with the first two factors together, explaining 76,06% of the total variance. Because an oblique rotation showed that the factors were not strongly correlated, it was decided to use principal factor analysis with Varimax rotation. The UWES (loading = -0,83) and OLBI engagement scale (loading = 0,76) formed the first factor, while the OLBI exhaustion/ disengagement scale (loading = 0,99) formed the second factor.

Descriptive statistics, Cronbach alpha coefficients and the inter-item correlation coefficients of the OLBI and UWES for employees (N= 275) working in a government organisation are presented in Table 5.

Descriptive statistics

Table 5

Descriptive Statistics, Cronbach Alpha Coefficients and Inter-Item Correlation Coefficients of the Measuring Instruments

Test and subscales	*Mean*	*SD*	Skewness	Kurtosis	α	Inter-item *r*
OLBI Exhaustion/Disengagement	19,67	0,50	0,08	0,58	0,66	0,28
OLBI Engagement	15,87	0,56	0,26	0,23	0,71	0,24
UWES	65,23	23,39	-0,28	-0,53	0,94	0,47

The information reflected in Table 5 indicates that the scores on all subscales are normally distributed. Although the 8-item OLBI exhaustion/disengagement scale demonstrated a marginally acceptable level of internal consistency, both the 7-item OLBI engagement scale and the UWES scale obtained acceptable Cronbach alpha coefficients, falling above the 0,70 level as suggested by Nunnally and Bernstein (1994). Inter-item correlations all scales were consistent with the guideline of $0,15 < r < 0,50$ suggested by Clark and Watson (1995). The above results provide only partial support for hypotheses 1 and 2. This conclusion is deducted from the results that indicate that although the UWES and OLBI presented with acceptable levels of internal consistency, neither of these scales resulted in the factor structure expected.

Next, MANOVA and ANOVA analyses followed to determine the relationship between scores of the OLBI and various demographic characteristics, such as culture, age, qualifications and tenure, the results of which are reported in Table 6.

Table 6

Manovas – Differences in Burnout Levels of Demographic Groups

Variable	Value	F	Df	Den Df	*p*
Culture	0,95	3,64	4	536	0,00*
Age	0,96	1,42	8	510	0,18
Qualifications	0,93	3,68	6	572	0,00*
Tenure	0,89	4,13	8	550	0,00*

* Statistically significant difference: $p < 0,01$

In an analysis of Wilk's Lambda values ($p < 0,01$), statistically significant differences were obtained between the mean burnout scores for culture, qualifications and tenure, but not for age. The results provide partial support for hypothesis 3, as significant differences based on biographical characteristics exist regarding burnout scores. Analysis of variance (Anova) was used to analyse the relationships between burnout and the three demographic variables that showed statistically significant differences.

The significance of differences in burnout levels of the different cultural groups are reported in Table 7.

Table 7

Differences in Burnout Levels of Cultural Groups

	Black	White	Other	*p*	Root MSE
OLBI engagement	2,19[a]	2,51[b]	2,26	0,00*	0,54
OLBI exhaustion/disengagement	2,44	2,50	2,45	0,82	0,50

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 7 demonstrates that there are statistically significant differences between the levels of engagement (as measured by the OLBI) of the various cultural groups. Regarding practical

significance, the white participants experience less engagement (considering that a higher score is indicative of lower engagement) than their black counterparts (medium effect). No statistically significant differences were found between the levels of exhaustion/engagement of the various cultural groups.

The differences in burnout levels of participants with different educational qualifications are reported in Table 8.

Table 8

Differences in Burnout Levels of Participants with Different Qualifications

	Grade 10 to 12	**Diploma**	**Degree**	**Post-graduate**	***p***	**Root MSE**
OLBI engagement	2,28	2,14[a]	2, 50[b]	2,11[a]	0,00*	0,55
OLBI exhaustion/disengagement	2,48[b]	2,41	2,52[b]	2,19[a]	0,03	0,49

* Statistically significant difference: $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 8 demonstrates that there are statistically significant differences between the levels of engagement (as measured by the OLBI) of participants with different qualifications. In terms of practical significance, participants with a degree tended to experience lower levels of engagement (higher scores) as opposed to participants with post-graduate degrees (medium effect) and diplomas (medium effect). Furthermore, Table 8 shows that with regard to the OLBI exhaustion/disengagement scores, participants with a Grade 10 to 12 level of education tended to experience more exhaustion/disengagement than those with a post-graduate degree (medium effect). Similarly, participants with a degree experienced higher levels of burnout than those with a post-graduate degree.

The differences in burnout levels of participants with different levels of tenure are reported in Table 9.

Table 9

Differences in Burnout Levels of Participants with Different Levels of Tenure

	Less than 1 year	2 – 5 years	6 – 10 years	11 – 20 years	Longer than 20 years	*p*	Root MSE
OLBI engagement	2,00[a]	2,21[a]	2,37[b]	2,27[b]	2,48[b/c]	0,00*	0,53
OLBI exhaustion/disengagement	2,43	2,44	2,34	2,60	2,52	0,06	0,48

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 9 demonstrates that there are statistically significant differences between the levels of engagement (as measured by the OLBI) of participants with different levels of tenure. In terms of practical significance, participants who worked for the organisation for one year or less, experienced higher levels of engagement (lower scores) when compared to those who worked for the company for 6 to 10 years (medium effect), 11 to 20 years (medium effect) and in excess of 20 years (large effect). Persons who worked for the organisation for a longer period of time experienced lower levels of engagement. It was also indicated that those who worked for the company for two to five years were more engaged than people who worked for the company for longer than 20 years.

The differences in engagement levels (as measured by the UWES) of participants from different cultures are reported in Table 10.

Table 10

Differences in Engagement Levels of Participants from Different Cultures

	Black	White	Other	*p*	Root MSE
UWES total	4,05	3,43	3,46	0,00*	1,36

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 10 demonstrates that statistically significant differences exist between the levels of engagement (as measured by the UWES) as experienced by different cultural groups. However, these differences had small effects (*d* values falling below the 0,50 level). No

statistically significant differences were found regarding the mean scores of participants falling in different age groups.

The differences in engagement levels (as measured by the UWES) of participants with different qualifications are reported in Table 11.

Table 11

Differences in Engagement Levels of Participants with Different Qualifications

	Grade 10 to 12	Diploma	Degree	Post-graduate	*p*	Root MSE
UWES total	3,73[a]	4,05	3,48[a]	4,51[b]	0,01	1,37

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 11 demonstrates that a statistically significant difference exists between the levels of engagement (as measured by the UWES) of participants with different qualifications. Practically significant differences of medium effect were obtained between participants with a Grade 10 to 12 level of education and those with post-graduate qualifications, and between participants with a degree and those with a post-graduate level of education. Participants with a Grade 10 to 12 level of education, experience lower levels of engagement compared to those with post-graduate qualifications. Similarly, participants with degrees experience a decreased level of engagement as compared to those with post-graduate qualifications.

The differences in engagement levels (as measured by the UWES) of participants with different levels of tenure are reported in Table 12.

Table 12

Differences in Engagement Levels of Participants with Different Levels of Tenure

	Less than 1 year	2 – 5 years	6 – 10 years	11 – 20 years	Longer than 20 years	*p*	Root MSE
UWES total	4,50	3,85[b]	3,89	3,37[a]	3,64[a]	0,00*	1,34

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0, 8$) are indicated

Table 12 demonstrates that statistically significant differences exists between the levels of engagement (as measured by the UWES) of participants with different levels of tenure. Practically significant differences of medium effect were obtained between the levels of engagement of participants who have been working for the company for less than one year and those working for the company in excess of 20 years, with those participants with a short tenure experiencing higher levels of engagement. A practically significant difference of large effect was obtained with regard to participants, who have been working for the organisation for less than one year and those who have been working for the company between 11 and 20 years, with those participants who have recently joined the organisation experiencing a higher level of engagement.

DISCUSSION

The objectives of this study were to determine the construct validity and internal consistency of the OLBI and the UWES, as well as to determine whether differences exist between biographical groups in terms of their scores on the OLBI and UWES.

Exploratory factor analysis of the OLBI resulted in two factors. The original hypothesised OLBI model consisted of two factors, one representing exhaustion and the other disengagement. However, in this sample, the first factor represented engagement and the second exhaustion/disengagement. The first factor, or engagement scale, consisted of all positively phrased items of the OLBI, whereas the second factor, or exhaustion/disengagement scale, comprised of all remaining exhaustion and disengagement items, with the exception of Item 13, which did not load on either factor. The finding that the exhaustion and disengagement items load on the same single factor is not surprising given that, as noted by Schaufeli (2003), exhaustion and cynicism (disengagement) are correlated relatively strongly and cynicism (disengagement) develops in response to exhaustion. These findings do not correspond with the findings of Demerouti et al. (2002) that burnout as measured by the OLBI has a two-factor structure, with exhaustion and disengagement as separate, yet correlated dimensions. Although the internal consistency of the engagement scale was acceptable, the Cronbach alpha coefficient of the exhaustion/disengagement scale was only marginally acceptable. Based on these results, hypothesis 1, which states that burnout, as conceptualised by the OLBI, has a two-dimensional structure, consisting of an exhaustion and disengagement subscale, is rejected.

Regarding the UWES, exploratory factor analysis resulted in one factor. This corresponds with the findings of Storm and Rothmann (2003), who in a sample of 2396 members of the South African Police Services, found that a re-specified one-factor model fitted their data the best (although the initial three-factor model rendered satisfactory results). In their research Naudé and Rothmann (2004) found that vigour and dedication load on the same factor. Schaufeli, Martinez, Pinto, Salanova and Bakker (2002) however found that the fit of the hypothesised three-factor model was superior to that of the one-factor solution. A high level of internal consistency was obtained on the UWES. Based on these findings, hypothesis 2, which states that work engagement as conceptualised by the UWES has a three-dimensional structure, is rejected.

Hypothesis 3 is accepted, as significant differences were found between various biographical groups and their scores on the OLBI and UWES. Regarding the OLBI, the results showed that black participants were more engaged than their white counterparts. However, based on engagement as measured by the UWES, no practically significant differences were found with regard to culture. The finding that the black participants are more engaged that the white participants does not correspond with the research of Storm (2002), who did not find any practically significant differences between the engagement levels of black and white participants. As noted, a literature review (Antonovsky, 1979) suggested that black participants are expected to score lower on indices of psychological well-being compared to white participants, due to factors related amongst others to socio-cultural background and life circumstances. However, as suggested, by Wissing and Van Eeden (2002) one would have to consider this in the context of the new socio-political dispensation and corresponding organisational programmes. Hypothetically, within the context of Employment Equity and Affirmative Action, it can be expected that white employees may feel less vigour, dedication and absorption toward their work, being more sceptical regarding their work than for example a black participant. More research is required in this regard.

No significant differences were found with regard to the OLBI and age. Maslach et al. (2001) however, note that of all the demographic variables that have been studied, age is the one that has been most consistently related to burnout, with younger employees reporting higher levels of burnout than employees over the age of 30 and 40 years.

In terms of qualifications and engagement as measured by the OLBI, it was established that participants with degrees were less engaged that those with post-graduate degrees, as well as those with diplomas. Participants with post-graduate degrees were less burned out when compared to participants with Grade 10 to 12 levels of education and participants with degrees. However, Maslach et al. (2001) note that some studies have found that those with a higher level of education reported higher levels of burnout compared to those with less educated degrees, possibly because such persons secure more responsible positions than the latter. These findings were not replicated in this study. Regarding engagement as measured by the UWES, participants with post-graduate degrees displayed a higher level of engagement in comparison to participants with Grade 10 to 12 qualifications and participants with degrees. These findings do not correspond with the findings of Storm (2002), who did not find significant differences with regard to the engagement levels of participants with different levels of education. Hypothetically speaking, in an attempt to explain the above finding, one would expect participants with post-graduate levels of education to display a high level of dedication and interest in their field of specialisation, hence the fact that they pursued their education to a post-graduate level.

Lastly, with regard to tenure and engagement as measured by the OLBI, results indicated that participants who worked for the organisation for one year or less were more engaged than those who had been working for the company for 6 to 10 years, 11 to 20 years and in excess of 20 years. In terms of engagement as measured by the UWES, participants who had been working for the organisation for less than one year demonstrated higher levels of engagement than those who had been working for the organisation for 11 to 20 years and in excess of 20 years. No research comparing the engagement levels of participants with different levels of tenure could be found in the literature. Results consistently demonstrated that tenure less than one year was associated with increased work engagement. A possible reason for this could be that newly employed participants, as opposed to employees who have been following the same routine for a number of years, still find their work to be challenging, hence exerting a high level of energy into their work.

In their proposed Comprehensive Burnout and Engagement (COBE) model, Schaufeli and Bakker (2002) found that job resources exclusively predicted work engagement. The presence or lack of available resources may also have an influence on the participants' levels of engagement,

with the newly joined employees having more resources at their disposal as part of their induction phase.

This study had several limitations. Firstly, the sample was imbalanced in terms of culture/race. Stratified random sampling might ensure sufficient representation of the different groups, for example allowing focus on bias and equivalence of the OLBI and UWES for different race/language groups. A further limitation of this study was its reliance on self-report measures. According to Schaufeli, Enzmann and Girault (1993), the exclusive use of self-report measures in validation studies increases the likelihood that at least part of the shared variance between measures can be attributed to method variance. Also the sample should be extended to include employees working at various other government organisations.

RECOMMENDATIONS

Based on the results obtained in this study, the use of the OLBI is not recommended as a measuring instrument of preference to assess burnout of government employees in a South African context, as some further refinement of the scale is required.

Researchers such as Demerouti et al. (2002) have confirmed the two-dimensional structure of the OLBI, consisting of an exhaustion and disengagement scale. These researchers suggest that the OLBI may be considered a more suitable measure of burnout as compared to the MBI given that it includes both negatively and positively worded items, as opposed to the one-directional formulation of the items in the Maslach Burnout Inventory, thus avoiding answering bias. However, in this research, the positively worded items loaded on one factor, which appeared to be an engagement scale, with all remaining negatively phrased exhaustion and disengagement items loading on a second factor, an occurrence which may not have taken place had the positively worded items been phrased negatively. Future research regarding the construct validity of the OLBI is required, also making use of larger and more culturally balanced samples. The OLBI is an instrument that was originally constructed from data based on German samples and may not be suitable to a cross-cultural context as is the case in South Africa. Research regarding the cultural equivalence, reliability and validity of the OLBI in different occupational settings in South Africa is required.

However, the use of the UWES is recommended for measuring engagement of government employees in South Africa. It is suggested, given that the UWES proved to be reliable and valid that future research focuses on the reliability and validity of the UWES in other occupational settings. It is furthermore recommended that larger samples, with more powerful sampling methods be used in future.

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CHAPTER 3

ARTICLE 2

THE VALIDATION OF THE JOB INSECURITY INVENTORY FOR EMPLOYEES IN A GOVERNMENT ORGANISATION

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ABSTRACT

The objective of this study was to validate the Job Insecurity Inventory for employees (N = 275) in a government organisation and to assess the differences between the levels of job insecurity of different demographic groups. A cross-sectional survey design was used. The Job Insecurity Inventory and a biographical questionnaire were administered. Structural equation modelling confirmed the two-factor structure of the JII, consisting of an affective and cognitive dimension. Both scales demonstrated acceptable internal consistencies. No differences were observed between the job insecurity levels of groups based on age, qualifications and tenure. White participants experienced higher levels of cognitive job insecurity than black participants.

OPSOMMING

Die doel van hierdie studie was om die Werksonsekerheidsvraelys te valideer vir werknemers (N = 275) in 'n staatsorganisasie en om verskille tussen die werksonsekerheid van verskillende demografiese groepe te bepaal. 'n Dwarssneeopname-ontwerp is gebruik. Die Werksonsekerheidsvraelys en 'n biografiese vraelys is afgeneem. Strukturele vergelykingsmodellering het die twee-faktor struktuur van die JII, bestaande uit 'n kognitiewe en affektiewe dimensie bevestig. Albei skale het aanvaarbare interne konsekwentheid getoon. Geen verskille is waargeneem betreffende die vlakke van werksonsekerheid van groepe gebaseer op ouderdom, kwalifikasies en dienstydperk nie. Wit deelnemers het hoër vlakke van werksonsekerheid as swart deelnemers ervaar.

Employment for many employees fulfils a greater function than merely being a source of income. Bridges (1995) explains that people in our society need jobs, noting that although this statement may sound apparent and insignificant, it must be considered that prior to the 19th century many people lived productive and meaningful lives without jobs and that presently many people still do so in non-industrialised parts of the world. In advanced societies, employment continues to play an important role in the health and well-being of adults (Siegrist et al., 2004). Having a job is often a requirement for a continuous income and adult socio-economic status, but, as indicated by Bridges (1995), the financial aspect of a job is so evident that people often underestimate its psychological function.

Besides being a source of revenue, an individual's occupation is a source of socialisation; it provides opportunities for personal growth and development, also including the positive experience of the self in a core social role. This also allows for partaking in societal networks beyond primary groups (Siegrist et al., 2004). The identities of most citizens of industrialised countries are defined in terms of their jobs, connected to a wider community through their jobs and provided with structure and purpose by their jobs (Bridges, 1995). In the opinion of De Witte (1999), it is hardly surprising that the perception that the current job might be lost reduces well-being, as in our society work constitutes the key to social participation and recognition.

Baruch and Hind (1999) refer to the "new deal" in employment that has emerged in present-day business, which involves a shift away from paternalistic and secure employment, moving toward an emphasis on continuous responsibility for self-development on the part of the employee. Bridges (1995) refers to "dejobbing", a term which describes the demise of jobs and work situations which are not framed by clear job descriptions and reporting relationships, and are characterised by multiple roles, where the role mix changes frequently.

This shift in the nature of employment is largely related to organisations worldwide having to engage in downsizing and restructuring efforts in an attempt to remain competitive and survive in harsh economic conditions, which is frequently accompanied by the redundancy of large numbers of staff. Changes in the nature of work have coincided with changes in the labour market with more females occupying the workforce and with an increase in part-time work and flexible work arrangements (Siegrist et al., 2004). Practically every sector of the

South African economy is experiencing financial pressure due to *inter alia* globalisation and the increasing pace of technology.

Jacobson and Hartley (1991) cite recession and restructuring, technological advancement, growth of the small business sector, employment flexibility, and government policy as antecedents to job insecurity. Probst (2002) notes that massive layoffs, conversion of full-time jobs to part-time positions, and the increase of temporary workers are but a few of the realities facing organisations and workers presently. Job instability, forced mobility, and unemployment, aspects which according to Siegrist et al. (2004) are perhaps most significantly related to health, are becoming increasingly common, leading to an increase in career discontinuity, forced early retirement, and job loss. Higher production targets with less manpower, joined with the constant threat of job loss negatively affect the psychological well-being of employees (Sverke & Hellgren, 2001). Government organisations are challenged with high demands for basic services, whilst simultaneously having to do so with limited resources and are not excluded from the realities of restructuring, which are likely to result in job insecurity and occupational stress (Rothmann, Jackson & Kruger, 2003).

Viewing job insecurity as a stage in the job loss sequence does not imply that it will necessarily be followed by job loss or unemployment, because in the majority of cases the population experiencing job insecurity is significantly larger than the number of employees who lose their jobs (Jacobson, 1991). Besides those employees anticipating potential job loss, job insecurity also relates to those who retained their positions after having undergone a redundancy or downsizing programme. Baruch and Hind (1999) explain that the term "survivor syndrome" has been created to refer to these persons, with it having been argued that the "survivors" experience the adverse effects of change as profoundly as those who have left. Jacobson (1991) believes that job insecurity has the potential of becoming more stressful than job loss in that the coping process may be inhibited by the uncertainty of the event. In job-loss, the individual is required to come to terms with the loss and to face the outcomes. Numerous negative effects of "survivor syndrome" have been covered in the literature including burnout, low morale, decreased commitment, reduced loyalty, inefficiency, reduced performance, resignation and cynicism (Baruch & Hind, 1999).

Regarding individual level consequences of job insecurity, job insecurity is consistently associated with a reduced level of job satisfaction (Ashford, Lee & Bobko; 1989; Davy, Kinicki & Scheck, 1997), lowered organisational commitment (Apisakkul, 2000; Ashford et al., 1989; Davy et al., 1997), reduced work-related performance at both a social and technical level (De Witte, 2000), lowered trust in management (Ashford et al., 1989), psychosomatic complaints, physiological variables and various physical strains (De Witte, 2000), psychological distress, anxiety, and depression (Roskies & Louis-Guerin, 1990), decreased employee mental health and family well-being (Larson, Wilson & Beley, 1994), decreased workplace safety motivation and compliance (Probst & Brubaker, 2001), reduced work effort (Brockner, Grover, Reed & De Witt, 1992), work withdrawal behaviour (Probst, 1999), and increased intention to leave and resistance to change (Greenhalgh & Rosenblatt, 1984). De Witte (1999) notes that the relationship between job insecurity and psychological well-being is a robust one, as the relationship remained significant even after controlling for occupational status, gender, age and different job characteristics.

Job insecurity is not only problematic for the individual employees, but also for the company in which they work. Greenhalgh and Rosenblatt (1984) found that the impact of job insecurity on individual employees could erode the effectiveness of the organisation. A downward spiral is created, where productivity decreases in such a way that the competitive strength of the company is undermined. The risk of further redundancies is increased, which in turn increases feelings of job insecurity. The impact of job insecurity spreads into negative consequences for the organisation. Greenhalgh and Sutton (1991) further found that job insecurity is a change inhibitor, because fear for the future is accompanied by resistance to change and also that job insecurity holds negative consequences for industrial relations. Greenhalgh and Sutton (1991) report that apart from the human resource implications of job insecurity, companies need to be cautious of high levels of job insecurity, as damaging messages about the organisation may leak out. Cooper (1999) is of the opinion that organisations may suffer financially from heightened employee perceptions of job insecurity, due to the associated cost implications of heightened absenteeism and sickness, which results from lowered employee well-being.

The changes organisations have to instil in an attempt to remain competitive affect the type and amount of work employees have to do. Due to high unemployment rates many employees have little choice but to accept working conditions available to them, even though these may be less than desirable. Rothmann (2003) notes that the environment in which South African employees have to function demands more of them than ever before. Maslach et al. (2001) are of the opinion that the impact of the changing world of work is perhaps most evident in changes in the psychological contract. 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. Long-term job insecurity will in all likelihood hold serious consequences for an employee's overall life situation as economic as well as other highly valued aspects of life will be perceived as being under threat (Ashford et al., 1989; Hartley, Jacobson, Klandermans & Van Vuuren, 1991). Given the wide ranging implications held by job insecurity, it is important to identify job insecurity, measuring the construct with a valid and reliable measuring instrument, as well as to identify how the experience of job insecurity differs between demographic groups, i.e. identifying those employees who are most and least vulnerable to the experience of job insecurity.

The objectives of this study were to validate the Job Insecurity Inventory for employees in a government organisation and to assess the differences between the levels of job insecurity of different demographic groups.

Job insecurity

De Witte (1999) points out that job insecurity has usually been defined in different ways, with Mauno and Kinnunen (1999) indicating that literature usually conceptualises job insecurity from three general points of view, as being (i) a global or (ii) multidimensional concept or (iii) a job stressor. In most instances, job insecurity has been defined according to the global viewpoint, signifying the threat of job loss or job discontinuity (Caplan, Cobb, French, Van Harrison & Pinneau, 1980; De Witte, 1999). Generally this definition has been applied in the context of organisational crisis or change in which job insecurity is considered as a first phase of the process of job loss (Ferrie, 1997; Joelson & Wahlquist, 1987). From a uni-dimensional perspective, Van Vuuren (1990), who views job insecurity as an overall concern, emphasises that job insecurity has the following components: Firstly, it is a

subjective experience or perception, as each employee may perceive the same situation differently. Secondly, job insecurity implies uncertainty regarding the future, and finally doubts about the continuation of the job as such, are central to job insecurity. Sverke et al. (2004) also view job insecurity as a perceptual phenomenon, which reflects the individual's fear of involuntary job loss, thus representing the individual's perception of the employment situation as more insecure than he or she desires.

In contrast with a unidimensional view of job insecurity, researchers who have adopted the multidimensional definition of job insecurity, argue that job insecurity refers not only to the degree of uncertainty, but also to the continuity of certain dimensions, such as opportunities for promotion (Ashford et al., 1989; Borg & Elizur, 1992; Rosenblatt & Ruvio, 1996). De Witte (1999) indicates that from a multifaceted perspective, job insecurity is viewed as encompassing aspects such as the perceived threat to various job features, as well as the individual's ability to counteract these threats.

According to De Witte (1999) and Van Vuuren (1990), job insecurity consistently presents itself as a stressor. With regard to consequences, a distinction is made between stress reactions and coping behaviour. According to Van Vuuren (1990), stress reactions refer to the consequences of the stressor for psychological well-being, while coping refers to the way in which a person deals with stress. Within the context of the stress theories, a stressor leads to some type of strain reaction, which holds consequences for the health and well-being of the individual, as well as the individual's work-related attitudes and behaviour (Sverke et al., 2004).

The more employees value their present jobs, and the more they depend on it for obtaining valued features of that job, the greater the perceived severity of job loss. Unlike actual job loss, which is an objective experience revealed by the fact itself, job insecurity is cued by one or more inferential events which are perceived as a threat (Klandermans, Van Vuuren & Jacobson (1991). Jacobson (1991) describes job insecurity as a perceptual phenomenon, which is likely to differ between employees working in the same organisation, because perceptions vary as a function of contextual factors and personal attributes. Nevertheless, individuals do not exist in isolation of each other, so an individual's interpretation of the situation will at least to some extent be socially constructed.

In this study, the Job Insecurity Inventory (JII) (De Witte, 2000) was used to measure job insecurity. De Witte (2000) developed the JII based on Borg's (1992) conceptualisation of job insecurity as a two-dimensional construct, consisting of an affective and cognitive component. Cognitive job insecurity relates to the perceived likelihood of job loss, whereas affective job insecurity relates to fear of job loss.

De Witte (1999, 2000) reports that in an attempt to compare the experience of unemployment and that of job insecurity, the choice of a global measuring instrument was inevitable, noting that measurement via only one item, could deliver unreliable and unstable results. Based on Borg's conceptualisation of job insecurity as a two-dimensional construct, consisting of an affective and cognitive component, a two-dimensional measuring instrument was designed (De Witte, 2000).

The 11 items of the JII summarises both the cognitive and affective dimensions of job insecurity. De Witte (2000) found, with regard to the JII, that two factors could be distinguished, which, together predict 68,2% of the total variance. De Witte (2000) states the following: "I am very sure that I will be able to keep my job", as an example of the cognitive job insecurity aspect. The affective aspect, for example: "I fear that I might lose my job", emerged as the second factor.

The items of the JII, measuring global job insecurity, are reported to have a Cronbach alpha coefficient of 0,92 (De Witte, 2000). De Witte (2000) found that the overlap between both predictive factors (cognitive and affective) is of significance, making it complicated to distinguish between the two dimensions. With the items, which primarily refer to one of both dimensions, two scales were created. Both scales were shown to be highly reliable, with the six items measuring cognitive job insecurity, displaying an alpha coefficient of 0,90; and the five items of the affective job insecurity having an alpha coefficient of 0,85. De Witte (2000) notes that the item content of these two scales does not overlap, but nevertheless, have a high underlying correlation (r = 0,76). This indicates that both aspects strongly refer to one another, and are not "accurately" differentiated in the perceptions of the respondents.

Despite the prevalence and significance of job insecurity in our society, limited South African research regarding the validity and reliability of the JII has been conducted. For this reason,

this study is considered important and relevant. Furthermore, it is important to determine differences between the job insecurity levels of demographic groups, given that findings in this regard differ between various studies conducted previously, with some researchers finding age, qualifications, tenure and culture to be related to variations in levels of job insecurity, whilst other research did not replicate these findings.

Job insecurity of demographic groups

Mauno and Kinnunen (1999) indicate that research categorises the antecedents of job insecurity into three groups, being organisational and environmental circumstances (e.g. change), an employee's individual and positional characteristics (e.g. age) and an employee's personal characteristics (e.g. self-esteem). In terms of demographic variables' relationship to job insecurity, Roskies and Louis-Guerin (1990) argue that managers might react more strongly to the threat of job loss, because they believe in "meritocratic individualism", i.e. any career setback would lead to guilt, self-doubt, despair and commensurate reduction in well-being. However, Schaufeli (1992) states that the threat of job loss should be less problematic for the more highly educated, as such occupational groups possess more resources to counteract the adverse consequences of unemployment. De Witte (1999) reports that potential unemployment is most distressing for respondents between the ages of approximately 30 to 50 years, seeming to be less problematic for younger and older respondents. In de Witte's opinion, the reason for this probably relates to the fact that younger respondents have less financial responsibilities and better prospects of finding a job in future, and older respondents can prepare themselves for a new role, being that of retirement. De Witte (1999) notes that for participants between the ages of 30 to 50 years, their family responsibilities and reduced financial resources are more burdening and their position of "unemployed" is less socially acceptable.

Yousef (1998) found, that employees' age, marital status, job level, monthly income, tenure in present job, tenure in company and an organisation's activity, contribute significantly to variations in job satisfaction with job security among employees. Manski and Straub (2000) found that expectations of job loss decrease with age, as well as that job insecurity tends to decrease with schooling. Roskies and Louis-Guerin (1990), however, did not find a correlation between age and job insecurity.

Limited research has been conducted with regard to the relationship between culture and job insecurity in South Africa. Concerning differences between job insecurity levels of different cultural groups, it could be expected that the new socio-political dispensation, with aspects such as Employment Equity and Affirmative Action, would affect the levels of job insecurity experienced by different cultural groups. Typically, in the context of this research, it could be expected that those least advantaged by such legislation will experience higher levels of job insecurity than those who benefit from the new dispensation.

Manski and Straub (2000) found significant differences between job insecurity of different race groups, with the job loss concern among the black group being almost double that of the white group. Although previous research, such as that conducted by Manski and Straub (2000) established that black participants experience higher levels of job insecurity than their white counterparts, limited South African research exists in this regard. Within the context of Affirmative Action and Employment Equity initiatives, it is possible that the non-beneficiaries of the new dispensation (i.e. white participants) will experience higher levels of job insecurity than the beneficiaries (i.e. black participants).

In line with De Witte's (1999) finding that potential unemployment is most distressing for respondents between the ages of approximately 30 to 50 years, seeming to be less problematic for younger and older respondents, it is expected that those participants nearing retirement, as well as those who have only recently joined the labour market, will experience decreased levels of job insecurity compared to those falling within neither of these categories. It is expected that increased qualifications will be associated with lower levels of job insecurity, given that as stated by Schaufeli (1992), such individuals possess more resources to counteract the adverse consequences of unemployment.

Limited research exists in this regard. Yousef (1998) found that satisfaction with job security tended to increase commensurate with tenure. Given the "last in first out" policy followed by many organisations, it is postulated that increased tenure is associated with increased levels of job security, i.e. decreased job insecurity.

Hypotheses related to the present study are formulated as follows:

H1: Job insecurity, as measured by the JII, can be defined as a two-dimensional construct with acceptable levels of internal consistency for each of its subscales, namely affective and cognitive job insecurity.

H2: White participants experience higher levels of job insecurity than black participants.

H3: Participants who have recently entered the labour market (i.e. "young" employees) and those who are close to retirement age, experience lower levels of job insecurity compared to those participants falling between these two categories.

H4: Higher qualifications are associated with decreased levels of job insecurity.

H5: Increased tenure is associated with decreased levels of job insecurity.

METHOD

Research design

A cross-sectional survey design was used to describe the information on the population collected at that time. This design (Shaughnessy & Zechmeister, 1997) can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is also ideal to describe and predict functions associated with correlative research.

Participants

The entire population of 500 employees working in a government organisation in Gauteng was targeted for this research. A response rate of only *297* participants was obtained. Participants were frequently reminded to complete the provided questionnaires. Questionnaires were however completed unanimously, which probably played a role in the poor response rate (60%) obtained. The population includes workers from all levels, ranging from a semi-skilled workers to professionals. The lowest level employees are of a literacy

level adequate enough to allow for the valid completion of the questionnaires. The characteristics of the participants are reported in Table 1.

Table 1

Characteristics of the Participants (N = 297)

Item	Category	Frequency	Percentage
Cultural group	Black (1)	185	62,3
	White (2)	56	18,9
	Other (3)	34	11,4
	Total	275	92,6
Gender	Male (1)	145	48,8
	Female (2)	142	47,5
	Total	286	96,3
Age	24 years and younger (1)	27	9,1
	25 – 35 years (2)	105	35,4
	36 – 45 years (3)	69	23,2
	46 – 55 years (4)	47	15,8
	56 years and older (5)	17	5,7
	Total	265	89,2
Qualification	Grade 10 to 12 (1)	139	46,8
	Diploma (2)	77	25,9
	Degree (3)	55	18,5
	Post-graduate Degree (4)	24	8,1
	Total	295	99,3
Tenure	Less than 1 year (1)	47	15,8
	2 – 5 years (2)	74	24,9
	6 – 10 years (3)	68	22,9
	11 – 20 years (4)	59	19,9
	Longer than 20 years (5)	37	12,5
	Total	285	96,0

The study population consisted mainly of black participants (62,3%). The majority of participants fell in the 25 to 35 year age group (35,4%) and had a Grade 10 to 12 level of education (46,8%).

Measuring instruments

The Job Insecurity Inventory (JII) (De Witte, 2000) was used in this study. Biographical information was also gathered regarding race, education, qualification and tenure.

The 11 items of the *Job Insecurity Inventory (JII)* (De Witte, 2000) summarise both the cognitive and affective dimensions of job insecurity and are arranged along a five-point scale, varying from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of a question relating to cognitive job insecurity is, "I think that I will be able to continue working here", whereas an example of a question relating to affective job insecurity is, "I fear that I might lose my job". The items of the JII, measuring global job insecurity are reported to have a Cronbach alpha coefficient of 0,92 and both scales (cognitive and affective) were shown to be highly reliable, with the six items measuring cognitive job insecurity, displaying an alpha coefficient of 0,90; and the five items of the affective job insecurity having an alpha coefficient of 0,85 (De Witte, 2000). According to De Witte (2000) the content of these two scales do not overlap, but nevertheless are strongly correlated (r = 0,76). In terms of South African research, Heymans (2002) obtained an alpha coefficient of 0,81 for the JII and Elbert (2002) obtained an alpha coefficient of 0,84.

Statistical analysis

The statistical analysis was carried out with the SPSS program (SPSS Inc, 2003). Cronbach's alpha coefficients (α) and inter-item correlations coefficients were determined to assess the validity and reliability of the JII. Means, standard deviations, skewness and kurtosis were determined to describe the data. MANOVA, ANOVA and Tukey HSD tests were conducted in order to determine differences in job insecurity scores of biographical groups. In terms of practical significance, a cut-off point of 0,50 was set for difference of medium effect and 0,80 for a difference of large effect (Cohen, 1988).

Structural equation modelling (SEM) methods as implemented by AMOS (Arbuckle, 1997) was used to test the factorial models for the JII, using the maximum likelihood method. The SEM is a statistical method that takes a hypothesis-testing approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001). Hypothesised relationships were tested empirically for goodness-of-fit with the sample data. The χ^2 statistic and several other goodness-of-fit indices, which sum up the degree of correspondence between the inferred (hypothesised) and observed covariance matrices, was be used. If used in isolation, the χ^2 statistic can lead to certain limitations. Researchers have addressed the χ^2 limitations

by developing goodness-of-fit indexes that take a more pragmatic approach to the evaluation process. One of the first fit statistics to address this problem was the χ^2/degrees of freedom ratio (CMIN/DF) (Wheaton, Muthén, Alwin & Summers, 1977), which is the minimum discrepancy per degree of freedom. These criteria, also referred to as "subjective" or "practical" indices of fit, are frequently used as additions to the χ^2 statistic.

The Goodness-of-Fit Index (GFI) indicates the relative amount of the variances/co-variances in the sample predicted by the estimates of the population. The Adjusted Goodness-of-Fit Index (AGFI), which is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables, was also used. The Normed Fit Index (NFI) was used to assess global model fit. The NFI, which is normed to fall on a 0 to 1 continuum, is considered to represent the point at which the model under evaluation falls on a scale running from a null model to a perfect fit. The Comparative Fit Index (CFI) also compares the hypothesised and independent models, but takes cognisance of sample size. The Tucker-Lewis Index (TLI) is a relative measure of co-variation explained by the model, which is specifically developed to assess factor models (Tucker & Lewis, 1973). As suggested by Browne and Cudeck (1993), the Root Mean Square Error of Approximation (RMSEA), which estimates the overall amount of error in the hypothesised model-data fit relative to the estimated parameters of the model, and the 90% confidence interval of the RMSEA, was used.

RESULTS

Structural equation modelling (SEM) methods were used to test factorial models for the JII. Data analyses proceeded as follows: First, a quick overview of model fit was done by looking at the overall χ^2 value, together with its degrees of freedom and probability value. Global assessments of model fit were based on several goodness-of-fit statistics (GFI, AGFI, NFI, TLI, CFI and RMSEA). Secondly, given findings of an ill-fitting initially hypothesised model, analyses proceeded in an exploratory mode. Possible misspecifications as suggested by the so-called modification indices were looked for, and eventually a revised, re-specified model was fitted to the data.

Hypothesised model of job insecurity

The full hypothesised 2-factor model consisting of all 11 items of the JII was tested. Table 2 presents fit statistics for the test of the various models.

Table 2

Goodness-of-fit Statistics for the JII Models

Model	χ^2	χ^2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA
Model 1 (one-factor)	79,67	1,74	0,95	0,93	0,90	0,94	0,95	0,05
Model 1 (two-factor)	74,81	1,74	0,95	0,93	0,90	0,94	0,95	0,05
Model 2 (two-factor)	42,21	1,31	0,97	0,95	0,94	0,98	0,99	0,03

Confirmatory factor analyses

First, a unidimensional model, which assumes that all 11 items of the JII load on one single factor, was tested. Table 2 provides a summary of the fit statistics for the hypothesised one-factor model. This model revealed a relatively good overall fit. Although the $\chi^2 = 79,67$ ($df = 44$; $p < 0,00$), was statistically significant, the other fit indices indicated relatively good fit between the model and the data. According to De Witte (2000) the content of these two scales do not overlap, but nevertheless are strongly correlated ($r = 0,76$), hence the good fit of data to a unidimensional model.

Subsequently a two-factor model, consisting of a cognitive (items 1, 2, 3, 4, 10, and 11) and affective (items 5, 6, 7, 8, and 9) subscale was tested. The statistically significant $\chi^2 = 74,81$ ($df = 43$; $p < 0,00$) and fit indices revealed a relatively good overall fit of the originally hypothesised JII model (Model 1).

Exploratory factor analyses

To pinpoint possible areas of misfit, modification indexes were examined. Modification indexes (MI) demonstrated misspecification associated with the pairing of items 1 and 3 (MI = 10,14) and items 1 and 8 (MI = 9 06). Upon inspecting the regression weights, it was noted

that item 2 had an estimate of -0.05 and consequently was deleted.

Model 2 was re-specified with item 2 deleted and allowing the errors of item 1 and 3 and items 1 and 8 to correlate. A lower statistically significant $\chi^2 = 42{,}21$ ($df = 32$; $p < 0{,}00$) and fit indices revealed a good overall fit of the hypothesised JII model (Model 2). The GFI and AGFI values fell well above the 0,90 cut-off point and the TLI and CFI values fell above the 0,95 level, with the NFI value falling very close to 0,95. Lastly, the RMSEA value fell well below the 0,08 cut-off point.

The structural equation modelling results provided above indicate that good fit was obtained for both the one-factor JII model and the two-factor JII model. However, the fit of the two-factor model was marginally better than that of the one-factor model.

Descriptive statistics for the JII are reported in Table 3.

Table 3

Descriptive Statistics, Cronbach Alpha Coefficients and Inter-Item Correlation Coefficients of the Measuring Instrument

Test and subscales	*Mean*	*SD*	Skewness	Kurtosis	Inter-item *r*	α
Cognitive Job Insecurity	12,82	0,79	0,10	-0,33	0,32	0,70
Affective Job Insecurity	13,97	0,82	0,07	0,22	0,34	0,72

Table 3 shows that acceptable Cronbach alpha coefficients were obtained on the affective and cognitive job insecurity scales, adhering to the 0,70 cut-off point as set by Nunnally and Bernstein (1994). Inter-item correlation coefficients of all scales were acceptable (Clark & Watson, 1995) and the scores on all dimensions seem to be distributed normally (skewness and kurtosis were smaller than one).

Next, MANOVA and ANOVA analyses followed to determine the relationship between scores of the JII and various demographic characteristics, such as culture, age, qualification and tenure, the results of which are reported in Table 4.

Table 4

Differences in Job Insecurity levels of Demographic Groups

Variable	Value	*F*	*df*	Den Df	*p*
Culture	0,94	4,20	4	530	0,00*
Age	0,95	1,66	8	506	0,11
Qualification	0,96	1,98	6	568	0,06
Tenure	0,95	1,93	8	546	0,05

* Statistically significant difference: $p < 0,01$

In an analysis of Wilk's Lambda values ($p < 0,01$), statistically significant differences were obtained for culture, but not for qualification, tenure and age. The relationship between job insecurity and culture was further analysed to determine practical significance using ANOVA, followed by Tukey HSD tests.

The ANOVA of differences in job insecurity of the different cultural groups are reported in Table 5.

Table 5

Differences in Job Insecurity Levels of Cultural Groups

	Black	White	Other	*p*	Root MSE
JII Affective	2,69	3,07	2,85	0,00*	0,81
JII Cognitive	2,55[a]	2,99[b]	2,67	0,00*	0,72

* Statistically significant difference: $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 5 demonstrates that statistically significant differences were obtained between the cognitive and affective job insecurity scores of the various ethnic groups. Practically significant differences were obtained between the cognitive job insecurity scores of the white and black ethnic groups, where the white participants obtained a higher mean cognitive job insecurity score compared to the black participants.

DISCUSSION

The aim of the study was to investigate the psychometric properties of JII for employees at a government organisation. The two-dimensional structure of the JII was confirmed and both scales presented with adequate internal consistency, although a one-dimensional model also presented a good fit. Significant differences were obtained between the job insecurity scores of black and white ethnic groups, although no differences were obtained between the job insecurity scores of participants with different qualifications, levels of tenure and of different ages.

The structural equation modelling results indicated that a good fit was obtained for both the one-factor JII model and the two-factor JII model. However, the fit of the two-factor model was marginally better than that of the one-factor model. According to De Witte (2000) the content of these two scales do not overlap, but nevertheless have a high underlying correlation (r = 0,76). A correlation coefficient of 0,65 was obtained between cognitive and affective job insecurity in this study. As noted by De Witte (2000), this indicates that both aspects strongly refer to one another, and are not "accurately" differentiated in the perceptions of the respondents. Given the high underlying correlation between these two scales, it is not surprising that the one-factor model of the JII presented with a good fit to data. Both the affective and cognitive job insecurity scales presented with an acceptable level of internal consistency. These findings lend support to hypothesis 1.

Item 2 ("There is only a small chance that I will become unemployed") was eliminated from the original JII, resulting in a 10-item scale being fitted to the data in post hoc analysis, which is not consistent with previous research (De Witte, 2000). The deletion of this item from the JII for reasons of model-fit improvement resulted in the sacrifice of model parsimony, i.e. relationships have been eliminated, which could be viewed as erosion in the meaning of the job insecurity construct. Furthermore, it is possible, given the small sample size and sampling procedure that these findings could have been purely coincidental. Also, the problem with this item may be related to its ambiguous nature (specifically for individuals who speak Afrikaans or African languages by preference), which in turn may be related to translation from Dutch to English.

The correlated errors present another dilemma in this study. Generally, the specification of correlated error terms for purposes of model fit improvement is not an acceptable practice. According to Aish and Jöreskog (1990), correlated error terms in measurement models are representative of systematic, rather than random, measurement error in item responses and may derive from characteristics unique to either the items or respondents. To illustrate, if these parameters reflect item characteristics, they may be representative of a small omitted factor, however, correlated errors may represent respondent characteristics that reflect bias such as yea-/nay saying, social desirability (Aish & Jöreskog, 1990), or a high degree of overlap in item content (Byrne, 2001). In the opinions of Bentler and Chou (1987) specification of a model that forces error parameters to be uncorrelated is rarely appropriate with "real" data. For this reason, correlated errors were allowed in this study.

The JII is a rather recently constructed measuring instrument and very few studies have critically reviewed its psychometric properties, particularly of the translated version in a South African context. Nevertheless, it is believed that the results of this study can serve as a standard for measuring job insecurity of government employees in South Africa.

Differences in the cognitive job insecurity scores were obtained for culture, but not for qualification, tenure and age as opposed to the research findings of Manski and Straub (2000), which demonstrated significant differences in the job insecurity scores of participants of different ages and with different qualifications. In this study it was found that the white participants experience higher levels of cognitive job insecurity than their black counterparts. This does not correspond with the findings of Manski and Straub (2000) and Elbert (2002), who found that job loss concern among the black participants, were higher than that of white participants. It was hypothesised that those least advantaged by Employment Equity legislation, i.e. white participants would experience higher levels of job insecurity than those who benefit from the new dispensation, i.e. black participants. This would particularly be the case in the context of this research, as it is noted that the white participants represent 19% of the total population, implying that Employment Equity is actively enforced within the organisation. These findings lend support to hypothesis 2, although hypotheses 3, 4, and 5, stating that significant differences exist between the job insecurity scores of participants with different qualifications, of different ages and with different levels of tenure, are rejected.

This study had several limitations. Firstly, was its exclusive reliance on self-report measures, which may lead to a problem commonly referred to as "method variance". A further limitation is the sample size and more specifically the distribution of cultural/racial groups. Stratified random sampling might ensure sufficient representation of the different groups, for example allowing focus on bias and equivalence of the JII for different ethnic groups.

RECOMMENDATIONS

Based on results obtained in this study, the use of the JII is recommended as a measuring instrument of preference to assess job insecurity in South African government organisations. However, given the results obtained in this sample, further refinement of the scale may be required, with specific attention to item 2, "There is only a small chance that I will become unemployed", which appeared to be problematic in this study.

Particular attention should be given to the job insecurity levels of white participants in government organisations. Holm and Hovland (1999) propose making use of career counsellors as a mechanism for assisting employees that experience job insecurity. Barker (1999) found that perceived fairness is a major concern for employees in terms of job insecurity and that job insecurity is affected by how fairly employees feel processes are managed. Hiltrop (1996) suggests that rather than using career paths and job security, new kinds of incentives need to be used. Kanter (1994) proposes switching incentives from careers, status and promotion to personal reputation, teamwork and challenging assignments. In this manner a new kind of job security can be created.

Although this study found the JII to be reliable and confirmed its two-factor structure, more research focussing on the reliability and validity of the JII in a variety of organisational settings in South Africa is required. Norms need to be developed for a variety of occupational groups, professions, organisations and industries.

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CHAPTER 4

ARTICLE 3

JOB INSECURITY AND WELLNESS OF EMPLOYEES IN A GOVERNMENT ORGANISATION

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ABSTRACT

The objective of this study was to investigate the relationship between job insecurity, affectivity, burnout, and work engagement of employees (N = 297) in a government organisation. A cross-sectional survey design was used. The Job Insecurity Inventory, Affectometer 2, Oldenburg Burnout Inventory, and Utrecht Work Engagement Scale were used as measuring instruments. The results showed that job insecurity and burnout were statistically significantly related. Job insecurity was inversely related to work engagement. Negative affectivity showed a significant relationship with job insecurity and burnout, as well as lower work engagement. Positive affectivity was associated with lower levels of cognitive job insecurity and burnout, as well as higher levels of engagement. Affectivity partially mediated the relationships between cognitive job insecurity and burnout as well as work engagement.

OPSOMMING

Die doelstelling van hierdie studie was om die verband tussen werksonsekerheid, affektiwiteit, uitbranding en werksbegeestering van werknemers (N = 297) in 'n staatsorganisasie te ondersoek. 'n Dwarsneeopname-ontwerp is gebruik. Die Werkonsekerheidsvraelys, Affectometer 2, die Oldenburg Uitbrandingsvraelys en die Utrecht Werksbegeesteringskaal is as meetinstrumente gebruik. Die resultate het aangetoon dat werkonsekerheid statisties beduidend verband gehou het met uitbranding. Werkonsekerheid het 'n omgekeerde verband met werksbegeestering getoon. Negatiewe affektiwiteit het 'n beduidende verband met werkonsekerheid, uitbranding en lae werksbegeestering getoon. Positiewe affektiwiteit was geassosieer met laer vlakke van kognitiewe werksonsekerheid en uitbranding asook laer vlakke van werksbegeestering. Affektiwiteit het die verband tussen kognitiewe werksonsekerheid en uitbranding, sowel as kognitiewe werksonsekerheid en werksbegeestering gemedieer.

South African companies are exposed now more than ever to the effects of the world economy, technological advancement and tough international competition. As noted by Martins (2000) employers 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. Maslach, Schaufeli and Leiter (2001) are of the opinion that the impact of the changing world of work is perhaps most evident in changes in the psychological contract. 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. Rothmann (2003) adds that the environment in which South African employees (as well as those elsewhere in the world) have to function demands more of them than ever before.

Besides being a requirement for a continuous income and adult socio-economic status, an individual's occupation is a source of socialisation; providing opportunities for personal growth and development, the positive experience of oneself in a core social role, and for partaking in societal networks beyond primary groups (Siegrist et al., 2004). According to Bridges (1995), the identities of most citizens of industrialised countries are defined in terms of their jobs. Through jobs, individuals are connected to a wider community and find structure and purpose. Bergh and Theron (2003) note that everyday substantiation of the importance of work in people's lives lay in the importance attached to it in personal introductions, enquiries into people's identities, who people are, what they do for a living and how they do it, also noting that besides providing for many human needs, work holds psychological, social, ethical, moral, religious, economic and political meaning for individuals. Given the variety of functions fulfilled by employment in advanced societies, employment continues to play an important role in the health and well-being of adults (Siegrist et al., 2004). The perception that the current job might be lost reduces well-being, as in our society, work constitutes the key to social participation and recognition (De Witte, 1999).

Unemployment is not the solitary negative consequence of an economic recession, since simultaneously many employees have experienced the threat of job loss, job transfers, early involuntary retirement, and part-time employment; in other words, job insecurity (OECD, 1997). Siegrist et al. (2004) indicate that changes in the nature of work resulting from

organisations' attempts to survive, have coincided with changes in the labour market with more females occupying the workforce and with an increase in part-time work and flexible work arrangements. According to De Witte (1997, 1999), growing emphasis on more flexible employment contracts may also intensify feelings of job insecurity.

Besides those employees anticipating potential job loss, job insecurity also relates to those who retained their positions after having undergone a redundancy or downsizing programme. Baruch and Hind (1999) explain that the term "survivor syndrome" has been created to refer to these persons, with it having been argued that "survivors" experience the adverse effects of change as profoundly as those who have left. Numerous negative effects of "survivor syndrome" have been covered in the literature including burnout, low morale, decreased commitment, reduced loyalty, inefficiency, reduced performance, resignation and cynicism (Baruch & Hind, 1999). Exploratory research undertaken by De Witte (1999) confirmed that job insecurity is as harmful for the well-being of individuals as unemployment itself.

The violation of the psychological contract between an employee and an organisation is likely to produce burnout and a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being (Maslach et al., 2001). As noted by Mak and Mueller (2001) previous research has pointed toward the significant role that cognitive appraisal plays in the stress-strain link, with some researchers (Parkes, 1994) arguing that negative affectivity may serve as a moderating factor, in other words those who exhibit negative affectivity are prone to react more adversely to perceived stress than those with low negative affectivity. As noted by Rothmann (2003), tracking employees' effectiveness in coping with demands of the new world of work and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness are crucial, hence the importance of this research, which investigates the relationship between job insecurity, burnout and engagement, as well as the role that affectivity plays in these relationships.

The management of this government organisation reports concern regarding the general well-being of the workforce, noting that they present with unusually high levels of absenteeism and turnover. The employees of this government organisation are reported to be to be generally insecure regarding their occupational futures, many not knowing how their desired

occupational futures fit in with their potential career paths within the organisation. As noted, tracking employees' functioning in areas that could affect employee well-being and consequent organisational effectiveness is essential, hence the importance of researching the relationship between job insecurity, affectivity, burnout and work engagement.

The objectives of this study were to investigate the relationship between job insecurity and wellness (affectivity, burnout, and work engagement) of employees in a government organisation, and to assess whether affectivity mediates the relationship between job insecurity and burnout, as well as between job insecurity and work engagement.

Job insecurity, burnout and work engagement

Burnout is a particular, multidimensional and chronic stress reaction which goes beyond the experience of mere exhaustion, being seen as the final step in a progression of unsuccessful attempts to cope with a variety of negative stress conditions (Rothmann, Jackson & Kruger, 2003). Maslach et al. (2001, p. 399) define burnout as a "conceptualisation of job burnout as a psychological syndrome in response to chronic interpersonal stressors on the job". Schaufeli and Enzmann (1998, p. 36) define the concept as "a persistent, negative, work-related state of mind in 'normal' individuals that is primarily characterised by exhaustion, accompanied by distress, a sense of reduced effectiveness, decreased motivation, and the development of dysfunctional attitudes and behaviours at work."

According to Maslach et al. (2001), the exhaustion component of job burnout relates to the basic individual stress aspect of burnout, referring to feelings of being overextended and depleted of one's emotional and physical resources. The cynicism component refers to negative, callous, or excessively detached responses to various aspects of the job. The reduced efficacy or accomplishment component is linked to the self-evaluation dimension of burnout, referring to feelings of incompetence and a lack of achievement and productivity at work.

From a theoretical point of view it could be argued that exhaustion and cynicism constitute the two key aspects of burnout, noting that exhaustion refers to the fact that the employee is incapable of performing because all energy has been drained and cynicism indicates that the

employee is no longer willing to perform, because of increased intolerance of any effort (Schaufeli, 2003). The reasons for this are threefold. Firstly, relatively low correlations of professional efficacy are observed with exhaustion and cynicism, whereas exhaustion and cynicism are correlated relatively strong. Secondly, it appears that cynicism develops in response to exhaustion, whereas professional efficacy seems to develop independently and in parallel. Lastly, professional efficacy is the weakest burnout dimension in terms of significant relationships with other variables (Schaufeli, 2003).

Burnout, in this research, is conceptualised based on the theoretical work of Cherniss (1980) and Hall (1976), who view burnout as a syndrome of work-related negative experiences, including feelings of exhaustion and disengagement from work. From this perspective, exhaustion is defined as the result of prolonged and intense physical, cognitive and affective strain, resulting from prolonged exposure to specific work stressors (Demerouti, Bakker, Nachreiner & Ebbinghaus, 2002). The disengagement aspect of burnout refers to emotions regarding the work task (e.g. uninteresting and no longer challenging), as well as to a devaluation and mechanical execution of one's work. Disengagement represents a wide-ranging and intensive reaction in terms of an emotional, cognitive and behavioural rejection of the job and it describes occupational disillusionment.

In terms of the antecedents of burnout, Schaufeli (2003) notes that a lot is known about variables that are related to burnout, but that relatively little is known regarding the causes and consequences of burnout. Schaufeli (2003) explains that from cross-sectional research it is known that burnout is particularly related to experienced qualitative and quantitative work overload, role problems (role ambiguity and role conflict), lack of social support (from colleagues and supervisors) and lacking self-regulatory job characteristics (feedback, autonomy, participation in decision-making). Westman, Etzion and Danon (2001), who researched job insecurity and crossover of burnout in married couples (98 couples), found a positive correlation between job insecurity and burnout, with regard to both males and females. These researchers concluded (p. 478) that, "Our findings corroborate the results of Dekker and Schaufeli (1995) and Landsbergis (1988) that the prolonged chronic exposure to job insecurity can lead to a wearing out of resources and a feeling of exhaustion".

In line with the increased focus of psychology on human strengths and optimal functioning, work engagement, although related to burnout, is viewed as the theoretical antithesis of burnout. Maslach and Leiter (1997) redefined burnout as an erosion of engagement with the job. However, Schaufeli and Bakker (2002) define engagement as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. Schaufeli, Salanova, Gonzáles-Romá and Bakker (2002) explain that vigour (opposite pole of exhaustion) is characterised by high energy levels, mental resilience when working, willingness to exert effort into one's work and to persist even in the face of adversity; dedication (the opposite pole of cynicism) is related to enthusiasm, inspiration, pride, challenge and a sense of significance; and absorption refers to a state where time passes quickly and where the individual has difficulty in detaching him/herself from work.

Schaufeli et al. (2001) describe eight characteristics of engaged employees being that they take initiative and actively give direction to their lives, they generate their own positive feedback as encouragement, they are also engaged outside their worklife, they have values and norms consistent with those of their employers, they too become fatigued, but experience a positive fatigue (tired but satisfied), they too experienced burnout or have potential to become burnt out, but remedy this themselves, they too on occasion want to do something else besides work and lastly they do not suffer from enslavement to work.

A shift has taken place in the nature of employment, which is largely related to organisations worldwide having to engage in downsizing and restructuring efforts in an attempt to remain competitive and survive in harsh economic conditions. Such efforts on the parts of organisations are frequently accompanied by the redundancy of large numbers of staff and often leads to a mentality that favours profitability over the welfare of employees (Turner, Barling & Zacharatos, 2002). According to Hellgren, Sverke and Isaksson (1999), working life has been subject to dramatic change over the past decades and numerous organisations have engaged in large-scale workforce reductions in order to cut costs and improve organisational effectiveness and competitive ability. Concepts such as Baruch and Hind's (1999) "new deal" in employment, Kluytmans and Ott's (1999) "life-time employability" as opposed to "life-time employment", Hall's (1996) "protean career", Arthur and Rousseau's (1996) "boundaryless career", and Bridges' (1995) "dejobbing", are descendants to the fundamental changes that have and are still taking place in the labour market.

Jacobson (1991) believes that job insecurity has the potential of becoming more stressful than job loss in that the coping process may be inhibited by the uncertainty of the event, whereas in the case of job-loss, the individual is required to come to terms with the loss and to face the outcomes. Jacobson (1991) is of the opinion that a preliminary step toward a better understanding of job insecurity is the understanding that there is no one-to-one correspondence between job insecurity and other employment-related crises, especially with the job-loss experience. Nevertheless, job insecurity is the forerunner of the process of job-loss in some respects. Hartley, Jacobson, Klandermans and Van Vuuren (1991) have built on, and modified earlier writers' representations of the stages of job-loss. Their representation of the sequence of the job-loss process, plots job insecurity as the first of three stages (anticipatory phase, termination phase and unemployment phase); and is associated with planned, but unannounced redundancies.

According to De Witte (1997, 1999), the subject of job insecurity relates to people in their work context who fear they may lose their jobs and become unemployed. Greenhalgh and Rosenblatt (1984, p. 438) define job insecurity as a "sense of powerlessness to maintain desired continuity in a threatened job situation". Job insecurity has been defined according to a global viewpoint, signifying the threat of job loss or job discontinuity (Caplan, Cobb, French, van Harrison & Pinneau, 1980; De Witte, 1999). Generally, this definition has been applied in the context of organisational crisis or change, in which job insecurity is considered as a first phase of the process of job loss (Ferrie, 1997; Joelson & Wahlquist, 1987). Researchers, who have adopted a multidimensional definition of job insecurity, argue that job insecurity refers not only to the degree of uncertainty, but also to the continuity of certain dimensions, such as opportunities for promotion (Ashford, Lee & Bobko, 1989; Borg & Elizur, 1992; Rosenblatt & Ruvio, 1996). Hellgren, Sverke and Isaksson (1999) indicate that the terms quantitative and qualitative job insecurity are used to distinguish between these two dimensions of job insecurity. Quantitative job insecurity refers to concern for the future existence of the present job, whereas qualitative job insecurity refers to perceived threats of impaired quality in the employment relationship, for example deterioration of working conditions, lack of career opportunities, and a decrease in salary.

Job insecurity consistently presents itself as a stressor (De Witte, 1999; Van Vuuren (1990). With regard to consequences, a distinction is made between stress reactions and coping behaviour. Stress reactions refer to the consequences of the stressor for psychological well-being, while coping refers to the way in which the person deals with stress (De Witte, 1997). Van Vuuren (1990), who views job insecurity as an overall concern, emphasises that job insecurity has the following components: Firstly, it is a subjective experience or perception, as different employees might perceive the same situation differently. Secondly, job insecurity implies uncertainty regarding the future and finally, doubts about the continuation of the job as such, are central to job insecurity. De Witte (2000) conceptualises job insecurity from a global, two-dimensional perspective, consisting of affective and cognitive job insecurity. Cognitive job insecurity relates to the perceived likelihood of job loss, whereas affective job insecurity relates to fear of job loss.

In terms of individual level consequences, job insecurity is consistently associated with a reduced level of job satisfaction (Ashford, Lee & Bobko; 1989; Davy, Kinicki & Scheck, 1997), reduced organisational commitment (Apisakkul, 2000; Ashford et al., 1989), reduced work-related performance at both social and technical levels (De Witte, 2000), lowered trust in management (Ashford et al., 1989), psychosomatic complaints, physiological variables and various physical strains (De Witte, 2000), psychological distress, anxiety, and depression (Roskies & Louis-Guerin, 1990), decreased employee mental health and family well-being (Larson, Wilson & Beley, 1994), decreased workplace safety motivation and compliance (Probst & Brubaker, 2001), reduced work effort (Brockner, Grover, Reed & De Witt, 1992), work withdrawal behaviour (Probst, 1999), and increased intention to leave and resistance to change (Greenhalgh & Rosenblatt, 1984). Hellgren et al. (1999) found that quantitative job insecurity was related to stress symptoms such as ill-health, sleeping problems and distress and that these problems also tend to transfer to non-work settings. Qualitative job insecurity related primarily to attitudinal outcomes, for example job dissatisfaction and propensity to leave.

Regarding organisational level consequences, Greenhalgh and Rosenblatt (1984) found that the impact of job insecurity on individual employees could erode the effectiveness of the organisation. A downward spiral is created, whereby productivity decreases in such a manner that the competitive strength of the company is undermined. The risk of further redundancies

is increased, which in turn heightens feelings of job insecurity. The impact of job insecurity results in negative consequences for the organisation. Furthermore, Greenhalgh and Sutton (1991) found that job insecurity is a change inhibitor, because fear for the future is accompanied by resistance to change and also that job insecurity holds negative consequences for industrial relations. Greenhalgh and Sutton (1991) report that apart from the human resource implications of job insecurity, companies need to be wary of high levels of job insecurity, as damaging messages about the organisation may leak out. Cooper (1999) is of the opinion that organisations may suffer financially from heightened employee perceptions of job insecurity, due to the associated cost implications of increased absenteeism and sickness, which results from lowered employee well-being.

Probst (2002) explains that from an affective events theory perspective, work environment features and events are subject to cognitive appraisal of whether and to what extent such work events and features will aid or obstruct the attainment of goals. If such goal obstruction is identified and there is a perceived imbalance between the environmental demands and the employee's ability to cope with those demands, based on aspects such as dispositions and available resources, stress results. This strain may become evident at a physiological, behavioural or psychological level, or any combination of these. Probst (2002) explains that for this reason, when stress exists, work attitudes and affective reactions are expected to be negative.

From the person-environment fit perspective, psychological adjustment is viewed as the congruence between the employee and workplace characteristics. According to Probst (2002), stress value depends on the perceived imbalance between an individual's perceptions of the demands made by the environment and the individual's perceived ability and motivation to cope with those demands. Based on this perspective, Probst (2002) is of the opinion that job insecurity is perceived by an employee as a change or precursor to change demanding adaptation, which may be difficult to meet. Failure to cope with potential future unemployment or loss of job features may have significant consequences. Bergh and Theron (2003) indicate that symptoms such as stress, role conflict, role ambivalence and burnout may be indicative of incongruent fit in the workplace.

Based on the above perspectives of work stress, as well as a review of previous research, it is perceived that increased job insecurity, as a stressor, will be associated with increased levels of burnout and decreased levels of work engagement. Burnout is viewed as being the result of prolonged and intense physical, cognitive and affective strain (Demerouti et al., 2002). One would only expect a person to develop burnout after experiencing particularly severe job insecurity for a prolonged period of time, something which is not applicable to this particular study population. A practically significant relationship between job insecurity and burnout may however be obtained when using a sample that has been experiencing a high level of job insecurity for a substantial amount of time, for example employees working in an organisation that has been working toward downsizing for some time. Within the context of this research sample, it is however expected that job insecurity will show an association with reduced levels of work engagement.

Personality dispositions such as positive and negative affectivity, have been found to play a role in the stressor-strain relationship, and are therefore expected to influence the relationships between job insecurity and work engagement. Individuals high on the trait negative affectivity and low on the trait positive affectivity respectively are expected to experience the outcomes (reduced work engagement) of job insecurity as being more severe than those measuring low on negative affectivity and high on positive affectivity.

Affectivity

Positive affect and negative affect, which are aspects of employees' happiness, may influence the effects of job insecurity on burnout and work engagement of employees. Affect can be assessed as a short-term state or long-term trait. Watson (2002) explains that viewed as a long-term trait, these constructs are typically referred to as negative and positive "affectivity", as opposed to "affect", which refers to a short-term, fleeting state of emotions.

According to Meeks and Murrell (2001), negative affectivity can be defined as an intra psychic determinant, which controls an individual's view of the world, where an individual will interpret the world and see him/herself in unhappy and pessimistic terms. Mak and Mueller (2001) conceptualise negative affectivity as reflecting neuroticism, a low level of self-esteem and frequent negative emotionality, noting that individuals high in trait negative

affectivity are prone to experiencing and reporting high levels of subjective stress and strain outcomes. Individuals high on negative affectivity tend to be easily distressed, agitated, upset, pessimistic, and dissatisfied (Chiu & Kosinski, 1997). Such persons view themselves, as well as world in negative terms and are more introspective, also dwelling on their past failures and shortcomings.

Positive affectivity is characterised by positive feelings experienced across situations, by sociability, social dominance, energy, venturesomeness and ambition (Meeks & Murrell, 2001). Positive affectivity directs organisms toward situations and experiences with the potential of yielding pleasure and reward and the procurement of resources that are essential to the survival of the individual (Jackson & Rothmann, 2004). Individuals, who measure high on positive affectivity experience frequent and intense episodes of pleasant, pleasurable mood and are cheerful, enthusiastic, energetic, confident, and alert in general (Watson, 2002). Conversely, those measuring low on positive affectivity report reduced levels of happiness, excitement, vigour and confidence (Watson, 2002).

Abraham (1998) notes that viewed as a stable trait, both in the temporal and cross-situational sense, negative affectivity may influence stress-outcome relationships. Individuals who measure high on negative affectivity may develop an inflexible mental framework, with this inflexible person being more likely to come to the conclusion that failure to match standards to rules stems from irregularities in rules, which must then be rejected. Over time, as the frequency of rejection increases, the rigid person experiences a loss of confidence, respect and trust in the organisation and increasing tension, which could lead to emotional exhaustion.

In their research, Roskies et al. (1993) investigated the relationship between personality traits, job insecurity and employee well-being. These researchers found that individuals high on negative affectivity do not always perceive the outcomes of job insecurity as more severe than those measuring low on this trait, but may report lower well-being as a result of their elevated initial values. Furthermore, Roskies et al. (1993) found that mood dispositions hold more predictive value with regard to stress than job insecurity perceptions. Hellgren, Sverke and Isaksson (1999) found that taking mood dispositions into account improves the prediction of the outcomes of job insecurity.

Based on a review of research findings, Watson (2002) shows that positive affect levels are not highly constrained by objective life conditions and that major life events exert a significant influence on well-being only in the short-term, where after people adapt to them and gradually move back to their pre-existing set point. However, he concluded that although positive affect scores are stable over time, many individuals displayed substantial change. Headey and Wearing (1991) reported that 31,1% of their participants had positive affect scores which shifted by more than a standard deviation over a six-year period.

Based on the above-mentioned research problem, the following hypotheses are proposed:

H1: A significant relationship exists between job insecurity and burnout.

H2: A significant relationship exists between job insecurity and work engagement.

H3: Affectivity partially mediates the relationship between job insecurity and burnout.

H4: Affectivity partially mediates the relationship between job insecurity and work engagement.

METHOD

Research design

A cross-sectional survey design was utilised to describe the information on the population collected at that time. This design (Shaughnessy & Zechmeister, 1997) can also be used to evaluate interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is also ideal to describe and predict functions associated with correlative research.

Participants

The entire population of 500 employees working in the government organisation in Gauteng was targeted for this research, although a response rate of only 297 participants was obtained. The population included workers from all levels, ranging from semi-skilled to professionals. The lowest level employees have a level of literacy adequate to allow for valid completion of questionnaires. The biographical characteristics of the study population are detailed in Table 1.

Table 1

Characteristics of the Participants (N = 297)

Item	Category	Frequency	Percentage
Cultural group	Black (1)	185	62,3
	White (2)	56	18,9
	Other (3)	34	11,4
	Total	275	92,6
Gender	Male (1)	145	48,8
	Female (2)	142	47,5
	Total	286	96,3
Age	24 years and younger (1)	27	9,1
	25 – 35 years (2)	105	35,4
	36 – 45 years (3)	69	23,2
	46 – 55 years (4)	47	15,8
	56 years and older (5)	17	5,7
	Total	265	89,2
Qualification	Grade 10 to 12 (1)	139	46,8
	Diploma (2)	77	25,9
	Degree (3)	55	18,5
	Post-graduate Degree (4)	24	8,1
	Total	295	99,3
Tenure	Less than 1 year (1)	47	15,8
	2 – 5 years (2)	74	24,9
	6 – 10 years (3)	68	22,9
	11 – 20 years (4)	59	19,9
	Longer than 20 years (5)	37	12,5
	Total	285	96,0

Sixty percent of the participants were black. The majority of participants fell in the 25 to 35 years and 36 to 45 years age groups and 47% had a Grade 10 to 12 level of education. The majority of population under study worked for the organisation between 2 to 5 (25%) and 6 to 10 (23%) years.

Measuring instruments

The Job Insecurity Inventory (JII) (De Witte, 2000), the Affectometer 2 (AFM 2) (Kammann & Flett, 1983), the Oldenburg Burnout Inventory (OLBI) (Demerouti, Bakker, Vardakou & Kantas, 2003) and the Utrecht Work Engagement Scale (UWES) (Schaufeli, Salanova, Gonzáles-Romá & Bakker, 2002) were used in this study. Biographical information was also gathered regarding race, education, gender and tenure.

The 11 items of the *Job Insecurity Inventory (JII)* (De Witte, 2000), which was used as a measure of job insecurity, summarise both the cognitive and affective dimensions of job insecurity and are arranged along a five-point scale, with one being "strongly disagree" and five representing strong agreement. An example of a question relating to cognitive job insecurity would be, "I think that I will be able to continue working here", whereas an example of a question relating to affective job insecurity would be, "I fear that I might lose my job". The items of the JII, measuring global job insecurity are reported to have a Cronbach alpha coefficient of 0,92 and both scales (cognitive and affective) were shown to be highly reliable, with the six items measuring cognitive job insecurity, displaying a Cronbach alpha coefficient of 0,90; and the five items of the affective job insecurity having a Cronbach alpha coefficient of 0,85 (De Witte, 2000). According to De Witte (2000) the content of these two scales do not overlap, but nevertheless have a high underlying correlation ($r = 0,76$). In terms of South African research, Heymans (2002) obtained an alpha coefficient of 0,81 for the JII and Elbert (2002) obtained an alpha coefficient of 0,84. Bosman, Buitendach and Rothmann (in press) obtained a alpha coefficient of 0,70 for the cognitive scale of the JII and 0,72 for the affective scale of the JII and note that structural equation modelling results indicated that a good fit was obtained for both the one-factor JII model and the two-factor JII model, although the fit of the two-factor model was marginally

better than that of the one-factor model. Item 2 of the scale however proved to be problematic, not loading on either scale.

The *Affectometer 2 (AFM 2)* (Kammann & Flett, 1983) was used to measure affectivity. The AFM 2 is a 20-item self-report scale measuring the balance of positive and negative feelings in recent experience. Questions are rated on a scale ranging from 1 (*not at all*) to 5 (*all the time*). Examples pertaining to the negative affectivity scale would include, "I wish I could change some part of my life" and "I feel like a failure", whereas items from the positive affectivity scale would include "My life is on the right track" and "I can handle any problems that come up". Kammann and Flett (1983) obtained Cronbach alpha coefficients of 0,95 for the scale, as well as indications of validity. The Affectometer 1 shows correlations of 0,74 with the General Well-being Schedule, -0,62 with an ad hoc list of somatic complaints, which indicate acceptable validity. Using a simple principal component analysis on the 10 items of the positive affectivity scale, Jackson and Rothmann (2004) obtained a one-factor solution and a Cronbach's alpha of 0,80.

The *Oldenburg Burnout Inventory (OLBI)* (Demerouti et al., 2003) was used as a measure of burnout. The OLBI includes both core dimensions of burnout, known as exhaustion and disengagement (cynicism/depersonalisation). The OLBI consists of 16 items, which are measured on a four-point Likert-type scale, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Eight items are phrased positively, for example "I always find new and interesting aspects in my work" and the remaining eight are phrased negatively, for example "There are days when I feel tired before I arrive at work". The exhaustion subscale, comprises of 8 items measuring affective, physical and cognitive aspects of burnout. The disengagement subscale, comprises of 8 items that relate to distancing one from one's work. An example of an item from the exhaustion scale, would be, "During my work, I often feel emotionally drained", whereas an example of an item from the disengagement scale would be, "I find my work to be a positive challenge". In a study conducted by Demerouti et al. (2002) investigating the convergent validity of the MBI and OLBI, using multitrait-multimethod analyses, it was found that the latent variables representing both instruments are highly correlated and that all exhaustion and distancing/disengagement items of both instruments load on a single factor. Demerouti et al. (2002) obtained Cronbach alpha coefficients of 0,85 (exhaustion) and 0,84

(disengagement) respectively. Bosman et al. (2004) found that rather than consisting of an exhaustion and disengagement scale, the OLBI presented with a two-factor structure consisting of an engagement (all positively phrased items) and an exhaustion/disengagement (the remaining negative phrased exhaustion and disengagement items) (r = 0,64). The exhaustion/disengagement scale presented with a Cronbach's alpha of 0,66 and the engagement scale presented a Cronbach's alpha of 0,71. Item 13, which appears to be constructed ambiguously, proved to be problematic and was consequent removed from the scale.

The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) was used to measure work engagement. This 17-item questionnaire is arranged along a seven-point frequency scale, ranging from 0 (*never*) to 6 (*daily*). The UWES has three scales, namely vigour (6 items), dedication (5 items), and absorption (6 items). Examples of items relating to the three dimensions are the following: "I am bursting with energy in my work" (vigour); "I find my work full of meaning and purpose" (dedication); and "When I am working, I forget everything around me" (absorption). High levels of vigour, dedication and engagement point to an individual who experiences a high level of work engagement. Regarding internal consistency, Cronbach coefficients have been determined between 0,68 and 0, 91 (Schaufeli et al., 2002). Storm (2002) obtained alpha coefficients of 0,78 (vigour), 0,89 (dedication) and 0,78 (absorption) for the UWES in a sample of 2396 members of the South African Police Services. Bosman et al (2004) found a one-factor structure for the UWES, with a Cronbach's alpha of 0,94.

Statistical analysis

The statistical analysis is carried out with the SPSS programme (SPSS Inc, 2003), making use of descriptive statistics, Cronbach's alpha and inter-item correlation coefficients, Pearson product moment correlation coefficients and multiple regression analyses.

Cronbach alpha coefficients (α) and inter-item correlation coefficients was used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the

data. The significance of differences in affectivity scores between biographic groups was established by means of MANOVA, ANOVA and Tukey's HSD tests. Pearson product-moment correlation coefficients were used to specify the relationships between variables. The level of statistical significance is set at $p < 0,01$. Steyn (2002) criticises the sole uses of statistical significance testing and recommends that effect sizes be established to determine the importance of a statistically significant relationship. While the reporting of effect sizes are encouraged by the American Psychological Association (APA) in their Publication Manual (APA, 1994), most of these measures are seldom found in published reports (Kirk, 1996; Steyn, 2002). Therefore, effect sizes will be computed to assess the practical significance of relationships in this study. A cut-off point of 0,30, which represents a medium effect (Cohen, 1988; Steyn, 2002), is set for the practical significance of correlation coefficients.

Regression analyses were carried out to determine the percentage variance in the dependent variable that is predicted by the independent variables. A correlation can be better understood by determining R^2 (Cohen, 1988). The square of the correlation coefficient, indicates the proportion of variance in any two variables, which is predicted by the variance in the other.

RESULTS

Construct validity of AFM 2

A simple principal components analysis was conducted on the 20 items of the AFM 2 on the total sample of employees in a government organisation. Analysis of eigenvalues (larger than 1) and scree plot indicated that two factors could be extracted. Next, because an oblique rotation showed that the factors were not strongly related, principal factor analysis with a Varimax rotation was used.

Table 2

Rotated Component Matrix of the 20-item AFM 2 for Employees in a Government Organisation

	Component	
	1	2
1.My life is on the right track	-0,05	0,58
2.I wish I could change some part of my life	0,45	-0,15
3.My future looks good	-0,14	0,58
4.I feel as though the best years of my life are over	0,52	-0,26
5.I like myself	-0,37	0,44
6.I feel there must be something wrong with me	0,69	-0,17
7.I can handle any problems that come up	-0,21	0,51
8.I feel like a failure	0,66	-0,30
9.I feel loved and trusted	-0,11	0,61
10.I seem to be left alone when I don't want to be	0,69	-0,11
11.I feel close to people around me	-0,07	0,58
12.I have lost interest in other people and don't care about them	0,68	-0,11
13.I feel I can do whatever I want to	0,08	0,44
14.My life feels stuck in a rut	0,62	-0,29
15.I have energy to spare	-0,04	0,63
16.I can't be bothered doing anything	0,45	0,26
17.I smile and laugh a lot	-0,20	0,53
18.Nothing seems very much fun anymore	0,56	-0,07
19.I thing clearly and creatively	-0,21	0,59
20.My thoughts go around in circles	0,51	0,04

Inspection of Table 2 indicates that items 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20 load on the first factor, which can be labelled "negative affectivity", comprising of feelings of low self-esteem and frequent negative emotionality. Items 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19 load on the second factor, which is representative of "positive affectivity", comprising of feelings of high self-esteem, confidence and enthusiasm.

Descriptive statistics, Cronbach alpha coefficients and the inter-item correlation coefficients of the JII, AFM 2, OLBI and UWES for employees (N = 297) working in a government organisation are reported in Table 3.

Table 3

Descriptive Statistics, Cronbach Alpha Coefficients and Inter-Item Correlation Coefficients of the Measuring Instruments

Test and subscales	*Mean*	*SD*	Skewness	Kurtosis	Inter-item *r*	α
Cognitive job insecurity	12,82	0,79	0,10	-0,33	0,32	0,70
Affective job insecurity	13,97	0,82	0,07	0,22	0,34	0,72
OLBI Exhaustion/disengagement	19,67	0,50	0,08	0,58	0,28	0,66
OLBI Engagement	15,87	0,56	0,26	0,23	0,24	0,71
UWES	65,23	23,39	-0,28	-0,53	0,47	0,94
AFM 2 Negative affectivity	26,23	0,79	0,14	-0,18	0,29	0,80
AFM 2 Positive affectivity	35,87	0,69	-0,05	0,11	0,25	0,77

Table 3 shows that acceptable Cronbach alpha coefficients were obtained on all the scales, with the exception of the OLBI Exhaustion/Disengagement subscale, which fell marginally below the 0,70 cut-off point (see Nunnally & Bernstein, 1994). All of the inter-item correlation coefficients were acceptable (Clark & Watson, 1995). Scores on all the dimensions seem to be distributed normally (skewness and kurtosis were smaller than one),

No comparable South African norms for the cognitive job insecurity scale (with item 2 excluded) could be found in the literature. Regarding affective job insecurity, compared to the categorisation of job insecurity scores in the research of Buitendach and Rothmann (in press), the mean score of 13,97 is considered to fall within the average range (middle third). No comparable South African norms exist for the OLBI and norms for the UWES are based on the vigour, dedication and absorption subscales, which were not used in the study. No South African norms could be found for the AFM 2.

Regarding differences between biographical groups, Bosman et al. (in press) found that white participants presented with higher levels of cognitive job insecurity compared to their black counterparts. In terms of the OLBI, that the white participants presented with lower levels of engagement compared to the black participants and shorter tenure was associated with increased engagement. Regarding the UWES, participants with post-graduate degrees displayed a higher level of engagement in comparison to participants with Grade 10 to 12 qualifications and participants with degrees.

Next, MANOVA and ANOVA analyses followed to determine the relationship between scores the AFM 2 and various demographic characteristics, such as culture, age, qualification and tenure, the results of which are reported in Table 4.

Table 4

MANOVA – Differences in Affectivity of Demographic Groups

Variable	Value	F	Df	Den Df	*P*
Culture	0,96	1,97	4	432	0,09
Age	0,97	0,75	8	410	0,64
Qualification	0,94	2,28	6	464	0,04
Tenure	0,89	3,30	8	444	0,00*

* Statistically significant difference: $p < 0,01$

In an analysis of Wilk's Lambda values ($p < 0,01$), statistically significant differences were obtained for tenure, but not for culture, age and qualification. The relationship between affectivity was further analysed to determine practical significance using ANOVA, followed by Tukey HSD tests.

The ANOVA of differences in affectivity of the participants with different levels of tenure are reported in Table 5.

Table 5

Differences in Affectivity of Participants with Different Levels of Tenure

	Less than 1 year	2 – 5 years	6 – 10 years	11 – 20 years	Longer than 20 years	p	Root MSE
Positive affectivity	3,74[b]	3,70[b]	3,58	3,30[a]	3,29[a]	0,00*	0,71
Negative affectivity	2,19[a]	2,61[b]	2,66[b]	2,61[b]	2,85[c]	0,01	0,79

* Statistically significant difference: $p < 0,01$
a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,5$) or c (large effect, $d \geq 0,8$) are indicated

Table 5 demonstrates that statistically significant differences were obtained between the positive and negative affectivity scores of persons with different levels of tenure. Practically significant differences of medium effect were obtained between the positive affectivity

scores of employees working in the organisation for 2 to 5 years and those working in the organisation for 11 to 20 years, as well as those working in the organisation for longer than 20 years. Similarly practically significant differences of medium effect were obtained between the positive affectivity scores of employees working in the organisation for less than one year and those working in the organisation for 11 to 20 years, as well as those working in the organisation for longer than 20 years. Participants working in the organisation for less than one year and for 2 to 5 years, presented higher positive affectivity scores than those who worked in the organisation for 11 to 20 years and longer.

Regarding negative affectivity, it was established that participants working in the organisation for one year of less experienced lower levels of negative affectivity as compared to participants working in the organisation for 2 to 5 years (medium effect), 6 to 10 years (medium effect), 11 to 20 years (medium effect) and longer than 20 years (large effect).

The correlation coefficients between the JII, AFM 2, OLBI and UWES for employees working in a government organisation are reported in Table 6.

Table 6

Correlation Coefficients between the JII, AFM 2, OLBI and UWES

	1	2	3	4	5	6
1. Cognitive job insecurity	-	-	-	-	-	-
2. Affective job insecurity	0,65*††	-	-	-	-	-
3. Engagement (OLBI)	0,48*†	0,36*†	-	-	-	-
4. Exhaustion/disengagement	0,22*	0,22*	0,22*	-	-	-
5. Engagement (UWES)	-0,43*†	-0,30*†	-0,55*††	-0,48*†	-	-
6. Negative affectivity	0,38*†	0,32*†	0,43*†	0,23*	-0,43*†	-
7. Positive affectivity	-0,37*†	-0,26*	-0,40*†	-0,28*	0,51*††	-0,45*†

* Statistically significant $p \leq 0,01$
† Correlation is practically significant $r \geq 0,30$ (medium effect)
†† Correlation is practically significant $r \geq 0,50$ (large effect)

Table 6 shows practically significant negative correlation coefficients of medium effect between the OLBI Exhaustion/Disengagement scale and the UWES engagement scale. A

practically significant negative correlation of large effect was obtained between engagement as measured by the OLBI and engagement as measured by the UWES. For the purpose of interpretation, it must be noted that a high score on the engagement scale of the OLBI suggests low engagement, with a low score indicating increased work engagement. In other words, an increased level of work engagement on the UWES is associated with an increased level of work engagement as measured by the OLBI.

Cognitive job insecurity showed a practically significant positive correlation of medium effect with the OLBI Engagement scale, implying that increased levels of cognitive job insecurity are associated with lower levels of engagement as measured by the OLBI (considering that a lower score indicates higher levels of engagement). In a similar vein, cognitive job insecurity demonstrated a practically significant negative correlation of medium effect with engagement as measured by the UWES, suggesting that higher levels of cognitive job insecurity are associated with lower levels of engagement. Affective job insecurity demonstrated a practically significant correlation of medium effect with engagement as measured by the OLBI, suggesting that higher levels of affective job insecurity are associated with lower levels engagement as measured by the OLBI. No practically significant correlations were obtained between the job insecurity subscales and the exhaustion/disengagement scales of the OLBI.

As expected, a negative correlation of medium effect was obtained between negative and positive affectivity. Negative affectivity demonstrated a positive correlation of medium effect with engagement as measured by the OLBI, suggesting that negative affectivity is associated with lower levels of engagement. Practically significant correlations of medium effect were obtained between negative affectivity and both job insecurity scales, suggesting that higher levels affective and cognitive job insecurity are associated with higher levels of negative affectivity. A negative correlation of medium effect was obtained negative affectivity and the UWES, also indicating that increased levels of negative affectivity are associated with decreased levels of engagement. Positive affectivity demonstrated a negative correlation of medium effect with engagement as measured by the OLBI, suggesting that increased levels of positive affectivity are associated with increased levels of engagement, a relationship also confirmed by the positive correlation of large effect obtained between positive affectivity and the UWES.

Next, a series of multiple regression analyses were performed to test whether job insecurity (as measured by the JII) predicted exhaustion/disengagement (as measured by the OLBI), engagement (as measured by the OLBI), as well as engagement (as measured by the UWES), and to test whether affectivity (as measured by the AFM 2) mediates the relationship between job insecurity and the dependent variables. Baron and Kenny (1986) recommend three steps in order to test for mediation. According to these authors, beta coefficients of different regression equations must be compared. Firstly, the mediator should be predicted by the independent variable. Secondly, the dependent variable should be predicted by the mediator and the independent variable and lastly, the dependent variable should be regressed on the independent variable, controlling for the mediator. If all steps prove significant, perfect mediation holds when, controlling for the mediator, the independent variable does not predict the dependent variable. Regression analyses with cognitive and affective job insecurity as independent variables (not reported here) showed that cognitive job insecurity emerged as the only statistically significant predictor when both were entered into the analyses. To prevent multicollinearity, it was decided to use only cognitive job insecurity (and not affective job insecurity) in the analyses.

The possible mediating role of affectivity in the relationship between job insecurity and exhaustion/disengagement was tested (Refer to Table 7). Firstly, regression analyses with cognitive job insecurity as dependent variable and positive and negative affectivity respectively as independent variables (not shown in Table 7) showed statistically significant F-values (positive affectivity: $F = 22{,}91$, $p < 0{,}0001$; Negative affectivity: $F = 34{,}83$, $p < 0{,}0001$). These results lend support to the first criterion set by Baron and Kenny (1986). Secondly, a regression analysis with cognitive job insecurity as independent variable and exhaustion/disengagement as dependent variable resulted in a statistically significant F-value ($F = 13{,}25$, $p < 0{,}0001$). Regression analyses with exhaustion/disengagement as dependent variable and positive and negative affectivity as predictors, also showed statistically significant results (Positive affectivity: $F = 15{,}85$, $p < 0{,}0001$; Negative affectivity: $F = 14{,}34$, $p < 0{,}0001$). These results provide support for the second criterion of Baron and Kenny (1986) and lastly, in order to test adherence to the third criterion, exhaustion/ disengagement was regressed on cognitive job insecurity, controlling for the affectivity, the results of which are provided in Table 7.

Table 7

Regression Analysis – Cognitive Job Insecurity and Positive and Negative Affect: Exhaustion/Disengagement.

ANALYSIS OF VARIANCE				
Model 1: Cognitive job insecurity				
R: 0,23	Source of variation	*df*	Sum of	Mean
R^2: 0,05			squares	Square
Adjusted R^2: 0,05	Regression	1	3,38	3,38
Standard Error: 0,50	Residual	239	60,88	0,26
	$F = 13,25$ $p = 0,000$			
Model 2: Cognitive job insecurity and positive affect				
Cognitive job insecurity	Source of variation	*df*	Sum of	Mean
Positive affect			squares	Square
R: 0,30	Regression	2	5,85	2,93
R^2: 0,09	Residual	238	58,40	0,25
Adjusted R^2: 0,08	$F = 11,93$ $p = 0,000$			
Model 3: Cognitive job insecurity, positive affect and negative affect				
Cognitive job insecurity	Source of variation	*df*	Sum of	Mean
Positive affect			squares	Square
Negative affect	Regression	3	6,51	2,17
R: 0,32	Residual	237	57,75	0,24
R^2: 0,08	$F = 8,90$ $p = 0,000$			
Adjusted R^2: 0,09				

VARIABLES IN THE EQUATION					
INDEPENDENT VARIABLES	B	SEB	Beta	*t*	*p*
Cognitive job insecurity	0,16	0,05	0,23	3,64	0,000*
Cognitive job insecurity	0,12	0,05	0,17	2,61	0,010*
Positive affectivity	0,14	0,05	0,21	3,18	0,002*
Cognitive job insecurity	0,10	0,05	0,14	2,07	0,040*
Positive affectivity	0,12	0,05	0,17	2,47	0,014*
Negative affectivity	0,07	0,04	0,11	1,64	0,103

* Statistically significant difference: $p < 0,05$

From Table 7, it is evident that although the regression coefficient of cognitive job insecurity remains statistically significant upon inclusion of positive affectivity and negative affectivity,

the standardised regression coefficient (beta) of cognitive job insecurity decreases when controlling for positive affectivity. Negative affectivity (which was added in Model 3 in Table 7) did not contribute statistically significantly (in addition to cognitive job insecurity and positive affectivity) to explain the variance in exhaustion/disengagement ($\Delta F = 2{,}67$, $p = 0{,}10$; $\Delta R^2 = 0{,}01$). Furthermore, based upon Baron and Kenny's (1986) third criterion, which states that perfect mediation would be applicable when the independent variable does not predict the dependent variable when controlling for the mediator, perfect mediation does not apply in this case. However, given the reduction in the standardised regression coefficient (beta) of cognitive job insecurity upon inclusion of positive affectivity, it does appear as though proof does exist for a partially mediating effect of positive affectivity on the relationship between job insecurity and burnout (i.e. exhaustion/disengagement). Cognitive job insecurity predicted 5% of the variance in exhaustion/disengagement, which increases to 8% when combined with positive affectivity.

Next, the possible mediating role of affectivity in the relationship between job insecurity and work engagement (UWES) was investigated (Refer to Table 8). Firstly, support for the first criterion set by Baron and Kenny (1986) was already shown when the regression analyses with cognitive job insecurity as dependent variable and positive and negative affectivity respectively as independent variables conducted. Secondly, a regression analysis with cognitive job insecurity as independent variable and engagement (UWES) as dependent variable resulted in a statistically significant F-value ($F = 27{,}74$, $p < 0{,}0001$). Regression analyses with engagement (UWES) as dependent variable and positive and negative affectivity as predictors, also showed statistically significant results (Positive affectivity: $F = 68{,}64$, $p < 0{,}0001$; Negative affectivity: $F = 64{,}52$, $p < 0{,}0001$). These results provide support for the second criterion of Baron and Kenny (1986) and lastly, in order to test adherence to the third criterion, engagement (as measured by the UWES) was regressed on cognitive job insecurity, controlling for the affectivity, the results of which are provided in Table 8.

Table 8

Regression Analysis – Cognitive Job Insecurity and Positive and Negative Affect: UWES

ANALYSIS OF VARIANCE				
Model 1: Cognitive job insecurity				
R: 0,33	Source of variation	*Df*	Sum of	Mean
R^2: 0,11			squares	Square
Adjusted R^2: 0,11	Regression	1	51,64	51,64
	Residual	228	424,54	1,86
	$F = 27,74$ $p = 0,000$			
Model 2: Cognitive job insecurity and positive affect				
Cognitive job insecurity	Source of variation	*Df*	Sum of	Mean
Positive affect			squares	Square
R: 0,52	Regression	2	126,63	63,32
R^2: 0,27	Residual	227	349,55	1,54
Adjusted R^2: 0,26	$F = 41,12$ $p = 0,000$			
Model 3: Cognitive job insecurity, positive affect and negative affect				
Cognitive job insecurity	Source of variation	*Df*	Sum of	Mean
Positive affect			squares	Square
Negative affect	Regression	3	155,98	52,00
R: 0,57	Residual	226	320,19	1,42
R^2: 0,33	$F = 36,70$ $p = 0,000$			
Adjusted R^2: 0,32				

VARIABLES IN THE EQUATION					
INDEPENDENT VARIABLES	B	SEB	Beta	*t*	*p*
Cognitive job insecurity	-0,65	0,12	-0,33	-5,27	0,000*
Cognitive job insecurity	-0,41	0,12	-0,21	-3,46	0,001*
Positive affect	-0,80	0,12	-0,42	-6,98	0,000*
Cognitive job insecurity	-0,26	0,12	-0,13	-2,26	0,025*
Positive affect	-0,62	0,12	-0,32	-5,35	0,000*
Negative affect	-0,46	0,10	-0,28	-4,55	0,000*

* Statistically significant difference: $p < 0,05$

From Table 8 it is evident that although the regression coefficient of cognitive job insecurity remain statistically significant upon inclusion of positive affectivity and negative affectivity, the standardised regression coefficient (beta) of cognitive job insecurity decreases upon controlling for positive affectivity (Model 2) and negative affectivity (Model 3). Based upon

Baron and Kenny's (1986) third criterion, which states that perfect mediation would be applicable when the independent variable does not predict the dependent variable when controlling for the mediator, perfect mediation does not apply in this case. However, given the reduction in the standardised regression coefficient of cognitive job insecurity upon inclusion of the two affectivity scales, it does appear as if positive and negative affectivity partially mediate the effect of job insecurity on engagement (as measured by the UWES). Cognitive job insecurity predicted 11% of the variance in engagement (as measured by the UWES), which increases to 27% when combined with positive affectivity ($\Delta F = 48{,}70$, $p = 0{,}0001$; $\Delta R^2 = 0{,}16$), further increasing to 33% when adding negative affectivity ($\Delta F = 20{,}72$, $p = 0{,}0001$; $\Delta R^2 = 0{,}05$).

Finally, the potential mediating role of positive and negative affectivity in the relationship between job insecurity and work engagement (as measured by the OLBI) was investigated (Refer to Table 9). Firstly, support for the first criterion set by Baron and Kenny (1986) was already shown when the regression analyses with cognitive job insecurity as dependent variable and positive and negative affectivity respectively as independent variables conducted. Secondly, a regression analysis with cognitive job insecurity as independent variable and engagement (OLBI) as dependent variable resulted in a statistically significant F-value ($F = 27{,}74$, $p < 0{,}0001$). Regression analyses with engagement (OLBI) as dependent variable and positive and negative affectivity as predictors, also showed statistically significant results (Positive affectivity: $F = 45{,}73$, $p < 0{,}0001$; Negative affectivity: $F = 69{,}20$, $p < 0{,}0001$). These results provide support for the second criterion of Baron and Kenny (1986). To examine adherence to the third criterion, engagement (as measured by the OLBI) was regressed on cognitive job insecurity, controlling for the affectivity, the results of which are provided in Table 9.

Table 9

Regression Analysis – Cognitive Job Insecurity and Positive and Negative Affect: Engagement (OLBI)

ANALYSIS OF VARIANCE				
Model 1: Cognitive job insecurity				
R: 0,43	Source of variation	*df*	Sum of	Mean
R^2: 0,19			squares	Square
Adjusted R^2: 0,18	Regression	1	14,17	14,17
	Residual	239	62,24	0,26
	$F = 54,43$ $p = 0,000$			
Model 2: Cognitive job insecurity and positive affect				
Cognitive job insecurity	Source of variation	*df*	Sum of	Mean
Positive affect			squares	Square
R: 0,51	Regression	2	19,53	9,77
R^2: 0,26	Residual	238	56,87	0,24
Adjusted R^2: 0,25	$F = 40,87$ $p = 0,000$			
Model 3: Cognitive job insecurity, positive affect and negative affect				
Cognitive job insecurity	Source of variation	*df*	Sum of	Mean
Positive affect			squares	Square
Negative affect	Regression	3	25,57	8,52
R: 0,58	Residual	237	50,84	0,21
R^2: 0,34	$F = 39,74$ $p = 0,000$			
Adjusted R^2: 0,33				

VARIABLES IN THE EQUATION					
INDEPENDENT VARIABLES	B	SEB	Beta	*t*	*P*
Cognitive job insecurity	0,34	0,05	0,43	7,38	0,000*
Cognitive job insecurity	0,27	0,05	0,35	5,96	0,000*
Positive affect	-0,21	0,05	-0,28	-4,74	0,000*
Cognitive job insecurity	0,21	0,05	0,27	4,60	0,000*
Positive affectivity	-0,13	0,05	-0,17	-2,97	0,003*
Negative affectivity	0,21	0,04	0,32	5,31	0,000*

* Statistically significant difference: $p < 0,05$

Table 9 indicates that although the regression coefficient of cognitive job insecurity remains statistically significant after including positive affectivity and negative affectivity, the standardised regression coefficient (beta) of cognitive job insecurity when controlling for

positive affectivity and negative affectivity. Perfect mediation does not apply in this case, although based on the reduction in the standardised regression coefficient of cognitive job insecurity upon inclusion of positive and negative affectivity, proof does exist for the partially mediating effect of positive and negative affect on the relationship between job insecurity and engagement (as measured by the OLBI). In itself, cognitive job insecurity predicts 19% of the variance in engagement, which increases to 26% when combined with positive affectivity (ΔF = 22,44, p = 0,0001; ΔR^2 = 0,07), further increasing to 34% when adding negative affectivity (ΔF = 28,15, p = 0,0001; ΔR^2 = 0,08).

The above findings indicate that job insecurity contributes toward exhaustion/disengagement and that low job insecurity contributes toward engagement. The effects of the relationships between cognitive job insecurity and exhaustion/disengagement, as well as cognitive job insecurity and work engagement, are partially mediated by positive and negative affectivity. Based on these results, hypothesis 1, which states that a relationship exists between job insecurity and burnout, as well as hypothesis 2, which states that a relationship exists between job insecurity and work engagement, can be accepted. Given that positive and negative affectivity were found to play a partially mediating role in the relationship between job insecurity and exhaustion/disengagement, as well as in the relationship between job insecurity and work engagement, hypotheses 3 and 4 are accepted.

DISCUSSION

The objectives of this research were to determine the relationship between job insecurity, burnout and work engagement, as well as to determine whether affectivity mediates the relationship between job insecurity and work engagement.

Results obtained in this study confirmed the two-dimensional structure of the AFM 2, consisting of positive affectivity and negative affectivity, as well as the internal consistency of both scales. It was found that participants who worked in the organisation for less than one year and two to five years demonstrated higher levels of positive affectivity compared to employees who had worked in the organisation for 11 years and longer. Regarding negative affectivity, it was established that participants with tenure less than one year presented with

lower negative affectivity levels compared to participants who had been employed in the organisation for longer.

The analysis of Pearson correlations in this study showed that higher levels of cognitive job insecurity were associated with lower levels of work engagement (as measured by both the OLBI and UWES), higher levels of negative affectivity and lower levels of positive affectivity. Increased levels of affective job insecurity demonstrated an association with decreased levels of engagement (both as measured by the OLBI and UWES) and increased levels of negative affectivity. Negative affectivity was found to be associated with decreased work engagement (as measured by both the OLBI and UWES). Higher levels of positive affectivity showed an association with higher levels of work engagement (both as measured by the OLBI and UWES).

A statistically significant relationship was found between job insecurity and burnout. This finding confirms the findings of Westman, Etzion and Danon (2001) and Dekker and Schaufeli (1995). Maslach et al. (2001) also stated that the violation in the psychological contract caused by a lack of job security will lead to burnout. However, in this study the relationship between job insecurity and burnout was not very strong. In the contexts of the OLBI, which was used to measure burnout in this study, burnout is viewed as being the result of prolonged and intense physical, cognitive and affective strain (Demerouti et al., 2002). In terms of this definition, one would expect an employee to develop burnout after experiencing particularly severe job insecurity for a prolonged period of time, which was probably not the case in this sample.

Both job insecurity subscales were consistently associated with decreased levels of work engagement. However, cognitive job insecurity and affective job insecurity were relatively strongly related in this study, which explains why the first emerged as a significant predictor of work engagement in the regression analysis. According to Maslach et al. (2001), the violation of the psychological contract caused by *inter alia* job insecurity, is likely to produce a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being. Cognitive job insecurity in particular was found to hold predictive value with regard to burnout (exhaustion and disengagement), as well as work engagement.

Positive affectivity partially mediated the relationship between cognitive job insecurity and burnout (i.e. exhaustion/disengagement). Employees, who experience cognitive job insecurity, tend to become exhausted and distance themselves mentally from their work, but they also experience lower positive affectivity, which contributes to burnout. Furthermore, they experience less vigour and dedication (i.e. work engagement) at work. Cognitive job insecurity seems to lead directly and indirectly (through both high negative affectivity and low positive affectivity) to decreased work engagement. Employees experiencing cognitive job insecurity tend to display lower levels of energy and are less dedicated and absorbed in their work, also experiencing lower levels of positive affect and higher levels of negative affect, which contributes to their decreased levels of work engagement.

This study had several limitations. Firstly, the sample size is a limitation, specifically the distribution of cultural/racial groups. Stratified random sampling might ensure sufficient representation of the different groups. A further limitation of this study was its reliance on self-report measures. According to Schaufeli, Enzmann and Girault (1993), the exclusive use of self-report measures in validation studies increases the likelihood that at least part of the shared variance between measures can be attributed to method variance. Regarding research design, future studies should focus on longitudinal designs where causal inferences can be made. Also the sample should be extended to include employees working in various other government organisations.

RECOMMENDATIONS

The two-dimensional structure of the AFM 2 was confirmed, with both scales delivering adequate internal consistencies. Limited South African research on the 20-item version of the AFM 2 could however be found. Further research is required in this regard. Future studies should focus on the bias and equivalence of the AFM 2 for different race and language groups. More research regarding the relationship between job insecurity and psychological well-being is required in a variety of occupational settings in South Africa.

Results demonstrated that cognitive job insecurity contributes toward exhaustion/disengagement and decreased work engagement and that affectivity also plays and

important role. Cognitive job insecurity levels, as well as positive and negative affectivity levels need to be addressed in order to secure optimal wellness of employees.

Regarding mechanisms to reduce job insecurity, Barker (1999) found that perceived fairness is a major concern for employees in terms of job insecurity. Job insecurity levels are affected by how employees feel processes in the organisation are fairly managed. Sadri (1996) emphasises the importance of open communication in fostering perceptions of fairness. Hiltrop (1996) is of the opinion that companies can no longer rely on traditional methods and techniques to attract and retain talented employees therefore new kinds of incentives need to be applied. Companies need to switch incentives from careers, status and promotion, to personal reputation, teamwork and challenging assignments, finding new creative ways of making work challenging and participative can lead to a sense loyalty, which translates into a new kind of security, coined "employability security" (Kanter, 1994). As indicated by Hiltrop (1996), this is the promise that the employee's skills will be enhanced, as well as access to other tasks and assignments will be facilitated. Büssing (1999) found that social support has an alleviating function for persons working under job insecure conditions.

Watson (2002) notes that high positive affect is most likely when a person is focused outward and is actively engaged in the environment. Socialisation and interpersonal behaviour, as well as exercise and physical activity are particularly conducive toward positive affectivity. Positive affectivity is furthermore likely to be increased when employees perceive their goals as important and worthwhile. Watson (2002) emphasises the importance of understanding underlying mood systems when attempting to increase positive affectivity. Employees should be taught how to monitor their moods and to become sensitive to their internal rhythms, which will enable them to maximise feelings of efficacy and enjoyment, while minimising stress and frustration. Watson (2002) lastly draws attention to the importance of adequate sleep in maintaining energy and alertness.

It is recommended that a more powerful sampling method be used and that longitudinal designs be employed, so as to enable causal inferences. The use of larger samples might also provide increased confidence that study findings would be consistent across other similar groups.

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CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

In this chapter conclusions regarding the literature study and the results of the empirical research are made. Shortcomings of the research are discussed, and recommendations for the organisation and future research are suggested.

5.1 CONCLUSIONS

Next, conclusions regarding the specific theoretical objectives and the results of the empirical research are made.

5.1.1 Conclusions regarding the specific theoretical objectives

In line with the first specific objective stated in Chapter 1, job insecurity, affectivity, burnout, and work engagement, as well as the relationships between these constructs, were conceptualised from literature.

Job insecurity was conceptualised from literature, as being a subjective phenomena reflected in an individual's fear or concern regarding involuntary job loss. In this research, job insecurity was viewed as consisting of an affective and cognitive dimension, i.e. distinguishing between concern regarding job loss and fear of job loss. Job insecurity was shown to hold damaging consequences for both the individual and the organisation, for example a reduction in psychological well-being, organisational commitment, and job satisfaction; and an increase in absenteeism, turnover, anxiety and depression.

Burnout was conceptualised as a psychological syndrome, characterised by a chronic, negative work-related state of mind, occurring in response to persistent interpersonal work stressors. Within the theoretical framework of the OLBI, which was used as a measure of burnout in this research, burnout was conceptualised as a two-dimensional construct, consisting of an exhaustion and disengagement subscale. Exhaustion was defined as relating to extensive and intense physical, affective and cognitive strain, as a consequence of

prolonged contact to specific work conditions/stressors. The disengagement scale was conceptualised as relating to emotions regarding the work tasks, as well as to a devaluation and mechanical execution of one's work.

Work engagement was conceptualised as a positive, persistent affective-cognitive, and work-related orientation, characterised by vigour, dedication and absorption. Vigour was conceptualised as being related to high energy levels, mental resilience, willingness to exert effort and persistence. Dedication was conceptualised as being related to enthusiasm, inspiration, pride, challenge and a sense of significance. Absorption was defined as referring to a state where time flies and where the individual finds it difficult for him or her to detach from work. Burnout and work engagement were conceptualised as opposite, yet independent constructs.

Negative affectivity was defined as an individual's tendency to see the world and him- or herself in unhappy and pessimistic terms, with positive affectivity being characterised by positive feelings experienced across situations, by sociability, social dominance, energy, venturesomeness and ambition.

A literature review indicated that Westman, Etzion and Danon (2001) found a positive correlation between job insecurity and burnout. Job insecurity can be viewed as a violation of the psychological contract between employer and employee, which in the opinions of Maslach, Schaufeli and Leiter (2001) is likely to produce burnout and a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being. According to Mak and Mueller (2001) previous research pointed toward the significant role that cognitive appraisal plays in the stress-strain link, with some researchers (Parkes, 1994) arguing that negative affectivity may play a role in this relationship, in other words those who exhibit negative affectivity are prone to react more adversely to perceived stress than those with low negative affectivity.

Rothmann (2003) indicated that tracking employees' effectiveness in coping with the demands of the new world of work and stimulating their growth in areas that could possibly

impact on individual well-being and organisational efficiency and effectiveness are crucial, hence the importance of this research.

5.1.2 Conclusions regarding the specific empirical objectives

The first empirical objective was to determine the reliability and validity of the various measuring instruments employed in this research.

Regarding the construct validity of the JII, structural equation modelling results confirmed the two-dimensional structure, consisting of an affective and cognitive subscale, which corresponds with De Witte's (2000) findings. Item 2, which appeared to be formulated in an ambiguous manner, was however found to be problematic and was consequently removed from the scale and items 1 and 3, as well as 1 and 8 were allowed to correlate. Both scales presented with adequate internal consistency.

Differences in the cognitive job insecurity scores were obtained for culture, where the white participants presented higher levels of cognitive job insecurity compared to the black participants, but not for qualification, tenure and age. This does not correspond with the findings of Manski and Straub (2000), that demonstrated significant differences in the job insecurity scores of participants of different ages and qualifications and who found higher levels of job insecurity among black participants as compared to white participants. It was however indicated that within the context of the new Employment Equity legislation, the findings of these research are not unexpected, particularly in this government organisation where Employment Equity appears to be actively enforced.

One item of the OLBI (item 13), which appeared to be poorly formulated, was problematic, and consequently had to be removed. Although two scales emerged, these were not representative of disengagement and exhaustion as would be expected, but rather consisting of an engagement (all positively phrased items) and exhaustion/disengagement (all negatively phrased items) scale. Both scales presented acceptable inter-item correlation coefficients. The engagement scale presented an acceptable level of internal consistency, although the internal consistency of the exhaustion/disengagement scale proved to be slightly deficient.

Regarding the construct validity of the UWES, only one factor emerged, which corresponds with the findings of Storm and Rothmann (2003), who found that a re-specified one-factor model fitted their data best. The UWES presented with acceptable internal consistency.

Regarding the OLBI, the results showed that black participants were found to be more engaged than their white counterparts. However, based on engagement as measured by the UWES, no practically significant differences were found with regard to culture. Storm (2002) did not find any practically significant differences between the engagement levels of black and white participants. A literature review suggested that black participants are expected to score lower on indices of psychological well-being compared to white participants, due to factors related amongst others to socio-cultural background and life circumstances. It was however concluded that one would have to consider this in the context of the new socio-political dispensation and corresponding organisational programmes.

No significant differences were found with regard to the OLBI and age, although Maslach et al. (2001) note that of all the demographic variables that have been studied, age is the one that has been most consistently related to burnout, with younger employees reporting higher levels of burnout than employees over the age of 30 and 40 years. It was established that participants with degrees were less engaged (OLBI) than those with post-graduate degrees, as well as those with diplomas. Participants with post-graduate degrees were also less burned out when compared to participants with Grade 10 to 12 levels of education and participants with degrees, whereas Maslach et al. (2001) indicate that some studies have found that those with a higher level of education reported higher levels of burnout compared to those with less educated degrees.

With regard to tenure and engagement, as measured by the OLBI, results indicated that participants who worked for the organisation for one year or less were more engaged than those who had been working for the company for 6 to 10 years, 11 to 20 years and in excess of 20 years. In terms of engagement as measured by the UWES, participants who had been working for the organisation for less than one year demonstrated higher levels of engagement than those who had been working for the organisation for 11 to 20 years and in excess of 20 years. It was hypothesised that these findings could be a function of newly appointed employees still finding their work to be highly challenging or to the availability of resources as part of the induction phase.

Regarding the UWES, participants with post-graduate degrees displayed a higher level of engagement in comparison to participants with Grade 10 to 12 qualifications and participants with degrees, although the research of Storm (2002) did not replicate these findings. One would expect participants with post-graduate levels of education to display a high level of dedication and interest in their field of specialisation.

The two-dimensional structure of the AFM 2 was confirmed, with all items loading on the appropriate scales. Both the positive and negative affectivity scales presented adequate internal consistency. Participants who worked in the organisation for less than one year and those who worked for 2 to 5 years demonstrated higher levels of positive affectivity compared to employees who worked in the organisation for 11 years and longer. Similarly, it was found that participants with tenure less than one year presented lower negative affectivity levels compared to participants who worked in the organisation for longer.

In line with the second specific empirical objective, with exception of the affective scale of the JII, no existing South African norms could be found for the measuring instruments employed in this research. Based on the mean scores obtained by the study population on the various measuring instruments, it appeared that the participants experience average levels of cognitive job insecurity, i.e. not being particularly high or low. Compared to other research, the mean affective job insecurity score fell within the average range. Once again, by considering the scales used, it was furthermore established that their levels of exhaustion/disengagement fell within the average ranges, as did their levels of engagement as measured by the OLBI. Their levels of engagement as measured by the UWES however, fell within the slightly above average range. In terms of affectivity, the participants demonstrated a mean negative affectivity score falling within the average range and a mean positive affectivity score falling within the high average range.

In terms of the third specific empirical objective, it was found that higher levels of cognitive job insecurity were associated with lower levels of engagement as measured by both the OLBI and UWES. Affective job insecurity demonstrated a similar relationship with engagement as measured by both the OLBI and UWES. Negative affectivity demonstrated an association with decreased levels of engagement (as measured by both the OLBI and the

UWES), whereas positive affectivity demonstrated an association with increased levels of engagement (both as measured by the OLBI and the UWES). Cognitive job insecurity was found to be associated to negative (positive correlation) and positive affectivity (negative correlation) and affective job insecurity was found to correlate positively with negative affectivity. Cognitive job insecurity proved to hold predictive value with regard to work engagement, although affective job insecurity did not demonstrate any such predictive value.

The finding that increased job insecurity is associated with decreased engagement, corresponds with the opinions of Maslach et al. (2001), who theorise that the violation of the psychological contract caused by *inter alia* job insecurity, is likely to produce a reduction in work engagement, because it erodes the notion of reciprocity, which is crucial in maintaining well-being.

No practically significant correlations were obtained between job insecurity and exhaustion/disengagement, which does not correspond with the findings of other researchers, for example the research of Westman, Etzion and Danon (2001) and Dekker and Schaufeli (1995) who found a positive correlation between job insecurity and burnout. Maslach et al. (2001) also theorise that the violation in the psychological contract caused by a lack of job security will lead to burnout. Job insecurity was found to hold some, although limited, predictive value with regard to exhaustion/disengagement.

A possible explanation for not finding a strong relationship between job insecurity and burnout could be related to the problematic nature of the OLBI, which was used to measure burnout (exhaustion/disengagement) in this research. A more reliable measuring instrument, for example the MBI might have delivered different results. The affective and cognitive job insecurity scores of the study population did not appear to be high. Burnout is viewed as being the result of prolonged and intense physical, cognitive and affective strain (Demerouti, Bakker, Nachreiner & Ebbinghaus, 2002). One would only expect a person to develop burnout after experiencing particularly severe job insecurity for a prolonged period of time, something that was not applicable to this particular study population.

Regarding the fifth specific empirical objective, it was found that affectivity plays a partially mediating role in the relationships between cognitive job insecurity and work engagement, as

well as cognitive job insecurity and exhaustion/disengagement. This finding lends support to the notion that affectivity plays a role in the stressor-strain relationship. According to Jackson and Rothmann (2004), persons measuring high on positive affectivity feel good about themselves and therefore report greater satisfaction with aspects of their lives. Based on the results obtained in this research, it would appear that participants with higher levels of positive affectivity experience greater satisfaction with regard to their work lives as evidenced in their levels of work engagement.

5.2 LIMITATIONS OF THE RESEARCH

A limitation of this study is the size of the sample, specifically the distribution of cultural groups and the sampling method. Future studies could benefit by making use of random, stratified sampling with the proportionate inclusion of cultural groups.

A further limitation of this study was its reliance on self-report measures. According to Schaufeli, Enzmann and Girault (1993), the exclusive use of self-report measures in validation studies increases the likelihood that at least part of the shared variance between measures can be attributed to method variance. Some participants may also have doubted the confidentiality of their responses, which may have influenced some of the results.

Regarding the research design, future studies should focus on longitudinal and quasi-experimental designs, which will make it possible to make causal inferences. In terms of cross-sectional designs, it is inappropriate to refer to an independent variable, such as job insecurity in this case, affecting dependent variables such as burnout and work engagement, as the order of influence may be reversed as well, for example burnout and work engagement rather being antecedents to job insecurity.

This research was conducted in a homogenous sample, consisting of employees of a specific organisation. This organisation probably has some unique characteristics, for example a specific organisational culture, which could have influenced the participants' responses. By implication, results cannot be generalised to other contexts or professions. The sample should be extended to include employees working in various other government organisations, as well as other sectors of the labour market.

5.3 RECOMMENDATIONS

Recommendations are made with regard to the applicable organisation, as well as in regard to future research.

5.3.1 Recommendations for the organisation

The mean score obtained by the participants in this study, indicates that job insecurity levels were not particularly high or low. This implies that while the level of job insecurity experienced by the employees in this company is not problematic, some job insecurity does exist and may need to be managed. Within this research in particular, white participants presented higher levels of cognitive job insecurity compared to the black participants, suggesting that white employees may require some attention in terms of their job insecurity levels. Cognitive job insecurity was also found to contribute toward decreased work engagement and increased levels of exhaustion/disengagement.

Holm and Hovland (1999) propose making use of career counsellors as a mechanism for assisting job insecure employees. Barker (1999) found that perceived fairness is a major concern for employees in terms of job insecurity and that job insecurity is affected by how employees feel, processes are fairly managed. Appelbaum and Donia (2000) highlight the importance of communication in fostering trust and empowerment. Fostering trust of the employees enable them to concentrate on their work and to continue being productive, with the assurance that management is also concerned regarding their well-being.

Hiltrop (1996) notes that companies can no longer rely on traditional methods and techniques to attract and retain talented employees and that instead of career paths and job security, new kinds of incentives need to be applied. Kanter (1994) proposes that companies need to switch incentives from careers, status and promotion, to personal reputation, teamwork and challenging assignments, finding ways of making work challenging and involving so it becomes a source of loyalty, which translates into a new kind of security. Kanter (1994) coins this new type of security, "employability security". As indicated by Hiltrop (1996), this is the

promise that the employee's skills will be enhanced, as well as access to other tasks and assignments will be facilitated.

Similarly, the study populations' disengagement/exhaustion mean score indicated that although burnout levels in the organisation are not high, some degree of burnout is present. According to Schaufeli (2003), relaxation is an individual secondary intervention aimed at the group at risk, and job redesign is an organisational, primary preventive intervention targeted at all employees. Burnout workshops combine various approaches, usually including aspects such as self-assessment, didactic stress management, relaxation, cognitive and behavioural techniques, time management, promotion of a more realistic image of the job, and peer support (Schaufeli, 2003). Essentially, burnout interventions are divided into two broad areas, i.e. increasing the participants' awareness of work-related difficulties and enhancing their coping resources by skills training and social support.

Most discussion of burnout interventions focus primarily on individual-centred solutions, for example strengthening the employee's internal resources or changing work behaviours. Maslach, Schaufeli and Leiter (2001) however note that this is paradoxical given that research has demonstrated that situational and organisational factors play a larger role in burnout than individual ones. A wide variety of interventions have been researched including stress inoculation training, assertiveness training, time management training, teambuilding, rational emotive therapy, and meditation. Research findings have been mixed, with a reduction in exhaustion being reported in some cases, but not in others (Maslach, Schaufeli & Leiter, 2001). According to these researchers, research findings have suggested that the most effective mode of intervention is to combine changes in managerial practice with educational interventions as described previously.

Maslach and Leiter (1997) have developed a model that focuses on the degree of match/mismatch between the person and six domains of his/her job environment, being work overload (too much to do in too little time with limited resources), lack of control (e.g. rigid policies and tight monitoring), insufficient reward (both internal and external rewards), breakdown in community (loss of a sense of connection with others in the workplace), absence of fairness (e.g. inequity in workload, pay or promotions) and value conflict (mismatch between the requirements of the job and the employee's principles). The greater

the mismatch, the greater the likelihood of burnout and the greater the match, the smaller the likelihood of burnout (Maslach & Leiter, 1997).

Although engagement levels as measured by the UWES did not appear problematic, engagement levels can nevertheless be increased. Maslach, Schaufeli and Leiter (2001) report that one advantage of a combined managerial and educational approach to intervention is that it emphasises building engagement with work. The focus on engagement allows for closer alliance with the organisational mission, especially with those aspects relating to quality of work life within the organisation. These researchers note that a work setting which is designed to sustain positive development of energy, vigour, dedication, absorption and effectiveness among its employees should be successful in promoting their well-being and productivity, lastly suggesting that the statement of a positive goal for intervention, i.e. increasing engagement rather than reducing burnout, enhances the accountability of the intervention, as assessing the presence of something is more definite than assessing the absence of its opposite.

The research of Ryan and Deci (2000) suggest that social-contextual events such as communication, rewards and feedback affect engagement. Feedback, positive performance feedback and optimal challenges facilitate intrinsic motivation, which in turn appears to be related to engagement. Internal locus of control is also a necessary pre-condition for engagement to become evident. A person with an internal locus of control sees a direct cause and consequence relationship between his/her behaviour and the consequences thereof. By reinforcing behaviour in such a manner, that employees can see a direct link between his/her behaviour and the consequences thereof, an internal locus of control can be stimulated. Roberts and Davenport (2002) cite career development (opportunities for learning new skills and self-development), identification with the organisation (being able to share in the organisation's success) and a rewarding work environment (e.g. recognition and participation in decision-making) as mechanisms to increase engagement.

Affectivity was found to influence the outcomes (burnout and work engagement) of job insecurity to some extent. Regarding mechanisms to stimulate positive affectivity, Watson (2002) proposes three general principles:

- Positive affect is more related to action than to thought. High positive affect is most likely when a person is focused outward and is actively engaged in the environment. Two broad classes are particularly conducive to positive affect, as being (i) socialisation and interpersonal behaviour and (ii) exercise and physical activity.
- The process of striving after goals rather than goal attainment in itself that is crucial for positive affectivity. It is essential that employees perceive goals to be important and find them worthwhile to pursue.
- Attempts at change are most likely to be a success when they are based on an adequate understanding of underlying mood systems, for example grasping that periods of happiness and enthusiasm inevitably give way to feelings of exhaustion. Watson (2002) proposes that by teaching employees to monitor their moods and becoming sensitive to their internal rhythms, they should be able to maximise feelings of efficacy and enjoyment, while minimising stress and frustration. In a similar vein, Watson (2002) comments that a significant amount of people are deprived of sleep. Adequate amounts of sleep is essential in maintaining energy and alertness and a lack of sleep can lead to reduced levels of positive affectivity.

5.3.2 Recommendations for further research

The two-factor structure of the JII, as well as its internal consistency was confirmed in this research. Item 2 proved to be problematic and may need to be revised, as the sentence appears to be poorly formulated. The JII should also be translated to other South African languages. The OLBI delivered disappointing results and is not recommended to assess burnout levels of government employees. The factor structure of the OLBI did not surface as expected, rather emerging as a measure of work engagement, as opposed to burnout, which is probably related to the positive phrasing of certain items in the scale. Although burnout and work engagement are viewed as opposites, these constructs are independent and should be measured as such. Further research is required into the psychometric properties of the OLBI. The UWES presented with a one-factor-, rather than a three-factor structure, which corresponds with the findings of some previous research. More research focussing on the dimensionality of this measuring instrument is required. The two-dimensional structure of the AFM 2 was confirmed, with both scales delivering adequate internal consistencies. Limited

research on the 20-item version of the AFM 2 could however be found, hence more research is required in this regard.

A major problem with regard to the JII, AFM 2, OLBI and UWES is the lack of research setting clinically validated cut-off points. By conducting such research in a variety of occupational groups, norms for occupational groups, professions, organisations and industries can be developed. Such groups can then also be compared and occupations that are most at risk can be identified. Future studies should focus on the bias and equivalence of the various measuring instruments for different cultural and language groups.

As noted by Schaufeli (2003, p. 11), "the traditional focus of burnout research on self-reports and experienced work characteristics has to be supplemented by a focus on those objective aspects of the work situation that can be influenced by management (e.g. caseload, performance feedback, job control) and on outcomes that have direct or indirect economical impact (e.g. sick leave, efficiency, performance, customer satisfaction). This calls for collaboration with economists and business administration researchers". In Schaufeli's (2003) opinion, burnout as a psychological phenomenon will only be taken seriously by management to the extent that it is demonstrated to contribute to poor business performance, with the burden of proof resting on the shoulders of the applied researchers. Schaufeli (2003) also suggests the importance of collaboration with various practitioners *inter alia* occupational physicians, psychiatrists and clinical psychologists, as well as scholars in fields such as epidemiology, physiology, economics and business administration, given that burnout is too important to leave it exclusively to industrial psychologists.

Further research is required into ways in which job insecurity can be effectively managed in organisations, particularly given the impact it has been found to have on employee wellness. Although job insecurity was found to contribute to burnout and decreased engagement in this research, and affectivity was also found to play a partially mediating role, little is known regarding the dynamics underlying job insecurity and how the various constructs interact. Research investigating underlying causality, for example using Structural Equation Modelling, is required.

Future studies regarding the relationship between job insecurity and burnout should be conducted, particularly in organisations where job insecurity is high and takes place over longer periods of time, for example in organisations awaiting downsizing or restructuring. More research regarding the relationship between job insecurity and work engagement should be undertaken. Given that affectivity was found to play a partially mediating role in the relationships between job insecurity, work engagement and burnout, future studies should pay attention to the role of dispositional traits in these relationships. It is recommended that larger samples, which will provide increased confidence that results would be consistent across similar groups, be used. Practical significance should be determined in addition to statistical significance and adequate statistical techniques (e.g. structural equation modelling) should be used. It is recommended that a more powerful sampling method be used and that longitudinal designs be employed, so as to enable causal inferences.

5.4 CHAPTER SUMMARY

In this chapter conclusions regarding the theoretical and empirical objectives were made. The limitations of the research were pointed out and recommendations were made for the organisation in which the study was conducted, as well as for future research. All theoretical and empirical objectives formulated for this research, have been attained.

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