JOB INSECURITY, BURNOUT, WORK ENGAGEMENT, GENERAL HEALTH AND JOB SATISFACTION IN SELECTED ORGANISATIONS IN THE VAAL TRIANGLE

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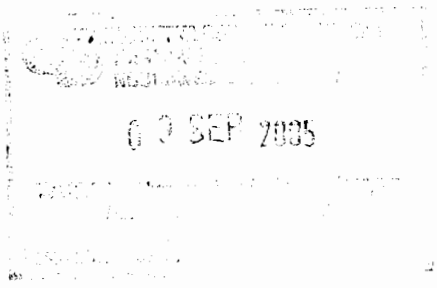

REMARK

The reader is reminded that all the references as well as the editorial style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association were followed in this thesis. These prescriptions are in line with the policy of the Programme for Industrial Psychology at the North-West University to adapt the APA-style in all scientific documents as from January 1999.

The thesis is submitted in the form of four research articles.

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"I can do all things through Him who strengthens me" (Philippians 4:13).

"Success is a journey, not a destination" (Ben Sweetland).

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SUMMARY

Topic: Job insecurity, burnout, work engagement, general health and job satisfaction in selected organisations in the Vaal Triangle.

Key terms: Job insecurity, burnout, work engagement, general health and job satisfaction.

The nature of work has dramatically changed, characterised by industrial restructuring, technological change and global competition. Organisations are involved in restructuring, downsizing, mergers, and outsourcing, in an attempt to reduce labour costs, survive harsh economic conditions, and improve global competitiveness. These are the options that many organisations have been provided with in order to adapt to a changing environment. Although some individuals may experience detrimental consequences resulting in the possibility of unemployment, other employees that remain can possibly face outcomes such as job insecurity, burnout, disengagement and job dissatisfaction.

Job insecurity is an important aspect to consider since it is concerned with the nature and continuance of an individual's career. The control over the destiny of the job is threatened and causes fear and uncertainty. Studies indicate that job insecurity among employees may have several consequences such as work-related attitudes, job dissatisfaction, negative physical and psychological health outcomes, withdrawal behaviour and stress symptoms.

The objectives of this study were to assess the construct validity and internal consistency of the MBI-GS, UWES, JIQ, GHQ and the MSQ, as well as the relationship, levels and socio demographic differences of burnout, work engagement, job insecurity and job satisfaction of employees in selected organisations in the Vaal Triangle. Another objective of this study was to investigate the relationship between job insecurity, burnout, engagement, general health and job satisfaction in selected organisations in the Vaal Triangle.

A survey design was used to realise the research objectives. The study population consisted of 216 employees. The research method was by means of four separate studies, each consisting of a brief literature overview and an empirical study. A cross-sectional survey design was used. An accidental sample of employees at selected organisations in the Vaal Triangle (N = 216) was used. Six questionnaires were administered, namely, the Maslach

Burnout Inventory–General Survey (MBI-GS), the Utrecht Work Engagement Scale (UWES), the Job Insecurity Questionnaire (JIQ), the General Health Questionnaire (GHQ), the Minnesota Satisfaction Questionnaire (MSQ), as well as a biographical questionnaire. Statistical analysis was carried out with the help of the SPSS programme.

Exploratory factor analysis of the MBI-GS resulted in a three-factor model of burnout, consisting of exhaustion, cynicism and professional efficacy and the UWES resulted in a one-factor model of engagement. The scales demonstrated acceptable levels of internal consistencies. Significant correlation coefficients between burnout and engagement were found. No practically significant differences, based on biographical characteristics exist regarding burnout and engagement scores. Exploratory factor analysis of the JIQ resulted in a two-factor model of job insecurity. The scales demonstrated acceptable levels of internal consistencies. Significant differences, based on race groups exist regarding job insecurity. Exploratory factor analysis of the MSQ resulted in a one-factor model of job satisfaction. The scales demonstrated acceptable levels of internal consistencies. A statistically, significantly difference was found between age and job satisfaction. Exploratory factor analysis of the GHQ resulted in a four-factor model of general health, consisting of somatic symptoms, anxiety/insomnia, social dysfunction and depression. The scales demonstrated acceptable levels of internal consistencies. The results revealed practically significantly relationships between burnout, engagement, job insecurity, job satisfaction and general health. As independent variables Exhaustion and Cynicism explained 36% of the dependent variable job satisfaction and 50% of general health.

Limitations of the research are discussed, followed by recommendations for the selected organisations and for future research.

OPSOMMING

Onderwerp: Werksonsekerheid, uitbranding, werksbegeestering, algemene gesondheid en werkstevredenheid in geselekteerde organisasies in die Vaaldriehoek.

Sleutelterme: Werksonsekerheid, uitbranding, werksbegeestering, algemene gesondheid en werkstevredenheid

Die aard van werk het dramaties verander, gekenmerk deur industriële struktuurverandering, tegniese veranderinge en globale kompetisie. Organisasies is betrokke by herstrukturering, afskaaling, samesmeltings en uitkontraktering, alles in 'n poging om arbeidskoste te verlaag, ekonomiese situasies te oorleef en globale kompetisie te bevorder. Deur dit is baie organisasies voorsien met buigbaarheid om aan te pas by die veranderende omgewing. Vir die individu mag dit nadelige oorsake inhou en die resultate daarvan kan lei tot werkloosheid. Moontlike gevolge wat 'n impak kan hê op die werknemer is werksonsekerheid, uitbranding, lae werksbegeestering en werksontevredenheid.

Werksonsekerheid is belangrik aangesien dit besorgdheid is oor die aard en voortsetting van die individu se loopbaan. Beheer oor die toekoms van die werk is onder bedreiging en lei tot vrees en onsekerheid. Studies het aangetoon dat werksonsekerheid onder werknemers uiteenlopende gevolge soos werks-verbandhoudende houdinge, werksontevredenheid, negatiewe fisiese en psigiese gesondheidsgevolge, onttrekkingsgedrag en spanningsimptome tot gevolg kan hê.

Dit was die doel van hierdie navorsing om die konstrukgeldigheid en interne konsekwentheid van die MBI-GS, UWES, JIQ, GHQ en MSQ te ondersoek, asook die verwantskap, vlakke en sosio demografiese verskille van uitbranding, werksbegeestering, werksonsekerheid en werkstevredenheid van werknemers in geselekteerde organisasies in die Vaaldriehoek. Nog 'n doelstelling van hierdie studie was om die verband tussen werksonsekerheid, uitbranding, werksbegeestering, algemene gesondheid in geselekteerde organisasies in die Vaaldriehoek te bepaal.

'n Dwarssnee opname-ontwerp is gebruik. Die studiepopulasie het bestaan uit 216 werknemers. Die navorsingsmetode was by wyse van vier afsonderlike studies, elk bestaande

uit 'n literatuuroorsig en 'n empiriese studie. 'n Dwarssnee opname ontwerp is gebruik. 'n Beskikbaarheidsteekproef van werknemers in geselekteerde organisasies in die Vaaldriehoek (N = 216) is geneem. Ses vraelyste is afgeneem, naamlik die Maslach Uitbrandings Vraelys–Algemene Opname (MBI-GS), die Utrecht Werksbegeesteringskaal (UWES), die Werksonsekerheidsvraelys (JIQ), die Algemene Gesondheidsvraelys (GHQ), die Minnesota Werkstevredenheidsvraelys (MSQ) en 'n biografiese vraelys. Statistiese analise is uitgevoer met behulp van die SPSS program.

Eksploratiewe faktoranalise van die Maslach Uitbrandingsvraelys–Algemene Opname het geresulteer in 'n driefaktormodel van uitbranding. Die UWES het geresulteer in 'n een faktormodel vir begeestering. Die meetinstrumente het aanvaarbare interne konsekwentheid getoon. Betekenisvolle korrelasiekoëffisiënte tussen uitbranding en werksbegeestering is aangedui. Geen prakties betekenisvolle verskille, gebaseer op demografiese veranderlikes bestaan betreffende uitbranding en werksbegeestering. Eksploratiewe faktoranalise van die Werksonsekerheidsvraelys het geresulteer in 'n tweefaktormodel van werksonsekerheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. Betekenisvolle verskille, gebaseer op ras bestaan betreffende werksonsekerheid. Eksploratiewe faktoranalise van die Werkstevredenheidvraelys het geresulteer in 'n eenfaktormodel van werkstevredenheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. Eksploratiewe faktoranalise van die GHQ het geresulteer in 'n vierfaktormodel van algemene gesondheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. Die resultate het praktiese betekenisvolle verbande tussen uitbranding, werksbegeestering, werksonsekerheid, werkstevredenheid en algemene gesondheid getoon. As onafhanklike veranderlikes het Uitputting en Sinisme 36% van die afhanklike veranderlike werkstevredenheid verklaar en 50% van algemene gesondheid.

Beperkings van die ondersoek word bespreek gevolg deur die aanbevelings vir die geselekteerde organisasies asook toekomstige navorsing.

CHAPTER 1

INTRODUCTION

This thesis is about the relationship between job insecurity, burnout, work engagement, general health and job satisfaction.

In this chapter the problem statement is discussed. Thereafter the research objectives, which consists of a general objective and specific objectives, are provided. The research method, including the research design, study population, measuring battery and statistical analysis, is explained and finally the division of chapters is provided.

1.1 PROBLEM STATEMENT

Never in the history of the world has there been such rapid, mammoth change as the period we are living today (Schulte, 2003). During the last few decades many economic changes leading to transformation in the labour market have taken place in the industrialised world (Mauno & Kinnunen, 1999). In a rapidly changing environment, characterised by intensified competition and escalating demands for flexibility and adjustment, organisations have taken to re-organisational activities such as outsourcing, downsizing, and mergers in order to adapt to the new situation (Cascio, 1995; Gowing, Kraft & Campbell Quick, 1998).

The globalisation of services has placed considerable demands on employees who work in this sector (Burchell, Lapido & Wilkinson, 2002). The global information era contributed to the profound restructuring of work taking place, in order to be competitive (Hartley, Jacobson, Klandermans & Van Vuuren, 1991). The world as such has become "smaller" and the tempo, with which work has to be completed, has increased drastically. New flexible forms of employment are being introduced, heightening the fear of redundancy (Hartley et al., 1991).

Organisations have, as noted by Cascio (1995), two options to become more profitable: they can either increase their gains or decrease their costs often by reducing the number of employees. Downsizing or "rightsizing" appears to be the standard solution in organisational

attempts at improving organisational effectiveness and reducing labour (Hitt, Keats, Harback & Nixon, 1994).

During restructuring, the organisational changes that are implemented or planned may impact on various aspects of employees' occupational roles and accentuate the potential for additional stress. It is conceivable that restructuring may cause increases in role overload, role insufficiency, role ambiguity, and responsibility, as well as blurring of role boundary. After all, organisational restructuring and downsizing are essentially change strategies aimed at increasing efficiency and cost effectiveness, which involves reducing staff numbers, extending or restricting their occupational roles, increasing the workload, and varying the range of responsibilities of employees who remain on staff (Mak & Mueller, 2001). In addition, downsizing survivors have to do more with fewer resources, their work-load increases, and uncertainty regarding task performance is likely to be prevalent (Burke & Nelson, 1998; Hartley, Jacobson, Klandermans & Van Vuuren, 1991).

From the organisational perspective, attempts to reduce labour costs and improve competitiveness have provided many companies with the functional and numerical flexibility necessary to adapt to a changing environment. From the individual perspective, although some individuals may view flexibility positively, the negative consequences are apparent and have dominated the psychological literature (Sverke & Hellgren, 2002). Organisations attempting to reduce costs, put pressure on employees who remain at work to modify their jobs, accept alternative employment conditions or positions, relocate, all of which are likely to fuel job insecurity, and lead employees to work harder (intensify their work) in order to keep their job (Büssing, 1999).

Studies of the employment process have revealed the necessity of considering additional variables in the study of job insecurity (Büssing, 1999). He mentioned that besides socio-demographic variables, such as gender, age and education, one must account for individual psychological differences. Given that job insecurity reflects a worry about losing the present job, this subjective experience is likely to have a strong psychological impact (Sverke, Hellgren & Näswall, 2002). For many individuals, work is a central factor for the satisfaction of economic and social needs. The perceived threat of unemployment involves frustration of these needs and the potential loss of important financial and social resources (De Witte,

1999). Research suggests that job insecurity may have as detrimental consequences as job loss itself (Dekker & Schaufeli, 1995; Latack & Dozier, 1986).

Job insecurity has been described in different ways (De Witte, 1997, 1999; Mauno & Kinnunen, 1999). Job insecurity has been conceptualised from different points of view, that is (1) a global or (2) a multidimensional concept (3) a job stressor. Job insecurity has been defined to the global definition, signifying the threat of loss or job discontinuity (Coplan, Cobb, French, Van Harrison & Pinneau, 1980). Usually the global definition has been applied in the context of organisational crisis or change, in which job insecurity is considered the first phase in the process of job loss (Ferrie, 1997; Joelson & Wahlquist, 1987). These researchers who have adopted the multidimensional definition of job insecurity argue that job insecurity refers not only to the amount of uncertainty an employee feels about his or her job continuity, but also for the continuity of certain dimensions of the job such as opportunities for promotion or the possibility of being laid off for a short while (Ashford, Lee & Bobko, 1989; Borg & Elizur, 1992; Greenhalgh & Rosenblatt, 1984; Rosenblatt & Ruvio, 1996; Rosenblatt et al., 1999). Job insecurity refers to employees' negative reactions to the changes concerning their jobs. Job security has been defined as an individual's expectations about continuity in a job situation (Davy, Kinicki & Scheck, 1997), overall concern about the future existence of the job (Rosenblatt & Ruvio, 1996), perception of a potential threat to continuity in his or her current job (Heaney, Israel & House, 1994) and powerlessness to maintain desired continuity in a threatened job situation (Greenhalgh & Rosenblatt, 1984), to give but a few examples.

Job insecurity has been defined as an essential and involuntary change regarding the future existence of the present job or of significant job features, such as deterioration of working conditions, limited career opportunities, and declining salary development (Greenhalgh & Rosenblatt, 1984; Hartley et al., 1991; Hellgren et al., 1999). Job insecurity also reflects the discrepancy between the preferred and experienced levels of job security, constituting a form of work-related stress potentially detrimental to the individuals' well-being, job attitudes and behaviours (Dekker & Schaufeli, 1995; Heaney et al., 1994; Lim, 1996).

A growing body of literature suggests that perceptions of job insecurity may have detrimental consequences for employee attitudes (Ashford, Lee & Bobko, 1989; Davy, Kinicki & Schenk, 1997; Rosenblatt, Talmuct & Ruvio, 1999; Sverke & Hellgren, 2002) and well-being (Barling & Kelloway, 1996; De Witte, 1999; Kinnunen, Mauno, Nätti & Happonen, 1999;

Mohr, 2000) as well as for organisation viability (Greenhalgh & Rosenblatt, 1984; Kets de Vries & Balazs, 1997). One would expect feelings of job insecurity to have a strong psychological impact on those affected.

According to the research of Probst (2000), the more satisfied individuals were with their job security, the less they intended to quit their job. In addition, the more satisfied employees were with their job security, the fewer health conditions and lower levels of psychological distress they reported. Commitment, psychological distress, and health conditions were significant and in the expected direction. Thus, the more negative employees' affective reactions to the workplace reorganisation were, the less committed they were to the organisation. In addition, these workers reported greater numbers of health-related problems and higher levels of psychological distress. Finally, they also engaged in more work withdrawal behaviours than individuals whose reactions to the workplace reorganisation were less negative (Probst, 2000). There is overwhelming evidence to suggest that job loss and unemployment is harmful to health (Lee, Colditz, Berkman & Kawachi, 2004). Research done by Hellgren and Sverke (2003) indicated that their results provide empirical support for the theoretical notion that job insecurity leads to health complaints. It can readily be assumed that the dominating view of causal direction is job insecurity to health association, implying that prolonged perceptions of job insecurity lead to impaired well-being and health over time (e.g., Heaney et al., 1994; Sverke et al., 2002).

In comparison to the actual loss of material resources (income) caused by unemployment, the condition of job insecurity is believed to lead to psychological stress due to uncertainty about the future (Lee, Colditz, Berkman & Kawachi, 2004). According to De Witte (1999) and Van Vuuren (1990), job insecurity consistently presents itself as a stressor. Like any other stressor, job insecurity may be related to a withdrawal response on attempts to totally avoid stress. It can be argued that job insecurity is a strain and stressor and may have an influence on the individual. Job insecurity may constitute a major source of stress for individuals working in industries that are downsizing or undergoing intense market competition and mergers, such as those that occurred in the U.S. health care industry during the 1990's (Lee et al., 2004). Mauno and Kinnunen (1999) indicated that job insecurity might operate as a chronic occupational stressor, and consequently have long-term effects on well-being.

Many studies have shown that occupational stressors can result in mental, physical and behavioural stress reactions, such as burnout, depression and psychosomatic diseases (Houkes, Janssen, de Jonge & Nijhuis, 2001). Unsuccessful attempts to cope with a variety of negative stress conditions can result in a multidimensional chronic stress reaction: burnout (Basson & Rothmann, 2002). Byrne (1991) views burnout, as the final step in the process of unsuccessful attempts to cope with negative stress conditions and therefore reasons that burnout is a consequence of prolonged and extensive job-related stress. Rothmann, Malan and Rothmann (2001) regard burnout as a particular kind of prolonged job stress. In other words a particular, multidimensional chronic stress reaction that goes beyond the experience of mere exhaustion. Maslach, Schaufeli and Leiter (2001) define burnout as a prolonged response to chronic, emotional and interpersonal stressors, which is characterised by exhaustion, cynicism and inefficacy. Maslach et al. (1996) state that exhaustion refers to feelings of being overextended and depleted of emotional and physical resources. Cynicism is recognised as a response to emotional exhaustion. Cynicism reflects indifference or a distant attitude towards work. It is seen as a negative, callous or detached response to various aspects of the job (Maslach et al., 1996). Professional efficacy is seen as a feeling of competence, productivity and achievement at work (Maslach et al., 1996).

According to Maslach, Schaufeli and Leiter (2001), the concept of burnout has been experienced and enlarged in recent years by the positive antithesis of job engagement that allowed for the study of the full spectrum of workers' well-being, ranging from the negative (burnout) to the positive (engagement) states.

Engagement is a positive, fulfilling and work-related state of mind that is characterised by vigour dedication and absorption (Maslach, Schaufeli & Leiter, 2001). Engaged individuals who view themselves as capable to deal with the complete demands of the job are likely to increase their productivity (Leiter & Harvie, 1998). Any occupation can be analysed in terms of a stress-interaction process in two elements, namely job demands and job resources (Jones & Fletcher, 1996; Schaufeli & Bakker, 2002). Job demands refer to the degree to which the working environment contains stimuli that require some effort (Jones & Fletcher, 1996). According to De Jonge and Dormann (2003) job demands are the things that have to be done, within a particular time. Job demands lead to negative consequences if they require additional effort beyond the usual way of achieving the work goals. The additional effort required may result in additional cognitive, emotional, and/or behavioural activity, for example work

overload, personal conflicts and emotional demands. If job demands require additional effort to accomplish one's work goals, they are likely to elicit negative emotional responses such as, anxiety, depression or burnout. Job resources refer to different aspects of the work itself that reduce the job demands directly or indirectly and the associated physiological, psychological and social costs (Antonovsky, 1987; Demerouti et al., 2001; Karasek, 1979), to achieve personal/or work goals (Demerouti et al., 2001) or stimulate personal growth and skill development, for example social support, autonomy, feedback and job security (Demerouti et al., 2001; Karasek, 1979). Research indicates that a lack of job resources could be related to mental disengagement from work, its content and work in general (Schaufeli & Bakker, 2002).

Job insecurity has consistently been found to be associated with reduced levels of work attitudes, such as job satisfaction (Probst, 2002). Judge, Bourdreau and Bretz (1994) and Judge and Hulin (1993) described job satisfaction as a function of the balance between work role inputs, that is, what the individual inputs into the work role (e.g. education), and work role outcomes, that is, what is perceived (for example job security). As outcomes received relative to inputs invested increase, job satisfaction is hypothesized to increase. Ashford et al. (1989) indicated that employees who felt insecure about their future employment were more dissatisfied with their jobs compared to those who perceived their future job situation as more secure. Similar results have been obtained in a number of studies (Davy et al., 1997; Hartley et al., 1991; Heaney et al., 1994; Rosenblatt & Ruvio, 1996). Perceptions of job dissatisfaction are related to patterns of behaviour such as tardiness, absenteeism and high labour turnover, whereas job satisfaction is related to behaviour that indicates a positive organisations orientation (Pretorius & Rothmann, 2001). In a similar vein, perceived insecurity concerning one's future role in the organisation may also make the employee less inclined to remain with the organisation. Job insecurity, like any stressor, could lead to a withdrawal response as manifested in for example, higher levels of turnover intention (Arnold & Feldman, 1982; Brockner, 1988; Burke & Nelson, 1998; Davy et al., 1997; Dekker & Schaufeli, 1995; Hartley et al., 1999).

In order to explain the causal pattern or relationship between occupational stresses and the outcomes thereof, several theoretical models have been developed. The Person-Environment Fit model proposed by French, Coplan and Van Harrison (1982) views stress as arising from a misfit between the requirements of the job (e.g. demands, resources) and values, skills and

traits of the individual (Cooper, Dewe & O'Driscoll, 2001; Winefield et al., 2002). Implicit in the notion of the misfit, is the person's ability to handle or cope with the encounter, while aspects such as values, resources, demands and skills available will help to determine the perceived misfit. Subjectivity of the person (how the individual perceives the encounter) will furthermore increase the likelihood that strain will occur.

The Job Demands-Control Model of Karasek (1979) is based on the proposition that the interaction between job demands and job control (decision latitude) is the key to explaining strain-related outcomes (Cooper et al., 2001). In other words, jobs that combine high levels of demand with low levels of autonomy, control or decision latitude are the most stressful (Winefield et al., 2002). According to the Conservation of Resources theory (COR) (Hobfoll, 1989, 2001), strive to retain, protect and build resources and any threats towards the person is the potential or actual loss of their valued resources. Negative outcomes (i.e. stress, burnout and low work engagement) are likely to occur when there is, (a) a threat of a net loss of resources, (b) a net loss of resources, or (c) a lack of resource gain following the investment of resources (Hobfoll, 1989; Taris, et al., 2001). Work provides a source of income, enables social contacts, influences the structuring of time, and contributes to personal development. The perceived threat of unemployment involves the frustration of these needs and thus the potential loss of important financial and social resources (De Witte, 1999).

Downsizing and other forms of organisational change involving layoffs (for example mergers, acquisitions, outsourcing and organisational restructuring) will continue as production and overhead costs remain non-competitive (Burke & Nelson, 1998) and thus render job insecurity and lasting characteristics of working life. It's negative reactions, combined with the facts that uncertain job situations tend to increase change resistance (Noer, 1993), that the most valuable individuals are more inclined to seek alternative jobs (Greenhalgh & Rosenblatt, 1984), and that the survivors have to do more with fewer resources (Burke & Nelson, 1998), suggest that job insecurity is of vital concern for both employees and their organisations.

It has been argued by Greenhalgh and Rosenblatt (1984), Hartley, Jacobson, Klandermans and van Vuuren (1991), Roskies and Louis-Geurin (1990), Sverke and Hellgren (2002), that employees no longer can expect their relationships with the organisation to be life-long and secure, nor can they expect their job content and career development to be permanent and

reliable. Many authors (e.g., Dekker & Schaufeli, 1995; Latack & Dozier, 1986) argue that perceptions of uncertainty regarding the nature and existence of an employee's present job may be just as detrimental as actual job loss. This is in congruence with the idea that anticipation of a stressful event can have just as severe consequences as the actual event itself, if not more severe (Lazarus & Folkman, 1984). The radical change from a traditionally secure working environment to a rapidly changing and insecure one could have an impact not only on the well-being of individuals, but also on their work attitudes and behaviour, and, in the long run, on the vitality of the organisation (Sverke & Hellgren, 2002). According to Greenhalgh and Rosenblatt (1984), workers react to job insecurity, and their reactions have consequences for organisational effectiveness.

The research problem can be summarised as follows: it is clear that the experience of job insecurity is a reality worldwide. No programmes were implemented in the past to address the problem. Insecure working conditions are growing in the Vaal Triangle and companies are being exposed more than ever to the effects of the world economy, technological advancement and tough international competition. Unemployment has been a growing factor over the years, where organisational changes involving downsizing, mergers, outsourcing and restructuring are playing an increasingly big role. 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 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 as well as salaries and wages, the latter usually being the largest, immediate source of cost-savings. Research regarding job insecurity and its consequences in selected organisations (motor industry, steel industry, telecommunication service, insurance companies, wholesale, transport, produce companies, banking etc.) in the Vaal Triangle may offer useful information to provide some order and integration in the relationship between these variables where job insecurity can lead to a downward spiral and diminish the organisational effectiveness, such as lower well-being, morale, job attitudes, lower commitment and performance. This study can therefore contribute to the relationship between job insecurity and burnout and the relationship between work engagement and job insecurity.

The following research questions arise, based on the description of the problem:

- How are job insecurity, burnout, work engagement, general health and job satisfaction conceptualised in the literature?
- What is the current level of job insecurity in selected organisations in the Vaal Triangle?
- What is the current level of burnout in selected organisations in the Vaal Triangle?
- What is the current level of work engagement in selected organisations in the Vaal Triangle?
- What is the current level of general health in selected organisations in the Vaal Triangle?
- What is the current level of job satisfaction in selected organisations in the Vaal Triangle?
- Can job insecurity predict higher levels of burnout and lower levels of job satisfaction?
- What recommendations can be made for the prevention and/or management of job insecurity, burnout, work engagement, general health and job satisfaction in selected organisations in the Vaal Triangle?

1.2 RESEARCH OBJECTIVES

The research objectives are divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this research is to assess the psychometric properties of the Job Insecurity Questionnaire (De Witte, 1997), the Maslach Burnout Inventory–General Survey (MBI-GS) (Maslach et al., 1996), the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002), the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), the General Health Questionnaire (GHQ) (Goldberg, 1979) in selected organisations in the Vaal Triangle.

1.2.2 Specific objectives

- To conceptualise job insecurity, burnout, work engagement, general health and job satisfaction as conceptualised in the literature.
- To assess the current level of job insecurity in selected organisations in the Vaal Triangle.
- To assess the current level of burnout in selected organisations in the Vaal Triangle by using the mean scores.

- To assess the current level of work engagement in selected organisations in the Vaal Triangle by using the mean scores.
- To assess the current level of general health in selected organisations in the Vaal Triangle by using the mean scores.
- To assess the current level of job satisfaction in selected organisations in the Vaal Triangle by using the mean scores.
- To assess whether job insecurity predicts higher levels of burnout and lower levels of job satisfaction.
- To make recommendations for the prevention and/or management of job insecurity, burnout, work engagement, general health and job satisfaction in selected organisations in the Vaal Triangle.

1.3 RESEARCH METHOD

The research method for each of the four articles that are submitted for the purpose of this thesis consists of a brief literature review and an empirical study. In the following paragraph, relevant aspects of the empirical studies conducted in this thesis are discussed.

1.3.1 Research design

A cross-sectional design with a survey as technique of data collection was used to research the objectives of this research. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously, while the survey describes a technique of data collection in which questionnaires are used to gather data about an identified population (Burns & Grove, 1993). This design will be well suited to the descriptive and predictive functions associated with correlational research, in which relationships between variables are examined (Shaughnessey & Zechmeister, 1997).

1.3.2 Participants

An accidental sample of employees on various levels in selected organisations (government organisations and private organisations) in the Vaal Triangle define the study population. The study population for this research consisted of 1000 individuals. The participants included:

employees in different departments of a steel manufacturing industry (n = 78); employees in different departments of a financial institution (n = 40); employees in different departments of a government organisation (n = 85); employees in different departments of a chemical industry (n = 13). A total of 216 completed questionnaires were returned. This represents a response rate of 21,6 %.

1.3.3 Measuring instruments

Six questionnaires are used in the empirical study, namely the Job Insecurity Questionnaire (JIQ) (De Witte, 1997), the Maslach Burnout Inventory–General Survey (MBI-GS) (Maslach et al., 1996); the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002), General Health Questionnaire (GHQ) (Goldberg, 1979), the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), as well as a biographical questionnaire.

The *Job Insecurity Questionnaire* (JIQ) is used to measure job insecurity (De Witte, 1997). This 11-item questionnaire is used to measure the perceived job insecurity of the participants. The questionnaire consists of 11-items relating to job insecurity. Items encapsulate both the cognitive and affective dimensions of job insecurity and are arranged along a 5-point Likert-type scale with 1 = strongly agree, 3 = unsure and 5 = strongly disagree. The 11-items are answered by deciding to what extent they experience (dis)agreement with statements rated on each subscale. Job insecurity is assessed according to the cognitive, affective and total dimensions for this study. The average of the 11-items is an indication of the overall job insecurity, of the respondent. A low score would indicate that the respondent would experience a high degree of job insecurity whilst a high score indicates a low degree of job insecurity. De Witte (2000), in his studies, reported a Cronbach alpha coefficient of 0,92 (total) for this questionnaire to which he refers as "globale jobonzekerheid". On the 5-items encapsulating the affective dimension of job insecurity (for example "I feel uncertain about the future of my job"), a Cronbach alpha coefficient of 0,85 was reported and the 6-items referring to the cognitive dimension of job insecurity (for example "I think that I will be able to continue working here"), a Cronbach alpha coefficient of 0,90 was found, thus indicating high reliability (De Witte, 2000). De Witte also found an overlap between the cognitive and affective factor loadings and reported that both scales correlated interdependently very high (r = 0,76). Heymans (2002) obtained an alpha coefficient of 0,81. Buitendach (2004) reported

a Cronbach alpha coefficient of 0,84 for the cognitive dimension, and a Cronbach alpha coefficient of 0,89 for the affective dimension.

The *Maslach Burnout Inventory–General Survey* (MBI-GS) (Maslach et al., 1996) is used to measure burnout. The MBI-GS has three subscales: Exhaustion (Ex) (5-items; for example "I feel used up at the end of the workday"), Cynicism (Cy) (5-items; for example "I have become less enthusiastic about my work") and Professional Efficacy (PE) (6-items; for example "In my opinion I am good at my job"). Together the sub-scales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach coefficient alphas) varied from 0,87 for exhaustion, 0,73 to 0,84 for Cynicism and 0,76 to 0,84 for Professional Efficacy. Test-retest reliabilities after one year were 0,65, Exhaustion, 0,60, Cynicism and 0,67, Professional Efficacy. All items are scored on a 7-point frequency-rating scale ranging from 0 ("never"), to 6 ("daily"). High scores on Exhaustion and Cynicism, and low scores on Professional Efficacy are indicative of burnout. Storm (2002) confirmed the three-factor structure of the MBI-GS in a sample of 2396 members of the South African Police Service (SAPS), but recommended that item 13 should be dropped from the questionnaire. She confirmed the structural equivalence of the MBI-GS for different race groups in the SAPS. The following Cronbach alpha coefficients were obtained for the MBI-GS: Exhaustion: 0,88; Cynicism: 0,79; Professional Efficacy: 0,78 (Storm, 2002). Naudé (2003) reported a Cronbach alpha coefficient of 0,79 for the exhaustion dimension, a Cronbach alpha coefficient of 0,68 for the depersonalisation dimension and a Cronbach alpha coefficient of 0,78 for the personal accomplishment dimension.

The *Utrecht Work Engagement Scale* (UWES) (Schaufeli et al., 2002) is used to measure the levels of engagement of the participants. The UWES includes three dimensions, namely vigour, dedication and absorption, which is conceptually seen as the opposite of burnout and is scored on a 7-point frequency-rating scale, varying from 0 ("never") to 6 ("every day"). The questionnaire consists of 17 questions and includes questions like "I am bursting with energy every day in my work", "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,68 and 0,91. The alpha coefficient could be improved (α varies between 0,78 and 0,89 for the three sub-scales) by eliminating a few items without substantially decreasing the scales internal consistency. Storm (2002) obtained the following alpha coefficients for the UWES in a sample of 2396 members of the South African Police Service; Vigour: 0,78; Dedication: 0,89; Absorption:

0,78. Naudé (2003) reported a Cronbach alpha coefficient of 0,70 for vigour, a Cronbach alpha coefficient of 0,83 for dedication and a Cronbach alpha coefficient of 0,67 for Absorption.

The *Minnesota Satisfaction Questionnaire* (MSQ) (Weiss et al., 1967) will be used to measure job satisfaction. The MSQ has 20-items and measures satisfaction with various aspects of a job. The response format was a 5-point Likert-type scale (1 = very dissatisfied, 5 = very satisfied). Choices at the end (5) of the scale indicate total agreement with the item, suggesting job satisfaction whereas choices at the beginning of the scale (1) indicate total disagreement with the statement made in the item, suggesting the degree of job dissatisfaction. Test-retest reliabilities of 0,70 and 0,80 were found over a span of a week and a year respectively (Cook et al., 1981). Rothmann (2001) found a Cronbach alpha coefficient of 0,96 and an inter-item correlation of 0,22, which is acceptable for broad higher order constructs (Clark & Watson, 1995). Another feature of the MSQ short form is that it can be used to measure two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself (Spector, 1997). Buitendach (2004) reported a Cronbach alpha coefficient of 0,82 for the extrinsic dimension, and a Cronbach alpha coefficient of 0,79 for the intrinsic dimension.

The *General Health Questionnaire* (GHQ) (Goldberg, 1979) was used to measure well-being. The scale is a screening test developed for the purpose of detecting non-psychiatric health symptoms. Items are scored on a four interval response mode ranging from 0 to 3, where 0 indicates no perceptions of mental health complaints and 3 indicates frequently perceived health complaints. Items 1-7 measure somatic symptoms, items 8-14 measure anxiety/insomnia, items 15-21 measure social dysfunction and items 22-28 measure severe depression. Hellgren and Sverke (2003) reported an internal consistency reliability for the GHQ scale of 0,85 (time 1) and 0,83 (time 2). Oosthuizen (2000) found the following Cronbach alpha coefficients for the GHQ, somatic symptoms (0,76), anxiety/insomnia (0,83), social dysfunction (0,73) and depression (0,78).

1.3.4 Statistical analysis

The analysis is carried out with the SPSS program (SPSS, 2003). In the first step, means standard deviations, skewness and kurtosis are determined to describe the data. The reliability and validity of the questionnaires are also determined by means of Cronbach alpha coefficients, mean inter-item correlations and their distribution scales, as well as confirmatory factor analysis with the SPSS (2003).

Construct (structural) equivalence is computed to compare the factor structure for the different culture groups included in this study. Exploratory factor analysis with a Procrustean target rotation is used to determine the construct equivalence of the measuring instruments for the different culture groups (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), the comparison between the similarities of the factor structure of two cultural groups could be underestimated due to the arbitrary spatial allocation of factors during factor analysis. Rather, it is suggested that target rotation be conducted prior to comparing the factor solutions of cultural groups by rotating the factor loading matrices with regard to each other in order to maximize the agreement between the factors. During this process, one group is arbitrarily assigned the target group and the factor loadings of the other group rotated towards the target group to form a common facto including matrix, also known as centroid. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but sensitive to a constant added to all loadings of a factor.

Because this index does not have a known sampling distribution, it is impossible to establish confidence intervals. Values higher than 0,95 are deemed to be evident of factorial similarity or equivalence across different cultural groups (Van de Vijver, & Leung, 1997), whereas values lower than 0,90 (Van de Vijver, & Poortinga, 1994) or even 0,85 (Ten Berge, 1986) should be viewed as an indication of sufficient existing differences. Furthermore, bias analysis is necessary because construct equivalence does not presuppose the absence of bias. An instrument could therefore demonstrate acceptable construct equivalence and still be biased (Van de Vijver, & Leung, 1997).

Pearson correlation coefficient is used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Multivariate analysis of variance (MANOVA) is used to determine the significance of differences between burnout and job insecurity of demographic groups, such as age, qualification, gender, race and tenure. Manova tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA a new dependent that maximizes group differences is created from the set of dependent variables. One-way analysis of variance is then performed on the newly created dependent variable. Wilk's lambda is used to test the significance of the effects. Wilk's lambda is a likelihood ratio statistic of the data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect as significant in MANOVA, ANOVA is used to discover which dependent variables are affected. Because multiple ANOVAS are used, a Bonferroni type adjustment is made for inflated Type 1 error.

Univariate analysis of variance (ANOVA) is used to determine the significance of differences between engagement and job satisfaction of demographic groups, such as age, qualification, gender, race and tenure. Anova tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). One-way analysis of variance is then performed on the newly created dependent variable. Wilk's lambda is used to test the significance of the effects. Wilk's lambda is a likelihood ratio statistic of the data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. ANOVA is used to discover which dependent variables are affected. Because multiple ANOVAS are used, a Bonferroni type adjustment is made for inflated Type 1 error.

Regression analysis were conducted to determine the percentage of variance in the dependent variables 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.

1.4 DIVISION OF CHAPTERS

The chapters are presented as follows:

Chapter 1: Introduction

Chapter 2: Research Article 1 (Burnout and Work Engagement in Selected Organisations in The Vaal Triangle)

Chapter 3: Research Article 2 (The validation of The Job Insecurity Questionnaire in Selected Organisations in The Vaal Triangle)

Chapter 4: Research Article 3 (The validation of The Minnesota Job Satisfaction Questionnaire in Selected Organisations in The Vaal Triangle)

Chapter 5: Research Article 4 (The relationship between Job Insecurity, Burnout, Work Engagement, General Health and Job Satisfaction in Selected Organisations In The Vaal Triangle)

Chapter 6: Conclusions, Limitations and Recommendations.

1.5 Chapter summary

In this chapter the problem statement was given. Thereafter the research objectives, that consists of a general objective and specific objectives were provided. The research method was explained and finally the division on chapters was provided. Next, Chapter 2 (Research Article 1), burnout and work engagement in selected organisations in the Vaal Triangle are discussed.

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CHAPTER 2

RESEARCH ARTICLE 1

BURNOUT AND WORK ENGAGEMENT IN SELECTED ORGANISATIONS IN THE VAAL TRIANGLE

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ABSTRACT

The objectives of this study were to assess the construct validity and internal consistency of the Maslach Burnout Inventory-General Survey (MBI-GS) and the Utrecht Work Engagement Scale (UWES), as well as the relationship, levels and socio demographic differences of burnout and work engagement of employees in selected organisations in the Vaal Triangle. A cross-sectional survey design was used. Accidental samples of workers at the selected oganisations (N = 216) were taken. The MBI-GS, the UWES and a biographical questionnaire were administered. Exploratory factor analysis of the MBI-GS resulted in a three-factor model of burnout, consisting of exhaustion, cynicism and professional efficacy and the UWES resulted in a one-factor model of engagement. The scales demonstrated acceptable levels of internal consistencies. No practically significant differences, based on biographical characteristics were found regarding burnout and engagement scores.

OPSOMMING

Die doelstellings van hierdie studie was om die konstrukgeldigheid en interne konsekwentheid van die Maslach Uitbrandingsvraelys–Algemene Opname (MBI-GS) en die Uitrecht–Werksbegeesteringskaal (UWES) asook die verhouding, vlakke en sosiale-demografiese verskille van uitbranding en werksbegeestering vir werknemers in geselekteerde organisasies in die Vaaldriehoek. 'n Dwarssnee opname-ontwerp is gebruik. 'n Beskikbaarheidsteekproef van werknemers in die geselekteerde organisasies (N = 216) is geneem. Die MBI-GS, die UWES en 'n biografiese vraelys is as meetinstrumente gebruik. Eksploratiewe faktoranalise van die MBI-GS het geresulteer in 'n driefaktormodel van uitbranding en die UWES het geresulteer in 'n eenfaktormodel vir begeestering. Die meetinstrumente het aanvaarbare interne konsekwentheid getoon. Geen prakties betekenisvolle verskille, gebaseer op demografiese veranderlikes bestaan betreffende die tellings van uitbranding en werksbegeestering.

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According to Maslach and Leiter (1997) there have been fundamental changes in the workplace and the nature of their jobs. The workplace today is a cold, hostile, demanding environment, both economically and psychologically (Maslach & Leiter, 1997). People are emotionally, physically, and spiritually exhausted. The daily demands of the job, the family, and everything in between and the thrill of achievement are more and more difficult to attain. Dedication and commitment to the job are fading. People are becoming cynical, keeping their distance, trying not to let themselves get too involved (Maslach & Leiter, 1997).

Burnout is associated with the unsuccessful progression of continued attempts to buffer the impact of environmental stressors, resulting in a general breakdown of resources, and ultimately in the inception of burnout (Schaufeli & Enzmann, 1998). Maslach, Schaufeli and Leiter (2001) define burnout as a prolonged response to chronic, emotional and interpersonal stressors, which are characterised by exhaustion, cynicism and inefficacy. The exhaustion component predicts stress-related health consequences and refers to feelings of being overextended and drained from one's emotional and physical resources. Exhaustion is due to a combination of personal stressors and job and organisational stressors. People who expect a lot from themselves and the organisations in which they work tend to create more internal stress, which in turn leads to emotional exhaustion. Similarly, emotional exhaustion is fuelled by having too much work to do, by role conflict, and by the type of interpersonal interactions encountered at work. Frequent, intense face-to-face interactions that are emotionally charged are associated with higher levels of emotional exhaustion. Some individuals are more prone to experience burnout and disengagement, and the researcher has put forward hypotheses on the antecedents of burnout and engagement. For the purpose of this study, individual factors such as age, gender, level of qualification, race and tenure were used (Maslach, Schaufeli & Leiter, 2001).

The objectives of this study were to determine the construct validity and internal consistency of the Maslach Burnout Inventory-General Survey (MBI-GS) and the Utrecht Work Engagement Scale (UWES). Another objective of this study was to determine the relationship, levels and socio demographic differences of burnout and work engagement of employees in selected organisations in the Vaal Triangle.

Burnout

Unsuccessful attempts to cope with a variety of negative stress conditions can result in a multidimensional chronic stress reaction: burnout (Basson & Rothmann, 2002). According to Friedman (2000), burnout is conceptualised as a three-dimensional phenomenon consisting of exhaustion, cynicism and professional efficacy. Exhaustion has been identified as the most salient reaction to the stress of job demands and the sense of unaccomplishment at work. When people feel cynical, they assume a cold, distant, depersonalised attitude toward their work and the people they encounter through work. Thus, exhaustion refers to the fact that the employee is incapable to perform 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). Individuals tend to minimize their involvement at work, and even relinquish their ideals. Feelings of ineffectiveness or lack of accomplishment are accompanied by a growing sense of inadequacy. The world seems to conspire against efforts to make progress. People loose confidence in their ability to make a difference professionally (Friedman, 2000).

Fourie (2003) regard burnout as a syndrome of complex processes which include physical, mental and emotional processes, a response to constant and repeated pressure that is difficult to control because of the long-term involvement in emotionally demanding situations. This ultimately manifests as exhaustion, a sense of reduced effectiveness, decreased motivation and a negative evaluation of the self, with specific reference to dysfunctional attitudes and behaviours at work (Fourie, 2003).

Research on burnout has established the sequential link from exhaustion to cynicism (Maslach, Schaufeli & Leiter, 2001). However, the subsequent link to inefficacy is less clear. It is also the case that burnout scores are fairly stable over time, which supports the notion that burnout is a prolonged response to chronic job stressors (Maslach, Schaufeli & Leiter, 2001).

During the development of the Maslach Burnout Inventory, burnout was found to be related to anxiety and depression. Subsequently, the distinction between burnout and depression was established empirically in several studies using the MBI and various measures of depression (Leiter & Durup, 1994). This research established that burnout is a problem that is specific to

the work context, in contrast to depression, which tends to pervade every domain of a person's life. These findings have lent empirical support to earlier claims that burnout is more job-related and situation-specific than general depression (Freudenberger, 1983; Warr, 1987).

Further support for this distinction comes from an analysis of various conceptualisations of burnout, which notes five common elements of the burnout phenomenon (Maslach & Schaufeli, 1993). (a) There is a predominance of dysphoric symptoms such as mental or emotional exhaustion, fatigue, and depression. (b) The emphasis is on mental and behavioural symptoms more than physical symptoms. (c) Burnout symptoms are work-related. (d) The symptoms manifest themselves in "normal" persons who did not suffer from psychopathology before. (e) Decreased effectiveness and work performance occur because of negative attitudes and behaviours.

Burnout is an individual experience that is specific to the work context (Maslach, Schaufeli & Leiter, 2001). People do not simply respond to the work setting; rather, they bring unique qualities to the relationship. These personal factors include demographic variables (such as age or formal education), enduring personality characteristics, and work-related attitudes. Several of these individual characteristics were found to be related to burnout (Maslach, Schaufeli & Leiter, 2001). However, these relationships are not as great in size as those for burnout and situational factors, which suggests that burnout is more of a social phenomenon than an individual one (Maslach et al., 2001).

Traditionally, the focus of psychology has been on negative states rather than on positive ones (Maslach et al., 2001). The prevalence of the pathogenic paradigm in health and social sciences is confirmed by Diener, Suh, Lucas and Smith (1999) reporting that 17 times more scientific articles were published on negative feelings than on positive feelings. However, more attention is given to the study of human strengths and optimal functioning. This "positive psychology" is seen as an alternative to the predominant focus on pathology and deficits. Viewed from this perspective, it is not surprising that the concept of burnout (which represents a negative psychological state) is being supplemented and enlarged by its positive antithesis of job engagement. Empirical studies revealed that some employees, regardless of high job demands and long hours do not develop burnout in comparison to others but seemed to find pleasure in hard work and dealing with job demands (Schaufeli & Bakker, 2004).

Work engagement

Engagement is not a momentary and specific state, but a more persistent and pervasive affective-cognitive state that is not focused on a particular object, event, individual or behaviour (Schaufeli, Salanova, González-Romá & Bakker, 2002), that is characterised by vigour, dedication and absorption. Vigour reflects the willingness and ability of the individual to invest effort in his/her job. This implies the presence of high levels of energy and mental resilience. Dedication refers to a sense of significance, enthusiasm and absorption whereas absorption reflects the full concentration and happiness of being engrossed in one's work. Time passes quickly when the individual is carried away by the job (Maslach, Schaufeli & Leiter, 2001). Schaufeli et al. (2002) indicates that engaged employees have a sense of energetic and effective connections with their work activities and perceive themselves as being able to deal completely with their job demands.

Maslach and Leiter (1997) rephrased burnout as an erosion of engagement with the job. What started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement turns into cynicism and efficacy turns into ineffectiveness. Accordingly, engagement is characterised by energy, involvement, and efficacy – the direct opposites of the three burnout dimensions. By implication, engagement is assessed by the opposite pattern of scores on the three MBI-GS dimensions (Maslach & Leiter, 1997).

The second path was taken by Schaufeli and his colleagues, agreeing in part with the description of engagement proposed by Maslach and Leiter (1997), with the difference that engagement be measured with a different instrument worthy of operationalisation in its own right (Schaufeli et al., 2002). They further argue that the simultaneous empirical investigation of burnout and engagement would be impossible with one instrument. Based on a theoretical analysis, burnout and engagement were conceptually related to each other, resulting in two work-related dimensions of well-being being identified, namely (1) *Activation,* ranging from exhaustion to vigour; and (2) *Identification,* ranging from cynicism to dedication (Schaufeli & Bakker, 2004). Also, personal accomplishment and absorption were included in the burnout and engagement constructs respectively, but not in an antithetical manner. It was argued that personal accomplishment was added only afterwards in the development of the Maslach Burnout Inventory (MBI) when a third factor was discovered during a factor-

analysis of a preliminary version of the MBI (Maslach, 1993). Similarly, absorption was discovered as a related dimension of the engagement construct during 30 in-depth interviews (Schaufeli et al., 2002).

Burnout and engagement are viewed as opposite constructs, conceptualising engagement in its own right, noting that burnout and engagement must be measured independently, with different instruments (Schaufeli et al., 2002).

Concerning biographical characteristics, Storm (2002) found that Indian participants experienced the highest levels of exhaustion and cynicism, followed by white and black participants. Coloured participants experienced the lowest levels of exhaustion and cynicism. No practically significant differences were found between the burnout scores of the white and black participants. According to the study of Bosman (2004), based on engagement as measured by the UWES, no practically significant differences were found with regard to race. Antonovsky (1979) suggested that black participants are expected to score lower in indices of psychological well-being compared to white participants, due to factors related amongst others to socio-cultural background and life circumstances.

Age the one demographic variable 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 (Maslach et al., 2001). Bosman (2004), however found no significant differences with regard to burnout and age. Maslach et al. (2001) note that some studies have found that individuals 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. Storm (2002) found no significant differences with regard to the engagement levels of participants with different levels of education. With regard to tenure and engagement Bosman (2004) found that participants who worked for one year or less within an organisation were more engaged than those who have been working for the company for 6 to 10 years, 11 to 20 years and in excess of 20 years. In terms of engagement, Bosman (2004) found that employees who had been working one year or less demonstrated higher levels of engagement than those who had been working for 11 to 20 years.

To summarise, burnout and engagement are conceptually related to each other, resulting in the identification of two work-related dimensions of well-being, namely (1) Activation,

ranging from exhaustion to vigour; and (2) Identification, ranging from cynicism to dedication (Schaufeli & Bakker, 2004). Thus, engagement can be distinguished but not divorced from burnout in terms of its structure and operationalisation. Engagement is theoretically viewed as the opposite end of the continuum from burnout.

Hypotheses

The hypotheses of this study are as follows:

H_1: Burnout as measured by the MBI-GS is a three-dimensional construct with acceptable levels of internal consistency for each of its subscales and is a construct equivalent measuring instrument for the different culture groups in selected organisations in the Vaal Triangle.
H_2: Work engagement as measured by the UWES is a three-dimensional construct with acceptable levels of internal consistency for each of its subscales and is a construct equivalent measuring instrument for the different culture groups in selected organisations in the Vaal Triangle.
H_3: Significant differences regarding burnout levels exist between different age groups, gender, level of qualification, race groups and tenure.
H_4: Significant differences regarding work engagement levels exist between different age groups, gender, level of qualification, race groups and tenure.

METHOD

Research design

A cross-sectional design with a survey as technique of data collection was used to research the objectives of this thesis. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993). This design will be well suited to the descriptive and predictive functions associated with correlational research, in which relationships between variables are examined (Shaughnessey & Zechmeister, 1997).

Participants

An accidental sample of employees on various levels in selected organisations (government organisations and private organisations) in the Vaal Triangle define the study population. The study population for this research consisted of 1000 individuals. The participants included: employees in different departments of a steel manufacturing industry (n = 78); employees in different departments of a financial institution (n = 40); employees in different departments of a government organisation (n = 85); employees in different departments of a chemical industry (n = 13). A total of 216 completed questionnaires were returned. This represents a response rate of 21,6 %. Descriptive information of the sample is indicated in Table 1.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Age	Less than 25	16	7,4%
	25-34	85	39,4%
	35-44	70	32,4%
	45-54	36	16,7%
	55+	9	4,2%
Gender	Male	98	45,4%
	Female	118	54,6%
Race	Black	88	40,7%
	White	128	59,3%
Qualification	Grade 10-12	116	53,7%
	Diploma	68	31,5%
	Degree	19	8,8%
	Degree +	13	6,0%
Years working in the company	Less than 1 year	15	6,9%
	1-4 years	53	24,6%
	5-10 years	60	27,8%
	11-15 years	46	21,3%
	16-20 years	17	7,9%
	Longer than 20 years	25	11,6%
Years in present position	Less than 1 year	26	12,0%
	1-4 years	99	45,8%
	5-10 years	66	30,6%
	11-15 years	17	7,9%
	16-20 years	1	0,5%
	Longer than 20 years	7	3,2%
Category	Professional (registered)	37	17,1%
	Semi-Professional	64	29,6%
	Skilled	89	41,2%
	Semi-Skilled	19	8,8%
	Unskilled (general worker)	7	3,2%

In summary, the group can be described as follows: The mean age of the respondents was 27,04 years with 39,4% falling within the 25 to 34 age bracket. The majority of this group were female (54,6%). A large percentage (53,7%) of the participants indicated that their highest qualification was grade 10 to 12. The majority of the group are skilled employees (41,2%), these organisations represents a high average of skilled workers.

Measuring instruments

In this study three measuring instruments, namely the Maslach Burnout Inventory–General Survey (MBI-GS) (Maslach et al., 1996) and the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002) were used, as well as biographical information was gathered.

The *Maslach Burnout Inventory–General Survey* (MBI-GS) (Maslach et al., 1996) will be used to measure burnout. The MBI-GS has three subscales: Exhaustion (Ex) (5-items; for example "I feel used up at the end of the workday"), Cynicism (Cy) (5-items; for example "I have become less enthusiastic about my work") and Professional Efficacy (PE) (6-items; for example "In my opinion I am good at my job"). Together the sub-scales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach coefficient alphas) varied from 0,87 for exhaustion, 0,73 to 0,84 for Cynicism and 0,76 to 0,84 for Professional efficacy. Test-retest reliabilities after one year were 0,65, Exhaustion, 0,60, Cynicism and 0,67, Professional efficacy. All items are scored on a 7-point frequency-rating scale ranging from 0 ("never"), to 6 ("daily"). High scores on Exhaustion and Cynicism, and low scores on Professional efficacy are indicative of burnout. Storm (2002) confirmed the three-factor structure of the MBI-GS in a sample of 2396 members of the South African Police Service (SAPS), but recommended that item 13 should be dropped from the questionnaire. She confirmed the structural equivalence of the MBI-GS for different race groups in the SAPS. The following Cronbach alpha coefficients were obtained for the MBI-GS: Exhaustion: 0,88; Cynicism: 0,79; Professional efficacy: 0,78 (Storm, 2002). A Cronbach alpha coefficient of 0,79 for the exhaustion dimension was reported by Naudé (2003), a Cronbach alpha coefficient of 0,68 for the depersonalisation dimension and a Cronbach alpha coefficient of 0,78 for the personal accomplishment dimension.

The *Utrecht Work Engagement Scale* (UWES) (Schaufeli et al., 2002) will be used to measure the levels of engagement of the participants. The UWES includes three dimensions,

namely vigour, dedication and absorption, which is conceptually seen as the opposite of burnout and is scored on a 7-point frequency-rating scale, varying from 0 ("never") to 6 ("every day"). The questionnaire consists of 17 questions and includes questions like "I am bursting with energy every day in my work"; "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,68 and 0,91. The alpha coefficient could be improved (α varies between 0,78 and 0,89 for the three sub-scales) by eliminating a few items without substantially decreasing the scales' internal consistency. Storm (2002) obtained the following alpha coefficients for the UWES in a sample of 2396 members of the South African Police Service; Vigour: 0,78; Dedication: 0,89; Absorption: 0,78. Naudé (2003) reported a Cronbach alpha coefficient of 0,70 for vigour, a Cronbach alpha coefficient of 0,83 for dedication and a Cronbach alpha coefficient of 0,67 for Absorption.

Statistical analysis

The analysis was carried out with the SPSS program (SPSS, 2003). The reliability and validity of the MBI-GS and UWES were determined by means of Cronbach alpha coefficients, mean inter-item correlations and their distribution scales, as well as confirmatory factor analysis with the SPSS (2003).

Construct (structural) equivalence was computed to compare the factor structure for the different culture groups included in this study. Exploratory factor analysis with a Procrustean target rotation was used to determine the construct equivalence of the MBI-GS and UWES for the different culture groups (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), the comparison between the similarities of the factor structure of two cultural groups could be underestimated due to the arbitrary spatial allocation of factors during factor analysis. Rather, it is suggested that target rotation be conducted prior to comparing the factor solutions of cultural groups by rotating the factor loading matrices with regard to each other in order to maximize the agreement between the factors. During this process, one group is arbitrarily assigned the target group and the factor loadings of the other group rotated towards the target group to form a common facto including matrix, also known as centroid. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but sensitive to a constant added to all loadings of a factor.

Because this index does not have a known sampling distribution, it is impossible to establish confidence intervals. Values higher than 0,95 are deemed to be evident of factorial similarity or equivalence across different cultural groups (Van de Vijver, & Leung, 1997), whereas values lower than 0,90 (Van de Vijver, & Poortinga, 1994) or even 0,85 (Ten Berge, 1986) should be viewed as an indication of sufficient existing differences. Furthermore, bias analysis is necessary because construct equivalence does not presuppose the absence of bias. An instrument could therefore demonstrate acceptable construct equivalence and still be biased (Van de Vijver, & Leung, 1997).

Pearson correlation coefficient was used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between burnout and engagement of demographic groups, such as age, qualification, gender, race and tenure. Manova tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA a new dependent that maximizes group differences is created from the set of dependent variables. One-way analysis of variance is then performed on the newly created dependent variable. Wilk's lambda was used to test the significance of the effects. Wilk's lambda is a likelihood ratio statistic of the data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect as significant in MANOVA, ANOVA was used to discover which dependent variables were affected. Because multiple ANOVAS were used, a Bonferroni type adjustment was made for inflated Type 1 error.

RESULTS

Construct equivalence of the MBI-GS and the UWES

A simple principal components analysis was conducted on the items of the MBI-GS on the total sample of employees in selected organisations in the Vaal Triangle. Exploratory factor analysis for the MBI-GS was done with the help of SPSS (2003). Analysis of eigenvalues

(larger than 1) and scree plot indicated that three-factors which explained 60,73% of the variance could be extracted. Next, a principal component analysis with a direct oblimin was used in carrying out factor analysis per race group. The pattern matrices for Black and White are reported in Table 2.

Three-factors exist for the MBI-GS which are parallel to those of the MBI-HSS (Maslach et al., 1996). The subscales are referred to as exhaustion, cynicism and professional efficacy. These subscales will be elaborated on below. Together they provide a three-dimensional perspective on burnout. The MBI-GS consists of 16-items. Items 1, 2, 3, 4, and 6 measure exhaustion; cynicism is measured by items items 8, 9, 14 and 15; and items 5, 7, 10, 11, 12, and 16 measure professional efficacy.

The pattern matrices of the three-factor solutions for Blacks and Whites were used as input for an exploratory factor analysis with target rotations. The three-factor structure was compared across groups by rotating one solution to the other. After target rotation, the following Tucker's phi coefficients were obtained: a) Factor 1 = 0,97; b) Factor 2 = 0,96; c) Factor 3 = 0,93. These Tucker's phi coefficients compared favourably with the guideline of 0,90. Inspection of Table 2 indicated that the MBI-GS is a construct equivalent questionnaire and can be used on both races for the purpose of this research.

Table 2

Pattern Matrix of the MBI-GS

Black				White			
Item	1	2	3	Item	1	2	3
MBI-GS 1	**0,84**	-0,05	-0,09	MBI-GS 1	**0,90**	0,00	-0,10
MBI-GS 2	**0,75**	0,29	-0,07	MBI-GS 2	**0,90**	0,01	-0,14
MBI-GS 3	**0,67**	0,16	0,16	MBI-GS 3	**0,82**	-0,07	0,15
MBI-GS 4	**0,50**	-0,08	**0,49**	MBI-GS 4	**0,77**	-0,03	0,18
MBI-GS 5	0,08	**0,74**	0,00	MBI-GS 5	0,22	**0,54**	0,18
MBI-GS 6	**0,75**	0,03	0,23	MBI-GS 6	**0,82**	0,04	0,11
MBI-GS 7	-0,09	**0,75**	-0,10	MBI-GS 7	0,11	**0,62**	-0,47
MBI-GS 8	-0,04	-0,07	**0,85**	MBI-GS 8	**0,56**	-0,10	0,42
MBI-GS 9	-0,04	-0,06	**0,88**	MBI-GS 9	**0,60**	-0,11	0,42
MBI-GS 10	-0,04	**0,71**	0,05	MBI-GS 10	-0,11	**0,80**	0,14
MBI-GS 11	0,02	**0,75**	0,13	MBI-GS 11	-0,10	**0,84**	0,21
MBI-GS 12	0,04	**0,80**	-0,15	MBI-GS 12	-0,06	**0,77**	0,06
MBI-GS 14	**0,46**	-0,11	-0,14	MBI-GS 14	0,28	0,14	**0,71**
MBI-GS 15	**0,39**	-0,08	**0,47**	MBI-GS 15	0,21	0,02	**0,72**
MBI-GS 16	0,07	**0,70**	0,14	MBI-GS 16	-0,05	**0,72**	-0,07

After the construct equivalence was confirmed a principal component analysis with direct oblimin was used and the pattern matrices for the total sample are reported in Table 3. The scree plot and eigenvalues showed three-factors which explains 62,6% of the total variance.

Table 3

Pattern Matrix of the MBI-GS for the Total Sample

Item	1	2	3
1. I feel emotionally drained	**0,83**	-0,02	0,01
2. I feel used up at the end of the workday	**0,80**	0,18	-0,00
3. I feel tired when I get up in the morning and have to face another day on the job	**0,81**	0,02	0,13
4. Working all day is really a strain for me	**0,79**	-0,11	0,20
5. I can effectively solve the problems that arise in my work	0,20	**0,63**	-0,29
6. I feel burned out from my work	**0,85**	0,01	0,11
7. I feel I am making an effective contribution to what this organisation does	-0,14	**0,73**	-0,11
8. I have become less interested in my work since I started this job	**0,59**	-0,23	0,40
9. I have become less enthusiastic about my work	**0,67**	-0,25	0,31
10. In my opinion, I am good at my job	-0,06	**0,72**	0,04
11. I feel exhilarated when I accomplish something at work	0,06	**0,72**	-0,00
12. I have accomplished many worthwhile things in this job	-0,06	**0,79**	0,07
14. I have become more cynical about whether my work contributes anything	0,29	-0,02	**0,79**
15. I doubt the significance of my work	**0,49**	-0,14	0,48
16. At my work, I feel confident that I am effective at getting things done	-0,12	**0,73**	0,22

Next, a simple principal components analysis was conducted on the 17-items of the UWES on the total sample of employees in selected organisations in the Vaal Triangle. Exploratory factor analysis for the UWES was done with the help of SPSS (2003). Analysis of eigenvalues (larger than 1) and scree plot indicated that one-factor which explained 54,1% of the variance could be extracted. Next, the component matrices of the two language groups were compared (see Table 4).

Table 4

Component Matrices of the Items of the UWES for Blacks and Whites

Black		White	
Item	1	Item	1
UWES 1	0,59	UWES 1	0,80
UWES 2	0,80	UWES 2	0,88
UWES 3	0,65	UWES 3	0,62
UWES 4	0,66	UWES 4	0,89
UWES 5	0,68	UWES 5	0,92
UWES 6	0,57	UWES 6	0,57
UWES 7	0,71	UWES 7	0,88
UWES 8	0,56	UWES 8	0,88
UWES 9	0,72	UWES 9	0,89
UWES 10	0,73	UWES 10	0,81
UWES 11	0,64	UWES 11	0,82
UWES 12	0,66	UWES 12	0,77
UWES 13	0,66	UWES 13	0,85
UWES 14	0,69	UWES 14	0,90
UWES 15	0,58	UWES 15	0,86
UWES 16	0,53	UWES 16	0,46
UWES 17	0,70	UWES 17	0,66

This one-factor model corresponds with the findings of Storm and Rothmann (2003), who found that a re-specified one-factor model fitted their data the best. Next, a simple factor analysis was conducted. The component matrix is reported in Table 5.

Table 5

Component Matrix of the UWES for the Total Sample

Item	
1. I am bursting with energy in my work	0,69
2. I find my work full of meaning and purpose	0,83
3. Time flies when I'm working	0,60
4. I feel strong and vigorous in my job	0,80
5. I am enthusiastic about my job	0,83
6. When I am working, I forget everything else around me	0,42
7. My job inspires me	0,82
8. When I get up in the morning, I feel like going to work	0,77
9. I feel happy when I am engrossed in my work	0,81
10. I am proud of the work that I do	0,70
11. I am immersed in my work	0,74
12. In my job, I can continue working for very long periods of time	0,72
13. To me, my work is challenging	0,76
14. I get carried away by my work	0,82
15. I am very resilient, metally, in my job	0,73
16. It is difficult to detach myself from my job	0,49
17. I always persevere at work, even when things do not go well	0,64

Descriptive statistics, Cronbach alpha coefficients and the inter-item correlation coefficients of the MBI-GS and UWES for the selected organisations in the Vaal Triangle are given in Table 6.

Table 6

Descriptive Statistics and Alpha Coefficients of the Measuring Instruments

Test and items	N	Mean	*SD*	Skewness	Kurtosis	Inter-item *r*	α
MBI-GS							
Exhaustion	216	9,27	7,59	0,88	0,10	0,62	0,89
Cynicism	216	2,07	1,42	0,50	-0,34	0,42	0,76
Professional Efficacy	216	23,38	6,68	-1,31	0,33	0,44	0,82
UWES	216	70,54	20,23	-0,94	0,16	0,53	0,95

The information reflected in Table 6 indicates that the scores on all subscales are normally distributed. The internal consistency of the 15-item MBI-GS scale and the 17-item UWES scale obtained acceptable Cronbach alpha coefficients, falling above the 0,70 guidelines (Nunnally & Bernstein, 1994). An acceptable level of inter-item correlation has been obtained for Cynicism and Professional Efficacy with the guideline of $0,15 < r < 0,50$ (Clark & Watson, 1995). The exhaustion subscale and engagement indicated high levels of inter-item correlations. The inter-item correlations $(r) = 0,62$ and $(r) = 0,53$ are above the guideline of 0,50, as suggested by Clark and Watson (1995). A possible reason for this high score may be the fact that the items are narrowly defined. These results need further investigation.

Table 7 shows the correlation coefficients between the MBI-GS and the UWES.

Table 7

Correlation Coefficients between the MBI-GS and UWES

Item	1	2	3
1. Exhaustion	-	-	-
2. Cynicism	0,62*++	-	-
3. Professional Efficacy	-0,01	-0,19	-
4. UWES	-0,41*+	-0,41*+	0,40*+

* Statistically significant $p \leq 0,05$

\+ Correlation is practically significant $r \geq 0,30$ (medium effect)

++Correlation is practically significant $r \geq 0,50$ (large effect)

Table 7 shows practically significant correlation coefficients of medium effect between exhaustion and engagement. Professional efficacy and engagement are practically significantly related. Practically significant correlation coefficients of medium effect exist between cynicism and engagement. A practically significantly correlation of large effect between exhaustion and cynicism exist.

Exhaustion and engagement are practically significantly negatively related to each other, thus the more exhausted an employee becomes the less engaged he/she may feel. Professional efficacy and engagement are practically significantly positively related, which indicate that an employee experiences feelings of effectiveness, accomplishment, competence when he/she

experiences engagement. Cynicism and engagement are practically significantly negatively related to each other, thus the more cynicism the employee experiences the less engaged he/she may feel. It can be deduced that a practically significantly relationship exists between exhaustion, professional efficacy, cynicism and engagement of employees in selected organisations in the Vaal Triangle.

Differences between Groups

Next, MANOVA followed to determine the relationship between burnout and various demographic groups, including age, qualification and tenure. Demographic groups were analysed for statistical significance using Wilk's Lambda statistics. The results of these comparisons are reported in Table 8.

Table 8

MANOVA of Burnout of Age, Qualification and Tenure

Variable	Value	*F*	*df*	Error *df*	*p*	Partial eta squared
Age	0,92	2,22	8	418	0,03	0,04
Qualification	0,97	0,94	6	420	0,47	0,01
Tenure	0,93	1,35	12	414	0,19	0,04

* Statistically significant difference $p < 0,01$

Table 8 shows that there was no statistically significant effect of age on the dependent variable burnout ($F_{(8, 418)} = 2,22$, $p < 0,01$; Wilk's Lambda = 0,92). No significant effect of qualification on the dependent variable burnout was found ($F_{(6, 420)} = 0,94$, $p < 0,01$; Wilk's Lambda = 0,97). No significant effect of tenure on the dependent variable burnout was found ($F_{(12, 414)} = 1,35$, $p < 0,01$; Wilk's Lambda = 0,93).

Next, T-tests followed to determine the relationship between burnout and gender groups. The results of these comparisons are reported in Table 9.

Table 9

Differences in Burnout Levels of Gender Groups

Variable	Mean Male	Mean Female	*t*-value	*df*	*SD* Male	*SD* Female	*F*	*p*	*d*
Exhaustion	8,44	9,77	-1,26	205	7,24	7,87	1,18	0,41	0,17
Cynicism	10,35	9,77	0,59	205	6,90	7,12	1,06	0,77	0,08
Professional efficacy	29,41	26,74	2,38	205	7,24	8,62	1,42	0,08	0,31

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 9 shows that there is no statistically significant difference between the levels of burnout of the various gender groups. No practically significant differences were found between the levels of burnout of the various gender groups.

Next, T-tests followed to determine the relationship between burnout and race groups. The results of these comparisons are reported in Table 10.

Table 10

Differences in Burnout Levels of Race Groups

Variable	Mean Black	Mean White	*t*-value	*df*	*SD* Black	*SD* White	*F*	*p*	*d*
Exhaustion	9,03	9,64	-0,55	195	7,43	7,96	1,15	0,51	0,08
Cynicism	11,11	9,70	1,37	195	6,07	7,75	1,63	0,02	0,18
Professional efficacy	26,61	28,37	-1,47	195	9,21	7,48	1,51	0,04	0,19

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 10 demonstrates that there is no statistically significant difference between the levels of burnout of the various race groups. Hypothesis 3, that states, significant differences regarding

burnout levels exist between different age groups, gender, level of qualification, race groups and tenure, is rejected.

Next, ANOVA followed to determine the relationship between engagement and various demographic groups, including age, qualification and tenure. Demographic groups were analysed for statistical significance using Wilk's Lambda statistics. The results of these comparisons are reported in Table 11.

Table 11

ANOVA of Engagement of Age, Qualification and Tenure

Variable	Value	*F*	*df*	Error *df*	*p*	Partial eta squared
Age	17,60	2,97	4	207	0,02	0,05
Qualification	7,58	1,66	3	208	0,18	0,02
Tenure	12,73	1,20	6	205	0,22	0,04

* Statistically significant difference $p < 0,01$

Table 11 shows that there was no statistically significant effect of age on the dependent variable engagement ($F_{(4, 207)} = 2,97$ $p < 0,01$; Wilk's Lambda = 17,60). No significant effect of qualification on the dependent variable engagement was found ($F_{(3, 208)} = 1,66$, $p < 0,01$; Wilk's Lambda = 7,58). No significant effect of tenure on the dependent variable engagement was found ($F_{(6, 205)} = 1,20$, $p < 0,01$; Wilk's Lambda = 12,73).

Next, T-tests followed to determine the relationship between engagement and gender groups. The results of these comparisons are reported in Table 12.

Table 12

Differences in Engagement Levels of Gender Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Male	Female			Male	Female			
Engagement	4,55	4,21	1,95	202	1,10	1,35	1,52	0,04	0,25

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 12 shows that there was no statistically significant difference between the levels of engagement of the various gender groups. No practically significant differences were found between the levels of engagement of the various gender groups.

Next, T-tests followed to determine the relationship between engagement and race groups. The results of these comparisons are reported in Table 13.

Table 13

Differences in Engagement Levels of Race Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Black	White			Black	White			
Engagement	4,42	4,30	0,62	192	1,11	1,33	1,45	0,08	0,09

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 13 shows that there was no statistically significant difference between the levels of engagement of the various race groups. Hypothesis 4, that states, significant differences regarding engagement levels exist between different age groups, gender, level of qualification, race groups and tenure, is rejected.

DISCUSSION

The objective of this study was to determine the construct validity and internal consistency of the MBI-GS and the UWES. Another objective of this study was to determine the relationship between burnout and engagement, and also to determine whether individuals and groups (such as age, qualification, gender race and tenure) differ in terms of variables in their experience of burnout and engagement.

Exploratory factor analysis of the MBI-GS resulted in three-factors. The original hypothesised MBI-GS model consisted of three-factors, representing exhaustion, cynicism and professional efficacy. Storm (2002), confirmed a three-factor structure for the MBI-GS. Naudé (2003), also confirmed a three-factor structure for the MBI-HSS. These findings correspond with the findings of Maslach et al. (1996) that burnout as measured by the MBI-GS has a three-factor structure. The internal consistency of the exhaustion scale and the internal consistency of the professional efficacy scale were acceptable, hypothesis 1, which states that burnout, as conceptualised by the MBI-GS, has a three-dimensional structure, consisting of an exhaustion, cynicism and professional efficacy subscale, is accepted.

Regarding the UWES, exploratory factor analysis resulted in one-factor. This corresponds with the findings of Storm and Rothmann (2003), who found that are-specified one-factor model fitted their data the best. Fourie (2003), also confirmed a one-factor model of work engagement. The original hypothesised UWES model consisted of three-factors, representing vigour, absorption and dedication. Schaufeli, Martinez, Pinto, Salanova and Bakker (2002) found that the fit of the hypothesised three-factor model was superior to that of the one-factor solution. Although the internal consistency of the UWES was acceptable, hypothesis 2, which states that engagement, as conceptualised by the UWES, has a three-dimensional structure, consisting of a vigour, absorption and dedication subscale, is rejected.

A statistically significant relationship exists between exhaustion and engagement, professional efficacy and engagement, cynicism and engagement of employees in selected organisations in the Vaal Triangle. According to previous research (Maslach & Leiter, 1997) burnout is seen as an erosion of engagement with the job. What started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless. Energy turns into exhaustion, involvement turns into cynicism and efficacy turns into ineffectiveness.

Accordingly, engagement is characterised by energy, involvement, and efficacy – the direct opposites of the three burnout dimensions.

No significant differences were found with burnout 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. Schaufeli and Enzmann (1998) also found that younger employees reported higher levels of burnout than those over the age of 30 and 40 years. In terms of qualification and burnout no significant differences were found. 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. In terms of burnout no significant differences were found with regard to gender. This supports the findings of Storm (2002), Kop et al. (1999) and Cannizzo and Liu (1995) who also found no difference between male and female employees. The finding that there were no significant differences with burnout and race does not correspond with the research of Storm (2002) who found differences between burnout and race groups. In terms of tenure and burnout no significant differences were found.

No significant differences were found with engagement and age. This does not correspond with the research of Storm (2002), who found statistically significant differences between age groups and engagement. In terms of qualification and engagement no significant differences were found. This supports the research of Storm (2002), who found no significant differences with regard to the engagement levels of employees with different levels of education.

No significant differences were found with engagement and gender, and engagement and race. Storm (2002) found no significant differences between the engagement levels of black and white. In terms of tenure and engagement no significant differences were found. This does not correspond with the research of Bosman (2004), who found that tenure less than one year was associated with increased engagement.

A limitation for this study is that self-report measures were exclusively relied upon. This causes a particular problem in validation studies that use self-report measures exclusively because at last part of the common variance of the measures has to be attributed to method variance (Schaufeli, Maslach & Marek, 1993). The use of a cross-sectional study design also

represents a limitation. Longitudinal data would allow for forming a better understanding of the true nature of burnout and engagement. Furthermore, the number of respondents who replied to the questionnaires is a limitation of this study and limits the ability to generalise the results.

RECOMMENDATIONS

The purpose of this study was to assess the construct validity and internal consistency of the MBI-GS and the UWES, as well as the relationship, levels and socio demographic differences of burnout and work engagement of employees in selected organisations in the Vaal Triangle.

Burnout and work engagement should be investigated in relation to other work-related outcomes, and be investigated in other highly stressful occupations in South Africa. More longitudinal research studies on the relationship between burnout and work engagement in the South African context are needed. The results of the MBI-GS differ between cultures, work settings and occupation groups (Maslach et al., 1996), further research in this regard will address the issue.

Recommendations for the specific organisations are discussed next. Inservice training programmes should be organised. Such programmes could provide employees with the necessary knowledge and skills to cope with or reduce burnout. Systematically organised and ongoing mental health induction programmes should be offered to employees, in the form of seminars or workshops. Counselling services should also be extended to employees. Effective time-management strategies must be developed to prioritise tasks and organise them into time efficient patterns. It is thus recommended that the organisations must provide adequate resources and encourage the use of problem focused strategies which in turn would result in the positive evaluation of professional competence and the prevention of the onset of burnout (Naudé, 2003).

Intervention strategies such as recognition for good performance, in other words, acknowledgements and praise for achievements, serve as a positive reinforcement for effectiveness. If employees receive acknowledgement for work well done, they will feel positive about themselves and will strive to maintain and even improve. A supportive

working climate must be implemented and involve employees in planning strategies and decision-making. Involving employees in planning strategies and decision-making is a way to maintain enthusiasm about the job. Employees need choices, flexibility and opportunity to be innovative and be allowed the opportunity for growth.

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CHAPTER 3

RESEARCH ARTICLE 2

THE VALIDATION OF THE JOB INSECURITY QUESTIONNAIRE IN SELECTED ORGANISATIONS IN THE VAAL TRIANGLE

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ABSTRACT

The objectives of this study were to assess the construct validity and internal consistency of the Job Insecurity Questionnaire (JIQ), as well as the relationship, levels and socio demographic differences of job insecurity of employees in selected organisations in the Vaal Triangle. A cross sectional survey design was used. Accidental samples of workers at the selected oganisations (N = 216) were taken. The JIQ and a biographical questionnaire were administered. Exploratory factor analysis of the JIQ resulted in a two-factor model of job insecurity. The scales demonstrated acceptable levels of internal consistencies. Significant differences regarding job insecurity levels exist between different race groups.

OPSOMMING

Die doelstellings van hierdie navorsing was om die Werksonsekerheidsvraelys (JIQ) te valideer vir werknemers in geselekteerde organisasies in die Vaaldriehoek en om verskille tussen die vlakke van werksonsekerheid van demografiese groepe vas te stel. 'n Dwarssnee opname-ontwerp is gebruik. 'n Beskikbaarheidsteekproef van werknemers in die geselekteerde organisasies (N = 216) is geneem. Die JIQ en 'n biografiese vraelys is as meet instrumente gebruik. Eksploratiewe faktoranalise van die Werksonsekerheidsvraelys het geresulteer in 'n tweefaktormodel van werksonsekerheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. Betekenisvolle verskille betreffende werksonsekerheid en verskillende ras groepe bestaan.

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Working life has been subject to dramatic change over the past decades as economic recessions, new information technology, industrial restructuring, and an accelerated global competition unceasingly have proven to be crucial and abiding factors influencing the nature of work and organisation (Hartley, Jacobson, Klandermans & Van Vuuren, 1991; Howard, 1995).

Organisations have taken to re-organisational activities such as outsourcing, downsizing, and mergers in order to adapt to the new situation (Cascio, 1995; Gowing, Kraft & Campbell Quick, 1998). Almost all of these re-organisational activities involve layoffs or the threat of layoffs, as well as the increased use of subcontracted and non-permanent employees (Hellgren & Sverke, 2003). For employees, the result has been an accelerating sense of job insecurity (Greenhalgh & Rosenblatt, 1984).

Job insecurity has become a frequently examined stressor in modern working life and scholars have found empirical support for a link between job insecurity and employee reactions (Hellgren & Sverke, 2003). The harmful impact of job insecurity is clearly shown when two groups of people are compared with each other in terms of knowledge of redundancy and the possibility of becoming redundant in the future. The group, who knew that redundancy was a reality, experienced improved psychological well-being in comparison with the group who were still uncertain. The unpredictability and the uncontrollability of job insecurity was a further negative impact on the psychological well-being of people (De Witte, 1999). Research done by De Witte (1999) indicated that employees who experience job security indicate higher psychological well-being.

It appears that job insecurity is associated with impaired well-being (Barling & Kelloway, 1996; Hartley et al., 1991). Physical health complaints, mental stress, and work to leisure carry-over increase proportionately with the level of job insecurity (Ashford et al., 1989; Lim, 1996; Noer, 1993).

Given that employees' reactions to uncertain employment conditions are of fundamental importance from both the occupational health and managerial perspectives (Matteson & Ivancevich, 1987), it becomes crucial to understand how job insecurity relates to factors such as well-being and work attitudes (Hellgren, Sverke & Isaksson, 1999). A number of studies also found feelings of uncertain employment conditions to be related with reduced levels of

work attitudes such as job satisfaction (Ashford et al., 1989; Davy, Kinicki & Scheck, 1997; Rosenblatt & Ruvio, 1996). In European and U.S. data, characteristics associated with high levels of job satisfaction has a lot of job security (Oswald, 2004).

Intuitively, one would expect feelings of job insecurity to have a strong psychological impact on those affected because there is a risk of losing economic and other highly valued aspects of life (Ashford, Lee & Bobko, 1989). Dekker and Schaufeli (1995) and Latack and Dozier (1986) suggested that perceived threats concerning the nature and continued existence of a job may have as detrimental consequences as job loss itself. Job insecurity could be expected to have an impact not only on the well-being of individuals, but also on their work attitudes and behaviour, and, in the long run, for the vitality of the organisation (Hellgren, Sverke & Isaksson, 1999). Job insecurity is important because it deals with the continued existence or survival of an oganisational member of an organisation (Greenhalgh & Rosenblatt, 1984; Jacobson, 1991). Underlying job insecurity is the notion that there is uncertainty in one's job situation, and that control over one's own destiny of the job situation is threatened (Hui & Lee, 2000).

Involuntary job loss has become an increasingly common experience for many employees at various organisations. Welsh (1996) reasons that this trend translates to more insecure work environments with concurrent increases in individual worker stress precipitated by perceived job insecurity. Thus, job insecurity can be perceived as a stressor (Van Vuuren, 1990; Parker & DeCotiis, 1983). In analysing its consequences, stress reactions can be recognised.

Mohr (2000) found a strong positive relationship between age and job insecurity, which is taken as evidence that older employees experience higher job insecurity than younger employees. In the study of Buitendach (2004) the results indicated that statistically and practically significant differences were found between the cognitive and affective job insecurity of different age groups. Concerning gender, previous research (Näswall, Sverke & Hellgren, 2001) indicated that men exhibited a stronger relation between the experience of job insecurity and its negative outcomes than women.

Individuals with higer levels of education tend to experience lower levels of job insecurity. Buitendach (2004) found that the highest level of job insecurity were reported by those with only a Grade 12 qualification.

The objectives of this study were to assess the construct validity and internal consistency of the JIQ, levels and socio demographic differences of job insecurity of employees in selected organisations in the Vaal Triangle.

Job insecurity

Since the late 1970's, economic recessions, industrial restructuring, technological change, and intensified global competition have dramatically changed the nature of work (Howard, 1995). Organisations in most industrialised countries have been involved in restructuring, layoffs, and "rightsizing" in their attempts to reduce labor costs and improve competitiveness (Sverke & Hellgren, 2002). For employees, these major changes have caused feelings of anxiety, stress, and insecurity concerning the nature and continued existence of their jobs (Jick, 1985; Romzek, 1985; Schweiger & Ivancevich, 1985).

Job insecurity has been defined as an essential and involuntary change regarding the future existence of the present job or of significant job features, such as deterioration of working conditions, waning career opportunities, and declining salary development (Greenhalgh & Rosenblatt, 1984; Hartley et al., 1991; Hellgren et al., 1999).

Job insecurity reflects the discrepancy between the preferred and experienced levels of job security, constituting a form of work-related stress potentially detrimental to the individual's well-being, job attitudes and behaviours (Dekker & Schaufeli, 1995; Heaney et al., 1994; Lim, 1996).

In the model of Greenhalgh and Rosenblatt (1984), the job insecurity construct is multidimensional, consisting of five components. The first component of the job insecurity construct is the perceived threat to various job features such as opportunities for promotion and freedom to schedule work. The more features that an individual perceives to be threatened, the greater the job insecurity. The second component of the job insecurity construct weights the first dimension. To achieve this weighting, researchers would multiply the perceived threat to each feature by its importance and then sum the scores of each feature to obtain an overall severity rating. This operation relies on the assumption that a threat to an important job feature will contribute more to job insecurity reactions than will a threat to a minor feature (Greenhalgh & Rosenblatt, 1984). The job insecurity construct's third

component is the perceived threat of the occurrence of various events that would negatively affect an individual's total job. The fourth component is the importance attached to each of the potentialities. The fifth component of the job insecurity construct is powerlessness. It seems to encompass an individual's ability to counteract the threats identified in the first four components. Perceiving a threat to jobs or job features, people who have the power to counteract threats, those who are low in powerlessness, should not experience much job insecurity (Greenhalgh & Rosenblatt, 1984).

Job insecurity is likely to rise in the context of organisational change and layoffs (Hellgren & Sverke, 2003). Job insecurity can be described as a function of both the objective situation (e.g. labor market characteristics, organisational change) and the individual's subjective characteristics (e.g. family responsibility, employability) (Sverke & Hellgren, 2002). From the organisational perspective, this has provided many companies with the functional and numerical flexibility necessary to adapt to a changing environment (Hellgren & Sverke, 2003). From the individual perspective, although some individuals may view flexibility positively, the negative consequences are apparent and have dominated the psychological literature (Sverke & Hellgren, 2002). Thus employees may experience varying degrees of job insecurity even if they are exposed to the same objective situation (Greenhalgh & Rosenblatt, 1984; Hartley et al., 1991; Sverke & Hellgren, 2002).

There can be differentiated between cognitive job insecurity and affective job insecurity. Cognitive job insecurity is the likelihood of job loss, whereas affective job insecurity is the fear of job loss (Borg & Elizur, 1992).

Uncertainties about the future of one's job have been found to relate to lowered work attitudes and well-being (Hellgren & Sverke, 1999). The integrated model of job insecurity of Sverke and Hellgren (2002) describes job insecurity as a subjectively experienced, multidimensional phenomenon which may arise as a function of the interaction between the objective situation and subjective characteristics, a phenomenon which may have detrimental consequences for employee attitudes and well-being, where such consequences may be mitigated by a number of potential moderators.

One would expect feelings of job insecurity to have a strong psychological impact on those affected (Sverke & Hellgren, 2002). Employees perceiving threat to their work future could

exhibit symptoms of distress manifested as anxiety, depression, and reduction in well-being (Dekker & Schaufeli, 1995; Heaney et al., 1994; Israel et al., 1989; Roskies et al., 1993). In the study of Mäkikangas and Kinnunen (2003), well-being was viewed from positive (job satisfaction) and negative (emotional exhaustion, mental distress and physical symptoms) points of view. There is a large body of empirical evidence to suggest that psychosocial work stressors are likely to increase strain and impair well-being at work. Job insecurity reflects a concern about losing the present job and this subjective experience is likely to have a strong psychological impact.

Individuals experience job insecurity as a perceived threat to their employment or current work situation. This perception of threat may arise during turbulent times, when there are clear signals from the organisation regarding changes. Some individual employees may perceive their work situation as threatened, in other words experiencing job insecurity, even when there is no threat. For the purpose of this study, individual factors such as age, qualification, gender, race and tenure were used (Greenhalgh & Rosenblatt, 1984; Kinnunen, Mauno, Nätti & Happonen, 1999; Näswall & De Witte, 2003).

Hypotheses

The hypotheses of this study are as follows:

H_1: Job insecurity as measured by the JIQ is a two-dimensional construct with acceptable levels of internal consistency for each of its subscales and is a construct equivalent measuring instrument for the different culture groups in selected organisations in the Vaal Triangle.
H_2: Significant differences regarding job insecurity levels exist between different age groups.
H_3: Significant differences regarding job insecurity levels exist between gender.
H_4: Significant differences regarding job insecurity levels exist between different levels of qualification.
H_5: Significant differences regarding job insecurity levels exist between different race groups.
H_6: Significant differences regarding job insecurity levels exist between different levels of tenure.

METHOD

Research design

A cross-sectional design with a survey as technique of data collection was used to research the objectives of this thesis. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993). This design will be well suited to the descriptive and predictive functions associated with correlational research, in which relationships between variables are examined (Shaughnessey & Zechmeister, 1997).

Participants

An accidental sample of employees on various levels in selected organisations (government organisations and private organisations) in the Vaal Triangle define the study population. The study population for this research consisted of 1000 individuals. The participants included: employees in different departments of a steel manufacturing industry (n = 78); employees in different departments of a financial institution (n = 40); employees in different departments of a government organisation (n = 85); employees in different departments of a chemical industry (n = 13). A total of 216 completed questionnaires were returned. This represents a response rate of 21,6 %. Descriptive information of the sample is indicated in Table 1.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Age	Less than 25	16	7,4%
	25-34	85	39,4%
	35-44	70	32,4%
	45-54	36	16,7%
	55+	9	4,2%
Gender	Male	98	45,4%
	Female	118	54,6%
Race	Black	88	40,7%
	White	128	59,3%
Qualification	Grade 10-12	116	53,7%
	Diploma	68	31,5%
	Degree	19	8,8%
	Degree +	13	6,0%
Years working in the company	Less than 1 year	15	6,9%
	1-4 years	53	24,6%
	5-10 years	60	27,8%
	11-15 years	46	21,3%
	16-20 years	17	7,9%
	Longer than 20 years	25	11,6%
Years in present position	Less than 1 year	26	12,0%
	1-4 years	99	45,8%
	5-10 years	66	30,6%
	11-15 years	17	7,9%
	16-20 years	1	0,5%
	Longer than 20 years	7	3,2%
Category	Professional (registered)	37	17,1%
	Semi-Professional	64	29,6%
	Skilled	89	41,2%
	Semi-Skilled	19	8,8%
	Unskilled (general worker)	7	3,2%

In summary, the group can be described as follows: The mean age of the respondents was 27,04 years with 39,4% falling within the 25 to 34 age bracket. The majority of this group were female (54,6%). A large percentage (53,7%) of the participants indicated that their highest qualification was grade 10 to 12. The majority of the group are skilled employees (41,2%), these organisations represent a high average of skilled workers.

Measuring instruments

In this study two measuring instruments, namely the Job Insecurity Questionnaire (JIQ) (De Witte, 1997) and a biographical questionnaire were used to gather information.

The *Job Insecurity Questionnaire* (JIQ) was used (De Witte, 1997) to measure the perceived job insecurity of the participants. The questionnaire consists of 11-items relating to job insecurity. Items encapsulate both the cognitive and affective dimensions of job insecurity and are arranged according to a 5-point Likert-type scale with 1 = strongly agree, 3 = unsure and 5 = strongly disagree. The 11-items are answered by deciding to what extent they experience (dis)agreement with statements rated on each subscale. The average of the 11-items is an indication of the overall job insecurity, of the respondent. A low score indicates that the respondent experiences a high degree of job insecurity whilst a high score indicates low degree of job insecurity. De Witte (2000), in his studies, reported a Cronbach alpha coefficient of 0,92 (total) for this questionnaire to which he refers as "*globale jobonzekerheid*". On the 5-items encapsulating the affective dimension of job insecurity (for example "I feel uncertain about the future of my job"), a Cronbach alpha coefficient of 0,85 was reported and the 6-items referring to the cognitive dimension of job insecurity (for example "I think that I will be able to continue working here"), a Cronbach alpha coefficient of 0,90 was found, thus indicating high reliability (De Witte, 2000). De Witte (2000) also found an overlap between the cognitive and affective factor loadings and reported that both scales correlated interdependently very high (r = 0,76). Heymans (2002) obtained an alpha coefficient of 0,81. Buitendach (2004) reported a Cronbach alpha coefficient of 0,84 for the cognitive dimension, and a Cronbach alpha coefficient of 0,89 for the affective dimension.

Statistical analysis

The analysis was carried out with the SPSS programme (SPSS, 2003). The reliability and validity of the JIQ were also determined by means of Cronbach alpha coefficients, as well as confirmatory factor analysis with the SPSS (2003).

Construct (structural) equivalence was computed to compare the factor structure for the different culture groups included in this study. Exploratory factor analysis with a Procrustean target rotation was used to determine the construct equivalence of the JIQ for the different culture groups (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), the comparison between the similarities of the factor structure of two cultural groups could be underestimated due to the arbitrary spatial allocation of factors during factor analysis. Rather, it is suggested that target rotation be conducted prior to comparing the factor solutions of cultural groups by rotating the factor loading matrices with regard to each other in order to maximize the agreement between the factors. During this process, one group is arbitrarily assigned the target group and the factor loadings of the other group rotated towards the target group to form a common facto including matrix, also known as centroid. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but sensitive to a constant added to all loadings of a factor.

Because this index does not have a known sampling distribution, it is impossible to establish confidence intervals. Values higher than 0,95 are deemed to be evident of factorial similarity or equivalence across different cultural groups (Van de Vijver, & Leung, 1997), whereas values lower than 0,90 (Van de Vijver, & Poortinga, 1994) or even 0,85 (Ten Berge, 1986) should be viewed as an indication of sufficient existing differences. Furthermore, bias analysis is necessary because construct equivalence does not presuppose the absence of bias. An instrument could therefore demonstrate acceptable construct equivalence and still be biased (Van de Vijver, & Leung, 1997).

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between job insecurity of demographic groups, such as age, qualification, gender, race and tenure. Manova tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In

MANOVA a new dependent that maximizes group differences is created from the set of dependent variables. One-way analysis of variance is then performed on the newly created dependent variable. Wilk's lambda was used to test the significance of the effects. Wilk's lambda is a likelihood ratio statistic of the data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect as significant in MANOVA, ANOVA was used to discover which dependent variables were affected. Because multiple ANOVAS were used, a Bonferroni type adjustment was made for inflated Type 1 error.

RESULTS

Construct equivalence of the JIQ

For the purposes of this research, it was decided to focus on *race* instead of *language* groups, seeing as the samples of language groups were relatively small.

A simple principal components analysis was conducted on the 11-items of the JIQ on the total sample of employees in selected organisations in the Vaal Triangle. Exploratory factor analysis for the JIQ was done with the help of SPSS (2003). Analysis of eigenvalues (larger than 1) and the scree plot indicated that two-factors could be extracted, which explained 58,5% of the variance. Next, a principal factor analysis with a direct oblimin rotation was used in carrying out factor analysis per race group. The pattern matrices for black participants and white participants are reported in Table 2.

Table 2

Pattern Matrix of the JIQ

	Black			White	
Item	1	2	Item	1	2
JIQ1	-0,32	**0,51**	JIQ1	-0,23	**0,53**
JIQ2	0,22	**0,43**	JIQ2	0,16	**0,75**
JIQ3	-0,14	**0,84**	JIQ3	-0,31	**0,67**
JIQ4	-0,28	**0,76**	JIQ4	-0,30	**0,71**
JIQ5	**0,68**	0,05	JIQ5	**0,66**	-0,29
JIQ6	**0,62**	0,01	JIQ6	**0,67**	-0,28
JIQ7	**0,49**	-0,27	JIQ7	**0,80**	-0,84
JIQ8	**0,84**	-0,08	JIQ8	**0,85**	-0,08
JIQ9	**0,79**	0,19	JIQ9	**0,88**	0,30
JIQ10	**0,71**	-0,22	JIQ10	**0,80**	-0,11
JIQ11	**0,64**	-0,12	JIQ11	**0,74**	-0,54

The pattern matrices of the two-factor solutions for black participants and white participants were then used as input for an exploratory factor analysis with target rotations. The two-factor structure was compared across groups by rotating one solution to the other. After target rotation, the following Tucker's phi coefficients were obtained: a) Factor 1 = 0,99; b) Factor 2 = 0,93. These Tucker's phi coefficients compared favourably with the guideline of 0,90. The pattern matrix for the total sample is reported in Table 3.

Table 3

Pattern Matrix of the JIQ for the Total Sample

Item	Component	
	1	2
1. I fear that I might lose my job	-0,24	**0,45**
2. I worry about the continuation of my career	0,18	**0,67**
3. I feel uncertain about the future of my job	-0,30	**0,70**
4. I fear that I might get fired	-0,35	**0,67**
5. It makes me anxious that I might become unemployed	**0,70**	-0,02
6. There is a possibility that I might lose my job in the near future	**0,60**	-0,18
7. I think I might be dismissed in the near future	**0,68**	-0,06
8. I am very sure that I will be able to keep my job	**0,86**	-0,06
9. I think that I will be able to continue working here	**0,83**	0,30
10. There is only a small chance that I will become unemployed	**0,78**	-0,12
11. I am certain of my job environment	**0,71**	-0,04

Based on the results in Table 3, two items were complex and problematic. Both loaded on the affective subscale, whereas they are intended to load on the cognitive subscale. These two items are: a) Item 10 – "There is a possibility that I might lose my job in the near future"; b) Item 11 – "I think I might be dismissed in the near future". A closer analysis of the two items showed that it had to do with the cognitive experience of job insecurity. These two items were therefore removed from the analysis. Buitendach and Rothmann (2004) confirmed the same results in a study in selected organisations in South Africa.

Descriptive statistics and Cronbach alpha coefficients of the JIQ for the selected organisations in the Vaal Triangle are indicated in Table 4.

Table 4

Descriptive Statistics and Alpha Coefficients of the Measuring Instrument

Test and items	N	Mean	*SD*	Skewness	Kurtosis	α
Affective Job Insecurity	216	2,8	0,91	0,07	-0,74	0,84
Cognitive Job Insecurity	216	3,5	0,74	0,52	-0,30	0,89

From Table 4 it is evident that the scores on the scales are normally distributed with both scales being somewhat negatively skewed and positively peaked. The internal consistencies of the two scales of the JIQ are acceptable, according to the guidelines of 0,70 as set by Nunnally and Bernstein (1994). It is also consistent with the findings of 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 0,84, and the five items of the affective job insecurity displaying a Cronbach alpha coefficient of 0,84 (De Witte, 2000).

Differences between Groups

Next, MANOVA followed to determine the relationship between job insecurity and various demographic groups, including age, qualification and tenure. Demographic groups were analysed for statistical significance using Wilk's Lambda statistics. The results of these comparisons are reported in Table 5.

Table 5

MANOVA of Job Insecurity of Age, Qualification and Tenure

Variable	Value	*F*	*df*	Error *df*	*p*	Partial eta squared
Age	5,29	2,43	4	210	0,05	0,04
Qualification	5,78	3,57	3	211	0,02	0,05
Tenure	9,30	2,92	6	208	0,01	0,08

* Statistically significant difference $p < 0,01$

Table 5 shows that there was no statistically significant effect of age on the dependent variable job insecurity ($F_{(4, 210)} = 2,43$, $p < 0,01$; Wilk's Lambda = 5,29; partial eta squared = 0,04), 4% of the variance was explained. Hypothesis 2, that states, significant differences regarding job insecurity levels exist between different age groups, is rejected. No significant effect of qualification on the dependent variable job insecurity was found ($F_{(3, 211)} = 3,57$, $p < 0,01$; Wilk's Lambda = 5,78; partial eta squared = 0,05), 5% of the variance was explained. Hypothesis 4, that states, significant differences regarding job insecurity levels exist between different levels of qualification, is rejected. No significant effect of tenure on the dependent variable job insecurity was found ($F_{(6, 208)} = 2,92$, $p < 0,01$; Wilk's Lambda = 9,30; partial eta squared = 0,08), 8% of the variance was explained. Hypothesis 6, that states, significant differences regarding job insecurity levels exist between different levels of tenure, is rejected.

Next, T-tests followed to determine the relationship between job insecurity and gender. The results of these comparisons are reported in Table 6.

Table 6

Differences in Job Insecurity Levels of Gender Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Male	Female			Male	Female			
Cognitive	14,05	14,45	-0,64	205	4,62	4,34	1,13	0,53	0,09
Affective	13.07	12,91	0,25	205	4,72	4,48	1,11	0,61	0,03

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 6 shows that there was no statistically significant difference between the levels of job insecurity of the various gender groups. Hypothesis 3, that states, significant differences regarding job insecurity levels exist between gender, is rejected.

Next, T-tests followed to determine the relationship between job insecurity and race. The results of these comparisons are reported in Table 7.

Table 7

Differences in Job Insecurity Levels of Race Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Black	White			Black	White			
Cognitive	13,64	14,91	-1,94	195	4,06	4,80	1,40	0,11	0,26
Affective	12,20	13,81	-2,43	195	3,90	4,97	1,63	0,02*	0,32

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 7 shows that there was a statistically significant difference between the levels of job insecurity of the various race groups. Hypothesis 5, that states, significant differences regarding job insecurity levels exist between different race groups, is accepted.

DISCUSSION

The objectives of this study were to assess the construct validity and internal consistency of the JIQ, levels and socio demographic differences of job insecurity of employees in selected organisations in the Vaal Triangle.

Exploratory factor analysis of the JIQ resulted in two-factors. The original hypothesised JIQ model consisted of two-factors, representing the cognitive and affective subscales. These findings correspond with the findings of Borg and Elizur (1992) that the cognitive and affective subscales are distinct components of job insecurity as measured by the Job Insecurity Questionnaire (JIQ). Buitendach (2004) also confirmed a two-factor structure after the removal of item 10 and item 11, which is in line with the findings of De Witte (1997). The internal consistency of the scales in this study were acceptable, hypothesis 1, which states that job insecurity, as conceptualised by the JIQ, has a two-dimensional structure, consisting of a cognitive and affective subscale, is accepted.

No significant differences were found with job insecurity and age. This finding does not correspond with the research of Mohr (2000) who found a correlation between the levels of job insecurity and age, implying older employees experience higher levels of job insecurity. Hartley et al. (1991) also found that older employees experienced more job insecurity than younger workers. Heymans (2002) also confirmed the finding that older employees experienced more job insecurity than younger workers, in a study on maintenance workers in a parastatal. In terms of qualification and job insecurity no significant differences were found. Reynolds (2000) indicated in his research that exposure to downsizing is more common among white collar workers and is associated with greater increase in job insecurity. In contrast, Schaufeli (1992) suggested that since white collar workers and professionals usually have higher qualification levels, they will be less vulnerable to job loss than employees with lower levels of qualifications. Van Vuuren, Klandermans, Jacobson and Hartley (1991) found that more highly educated employees tend to feel more secure in their jobs. Regarding the relationship between job insecurity and gender, no significant differences were found. Charles and James (2003) found no differences in terms of gender in the experience of job insecurity. These findings are in contrast with research done by Sverke et al. (2004), where women consistently reported higher levels of job insecurity than men. De Witte (1999) also reported in his research that women reported higher levels of job insecurity when they are

responsible for supporting a family. Buitendach (2004) found no practically significant differences between males and females. The finding that there were significant differences with job insecurity and race correspond with the research of Orpen (1993), that higher levels of job insecurity exist amongst black employees in South Africa. This also correspond with the findings of Manski and Straub (2000), who found that job loss concern among blacks were almost double that of the whites. With regards to tenure and job insecurity no significant differences were found. It is believed that employees with longer years of service will experience less levels of job insecurity than employees with less years of service, this can be related to the policy of LIFO (last in first out). In South Africa, however, no research could be found that addressed this issue.

A limitation of this study was that self-report measures were exclusively relied upon. This causes a particular problem in validation studies that use self-report measures exclusively because the final part of the common variance of the measures has to be attributed to method variance (Schaufeli, Maslach & Marek, 1993). The use of a cross-sectional study design also represents a limitation. Longitudinal data would allow for forming a better understanding of the true nature of job insecurity. Another limitation of this study was the various selected organisations that were relied upon and the number of respondents who replied to the questionnaires is a limitation of this study and limits the ability to generalise the results.

RECOMMENDATIONS

The literature on job insecurity recognises that communication and information sharing is a relevant factor to employees and could go a long way toward creating a climate for a secure workplace (Kuhnert & Palmer, 1991). According to Heymans (2002) reinforcing is important to maintain strong communication channels with employees. Management should devise methods of keeping employees informed at all levels of developments within the organisation, which will serve as a buffer regarding feelings towards job insecurity and the spin-off thereof might be the building of trust.

Holm and Hovland (1999) propose making use of career counsellors as a mechanism for assisting job insecure employees. Stress management workshops that teach effective coping strategies may be useful to decrease levels of job insecurity. Interventions of educating

employees with regards to successful coping strategies might also be designed and implemented in organisations where job insecurity is detected.

For future research on job insecurity a national representative sample of employees at selected organisations is needed, thus the exact study should be repeated in other South African organisations applying the same instrument and statistical methods to compare results. This will establish and ensure a meaningful job insecurity database for South Africa.

For future research it is recommended that research be repeated using a longitudinal design on the relationship between job insecurity in the South African context. Larger sample sizes provide increased confidence that study findings would be consistent across other sample groups.

Job insecurity should be investigated in relation to other work outcomes such as productivity and performance. Thus, a more comprehensive, multidimensional measure of job insecurity must be applied.

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CHAPTER 4
RESEARCH ARTICLE 3

THE VALIDATION OF THE MINNESOTA JOB SATISFACTION QUESTIONNAIRE IN SELECTED ORGANISATIONS IN THE VAAL TRIANGLE

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ABSTRACT

The objectives of this study were to assess the construct validity and internal consistency of the Minnesota Job Satisfaction Questionnaire (MSQ), levels and socio demographic differences of job satisfaction of employees in selected organisations in the Vaal Triangle. A cross sectional survey design was used. Accidental samples of workers at the selected oganisations *(N* = 216*)* were taken. The MSQ and a biographical questionnaire were administered. Exploratory factor analysis of the MSQ resulted in a one-factor model of job satisfaction. The scales demonstrated acceptable levels of internal consistencies. A practically significant difference exist between the levels of job satisfaction of different age groups.

OPSOMMING

Die doelstellings van hierdie navorsing was om die Werkstevredenheidvraelys (MSQ) te valideer vir werknemers in geselekteerde organisasies in die Vaaldriehoek en om verskille tussen die vlakke van werkstevredenheid van demografiese groepe vas te stel. 'n Dwarssnee opname ontwerp is gebruik. 'n Beskikbaarheidsteekproef van werknemers in die geselekteerde organisasies *(N* = 216*)* is geneem. Die MSQ en 'n biografiese vraelys is as meetinstrumente gebruik. Eksploratiewe faktoranalise van die Werkstevredenheidvraelys het geresulteer in 'n eenfaktormodel van werkstevredenheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. 'n Prakties betekenisvolle verskil bestaan betreffende ouderdom en werkstevredenheid.

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Social change in South Africa has been rapid since the nineties and has influenced many individual's day-to-day existence in the country (Erasmus & Sadler, 1999). Organisations represent the most complex social structures known today because of their dynamic nature. Employees are one of the role players in the organisation and it is through their involvement and commitment that the organisation becomes competitive (Sempane, Rieger & Roodt, 2002).

Employees in any organisation form attitudes about many things, such as pay, company of co-workers, benefits, training, opportunities, job security and working hours. It is important that some of these attitudes are more important than others and will to some extent determine how satisfied people are with their jobs (Erasmus & Sadler, 1999). Locke (1976) explains that for researchers to understand the job attitudes, they need to understand job dimensions, which are complex and interrelated in nature. He also mentioned the common dimensions of job satisfaction as work, pay, promotions, recognition, benefits, working conditions, supervision, co-workers, company and management. When people were asked what they want most from their jobs, the typical answers were mutual respect among co-workers, recognition for work well done, opportunities to develop skills and that the work should be interesting. People will further be satisfied with their jobs when they enjoy their work, have a realistic opportunity to advance within the company, like the people they deal with, like and respect their supervisors and believe that their pay is fair (Kleiman, 1997). Each of these factors contributes to an overall feeling of satisfaction with the job itself. Job satisfaction refers to an individual's general attitude towards his or her job. A person with a high level of job satisfaction holds a positive attitude about the job, while a person who is dissatisfied with his or her job holds a negative attitude about the job (Robbins, 2003).

Job satisfaction involves employees' affective or emotional feelings, it has major consequences on their lives (Sempane, Rieger & Roodt, 2002). The most common consequences of job satisfaction on employees are described as, the effects on the physical health and longevity, mental health and an impact on the employees' social life in general (Locke, 1976). He maintains that there is an interaction between the employees' feelings about their job and their social life. According to Erasmus and Sadler (1999), there is no simple formula for creating and predicting an employee's satisfaction but a critical factor is what employees expect from their jobs and what they are receiving as reward for their jobs.

One of the arguments often brought against theories of job satisfaction is that they take little account of differences between people (Oshagbemi, 2003). What seems to be lacking is a fairly comprehensive approach to examine personal correlates of job satisfaction specifically looking at the influences of gender, age and length of service. It has been suggested that job satisfaction is U-shaped in age, with higher levels of morale among younger workers but that this declines after the novelty of employment wears off and boredom with the job sets in (Clark, Oswald & Warr, 1996). Higgs, Higgs and Wolhuter (2004) found no significant differences between males and females in terms of their job satisfaction. In the study by Buitendach (2004) practically significant differences were found between levels of job satisfaction and qualification, indicating that employees with higher levels of qualification, experience higher levels of job satisfaction.

The objectives of this study were to assess the construct validity and internal consistency of the MSQ, levels and socio demographic differences of job satisfaction of employees in selected organisations in the Vaal Triangle.

Job satisfaction

Some authors (Locke, 1976; Warr, 1987) suggest that increments of all kinds of job elements are beneficial to an employee's job satisfaction and psychological well-being until a certain level is attained. This level or satiation point can be conceptualized as the point where supplies offered by the organisation equal the values of the employee (Taris & Feij, 2001). According to Ashford, Lee and Bobko (1989), perceptions of job insecurity should be negatively associated with measures of job satisfaction. A previous study (Oldham, Julik, Ambrose, Stepina & Brand, 1986) found that employees with lower perceptions of job security than various comparison referents were less satisfied with their jobs than were their referents. In the study of Ashford et al. (1989) job insecurity is associated with a decline in job satisfaction.

According to Coetsee (2003) job satisfaction is a positive or negative attitude that individuals have about their jobs and related matters (for example supervisory style, support, challenge, pay, benefits) and the degree to which there is a good fit between the individual and the organisation. Job dissatisfaction may lead to increased absenteeism, turnover and other undesirable behaviours. On the other hand higher job involvement leads to higher levels of

dedication and productivity in workers. High performance and equitable rewards encourage high satisfaction through a performance-satisfaction-effort loop. Higher job satisfaction usually is associated with lower turnover and fewer absences. Committed employees are more likely to embrace company values and beliefs (Newstrom & Davis, 2002).

According to Hirschfeld (2000), job satisfaction is the extent to which people like their jobs. Job satisfaction can also be described as an affective or emotional reaction to the job, resulting from the incumbent's comparison of actual outcomes with the required outcomes (Hirschfeld, 2000; Locke, 1976). Therefore, employees who are satisfied with their jobs are likely to be better ambassadors for the organisation (Agho, Price & Mueller, 1992).

Job satisfaction consists of two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself (Spector, 1997).

People will be satisfied with their jobs when they enjoy their work, have a realistic opportunity to advance in the organisation, like the people they deal with, like and respect their supervisors and believe that their pay is fair (Kleiman, 1997). Indeed, people who experience their work and working conditions positively (job satisfaction), typically feel good about their work-life experience and transfer these positive feelings to life beyond work (Coetsee, 2003).

Job satisfaction has been conceptualised and operationalised as both a global construct and a multifaceted construct (Hirschfeld, 2000). A presumable advantage of multidimensional measures of job satisfaction is that the components may relate differently to other variables of interest in a manner that advances the science and practice of industrial-organisational psychology (Hirschfeld, 2000). Weiss et al. (1967) identified the 20-item short form of the Minnesota Satisfaction Questionnaire (MSQ) as a popular facet of measure that is frequently used in job satisfaction research. An advantageous feature of the MSQ short form is that it can be used to measure two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Evidence exists supporting some degree of discriminant validity between these two components of job satisfaction in their relationships with other variables. For example, Brown's (1996) meta-analysis results suggest that intrinsic job satisfaction is more strongly

related to job involvement than is extrinsic job satisfaction. Results of Moorman's (1993) study suggest that intrinsic job satisfaction has an affective basis, whereas extrinsic job satisfaction does not. Intrinsic job satisfaction seems to be influenced to a greater degree by genetic factors than is extrinsic job satisfaction (Bouchard, 1997).

Organisations are characterised by an increased demand to change in order to improve their performance and become more competitive (Heymans, 2002). Amidst these changes, caused by economic uncertainty and global competition, large scale workforce reductions are prevalent, also in the Vaal Triangle. Employees in these organisations form attitudes about many things. It is important to realise that some of these attitudes are more important than others and will to some extent determine how satisfied employees are with their jobs (Erasmus & Sadler, 1999). Job satisfaction can be regarded as a core aspect influencing both the individual and these organisations.

Hypotheses

The hypotheses of this study are as follows:

H_1: Job satisfaction as measured by the MSQ is a two-dimensional construct with acceptable levels of internal consistency for each of its subscales and is a construct equivalent measuring instrument for the different culture groups in selected organisations in the Vaal Triangle.
H_2: Significant differences regarding job satisfaction levels exist between different age groups.
H_3: Significant differences regarding job satisfaction levels exist between gender.
H_4: Significant differences regarding job satisfaction levels exist between different levels of qualification.
H_5: Significant differences regarding job satisfaction levels exist between different race groups.
H_6: Significant differences regarding job satisfaction levels exist between different levels of tenure.

METHOD

Research design

A cross-sectional design with a survey as technique of data collection was used to research the objectives of this thesis. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993). This design will be well suited to the descriptive and predictive functions associated with correlational research, in which relationships between variables are examined (Shaughnessey & Zechmeister, 1997).

Participants

An accidental sample of employees on various levels in selected organisations (government organisations and private organisations) in the Vaal Triangle define the study population. The study population for this research consisted of 1000 individuals. The participants included: employees in different departments of a steel manufacturing industry (n = 78); employees in different departments of a financial institution (n = 40); employees in different departments of a government organisation (n = 85); employees in different departments of a chemical industry (n = 13). A total of 216 completed questionnaires were returned. This represents a response rate of 21,6 %. Descriptive information of the sample is indicated in Table 1.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Age	Less than 25	16	7,4%
	25-34	85	39,4%
	35-44	70	32,4%
	45-54	36	16,7%
	55+	9	4,2%
Gender	Male	98	45,4%
	Female	118	54,6%
Race	Black	88	40,7%
	White	128	59,3%
Qualification	Grade 10-12	116	53,7%
	Diploma	68	31,5%
	Degree	19	8,8%
	Degree +	13	6,0%
Years working in the company	Less than 1 year	15	6,9%
	1-4 years	53	24,6%
	5-10 years	60	27,8%
	11-15 years	46	21,3%
	16-20 years	17	7,9%
	Longer than 20 years	25	11,6%
Years in present position	Less than 1 year	26	12,0%
	1-4 years	99	45,8%
	5-10 years	66	30,6%
	11-15 years	17	7,9%
	16-20 years	1	0,5%
	Longer than 20 years	7	3,2%
Category	Professional (registered)	37	17,1%
	Semi-Professional	64	29,6%
	Skilled	89	41,2%
	Semi-Skilled	19	8,8%
	Unskilled (general worker)	7	3,2%

In summary, the group can be described as follows: The mean age of the respondents was 27,04 years with 39,4% falling within the 25 to 34 age bracket. The majority of this group were female (54,6%). A large percentage (53,7%) of the participants indicated that their highest qualification was grade 10 to 12. The majority of the group are skilled employees (41,2%), these organisations represent a high average of skilled workers.

Measuring instruments

In this study two measuring instruments, namely the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967) as well as a biographical questionnaire was used to gather information.

The *Minnesota Satisfaction Questionnaire* (MSQ) (Weiss et al., 1967) was used to measure job satisfaction. The MSQ has 20-items and measures satisfaction with regards to various aspects of a job. The response format was a 5-point Likert-type scale (1 = very dissatisfied, 5 = very satisfied). Choices at the end (5) of the scale indicate total agreement with the item, suggesting job satisfaction whereas choices at the beginning of the scale (1) indicate total disagreement with the statement made in the item, suggesting the degree of job dissatisfaction. Test-retest reliabilities of 0,70 and 0,80 were found over a span of a week and a year respectively (Cook et al., 1981). Rothmann (2001) found a Cronbach alpha coefficient of 0,96 and an inter-item correlation of 0,22, which is acceptable for broad higher order constructs (Clark & Watson, 1995). Another feature of the MSQ short form is that it can be used to measure two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself (Spector, 1997). Buitendach (2004) reported a Cronbach alpha coefficient of 0,82 for the extrinsic dimension, and a Cronbach alpha coefficient of 0,79 for the intrinsic dimension.

Statistical analysis

The analysis was carried out with the SPSS programme (SPSS, 2003). The reliability and validity of the MSQ were also determined by means of Cronbach alpha coefficients, as well as confirmatory factor analysis with the SPSS (2003).

Construct (structural) equivalence was computed to compare the factor structure for the different culture groups included in this study. Exploratory factor analysis with a Procrustean target rotation were used to determine the construct equivalence of the MSQ for the different culture groups (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), the comparison between the similarities of the factor structure of two cultural groups could be underestimated due to the arbitrary spatial allocation of factors during factor analysis. Rather, it is suggested that target rotation be conducted prior to comparing the factor solutions of cultural groups by rotating the factor loading matrices with regard to each other in order to maximize the agreement between the factors. During this process, one group is arbitrarily assigned the target group and the factor loadings of the other group rotated towards the target group to form a common facto including matrix, also known as centroid. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but sensitive to a constant added to all loadings of a factor.

Because this index does not have a known sampling distribution, it is impossible to establish confidence intervals. Values higher than 0,95 are deemed to be evident of factorial similarity or equivalence across different cultural groups (Van de Vijver, & Leung, 1997), whereas values lower than 0,90 (Van de Vijver, & Poortinga, 1994) or even 0,85 (Ten Berge, 1986) should be viewed as an indication of sufficient existing differences. Furthermore, bias analysis is necessary because construct equivalence does not presuppose the absence of bias. An instrument could therefore demonstrate acceptable construct equivalence and still be biased (Van de Vijver, & Leung, 1997).

Cronbach alpha coefficients and inter-item correlation coefficients were used to assess the reliability and validity of the measuring instrument. Descriptive statistics (e.g. means, standard deviations, range, skewness and kurtosis) and inferential statistics were used to analyse the data.

Univariate analysis of variance (ANOVA) was used to determine the significance of differences between job satisfaction of demographic groups, such as age, qualification, gender, race and tenure. Anova tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). One-way analysis of variance is then performed on the newly created

dependent variable. Wilk's lambda was used to test the significance of the effects. Wilk's lambda is a likelihood ratio statistic of the data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. ANOVA was used to discover which dependent variables were affected. Because multiple ANOVAS were used, a Bonferroni type adjustment was made for inflated Type 1 error.

RESULTS

Construct equivalence of the MSQ

A simple principal components analysis was conducted on the 20-items of the MSQ on the total sample of employees in selected organisations in the Vaal Triangle. Exploratory factor analysis for the MSQ was done with the help of SPSS (2003). Analysis of eigenvalues (larger than 1) and scree plot indicated that one-factor which explained 31,38% of the variance could be extracted. Next, the component matrices of the two language groups were compared (see Table 2).

Table 2

Component Matrices of the Items of the MSQ for Blacks and Whites

Black		White	
Item	1	Item	1
MSQ 1	0,27	MSQ 1	0,56
MSQ 2	0,31	MSQ 2	0,40
MSQ 3	0,34	MSQ 3	0,57
MSQ 4	0,40	MSQ 4	0,61
MSQ 5	0,65	MSQ 5	0,67
MSQ 6	0,57	MSQ 6	0,63
MSQ 7	0,39	MSQ 7	0,53
MSQ 8	0,55	MSQ 8	0,57
MSQ 9	0,32	MSQ 9	0,62
MSQ 10	0,33	MSQ 10	0,60
MSQ 11	0,44	MSQ 11	0,67
MSQ 12	0,62	MSQ 12	0,57
MSQ 13	0,62	MSQ 13	0,48
MSQ 14	0,55	MSQ 14	0,63
MSQ 15	0,52	MSQ 15	0,79
MSQ 16	0,60	MSQ 16	0,72
MSQ 17	0,52	MSQ 17	0,72
MSQ 18	0,56	MSQ 18	0,47
MSQ 19	0,62	MSQ 19	0,72
MSQ 20	0,74	MSQ 20	0,73

Next, a principal component analysis with varimax rotation was used in carrying out factor analysis per race group. The component matrix is reported in Table 3.

Table 3

Component Matrix of the MSQ for the Total Sample

Item	
1. Being able to keep busy all the time	0,46
2. The chance to work alone on the job	0,38
3. The chance to do different things from time to time	0,49
4. The chance to be "somebody" in the community	0,50
5. The way my boss handles his/her workers	0,63
6. The competence of my supervisor in making decisions	0,59
7. Being able to do things that don't go against my conscience	0,48
8. The way my job provides for steady employment	0,56
9. The chance to do things for other people	0,52
10. The chances to tell people what to do	0,51
11. The chance to do something that makes use of my abilities	0,60
12. The way company policies are put into practice	0,57
13. My pay and the amount of the work I do	0,48
14. The chances for advancement on this job	0,55
15. The freedom to use my own judgement	0,67
16. The chance to try my own methods of doing the job	0,67
17. The working conditions	0,60
18. The way my co-workers get along with each other	0,43
19. The praise I get for doing a good job	0,64
20. The feeling of accomplishment I get from my job	0,73

Descriptive statistics and Cronbach alpha coefficients of the MSQ in selected organisations in the Vaal Triangle are indicated in Table 4.

Table 4

Descriptive Statistics and Alpha Coefficients of the Measuring Instrument

Test and items	N	Mean	*SD*	Skewness	Kurtosis	α
MSQ	216	3,64	0,60	-0,12	-0,17	0,88

The information reflected in Table 4 indicates that the scores are normally distributed. The internal consistency of the 20-item MSQ scale obtained acceptable Cronbach alpha coefficients, falling above the 0,70 guidelines (Nunnally & Bernstein, 1994).

Differences between Groups

Next, ANOVA followed to determine the relationship between job satisfaction and various demographic groups, including age, qualification and tenure. Demographic groups were analysed for statistical significance using Wilk's Lambda statistics. The results of these comparisons are reported in Table 5.

Table 5

ANOVA of Job Satisfaction of Age, Qualification and Tenure

Variable	Value	*F*	*df*	Error *df*	*p*	Partial eta squared
Age	5,14	3,90	4	211	0,00*	0,07
Qualification	4,04	4,04	3	212	0,01	0,05
Tenure	2,60	1,26	6	209	0,28	0,04

* Statistically significant difference $p < 0,01$

Table 5 shows that there was a statistically significant effect of age on the dependent variable job satisfaction ($F_{(4, 211)} = 3,90$, $p < 0,01$; Wilk's Lambda = 5,14; partial eta squared = 0,07), 7% of the variance was explained. Hypothesis 2, that states, significant differences regarding job satisfaction levels exist between different age groups, is accepted. No significant effect of qualification on the dependent variable job satisfaction was found ($F_{(3, 212)} = 4,04$, $p < 0,01$; Wilk's Lambda = 4,04; partial eta squared = 0,05), 5% of the variance was explained. Hypothesis 4, that states, significant differences regarding job satisfaction levels exist between different levels of qualification, is rejected. No significant effect of tenure on the dependent variable job satisfaction was found ($F_{(6, 209)} = 1,26$, $p < 0,01$; Wilk's Lambda = 2,60; partial eta squared = 0,04), 4% of the variance was explained. Hypothesis 6, that states, significant differences regarding job satisfaction levels exist between different levels of tenure, is rejected.

Next, T-tests followed to determine the relationship between job satisfaction and gender groups. The results of these comparisons are reported in Table 6.

Table 6

Differences in Job Satisfaction Levels of Gender Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Male	Female			Male	Female			
Job Satisfaction	73,67	72,25	0,85	206	10,80	12,80	1,40	0,09	0,11

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 6 shows that there was no statistically significant difference between the levels of job satisfaction of the various gender groups. Hypothesis 3, that states, significant differences regarding job satisfaction levels exist between gender, is rejected.

Next, T-tests followed to determine the relationship between job satisfaction and race. The results of these comparisons are reported in Table 7.

Table 7

Differences in Job Satisfaction Levels of Race Groups

Variable	Mean	Mean	*t*-value	*df*	*SD*	*SD*	*F*	*p*	*d*
	Black	White			Black	White			
Job Satisfaction	71,19	73,39	-1,26	196	10,92	12,79	1,37	0,13	0,17

* Statistically significant difference $p < 0,01$

a Practically significant differences from type (in row) where b (medium effect, $d \geq 0,50$) or c (large effect, $d \leq 0,80$) are indicated

Table 7 shows that there was no statistically significant difference between the levels of job satisfaction of the various race groups. Hypothesis 5, that states, significant differences regarding job satisfaction levels exist between different race groups, is rejected.

DISCUSSION

The objectives of this study were to assess the construct validity and internal consistency of the MSQ, levels and socio demographic differences of job satisfaction of employees in selected organisations in the Vaal Triangle.

Exploratory factor analysis of the MSQ resulted in one-factor. The original hypothesised MSQ model consisted of two-factors, representing the intrinsic and extrinsic subscales. These findings correspond with the findings of Hirschfeld (2000) that the intrinsic and extrinsic subscales are distinct components of job satisfaction as measured by the Minnesota Job Satisfaction Questionniare (MSQ). Buitendach (2004) confirmed a two-factor structure for the MSQ with items 15, 16 and 20 removed. Although the internal consistency of the scales in this study were acceptable, hypothesis 1, which states that job satisfaction, as conceptualised by the MSQ, has a two-dimensional structure, consisting of an intrinsic and extrinsic subscale, is rejected.

Statistically significant differences were found with job satisfaction and age. Clark, Oswald and Warr (1996) suggest that job satisfaction is U-shaped in age, with higher levels of morale among younger workers but that this declines after the novelty of employment wears off and boredom with the job sets in. Job satisfaction rises again later in life as workers become accustomed to their role (Clark, Oswald & Warr, 1996).

In terms of qualification and job satisfaction no statistically significant differences were found. Gardner and Oswald (2002) indicated in their research that the lowest level of job satisfaction is experienced by employees with a degree as qualification.

Regarding the relationship between job satisfaction and gender, no statistically significant differences were found. This corresponds with the research of Higgs, Higgs and Wolhuter (2004), who also found no significant differences between males and females in terms of their experience of job satisfaction.

No statistically significant differences were found with job satisfaction and race. Oswald (2002) indicated that job satisfaction differs among blacks and whites. With regards to tenure and job satisfaction no statistically significant differences were found.

A limitation of this study was that self-report measures were exclusively relied upon. This causes a particular problem in validation studies that use self-report measures exclusively because the last part of the common variance of the measures has to be attributed to method variance (Schaufeli, Maslach & Marek, 1993). The use of a cross-sectional study design also represents a limitation. A longitudinal design would eliminate cohort effects confounding the data and their subsequent interpretations. Longitudinal data would allow for forming a better understanding of the true nature of job satisfaction. Another limitation of this study was the different selected organisations that were relied upon and the number of respondents who replied to the questionnaires is a limitation of this study and limits the ability to generalise the results.

RECOMMENDATIONS

For future research on job satisfaction a national representative sample of employees at selected organisations are needed, thus the exact study should be repeated in other South African organisations applying the same instruments and statistical methods to compare results. This will establish and ensure a meaningful job satisfaction database for South Africa.

For future research it is recommended that research be repeated using a longitudinal design on job satisfaction in the South African context and larger sample sizes will provide confidence that the study findings would be consistent across other sample groups.

Additional research is needed to further determine the reliability and validity in other samples in South Africa. Job satisfaction should be investigated in relation to other work outcomes such as productivity and performance. The inclusion of other dispositional strengths should also be investigated in the study of job satisfaction.

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CHAPTER 5
RESEARCH ARTICLE 4

THE RELATIONSHIP BETWEEN JOB INSECURITY, BURNOUT, WORK ENGAGEMENT, GENERAL HEALTH AND JOB SATISFACTION IN SELECTED ORGANISATIONS IN THE VAAL TRIANGLE

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ABSTRACT

The objectives of this study were to assess the relationship between job insecurity, burnout, engagement, general health and job satisfaction in selected organisations in the Vaal Triangle. A cross sectional survey design was used. Accidental samples of workers in the selected organisations (N = 216) were taken. The Job Insecurity Questionnaire (JIQ), Maslach Burnout Inventory–General Survey (MBI-GS), Utrecht Work Engagement Scale (UWES), General Health Questionnaire (GHQ) and Minnesota Satisfaction Questionnaire (MSQ) were administered. Exploratory factor analysis of the GHQ resulted in a four-factor model of general health. The scales demonstrated acceptable levels of internal consistencies. The results revealed practically significantly relationships between burnout, engagement, job insecurity, job satisfaction and general health. As independent variables Exhaustion and Cynicism explained 36% of the dependent variable job satisfaction and 50% of general health.

OPSOMMING

Die doelstelling van hierdie studie was om die verband tussen werksonsekerheid, uitbranding, werksbegeestering, algemene gesondheid en werkstevredenheid in geselekteerde oganisasies in die Vaaldriehoek te bepaal. 'n Dwarssnee opname-ontwerp is gebruik. 'n Beskikbaarheidsteekproef van werknemers vir die geselekteerde organisasie (N=216) is geneem. Die Werksonsekerheidvraelys (JIQ), Maslach Uitbrandingsvraelys-Algemene Opname (MBI-GS), Utrecht-werksbegeesteringskaal (UWES), algemene gesondheidsvraelys (GHQ) en Minnesota Werkstevredenheidsvraelys (MSQ) is afgeneem. Eksploratiewe faktoranalise van die GHQ het geresulteer in 'n vierfaktormodel van algemene gesondheid. Die meetinstrument het aanvaarbare interne konsekwentheid getoon. Die resultate het praktiese betekenisvolle verbande tussen uitbranding, werksbegeestering, werksonsekerheid, werkstevredenheid en algemene gesondheid getoon. As onafhanklike veranderlikes het Uitputting en Sinisme 36% van die afhanklike veranderlike werkstevredenheid verklaar en 50% van algemene gesondheid.

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Job insecurity has received growing recognition in connection with the rapidly changing organisational environment over the past two decades. In their struggle for survival, oganisations are faced with the necessity of making their operations more effective with fewer resources (Sverke, Hellgren & Näswall, 2002). The unpredictable economic situation and the tougher competitive standards have resulted in downsizing, mergers, acquisitions, and other types of structural change, all of which tend to produce increased feelings of insecurity among the employees, not only pertaining to their jobs but also about the future in general (Sverke, Hellgren & Näswall, 2002).

Innumerable organisations have engaged in restructuring and large-scale workforce reductions in order to cut costs and improve organisational effectiveness and competitive ability (Burke & Nelson, 1998; Kozlowski, Chao, Smith & Hedlund, 1993).

Literature suggests that perceptions of job insecurity may have detrimental consequences for employee attitudes (Ashford, Lee & Bobko, 1989; Davy, Kinicki & Scheck, 1997; Rosenblatt, Talmuct & Ruvio 1999; Sverke & Hellgren, 2002) and well-being (Barling & Kelloway, 1996; De Witte, 1999; Kinnunen, Mauno, Nätti & Happonen, 1999; Mohr, 2000) as well as for organisational viability (Greenhalgh & Rosenblatt, 1984; Kets de Vries & Balazs, 1997). Job insecurity may have as detrimental consequences as job loss itself (Latack & Dozier, 1986). According to Hartley et al. (1991) job insecurity can be one of the more important stressors in employment situations. For the individual, perceptions of job insecurity may have detrimental effects on employee well-being and job satisfaction. From the organisation's point of view, job insecurity may have negative consequences for employees' attitudes towards the organisation, willingness to remain with the organisation, and performance (Sverke, Hellgren & Näswall, 2002).

Given that employees' reactions to uncertain employment conditions are of fundamental importance from both the occupational health and managerial perspectives (Matteson & Ivancevich, 1987) it becomes crucial to understand how job insecurity relates to factors such as well-being and work attitudes (Hellgren, Sverke & Isaksson, 1999).

Many researchers have concluded that job insecurity is strongly related to the postulated outcomes, others have found substantially weaker measures of association, and still others have reported non-significant relationships (Sverke, Hellgren & Näswall, 2002).

The objectives of this study were to investigate the relationship between job insecurity, burnout, engagement, general health and job satisfaction in selected organisations in the Vaal Triangle, and to assess whether burnout and engagement partially mediate the relationship between job insecurity, job satisfaction and general health.

During the last few decades many economic changes, leading to changes in labour markets, have taken place in the industrialised world. These changes have mainly been due to a prolonged economic recession, forcing organisations to cut back costs, downsize, and "rightsize" (Mauno, Leskinen & Kinnunen, 1999). A significant issue, linked to these processes is job insecurity, since during organisational changes employees are likely to experience the threat of job loss as well as that of losing important features of the their job (Mauno, Leskinen & Kinnunen, 1999). Research of job insecurity focused primarily on negative effects relating to individuals and organisations.

Jacobson (1991) argues that job insecurity is a stressful experience, because it concerns the future; and the employee does not know whether he/she will actually lose his/her job, and this uncertainty restricts coping processes available in a stressful situation. The findings of Mauno and Kinnunen (1999) give empirical support to those cross-sectional studies which have regarded job insecurity as a stressor, leading to negative consequences for well-being (Ameen et al., 1995; Ashford et al., 1989; Davy et al., 1997; Larson, 1994; Lim, 1996). In turn, Heaney, Israel and House (1994) found that job insecurity operates as a chronic occupational stressor that has cumulative negative consequences on aspects of well-being. Job insecurity is thus viewed as a stressor. Stress arises when the demands of a particular encounter are appraised by the individual as exceeding the resources available, thereby threatening the well-being and bringing out change in the person's psychological condition in order to cope with the encounter (Cooper et al., 2001).

Job insecurity has an impact on three crucial variables namely; psychological well-being, job satisfaction and commitment to the organisation. Previous research also proved that both physical and mental health tend to decrease as the experience of job insecurity increases (De Witte, 1999; Hartley et al., 1999). Skill utilisation, work load, job insecurity and autonomy are four specific job characteristics which correlates with well-being (De Witte, 1999). Perceived job insecurity is detrimental for employee well-being and has often been reported to result in reduced psychological well-being, characterised by phenomena such as anxiety,

depression, and irritation or in strain-related psychosomatic complaints (Catalano et al., 1986). For the purpose of this research general health is conceptualised by looking at four concepts, somatic symptoms, anxiety/insomnia, social dysfunction and depression (Goldberg et al., 1979).

Dekker and Schaufeli (1995) found that prolonged job insecurity was more detrimental to an employee's health than security about his/her job situation. Research (Dekker & Schaufeli, 1995) showed that job insecurity is associated with a deterioration of psychological health, leading to psychological distress and burnout, as well as for job and organisational withdrawal. Burnout may develop after prolonged exposure to job insecurity (Dekker & Schaufeli, 1995). Burnout is defined 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 motivtion, and the development of dysfunctional attitudes and behaviours at work (Schaufeli & Enzmann, 1998). Burnout is conceptualised as a three-dimensional phenomenon consisting of exhaustion, cynicism and professional efficacy, of which exhaustion is considered to be the most important dimension (Lee & Ashforth, 1990) that relates to the individual stress aspect of burnout, referring to feelings of being overextended and depleted of one's emotional and physical resources (Maslach et al., 2001). A high level of job insecurity is related to high emotional and mental exhaustion (De Witte, 2000). Dekker and Schaufeli (1995) found that prolonged job insecurity was more detrimental to an employee's health than security about his/her job situation. It is evident that job insecurity holds psychological, mental and emotional consequences for the individual.

Research (Schaufeli & Bakker, 2002) indicated that some individuals, regardless of high job demands and a lack of job resources, do not develop burnout, but seem to find pleasure in hard work and dealing with job demands. Maslach and Leiter (1997) redefine burnout as an erosion of engagement with the job. Engagement is not a momentary and specific state, but a more persistent and pervasive affective-cognitive state that is not focused on a particular object, event, individual or behaviour (Schaufeli, Salanova, González-Romá & Bakker, 2002), that is characterised by vigour, dedication and absorption.

Furthermore De Witte (1999) constitutes that the findings of job insecurity reduces the level of psychological well-being, job security and organisational commitment could be explained

by distinguishing between two factors that could be relevant in explaining the harmful impact of job insecurity, namely: predictability and controllability. Unpredictability includes lack of clarity about the future and lack of clarity about the expectations and behaviour that the employee should adopt (De Witte, 1999; Hartley et al., 1991). Uncontrolability has an impact because the lack thereof or the feeling of powerlessness towards the threat is considered to be the core of the phenomenon of job insecurity (De Witte, 1999).

Hellgren et al. (1999) reported that perceived threats to important job features appear to relate primarily to attitudinal outcomes, such as dissatisfaction with the present job and the propensity to leave it voluntarily. People experiencing job insecurity may leave the organisation to seek more secure career opportunities in order to fulfil their four key expectations of work; namely income, security, creativity and social interaction (Greenhalgh & Rosenblatt, 1984; Ransome, 1995). Research also reveals that an imbalance between desired and actual work conditions results in low job satisfaction (Locke, 1976). In addition, a number of studies have also found feelings of unstable employment conditions to be related with reduced levels of work attitudes such as job satisfaction (Ashford et al., 1989; Davy, Kinicki & Scheck, 1997; Rosenblatt & Ruvio, 1996). Job satisfaction can also be described as an affective or emotional reaction to the job, resulting from the incumbent's comparison of actual outcomes with the required outcomes (Hirschfeld, 2000; Locke, 1976). Therefore, employees who are satisfied with their jobs are likely to be better ambassadors for the organisation (Agho, Price & Mueller, 1992).

According to Probst (2000) it is important to note that job insecurity is unlikely to influence equally all facets of job satisfaction. Focusing primarily on these aspects of one's job that would be threatened by a loss of job security, two frequent outcomes of workplace restructuring are pay decreases, lack of promotion opportunities, or even demotions.

The outcomes of job insecurity could be problematic for both employee and employer, since its impact on individual employees can erode the effectiveness of the organisation and the company risks getting into a downward spiral (Lord & Hartley, 1998). Thus job insecurity can be dysfunctional for both individual and organisation (Greenhalgh & Sutton, 1991). It is widely discussed that job insecurity leads to reduced well-being and negative emotions toward the perceived source of stress. It may be that job insecurity is especially burdensome just because it involves prolonged uncertainty (Hartley et al., 1991; Van Vuuren, 1990).

Feelings of uncertainty may lead to burnout, lower levels of work engagement, job dissatisfaction and health problems among employees in the selected organisations in the Vaal Triangle.

Hypotheses

The hypotheses of this study are as follows:

H_1: General health as measured by the GHQ is a multi-dimensional construct with acceptable levels of internal consistency for each of its subscales and is a construct equivalent measuring instrument for the different culture groups in selected organisations in the Vaal Triangle.
H_2: There is a practically significant relationship between job insecurity and burnout.
H_3: There is a practically significant relationship between job insecurity and engagement.
H_4: There is a practically significant relationship between job insecurity and general health.
H_5: There is a practically significant relationship between job insecurity and job satisfaction.
H_6: Job insecurity predicts higher levels of burnout and lower levels of job satisfaction.

METHOD

Research design

A cross-sectional design with a survey as technique of data collection was used to research the objectives of this thesis. Cross-sectional designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993). This design will be well suited to the descriptive and predictive functions associated with correlational research, in which relationships between variables are examined (Shaughnessey & Zechmeister, 1997).

Participants

An accidental sample of employees on various levels in selected organisations (government organisations and private organisations) in the Vaal Triangle define the study population. The study population for this research consisted of 1000 individuals. The participants included: employees in different departments of a steel manufacturing industry (n = 78); employees in different departments of a financial institution (n = 40); employees in different departments

of a government organisation (n = 85); employees in different departments of a chemical industry (n = 13). A total of 216 completed questionnaires were returned. This represents a response rate of 21,6 %. Descriptive information of the sample is indicated in Table 1.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Age	Less than 25	16	7,4%
	25-34	85	39,4%
	35-44	70	32,4%
	45-54	36	16,7%
	55+	9	4,2%
Gender	Male	98	45,4%
	Female	118	54,6%
Race	Black	88	40,7%
	White	128	59,3%
Qualification	Grade 10-12	116	53,7%
	Diploma	68	31,5%
	Degree	19	8,8%
	Degree +	13	6,0%
Years working in the company	Less than 1 year	15	6,9%
	1-4 years	53	24,6%
	5-10 years	60	27,8%
	11-15 years	46	21,3%
	16-20 years	17	7,9%
	Longer than 20 years	25	11,6%
Years in present position	Less than 1 year	26	12,0%
	1-4 years	99	45,8%
	5-10 years	66	30,6%
	11-15 years	17	7,9%
	16-20 years	1	0,5%
	Longer than 20 years	7	3,2%
Category	Professional (registered)	37	17,1%
	Semi-Professional	64	29,6%
	Skilled	89	41,2%
	Semi-Skilled	19	8,8%
	Unskilled (general worker)	7	3,2%

In summary, the group can be described as follows: The mean age of the respondents was 27,04 years with 39,4% falling within the 25 to 34 age bracket. The majority of this group were female (54,6%). A large percentage (53,7%) of the participants indicated that their highest qualification was grade 10 to 12. The majority of the group are skilled employees (41,2%), these organisations represent a high average of skilled workers.

Measuring instruments

Six questionnaires are used in the empirical study, namely the Job Insecurity Questionnaire (JIQ) (De Witte, 1997), the Maslach Burnout Inventory–General Survey (MBI-GS) (Maslach et al., 1996); the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002), the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), the General Health Questionnaire (GHQ) (Goldberg, 1979), as well as a biographical questionnaire.

The *Job Insecurity Questionnaire* (JIQ) was used to measure job insecurity (De Witte, 1997). This 11-item questionnaire was used to measure the perceived job insecurity of the participants. The questionnaire consists of 11-items relating to job insecurity. Items encapsulate both the cognitive and affective dimensions of job insecurity and are arranged along a 5-point Likert-type scale with 1 = strongly agree, 3 = unsure and 5 = strongly disagree. The 11-items are answered by deciding to what extent they experience (dis)agreement with statements rated on each subscale. Job insecurity is assessed according to the cognitive, affective and total dimensions for this study. The average of the 11-items is an indication of the overall job insecurity, of the respondent. A low score would indicate that the respondent would experience a high degree of job insecurity whilst a high score indicates low degree of job insecurity. De Witte (2000), in his studies, reported a Cronbach alpha coefficient of 0,92 (total) for this questionnaire to which he refers as "*globale jobonzekerheid*". On the 5-items encapsulating the affective dimension of job insecurity (for example "I feel uncertain about the future of my job"), a Cronbach alpha coefficient of 0,85 was reported and the 6-items referring to the cognitive dimension of job insecurity (for example "I think that I will be able to continue working here"), a Cronbach Alpha coefficient of 0,90 was found, thus indicating high reliability (De Witte, 2000). De Witte (2000) also found an overlap between the cognitive and affective factor loadings and reported that both scales correlated interdependently very high (r = 0,76). Heymans (2002) obtained an alpha coefficient of 0,81. Buitendach (2004) reported a Cronbach alpha coefficient of 0,84 for the

cognitive dimension, and a Cronbach alpha coefficient of 0,89 for the affective dimension. An acceptable Cronbach alpha coefficient of 0,84 for the affective dimension and 0,89 for the cognitive dimension was obtained for the JIQ in the study of Van Zyl (2005).

The *Maslach Burnout Inventory–General Survey* (MBI-GS) (Maslach et al., 1996) was used to measure burnout. The MBI-GS has three subscales: Exhaustion (Ex) (5-items; for example "I feel used up at the end of the workday"), Cynicism (Cy) (5-items; for example "I have become less enthusiastic about my work") and Professional Efficacy (PE) (6-items; for example "In my opinion I am good at my job"). Together the sub-scales of the MBI-GS provide a three-dimensional perspective on burnout. Internal consistencies (Cronbach coefficient alphas) varied from 0,87 for exhaustion, 0,73 to 0,84 for Cynicism and 0,76 to 0,84 for Professional efficacy. Test-retest reliabilities after one year were 0,65, Exhaustion, 0,60, Cynicism and 0,67, Professional Efficacy. All items are scored on a 7-point frequency-rating scale ranging from 0 ("never"), to 6 ("daily"). High scores on Exhaustion and Cynicism, and low scores on Professional efficacy are indicative of burnout. Storm (2002) confirmed the three-factor structure of the MBI-GS in a sample of 2396 members of the South African Police Service (SAPS), but recommended that item 13 should be dropped from the questionnaire. She confirmed the structural equivalence of the MBI-GS for different race groups in the SAPS. The following Cronbach alpha coefficients were obtained for the MBI-GS: Exhaustion: 0,88; Cynicism: 0,79; Professional efficacy: 0,78 (Storm, 2002). Naudé (2003) reported a Cronbach alpha coefficient of 0,79 for the exhaustion dimension, a Cronbach alpha coefficient of 0,68 for the depersonalisation dimension and a Cronbach alpha coefficient of 0,78 for the personal accomplishment dimension. Van Zyl (2005) reported a Cronbach alpha coefficient of 0,89 for the exhaustion dimension, a Cronbach alpha coefficient of 0,76 for the cynicism dimension and a Cronbach alpha coefficient of 0,82 for the professional efficacy dimension.

The *Utrecht Work Engagement Scale* (UWES) (Schaufeli et al., 2002) was used to measure the levels of engagement of the participants. The UWES includes three dimensions, namely vigour, dedication and absorption, which is conceptually seen as the opposite of burnout and is scored on a 7-point frequency-rating scale, varying from 0 ("never") to 6 ("every day"). The questionnaire consists of 17 questions and includes questions like "I am bursting with energy every day in my work", "Time flies when I am at work" and "My job inspires me". The alpha coefficients for the three subscales varied between 0,68 and 0,91. The alpha

coefficient could be improved (α varies between 0,78 and 0,89 for the three sub-scales) by eliminating a few items without substantially decreasing the scales internal consistency. Storm (2002) obtained the following alpha coefficients for the UWES in a sample of 2396 members of the South African Police Service; Vigour: 0,78; Dedication: 0,89; Absorption: 0,78. Naudé (2003) reported a Cronbach alpha coefficient of 0,70 for vigour, a Cronbach alpha coefficient of 0,83 for dedication and a Cronbach alpha coefficient of 0,67 for Absorption. Van Zyl (2005) reported a Cronbach alpha coefficient of 0,95 for the UWES.

The *Minnesota Satisfaction Questionnaire* (MSQ) (Weiss et al., 1967) was used to measure job satisfaction. The MSQ has 20-items and measures satisfaction with various aspects of a job. The response format was a 5-point Likert-type scale (1 = very dissatisfied, 5 = very satisfied). Choices at the end (5) of the scale indicate total agreement with the item, suggesting job satisfaction whereas choices at the beginning of the scale (1) indicate total disagreement with the statement made in the item, suggesting the degree of job dissatisfaction. In scoring the Minnesota Satisfaction Questionnaire, an average score of all 20-items are determined. The average score of the 20-items is an indication of the general job satisfaction of the respondent. A percentile score of 75 or higher would be indicative of a high degree of job satisfaction, while a percentile score of 25 or lower would be indicative of a low level of satisfaction. Scores in the middle of the range of percentiles are indicative of average satisfaction (Weiss et al., 1967). Test-retest reliabilities of 0,70 and 0,80 were found over a span of a week and a year respectively (Cook et al., 1981). Rothmann (2001) found a Cronbach alpha coefficient of 0,96 and an inter-item correlation of 0,22, which is acceptable for broad higher order constructs (Clark & Watson, 1995). Another feature of the MSQ short form is that it can be used to measure two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself (Spector, 1997). Alpha coefficients for the subscale scores are as follows: for sample 1, original intrinsic (12-items) = 0,85, revised intrinsic (7-items) = 0,81, original extrinsic (6-items) = 0,82, revised extrinsic (6-items) = 0,81. For sample 2, alpha coefficients for the subscale scores were as follows: original intrinsic = 0,84, revised intrinsic = 0,82, original extrinsic = 0,88 and revised extrinsic = 0,88 (Hirschfeld, 2000). Buitendach (2004) reported a Cronbach alpha coefficient of 0,82 for the extrinsic dimension, and a Cronbach alpha coefficient of 0,79 for the intrinsic dimension. Van Zyl (2005) reported a Cronbach alpha coefficient of 0,88 for the MSQ.

The *General Health Questionnaire* (Goldberg, 1979) was used to measure well-being. The scale is a screening test developed for the purpose of detecting non-psychiatric health symptoms. Items are scored on a four interval response mode ranging from 0 to 3, where 0 indicates no perceptions of mental health complaints and 3 indicates frequently perceived health complaints. Items 1-7 measure somatic symptoms, items 8-14 measure anxiety/insomnia, items 15-21 measure social dysfunction and items 22-28 measure severe depression. Hellgren and Sverke (2003) reported an internal consistency reliability for the GHQ scale of 0,85 (time 1) and 0,83 (time 2). Oosthuizen (2000) found the following Cronbach alpha coefficients for the GHQ, somatic symptoms (0,76), anxiety/insomnia (0,83), social dysfunction (0,73) and depression (0,78). Van Zyl (2005) reported the following Cronbach alpha coefficients for the GHQ, somatic symptoms (0,76), anxiety/insomnia (0,91), social dysfunction (0,77) and depression (0,91).

Statistical analysis

The analysis was carried out with the SPSS programme (SPSS, 2003). The reliability and validity of the JIQ, MBI-GS, UWES, GHQ and MSQ were also determined by means of Cronbach alpha coefficients, mean inter-item correlations and their distribution scales, as well as confirmatory factor analysis with the SPSS (2003).

Construct (structural) equivalence was computed to compare the factor structure for the different culture groups included in this study. Exploratory factor analysis with a Procrustean target rotation were used to determine the construct equivalence of the GHQ for the different culture groups (Van de Vijver & Leung, 1997). According to Van de Vijver and Leung (1997), the comparison between the similarities of the factor structure of two cultural groups could be underestimated due to the arbitrary spatial allocation of factors during factor analysis. Rather, it is suggested that target rotation be conducted prior to comparing the factor solutions of cultural groups by rotating the factor loading matrices with regard to each other in order to maximize the agreement between the factors. During this process, one group is arbitrarily assigned the target group and the factor loadings of the other group rotated towards the target group to form a common facto including matrix, also known as centroid. Factorial agreement between the two groups is then estimated with Tucker's coefficient of agreement (Tucker's phi). This coefficient is insensitive to multiplications of the factor loadings, but sensitive to a constant added to all loadings of a factor. Because this index does not have a

known sampling distribution, it is impossible to establish confidence intervals. Values higher than 0,95 are deemed to be evident of factorial similarity or equivalence across different cultural groups (Van de Vijver, & Leung, 1997), whereas values lower than 0,90 (Van de Vijver, & Poortinga, 1994) or even 0,85 (Ten Berge, 1986) should be viewed as an indication of sufficient existing differences. Furthermore, bias analysis is necessary because construct equivalence does not presuppose the absence of bias. An instrument could therefore demonstrate acceptable construct equivalence and still be biased (Van de Vijver, & Leung, 1997).

Cronbach alpha coefficients and inter-item correlation coefficients were used to assess the reliability and validity of the measuring instrument. Descriptive statistics (e.g. means, standard deviations, range, skewness and kurtosis) and inferential statistics were used to analyse the data.

Pearson correlation coefficient was used to specify the relationships between the variables. A cut-off point of 0,30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

Regression analysis were conducted to determine the percentage of variance in the dependent variables 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 equivalence of the GHQ

A simple principal components analysis was conducted on the 28-items of the GHQ on the total sample of employees in selected organisations in the Vaal Triangle. Exploratory factor analysis for the GHQ was done with the help of SPSS (2003). Analysis of eigenvalues (larger than 1) and scree plot indicated that four-factors which explained 59,51% of the variance could be extracted. A principal factor analysis with direct oblimin rotation was used in

carrying out factor analysis per race group. The pattern matrices for Black and White are reported in Table 2.

Table 2

Pattern Matrix of the GHQ

Black					White				
Item	1	2	3	4	Item	1	2	3	4
GHQ 1	-0,32	0,12	**0,71**	0,23	GHQ 1	0,21	-0,18	-0,03	**0,70**
GHQ 2	0,06	0,11	0,13	**0,56**	GHQ 2	0,09	0,11	0,06	**0,75**
GHQ 3	0,12	-0,13	0,16	**0,61**	GHQ 3	0,19	0,22	0,15	**0,58**
GHQ 4	-0,09	0,01	0,20	**0,77**	GHQ 4	0,11	0,04	-0,13	**0,45**
GHQ 5	-0,08	0,03	-0,15	**0,88**	GHQ 5	**0,67**	0,11	-0,32	0,24
GHQ 6	0,10	-0,10	-0,14	**0,69**	GHQ 6	**0,71**	0,12	-0,22	0,17
GHQ 7	0,11	-0,03	-0,20	**0,72**	GHQ 7	**0,59**	0,11	-0,04	0,23
GHQ 8	**0,55**	-0,22	0,16	0,13	GHQ 8	**0,76**	0,09	0,12	-0,03
GHQ 9	**0,45**	-0,22	0,00	0,25	GHQ 9	**0,75**	0,01	0,13	-0,02
GHQ 10	**0,50**	-0,17	-0,05	0,38	GHQ 10	**0,64**	0,05	0,12	0,30
GHQ 11	**0,75**	0,02	0,09	0,03	GHQ 11	**0,35**	**0,35**	0,17	0,29
GHQ 12	**0,70**	-0,20	-0,08	0,07	GHQ 12	**0,61**	0,20	0,08	0,19
GHQ 13	**0,49**	-0,32	0,00	0,22	GHQ 13	**0,71**	0,07	0,18	0,14
GHQ 14	**0,57**	-0,25	0,10	0,11	GHQ 14	**0,66**	0,15	0,11	0,20
GHQ 15	**0,38**	0,08	-0,06	-0,03	GHQ 15	0,33	**0,46**	-0,20	-0,36
GHQ 16	**0,58**	0,27	0,36	0,12	GHQ 16	**0,66**	-0,02	0,28	0,02
GHQ 17	0,43	0,-8	**0,62**	-0,11	GHQ 17	0,28	0,02	**0,67**	-0,11
GHQ 18	0,19	-0,09	**0,55**	0,00	GHQ 18	0,56	-0,07	**0,58**	-0,21
GHQ 19	-0,06	-0,39	**0,51**	-0,00	GHQ 19	-0,17	0,34	**0,73**	0,07
GHQ 20	-0,08	-0,14	**0,75**	-0,14	GHQ 20	0,14	-0,01	**0,78**	-0,02
GHQ 21	0,22	-0,08	**0,54**	0,09	GHQ 21	0,11	0,08	**0,58**	0,36
GHQ 22	0,17	**-0,62**	-0,00	0,02	GHQ 22	-0,17	**0,57**	0,43	0,25
GHQ 23	0,09	**-0,72**	-0,00	0,14	GHQ 23	0,14	**0,72**	0,18	0,09
GHQ 24	0,02	**-0,79**	-0,01	0,02	GHQ 24	0,08	**0,79**	0,12	0,00
GHQ 25	-0,01	**-0,77**	0,12	-0,09	GHQ 25	-0,02	**0,88**	0,01	-0,04
GHQ 26	0,16	**-0,71**	-0,10	0,12	GHQ 26	0,22	**0,64**	0,02	0,20
GHQ 27	-0,12	**-0,89**	0,02	-0,03	GHQ 27	0,12	**0,84**	-0,08	0,02
GHQ 28	-0,15	**-0,86**	0,08	-0,03	GHQ 28	-0,08	**0,95**	-0,03	-0,08

The pattern matrices for Blacks and Whites were used as input for an exploratory factor analysis with target rotations. The four-factor structure was compared across groups by rotating one solution to the other. After target rotation, the following Tucker's phi coefficients were obtained: a) Factor 1 = 0,78; b) Factor 2 = 0,92; c) Factor 3 = 0,81; d) Factor 4 = 0,86. These Tucker's phi coefficients showed an unacceptably low equivalence for the two race groups, accept for Factor 2. Inspection of Table 3 indicated that seven items were problematic. These items are: a) Item 1 - "Been feeling perfectly well and in good health". This item loaded on a different factor for the Black group. b) Item 5 - "Been getting any pains in your head". This item loaded on a different factor for the White group. c) Item 6 - "Been getting a feeling of tightness or pressure in your head". This item loaded on a different factor for the White group. d) Item 7 - "Been having hot or cold spells". This item loaded on a different factor for the White group. e) Item 15 - "Been managing to keep you busy and occupied". This item loaded on different factors for both groups. f) Item 16 - "Been taking longer over the things you do". This item loaded on a different factor for both groups. g) Item 22 - "Been thinking of you as a worthless person". This item loaded on a different factor for the White group. For the purpose of this research, it was decided not to remove these items although problematic. After the construct equivalence was confirmed a principal factor analysis with direct oblimin was used and the pattern matrices for the total sample are reported in Table 3.

Table 3

Pattern Matrix of the GHQ for the Total Sample

Item	1	2	3	4
GHQ 1	-0,12	0,12	0,28	**0,74**
GHQ 2	0,16	-0,06	-0,02	**0,69**
GHQ 3	0,27	-0,18	0,11	**0,53**
GHQ 4	0,14	-0,04	-0,11	**0,52**
GHQ 5	**0,56**	-0,05	-0,33	0,39
GHQ 6	**0,63**	-0,10	-0,26	0,25
GHQ 7	**0,59**	-0,10	-0,21	0,26
GHQ 8	**0,70**	-0,12	0,16	-0,04
GHQ 9	**0,68**	-0,10	0,07	-0,03
GHQ 10	**0,69**	-0,07	0,06	0,21
GHQ 11	**0,59**	-0,08	0,23	0,08
GHQ 12	**0,70**	-0,14	0,08	0,01
GHQ 13	**0,66**	-0,15	0,13	0,10
GHQ 14	**0,67**	-0,13	0,17	0,10
GHQ 15	**0,43**	-0,05	-0,00	-0,32
GHQ 16	**0,62**	0,21	0,40	0,08
GHQ 17	0,24	0,06	**0,70**	-0,02
GHQ 18	0,29	-0,01	**0,60**	-0,03
GHQ 19	-0,12	-0,37	**0,63**	0,06
GHQ 20	-0,09	-0,11	**0,77**	0,04
GHQ 21	0,14	-0,08	**0,55**	0,30
GHQ 22	-0,00	**-0,62**	0,21	0,14
GHQ 23	0,18	**-0,73**	0,07	0,04
GHQ 24	0,06	**-0,81**	0,02	-0,05
GHQ 25	-0,03	**-0,83**	0,03	-0,05
GHQ 26	0,29	**-0,67**	-0,06	0,03
GHQ 27	0,05	**-0,87**	-0,06	-0,03
GHQ 28	-0,13	**-0,92**	-0,03	-0,03

In Table 4 the descriptive statistics and Cronbach alpha coefficients of the JIQ, MBI-GS, UWES, GHQ and MSQ are indicated.

Table 4

Descriptive Statistics and Alpha Coefficients of the Measuring Instruments

Test and items	N	Mean	*SD*	Skewness	Kurtosis	α
JIQ						
Affective	216	2,8	0,91	0,07	-0,74	0,84
Cognitive	216	3,5	0,74	0,52	-0,30	0,89
MSQ	216	3,64	0,60	-0,12	-0,17	0,88
MBI-GS						
Exhaustion	216	9,27	7,59	0,88	0,10	0,89
Cynicism	216	2,07	1,42	0,50	-0,34	0,76
Professional Efficacy	216	23,38	6,68	-1,31	1,48	0,82
UWES	216	70,54	20,23	-0,94	0,16	0,95
GHQ						
Somatic symptoms	216	1,84	0.67	1,14	1,20	0,78
Anxiety/insomnia	216	2,01	0,95	0,76	-0,20	0,91
Social dysfunction	216	2,00	0,96	0,53	0,61	0,77
Depression	216	1,90	1,66	2,08	4,59	0,91

The results in Table 4 indicate that the scores on the JIQ, MBI-GS, UWES, GHQ and MSQ are relatively normally distributed. Regarding the Cronbach alpha coefficients, all subscales of the measuring instruments are considered acceptable in comparison to the guideline of Nunnally and Bernstein (1994). It appears that the JIQ, MBI-GS, UWES, GHQ and MSQ have acceptable levels of internal consistency.

The correlation coefficients between the JIQ, MBI-GS, UWES, GHQ and MSQ are reported in Table 5.

Table 5

Correlation Coefficients between the JIQ, MBI-GS, UWES, GHQ and MSQ

Item	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Exhaustion	-	-	-	-	-	-	-	-	-	-	-
2. Cynicism	0,59 *++	-	-	-	-	-	-	-	-	-	-
3. Professional efficacy	-0,17	-0,12	-	-	-	-	-	-	-	-	-
4. UWES	-0,42 *+	-0,36 *+	0,41 *+	-	-	-	-	-	-	-	-
5. MSQ	-0,43*+	-0,50*++	0,33 *+	0,59 *++	-	-	-	-	-	-	-
6. Cognitive	0,26 *	0,14	-0,04	-0,22 *	-0,31*+	-	-	-	-	-	-
7. Affective	0,28 *	0,18 *	-0,03	-0,28 *	-0,28*	0,67*++	-	-	-	-	-
8. Somatic symptoms	0,53*++	0,36*+	0,00	-0,25*	-0,27*	0,15*	0,18*	-	-	-	-
9. Anxiety /insomnia	0,63*++	0,47*+	-0,10	-0,31*+	-0,49*+	0,33*+	0,28*	0,64*++	-	-	-
10. Social dysfunction	0,50*++	0,39*+	-0,20*	-0,34*+	-0,29*	0,27*	0,27*	0,38*+	0,56*++	-	-
11. Depression	0,48*+	0,52*++	-0,25*	-0,29*	-0,32*+	0,19*	0,22*	0,41*+	0,57*++	0,43*+	-

* Statistically significant $p \leq 0,05$

\+ Correlation is practically significant $r \geq 0,30$ (medium effect)

++Correlation is practically significant $r \geq 0,50$ (large effect)

Upon inspection of Table 5, it is evident that exhaustion is practically significantly related (large effect) to cynicism. Employees who experienced high levels of exhaustion tended to experience high levels of cynicism. Exhaustion is practically significantly related (medium effect) to engagement and job satisfaction, individuals who experienced high levels of exhaustion tended to be less engaged and dissatisfied. Exhaustion is statistically significantly related to cognitive and affective job insecurity, employees who experienced high levels of exhaustion tended to experience job insecurity. Exhaustion is practically significantly related (large effect) to somatic symptoms, anxiety/insomnia and social dysfunction. Exhaustion is practically significantly related (medium effect) to depression. Individuals who experienced high levels of exhaustion, experienced more health related problems. Cynicism is practically

significantly related to engagement (medium effect) and job satisfaction (large effect), employees who experienced high levels of cynicism tended to be less engaged and dissatisfied. Cynicism is statistically significantly related to affective job insecurity. Cynicism is practically significantly related (medium effect) to somatic symptoms, anxiety/insomnia and social dysfunction. Cynicism is practically significantly related (large effect) to depression. Individuals who experienced high levels of cynicism, experienced more health related problems. Professional efficacy is practically significantly related (medium effect) to engagement and job satisfaction, the higher the levels of professional efficacy the more engaged and satisfied the employees tended to be. Professional efficacy is statistically significantly related to social dysfunction and depression. Hypothesis 2, that states there is a practically significant relationship between job insecurity and burnout, is partially accepted.

Engagement is practically significantly related (large effect) to job satisfaction, engaged employees tended to be more satisfied. Engagement is statistically significantly related to job insecurity, engaged employees tended to be more secure in the job. Engagement is statistically significantly related to somatic symptoms and depression. Engagement is practically significantly related (medium effect) to anxiety/insomnia and social dysfunction, engaged individuals experience less problems with their health. Hypothesis 3, that states there is a practically significant relationship between job insecurity and engagement, is partially accepted.

Job satisfaction is practically significantly related (medium effect) to cognitive job insecurity, the more satisfied the employees were the less job insecurity they experienced. Job satisfaction is statistically significantly related to affective job insecurity. Job satisfaction is statistically significantly related to somatic symptoms and social dysfunction. Job satisfaction is practically significantly related (medium effect) to anxiety/insomnia and depression. Satisfied employees experienced less problems with their health. Hypothesis 5, that states there is a practically significant relationship between job insecurity and job satisfaction, is partially accepted.

Cognitive and affective job insecurity is statistically significantly related to somatic symptoms. Cognitive job insecurity is practically significantly related (medium effect) to anxiety/insomnia. Cognitive and affective job insecurity is statistically significantly related to both social dysfunction and depression. Employees who experienced job insecurity

experienced problems with their health. Somatic symptoms is practically significantly related to anxiety/insomnia (large effect), social dysfunction (medium effect) and depression (medium effect). Anxiety/insomnia is practically significantly related to social dysfunction (large effect) and depression (large effect). Social dysfunction is practically significantly related to depression (medium effect). Hypothesis 4, that states there is a practically significant relationship between job insecurity and general health, is partially accepted.

Subsequently, the three-factors of the MBI-GS, the UWES, MSQ and GHQ were subjected to a second-order principal component analysis. Two-factors, which explained 61,5% of the total variance, was extracted.

Next, various regression analysis was done to establish in which manner the independent variable explains the dependent variable.

A regression analysis with job insecurity as dependent variable and Exhaustion (as measured by the MBI-GS) as independent variable is reflected in Table 6.

Table 6

Regression Analysis – Job Insecurity and Exhaustion

	ANALYSIS OF VARIANCE			
R: 0,30	Source of Variation	*df*	Sum of Squares	Mean Square
R^2: 0,09				
Adjusted R^2: 0,08	Regression	1	1073,81	1073,81
Standard Error: 7,27	Residual	212	11193,44	52,80
	$F = 20,34$ $p = 0,00$			

	VARIABLES IN THE EQUATION				
Dependent Variable	B	SEB	Beta	*t*	*p*
Job Insecurity	0,27	0,06	0,30	4,51	0,00

The dependent variable job insecurity explains 9% of the variance in Exhaustion. Next, a regression analysis with job insecurity as dependent variable and the sub-scale Cynicism of the MBI-GS is reflected in Table 7.

Table 7

Regression Analysis – Job Insecurity and Cynicism

ANALYSIS OF VARIANCE					
R: 0,18	Source of Variation	*df*	Sum of Squares		Mean Square
R^2: 0,03					
Adjusted R^2: 0,03	Regression	1	340,63		340,63
Standard Error: 7,02	Residual	212	10448,94		49,29
	$F = 6,91$ $p = 0,00$				

VARIABLES IN THE EQUATION					
Dependent Variable	B	SEB	Beta	*t*	*p*
Job Insecurity	0,15	0,06	0,18	2,63	0,00

The dependent variable job insecurity explains 3% of the variance in Cynicism. The independent variable Professional efficacy does not explain the dependent variable job insecurity. Next, a regression analysis with job satisfaction as dependent variable and burnout as independent variable is reflected in Table 8.

Table 8

Regression Analysis – Job Satisfaction and Burnout

	ANALYSIS OF VARIANCE			
R: 0,59	Source of Variation	*df*	Sum of Squares	Mean Square
R^2: 0,36				
Adjusted R^2: 0,35	Regression	3	10624,14	3541,381
Standard Error: 9,53	Residual	211	19164,76	90,828
	$F = 38,99$ $p = 0,00$			

	VARIABLES IN THE EQUATION				
Independent Variables	B	SEB	Beta	*t*	*p*
Exhaustion	-1,80	0,54	-0,23	-3,36	0,00*
Cynicism	-2,73	0,58	-0,33	-4,74	0,00*
Professional Efficacy	2,50	0,49	0,28	5,09	0,00*

The independent variables Exhaustion and Cynicism explains 36% of the variance in the dependent variable job satisfaction. Next, a regression analysis with general health as dependent variable and burnout as independent variable is reflected in Table 9.

Table 9

Regression Analysis – General Health and Burnout

	ANALYSIS OF VARIANCE			
R: 0,71	Source of Variation	*df*	Sum of Squares	Mean Square
R^2: 0,50				
Adjusted R^2: 0,50	Regression	3	20620,20	6873,399
Standard Error: 9,81	Residual	211	20316,33	96,286
	$F = 71,39$ $p = 0,00$			

	VARIABLES IN THE EQUATION				
Independent Variables	B	SEB	Beta	*t*	*p*
Exhaustion	5,07	0,55	0,56	9,19	0,00*
Cynicism	1,95	0,59	0,20	3,29	0,00*
Professional Efficacy	-1,24	0,51	-0,12	-2,44	0,02

The independent variables Exhaustion and Cynicism explains 50% of the variance in the dependent variable general health.

The above findings indicate that job insecurity contributes toward decreased job satisfaction and higher levels of burnout and that low job insecurity contributes toward increased job satisfaction and lower levels of burnout. Based on these results, hypothesis 6, that states that job insecurity predicts higher levels of burnout and lower levels of job satisfaction, is accepted.

DISCUSSION

An objective of this study was to assess the construct validity and internal consistency of the GHQ. Another objective of this study was to investigate the relationship between job insecurity, burnout, engagement, general health and job satisfaction in selected organisations

in the Vaal Triangle, and to assess whether job insecurity predicts higher levels of burnout and lower levels of job satisfaction.

Exploratory factor analysis of the GHQ resulted in a four-factor model of general health, consisting of somatic symptoms, anxiety/insomnia, social dysfunction and depression. The scales demonstrated acceptable levels of internal consistencies. Hypothesis 1, that states general health as measured by the GHQ is a four-dimensional construct, is accepted.

Exhaustion was practically significantly related to engagement. This result makes sense in terms of reports in the literature that engagement and burnout are related (Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002). Exhaustion was practically significantly related to job satisfaction, where according to Maslach (1998), negative correlations are often found between job satisfaction and burnout. Exhaustion was statistically significantly related to cognitive job insecurity. It is confirmed by De Witte (2000) that a high level of job insecurity is related to high emotional and mental exhaustion. A practically significantly correlation was found between exhaustion and general health. This result makes sense in terms of reports in the literature, where the exhaustion component of burnout predicts stress-related health consequences and refers to feelings of being overextended and drained from one's emotional and physical resources (Maslach, Schaufeli & Leiter 2001).

Cynicism was practically significantly related to engagement. This result makes sense in terms of reports in the literature that engagement and burnout are related (Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002). Cynicism was also practically significantly negatively related to job satisfaction, which indicates that the more cynicism an employee experience the less satisfied he/she will be. Cynicism was statistically significantly related to affective job insecurity and practically significantly related to general health.

Professional efficacy was practically significantly related to engagement. Once again this result makes sense in terms of reports in the literature that engagement and burnout are related (Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002). Professional efficacy was also practically significantly related to job satisfaction. Professional efficacy and the subscales of general health (social dysfunction and depression), are statistically significantly related.

The correlation between engagement and job satisfaction was practically significant, which explains that employees who experience job satisfaction are more engaged. The possible consequences of engagement pertain to positive attitudes towards work and towards the organisation, such as job satisfaction (Demerouti et al., 2001). The correlation between engagement and general health (anxiety/insomnia and social dysfunction) was also practically significant. Engagement was statistically significantly related to job insecurity.

There was a practically significant correlation between cognitive job insecurity and general health (anxiety/insomnia). Similar results have been obtained in a number of studies (De Witte, 1999; Hartley et al., 1991) where both physical and mental health appear to decrease with the increase of job insecurity.

Job satisfaction was practically significantly related to cognitive job insecurity and statistically significantly related to affective job insecurity. Similar results have been obtained in a number of studies (Ashford et al., 1989; Davy et al., 1997; Hartley et al., 1991; Heany & House, 1994; Rosenblatt & Ruvio, 1996). Job satisfaction was practically significantly related to general health (anxiety/insomnia and depression).

As independent variables Exhaustion and Cynicism explained 36% of the dependent variable job satisfaction. According to Maslach (1998), negative correlations are often found between job satisfaction and burnout. The independent variables Exhaustion and Cynicism explained 50% of the dependent variable general health. Previous reports in literature (Maslach, Schaufeli & Leiter 2001), explains that the exhaustion component of burnout predicts stress-related health consequences and refers to feelings of being overextended and drained from one's emotional and physical resources.

Limitations for this study is that self-report measures were exclusively relied upon. This causes a particular problem in validation studies that use self-report measures exclusively because at last part of the common variance of the measures has to be attributed to method variance (Schaufeli, Maslach & Marek, 1993). Another limitation of this study was the different selected organisations that were relied upon and the number of respondents who replied to the questionnaires is a limitation of this study and limits the ability to generalise the results.

RECOMMENDATIONS

The central purpose of this study was to assess the relationship between job insecurity, burnout, work engagement, general health and job satisfaction, and to establish whether burnout and engagement partially mediate the relationship between job insecurity, job satisfaction and general health. It is anticipated that this study will contribute to future research regarding job insecurity, burnout, work engagement, general health and job satisfaction experienced by employees.

Contingencies need to be put in place to counter the emotional impact job insecurity might have on the workforce. According to Heymans (2002) building trust, creating support and fostering concern for others may offer some hope for mitigating the effects of job insecurity. Reinforce the importance of maintaining strong communication channels with employees. Management to devise methods of keeping employees informed at all levels of employment within the organisation which will serve as a "buffer" regarding feelings towards job insecurity and the "spin-off" thereof might be the building of trust and enhancing job satisfaction and work engagement. The managerial/supervisory role in this regard is crucial to ensure information is relayed but understanding of this information is critical. It is imperative that the management recognises that it is what the employees perceive as happening that will dictate their reactions to management's actions (Heymans, 2002).

The lack of job security should be managed carefully by the organisations to prevent burnout, disengagement and job dissatisfaction. Employees should become aware of the causes and symptoms of burnout, as well as management actions that could alleviate the burnout of individuals. Training in the use of stress reduction techniques, management and coping skills should be facilitated to all employees.

Results demonstrated, that job insecurity contributes toward job dissatisfaction and decreased general health and that burnout and engagement also play an important role. Job insecurity levels need to be addressed in order to increase job satisfaction and secure optimal wellness of employees.

Future studies should use large samples and adequate statistical techniques. Large sample sizes might provide increased confidence that study findings would be consistent across other similar groups.

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CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter conclusions are drawn regarding the specific objectives of this study. The limitations of the research are discussed, followed by recommendations for the selected organisations and suggestions for future research.

6.1 CONCLUSIONS

The first objective of this study was to conceptualise job insecurity, burnout, work engagement, general health and job satisfaction.

Burnout. Literature described burnout as a prolonged response to chronic, emotional and interpersonal stress and is characterised by exhaustion, cynicism and inefficacy. According to Friedman (2000) burnout is conceptualised as a three-dimensional phenomenon consisting of exhaustion, depersonalisation and unaccomplishment. In the literature the exhaustion component predicts stress-related health consequences and refers to feelings of being overextended and drained of one's emotional and physical resources. Emotional exhaustion is due to a combination of personal stressors and job stressors. It is clear from the literature that emotional exhaustion leads to depersonalisation, which is a state of psychologically withdrawing from one's job and this results in a feeling of being unappreciated, ineffective, or inadequate. Therefore, the cynicism component refers to a detached response, to various aspects of the job, whereas reduced efficacy indicates feelings of incompetence and lack of production at work. Indeed, burnout is a particular, multidimensional and chronic stress reaction which goes beyond the experience, 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).

Work Engagement. In the literature work engagement is characterised by energy, involvement and efficacy. Engagement is identified as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption (Maslach & Leiter, 1997). It also seems that individuals who are engaged are likely to increase their productivity. In the literature there are six areas that contains critical factors that either cause the problems of

mismatch and burnout or offer the solutions of good fit and engagement. These factors contribute to exhaustion or sustain the energy, cause cynicism and alienation or provide increased involvement and commitment, produce a lack of accomplishment and inadequacy or lead to greater effectiveness and achievement.

Job insecurity. For the purpose of this research, job insecurity is viewed as the perceived threat of losing one's job, or valued features of the job, such as pay, autonomy and promotional prospects. Job insecurity has been defined as an essential and involuntary change regarding the future existence of the present job or of significant job features, such as deterioration of working conditions, waning career opportunities, and declining salary development (Greenhalgh & Rosenblatt, 1984; Hartley et al., 1991; Hellgren et al., 1999). Job insecurity is a subjective experience, which implies that employees may perceive the same situation differently, thus differing degrees of job insecurity. The experience of job insecurity relates to a cognitive or affective quality. The cognitive aspect of job insecurity relates to the individual's belief of the likelihood of losing the job, whereas, the affective component of insecurity is the concern about the likelihood of losing continuity in one's job (Borg & Elizur, 1992). Job insecurity holds consequences for both the individual and the organisation for example reduced well-being, negative emotions, organisational commitment, job satisfaction, turnover, depression, increase in absenteeism and anxiety.

Job satisfaction. The literature revealed that job satisfaction is not a unitary concept. It states that a person can be relatively satisfied with one aspect of his/her job and dissatisfied with one or more other aspects. According to Coetsee (2003) job satisfaction is a positive or negative attitude that individuals have about their jobs and related matters (e.g. supervisory style, support, challenge, pay, benefits) and the degree to which there is a good fit between the individual and the organisation. Job satisfaction is not a one-dimensional but multi-dimensional concept and is complex, encompassing individuals' general attitude towards work, or to specific facets of the job. Job satisfaction consists of two distinct components: intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction is how people feel about the nature of the job tasks themselves, extrinsic job satisfaction is how people feel about aspects of the work situation that are external to the job tasks or work itself (Spector, 1997). Job satisfaction is influenced by the extent to which there is correspondence between the situational characteristics of the work environment and the dispositional characteristics of the individual employees. A number of studies have found feelings of unstable employment

conditions to be related with reduced levels of work attitudes such as job satisfaction (Ashford et al., 1989; Davy, Kinicki & Scheck, 1997; Rosenblatt & Ruvio, 1996). From the literature it is evident that employees who feel their future employment to be insecure are generally more dissatisfied with their job than those who perceive their employment to be more secure.

General health. The literature revealed that job insecurity is associated with impaired well-being (Barling & Kelloway, 1996; Hartley et al., 1991). Both physical and mental health tend to decrease as the experiencing of job insecurity increases (De Witte, 1999; Hartley et al., 1991). Physical health complaints, mental distress, and work-to-leisure carry-over increase proportionately with the level of job insecurity (Ashford et al., 1989; Lim, 1996; Noer, 1993).

The empirical findings from the research are summarised as follows and address the objectives below:

- To assess the current level of job insecurity in selected organisations in the Vaal Triangle.
- To assess the current level of burnout in selected organisations in the Vaal Triangle by using the mean scores.
- To assess the current level of work engagement in selected organisations in the Vaal Triangle by using the mean scores.
- To assess the current level of general health in selected organisations in the Vaal Triangle by using the mean scores.
- To assess the current level of job satisfaction in selected organisations in the Vaal Triangle by using the mean scores.
- To assess whether job insecurity predicts higher levels of burnout and lower levels of job satisfaction.

The results obtained by means of exploratory factor analysis confirmed a three-factor strucure of the MBI-GS and supported a three-factor structure. This finding supports previous research (Storm, 2002; Naudé, 2003; Maslach et al., 1996) which confirmed a three-factor structure for the MBI. Relaibility analysis confirmed sufficient internal consistency of the exhaustion, cynicism and professional efficacy subscales. The UWES exploratory factor analysis confirmed a one-factor structure. Storm (2002) tested a one-factor model (after

deleting items 3, 11, 15 and 16 and allowed some error terms to correlate) and found that this structure fitted the data better. Relaibility analysis revealed that the engagement scale was sufficiently internally consistent. The results obtained by means of exploratory factor analysis confirmed a two-factor structure of the JIQ. This finding corresponds with previous research that confirmed a two-factor structure of the JIQ with cognitive and affective subscales as distinct components of job insecurity (Buitendach, 2004; Borg & Elizur, 1992). Relaibility analysis confirmed sufficient internal consistency of the job insecurity scale. The results obtained using exploratory factor analysis confirmed a one-factor structure of the MSQ. This finding is in contradiction with the research of Hirschfeld (2000) and Buitendach (2004), who confirmed a two-factor structure of the MSQ. Relaibility analysis revealed that the job satisfaction scale was sufficiently internally consistent. The results obtained by means of exploratory factor analysis confirmed a four-factor structure of the GHQ, consisting of the following subscales, somatic symptoms, anxiety/insomnia, social dysfunction and depression. Relaibility analysis confirmed sufficient internal consistency of the general health scale.

It was determined the demographic groups in the selected organisations in the Vaal Triangle differ regarding their levels of burnout, work engagement, job insecurity and job satisfaction. Regarding burnout, no statistically significant differences were found between age, qualification, gender, race and tenure. No statistically significant differences were found between engagement and various demographic groups (age, qualification, gender, race and tenure). Regarding job insecurity, no statistically significant differences were found between age, qualification, gender and tenure. A statistically significant difference was found between job insecurity and race. No statistically significant differences were found between job satisfaction and qualification, gender, race and tenure. Statistically significant differences were found between job satisfaction and age.

The results confirmed that a practically significantly relationship exists between exhaustion and engagement, cynicism and engagement, professional efficacy and engagement of employees in selected organisations in the Vaal Triangle. Exhuastion was practically significantly related to job satisfaction and general health. A statistically significantly correlation exists between exhaustion and job insecurity. A practically significantly correlation exists between cynicism and engagement, cynicism and job satisfaction, cynicism and general health. A practically significantly relationship exists between professional efficacy and job satisfaction. The correlation between engagement and job satisfaction was

practically significant, which explains that employees who experience job satisfaction are more engaged, and a practically significantly relationship between engagement and job insecurity. The correlation between engagement and general health was practically significant. A practically significantly correlation was found between cognitive job insecurity and general health (anxiety/insomnia), where both physical and mental health appear to decrease with the increase of job insecurity. A practically significantly correlation was found between cognitive job insecurity and job satisfaction, which supports the findings that job insecurity is associated with lowered job satisfaction (Ashford et al., 1989; Hartley et al., 1991; Heany, Israel & House, 1994; Probst & Brubaker, 2001).

As independent variables Exhaustion and Cynicism explained 36% of the dependent variable job satisfaction. According to Maslach (1998), negative correlations are often found between job satisfaction and burnout. The independent variables Exhaustion and Cynicism explained 50% of the dependent variable general health. Previous reports in literature (Maslach, Schaufeli & Leiter 2001), explains that the exhaustion component of burnout predicts stress-related health consequences and refers to feelings of being overextended and drained from one's emotional and physical resources.

6.2 LIMITATIONS OF THIS RESEARCH

The following limitations are evident from this study.

These findings cannot be generalised, therefore a nationally representative sample of employees at selected organisations are needed.

Fear that information could be used against participants, although they were not required to identify themselves, haste in some instances to complete the questionnaires due to time constraints, might have had an impact on the results.

An area that was not covered in this research is that of coping styles and personality that should be assessed and may provide important information for assisting employees to cope with stressful conditions such as job insecurity, as well as to cope with burnout.

Another limitation of this research is that motivation of the employee is not assessed – motivation is a crucial component of effectiveness and the degree of satisfaction. Therefore it is not only necessary to evaluate job satisfaction but also whether the employees are motivated by extrinsic and intrinsic factors.

Measuring job satisfaction with the short version on Revised Minnesota Job Satisfaction Questionnaire measures job satisfaction in general. Certain specific constructs such as salary, recognition etc. were not measured that could have provided information regarding the impact these constructs may have had as job insecurity.

Other limitations for this study are that self-report measures were exclusively relied upon. This causes a particular problem in the validation of studies that use self-report measures exclusively because the last part of the common variance of the measures has to be attributed to method variance (Schaufeli, Maslach & Marek, 1993).

The lack of longitudinal data must be considered, the cross-sectional nature of this research was limiting in that the strength and duration of the effects of job insecurity could not be assessed over time. Job insecurity has been shown to be psychologically harmful in the short run, it is possible that these negative effects are time limited, with individuals eventually learning to live with the uncertainty (Seguin & Roskies, 1991). They found in their follow-up study that the negative effects of job insecurity persisted over time.

The sampling method adopted in the design of this research is another limitation. An accidental sample was used that resulted in under-representation.

6.3 RECOMMENDATIONS

Next, recommendations for the selected organisations as well as suggestions for future research are made.

6.3.1 Recommendations for the organisations

Management and employees' skill levels must be expanded to enable them to identify emotional exhaustion before the effects of serious burnout come into effect as well as the

effects of job insecurity. Therefore interventions should be implemented to combat the prevalence of burnout and job insecurity. According to Lee and Ashforth (1996) interventions should be designed for the long term in order to deal with the root cause rather than just the symptoms of burnout and job insecurity. Interventions emphasising the negative effect burnout and job insecurity can have, should be introduced at all levels in the organisations. Stress intervention programmes inclusive of development of coping strategies can be useful for the employee. Individuals must be mentioned and assisted in recognising stress and using their skills to handle difficult demands. The elimination of the stressor is important, however where the stressor cannot be eliminated, coping strategies are suggested as mentioned earlier. A focus on the job environment, as well as the person in it, is essential for inter-variations to deal with the variable. According to Maslach, Schaufeli and Leiter (2001), neither changing the setting nor changing the individual is enough – effective change occurs when both develop in an integrated fashion.

Support services must be available for employees that provide a feeling of security and give the individual the opportunity to discuss problems and find solutions, also giving more support on all the changes in the work environment. Therefore it is essential to have support from significant others during stressful times. It is also important to receive feedback about oneself and the situation in order to resolve conflict and gain insight into new ways of handling the situation. Support people and groups which are encouraging are a vital part of handling stressful situations and gaining insight into new or different ways to handle stressful events. Situations are seen through past and present perceptions that can often be distorted. Gaining insight from knowledgeable individuals who are supportive is of utmost importance as necessary changes are being made. Counselling services by psychologists and/or psychiatrists should assist employees experiencing excessive stress and with ongoing mental health.

Strong communication channels with employees, must be of high importance and the maintenance thereof. A supportive working climate must be implemented and involve employees in planning strategies and decision-making. Involving employees in planning strategies and decision making is a way to maintain enthusiasm about the job. According to Heymans (2002) by imposing more restriction on how employees can perform their jobs, management will only be stifling any creativity on the part of employees. What is of concern is the creation of resentment towards management for restricting their freedom and this could

lead to less commitment to the organisation. Employees need choices, flexibility, opportunity to be innovative and the opportunity for growth. In-service programmes and interactive workshops can also stimulate employees.

Recognition for good performance, in other words, acknowledgement and praise for achievements, service as positive reinforcement for effectiveness. If employees receive acknowledgement for work well done, they will feel positive about themselves and will strive to maintain and even improve (Wevers & Steyn, 2002).

6.3.2 Recommendations for future research

Despite the various limitations, the findings of the present study might have important implications for future research.

In this study a cross-sectional design was employed, for future research it is recommended that longitudinal designs are needed to expand knowledge in terms of the inclusion of other variables.

Larger research groups must be used to deliver a more representative depiction of burnout, work engagement, job insecurity, general health and job satisfaction.

Future South African research needs to determine the prevalence of burnout, work engagement, job insecurity, general health and job satisfaction among the various levels of work, for top management level for supervisory level, also determines the higher risk occupational group.

Burnout, work engagement, job insecurity, general health and job satisfaction should also be investigated in relation to other work outcomes.

Furthermore, future researchers should focus on the inclusion of positively phrased items rather than negatively phrased items to the subscales of the MBI-GS and the UWES.

More research should be conducted regarding interventions to prevent and/or manage burnout, work engagement, job insecurity, general health and job dissatisfaction.

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