

**Leadership empowerment behaviour, job insecurity,
engagement and intention to leave in a petrochemical
organisation**

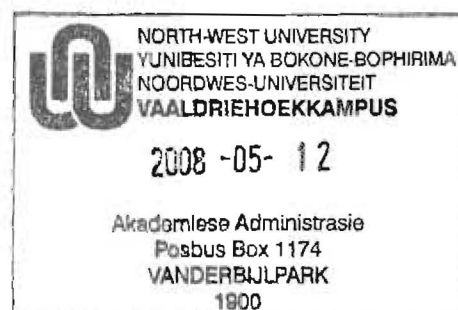
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REMARKS

The reader is reminded of the following:

- The references as well as the editorial style, as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA), were followed in this mini-dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Vaal Triangle Campus) to use APA style in all scientific documents as from January 1999.
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SUMMARY

Topic: Leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical organisation.

Key terms: Leadership empowerment behaviour, job insecurity, engagement, intention to leave, healthy work organisation, chemical industry, laboratory.

The significant change that organisations must endure in order to survive, let alone prosper, has grown tremendously in the past two decades. The lack of talent, especially amongst the previously disadvantaged groups, is one of numerous challenges South African organisations are confronted with. Organisations are therefore required to determine indicators of intention to leave as it is argued to be the single most important predictor of actual quitting behaviour. Variables found to relate to intention to leave include a sense of powerlessness and a lack of engagement.

The objective of this study is to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.

The research method consisted of a brief literature review and an empirical study. A cross-sectional survey design was used. The entire population of employees working in a business unit of a petrochemical organisation, namely the Laboratory, was targeted. The Leader Empowering Behaviour Questionnaire, Job Insecurity Inventory, Utrecht Work Engagement Scale and two questions measuring intention to leave were used. In addition, a biographical questionnaire was administered. The statistical analysis was conducted with the aid of the SPSS programme. The statistical method employed in the study consisted of descriptive statistics, Cronbach alpha coefficients, Pearson product-moment correlation and a multiple regression analysis. Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the experience of leadership empowerment behaviour, job insecurity, engagement and intention to leave of demographic groups.

Results indicated that leadership empowerment behaviour was negatively correlated with cognitive job insecurity and that a negative relationship existed between leadership empowerment behaviour and intention to leave. Leadership empowerment behaviour was

found to be positively correlated with engagement. A positive relationship existed between cognitive job insecurity and affective job insecurity, as well as between cognitive job insecurity and intention to leave. Cognitive job insecurity was found to be negatively correlated with engagement. A negative relationship was established between engagement and intention to leave. All these correlations were found to be statistically and practically significant with a medium to large effect.

Regression analysis indicated that leadership empowerment behaviour and affective job insecurity did not show a significant amount of predictive value towards intention to leave. Cognitive job insecurity and engagement were found to be indicators of intention to leave.

With regards to experiencing leadership empowerment behaviour, engagement and intention to leave, no significant differences were found between demographic groups. Participants in middle non-management positions, however, experienced higher levels of affective job insecurity than those in senior management positions.

Conclusions and limitations of the current research were discussed and recommendations for future research were made.

OPSOMMING

Onderwerp: Leier bemagtigingsgedrag, werksonsekerheid, begeestering en geneigdheid om te bedank in 'n petro-chemiese organisasie.

Sleuteltermes: Leier bemagtigingsgedrag, werksonsekerheid, begeestering, geneigdheid om te bedank, gesonde werksorganisasie, chemiese industrie, laboratorium.

Die beduidende verandering wat organisasies moet deurstaan, om nie eers te praat van vooruitgaan nie, het geweldig gegroei tydens die afgelope twee dekades. Die gebrek aan talent, veral onder die voorheen benadeelde groepe, is een van die talle uitdagings waarmee Suid Afrikaanse organisasies gekonfronteer word. Organisasies poog gevolglik om die aanwysers van geneigdheid om te bedank te bepaal omdat dit aangevoer word as die enkele belangrikste voorspeller vir gedrag met betrekking tot bedanking. Veranderlikes wat verband hou met geneigdheid om te bedank sluit 'n gevoel van magteloosheid en 'n gebrek aan begeestering in.

Die doelstelling van hierdie navorsing was om die verhouding tussen leier bemagtigingsgedrag, werksonsekerheid, begeestering en geneigdheid om te bedank in 'n petro-chemiese laboratorium te bepaal.

Die navorsingsmetode het bestaan uit 'n kort literatuuroorsig en 'n empiriese studie. 'n Dwars deursnee-opnameontwerp is gebruik. Die totale werknemerspopulasie van 'n besigheidseenheid in 'n petro-chemiese organisasie, naamlik die Laboratorium, is ingesluit in die navorsing. Die "Leader Empowering Behaviour Questionnaire", die "Job Insecurity Inventory", die "Utrecht Work Engagement Scale" en twee vrae wat geneigdheid om te bedank meet is gebruik. 'n Biografiese vraelys is afgeneem. Die statistiese analise is uitgevoer met behulp van die SPSS program. Die statistiese metodes wat gebruik is in die studie het bestaan uit beskrywende statistiek, Cronbach alpha koëffisiënte, Pearson produk-moment korrelasie en 'n meervoudige regressie-analise. Meerrigting-variasie analise (MANOVA) is gebruik om die belangrikheid van die verskille tussen demografiese groepe ten opsigte van die vlakke van leier bemagtigingsgedrag, werksonsekerheid, begeestering en geneigdheid om te bedank uit te lig.

Daar is bevind dat leier bemagtigingsgedrag 'n negatiewe korrelasie met kognitiewe werksonsekerheid het en dat 'n negatiewe verhouding bestaan tussen leier bemagtigingsgedrag en geneigdheid om te bedank. Leier bemagtigingsgedrag het 'n positiewe korrelasie met begeestering getoon. 'n Positiewe verhouding is gevind tussen kognitiewe werksonsekerheid en affektiewe werksonsekerheid. So ook tussen kognitiewe werksonsekerheid en geneigdheid om te bedank. Kognitiewe werksonsekerheid het 'n negatiewe korrelasie met begeestering getoon. 'n Negatiewe verhouding is tussen begeestering en geneigdheid om te bedank gevind. Al hierdie korrelasies het statistiese en praktiese beduidenheid getoon, met 'n medium tot groot effek.

Die regressie-analise het aangedui dat leier bemagtigingsgedrag en affektiewe werksonsekerheid nie 'n beduidende voorspellingswaarde ten opsigte van geneigdheid om te bedank gehad het nie. Kognitiewe werksonsekerheid en begeestering is as aanwysers van geneigdheid om te bedank bevind.

Ten opsigte van die vlakke van leier bemagtigingsgedrag, begeestering en geneigdheid om te bedank is geen beduidende verskille tussen demografiese groepe gevind nie. Werknemers in middel nie-bestuursposisies het egter hoër vlakke van affektiewe werksonsekerheid ervaar as werknemers in senior bestuursposisies.

Gevolgtrekkings en beperkinge van die huidige navorsing is uiteengesit en aanbevelings vir verdere navorsing is gemaak.

CHAPTER 1: INTRODUCTION

This research focuses firstly on the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave and secondly aims to determine whether leadership empowerment behaviour, job insecurity and engagement contribute to intention to leave. This study will be conducted in a petrochemical organisation that consists of several business units. The business unit relevant to this research is the Laboratory of the petrochemical organisation.

This chapter outlines the problem statement, research objectives, paradigm perspective of the research and research methodology employed. An overview of previous related research conducted on leadership empowerment behaviour, job insecurity, engagement and intention to leave is presented and linked with the objectives of this study. A discussion of the research method follows, with details regarding the empirical study, research design, participants, measuring instruments and statistical analysis. It concludes with an overview of the chapters that comprise this mini-dissertation and a chapter summary.

1.1 PROBLEM STATEMENT

Democratic South Africa has proven itself, in a relatively short time, as a potential competitive role player in the global investment community (Peralta & Stark, 2006). South Africa is categorised among the 25 leading chemical producing countries in the world and its chemical industry, although small in the global perspective, is a significant contributor to the global chemical industry (Anonymous, 2006). As the largest of its kind in Africa, the South African chemical industry is a complex and widely diversified industry. In terms of value-added output it is the largest industry in South Africa and the fourth largest employer in manufacturing (Anonymous, 2006).

In spite of its increasingly secure position on the world stage, the country is still faced with numerous challenges which include, amongst other, high crime levels, poverty and unemployment. A major challenge for organisations, including companies in the chemical industry, is the lack of talented employees, especially amongst the previously disadvantaged groups. This lack of new young talent and the pressure from the government to reach employment equity targets result in organisations enticing employees to leave their

organisation to join rival companies. This has become a common practice between companies (Peralta & Stark, 2006). The contest for talented employees between companies in the chemical industry substantiates the investigation of possible causes that give rise to employees' intention to leave their organisation. In order to retain talented individuals it is of critical importance for organisations to predict employees' intention to leave as it is a strong indicator for actual quitting behaviour (Firth, Mellor, Moore, & Loquet, 2004).

Firth et al. (2004) indicates that variables related to intention to leave include a sense of powerlessness and a lack of engagement. This sense of powerlessness and the lack of engagement may be explored by examining the following constructs: leadership empowerment behaviour, job insecurity and engagement. These constructs, as possible indicators for intention to leave and the relationship between them, will be discussed next.

More than a decade ago, Abramson (1997) argued that it was necessary to move from the traditional hierarchical, position-based leadership found in many organisations; Carson and King (2005) recommend that the emphasis should be moved from traditional leadership to a more empowering leadership style. Traditional leadership, characterised by influencing rather than empowering employees, (Kark, Shamir, & Chen, 2003) regarded managers as the sole holders of authority and in traditional hierarchical organisations employees were expected to fulfil rule-bound tasks without questioning (Cunningham, Hyman, & Baldry, 1996). The role of management requires alteration to allow for empowerment of employees (Cunningham et al., 1996).

Empowerment is characterised by the delegation of power to employees and in doing so decentralises decision-making in the organisation (Johnson, 1994; Cunningham et al., 1996; Carson & King, 2005). Empowered employees become active problem solvers who contribute to the planning and execution of tasks (Cunningham et al., 1996). Lee and Koh (2001) state that employee empowerment is the result of behaviour on the part of a leader who empowers his or her subordinates.

According to Johnson (1994), leadership empowerment behaviour creates an environment that fosters success because employees are empowered through greater responsibility, decision-making authority, information and feedback, as well as motivation, support and encouragement. "Empowerment means giving people the power to do the job demanded by

their positions" (Johnson, 1994, p. 19). Konczak, Stelly and Trusty (2000) indicate that limited research has been conducted to identify empowering behaviours of leaders and their study outlines the dimensions of leadership empowerment behaviour. These dimensions include the delegation of authority, the emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance (Konczak et al., 2000). In their study, Arnold, Arad, Rhoades and Drasgow (2000) reveal that the dimensions of leadership empowerment behaviours include leading by example, coaching, participative decision-making, informing and showing concern/interacting. Johnson (1994) reports that the conscious effort to empower employees is the common denominator between well-managed companies. Each of the above mentioned dimensions require certain behaviours on the part of leaders.

There are many benefits to having empowered employees, including a less risk averse workforce that is flexible, innovative and creative (Johnson, 1994). Empowered employees are self-motivated and believe in their ability to cope and perform successfully (Kark et al., 2003). Intention to leave decreases when leadership empowerment behaviour is increased (Maré, 2007). Empowerment is therefore an important driver of organisational effectiveness.

Appelbaum, Hébert and Leroux (1999) state that empowered employees have a sense of self-determination, meaning, competence and impact. A sense of self-determination refers to having freedom to choose the way in which tasks are executed, while a sense of meaning indicates that employees care about the work they deliver. Confidence with regard to ability to perform is indicative of a sense of competence, and having a sense of impact means that employees believe that their ideas are considered and that they can therefore influence the organisation (Appelbaum et al., 1999).

In order to empower employees, leaders need to delegate authority which entails sharing power with subordinates (Burke, 1986). Employees' accountability for outcomes needs to be emphasised and leaders should encourage independent decision-making (Konczak et al., 2000). Empowering employees further entails sharing information and knowledge that will allow them to contribute optimally to organisational performance (Ford & Fottler, 1995) and facilitating skills development (Wellins, Byham, & Wilson, 1991). Leaders need to provide coaching for innovative performance through encouraging calculated risk taking and new

ideas, offering feedback with regards to performance and treat mistakes and setbacks as opportunities to learn (Konczak et al., 2000).

Leadership empowerment behaviour therefore entails broadening the range of employee activities and increasing the degree of discretion that is attached to their jobs (Cunningham et al., 1996).

Tjeku (2006) reported a significant correlation between leadership empowerment behaviour and job insecurity. He indicated that increased levels of leadership empowerment behaviour imply decreased levels of job insecurity and further found that leadership empowerment behaviour predicts job insecurity.

Job insecurity refers to employees' fear of losing their jobs and that they might become unemployed (De Witte, 1999). It reflects the discrepancy between people's preferred level of job security and the level they actually experience (Mak & Mueller, 2000; Sverke & Hellgren, 2002; Mauno, Kinnunen, Mäkikangas, & Nätti, 2005). Although a number of definitions exist for the term 'job insecurity', Sverke and Hellgren (2002) argue that the various definitions are underlined by one general theme, namely that it is a subjective phenomenon. Mauno et al. (2005) states that the subjective estimate of the probability that one will lose one's job is based on the objective circumstances. These researchers related objective job insecurity to fixed term job contracts, or other forms of temporary employment, and subjective job insecurity, as a perceived threat of job loss to permanent employment.

Although objective and subjective job insecurity have an association with each other, there is a stronger correlation between the subjective sense of job insecurity and the negative consequences related to job insecurity than objective job insecurity (Mauno et al., 2005). Job insecurity is therefore a subjective experience, possibly based on objective circumstances, which implies uncertainty about the future and doubts about the continuation of the job as such. The likelihood of job loss refers to the cognitive aspect of job insecurity while the fear of job loss is related to the affective aspect thereof (De Witte, 2000). The cognitive appraisal of the future situation, whether certain or uncertain, triggers emotions based on the meaning connected to the potential job loss (De Witte, 2000). Greenhalgh and Rosenblatt (1984) state that job insecurity refers not only to the fear of losing one's job, but also to the fear of losing valued job features or aspects of one's job.

The need to cope with greater job insecurity is an increasingly common characteristic of employment due to changes in the nature of organisation and working life (Mulholland, Ivergård, & Stuart, 2005). Sparks, Faragher and Cooper (2001) report a number of reasons as to why an increased number of employees perceive their jobs to be insecure. These include organisational restructuring and downsizing, the growth of non-permanent employment contracts and the utilisation of contingent workers as opposed to the conventional full-time employees. De Witte (1999) supports this and explains that mass redundancies are also the result of plant closures and company merges. Job insecurity cannot only be detected among blue-collar workers, but professional and graduate positions that were once deemed secure are now also at risk, thus increasing job insecurity among white-collar workers (Smithson & Lewis, 2000).

Findings of a study conducted by Mauno, Leskinen and Kinnunen (2001) indicate that job insecurity is a chronic job stressor operating as a stable stress factor at the workplace. Employees' perception of job insecurity negatively affects employee health and well-being (De Witte, 1999; Mak & Mueller, 2000; Sparks et al., 2001; Sverke & Hellgren, 2002). Sparks et al. (2001) describes a number of studies that have proven this to be true. They further found that it is not only the employee as an individual who suffers from job insecurity, but the organisation bears financial loss due to increased absenteeism and sickness, resulting from lowered employee well-being.

Job insecurity further impacts the organisation as employees are less supportive of organisational goals, do not make an effort to deliver quality work and are more actively seeking different employment options (Sparks et al., 2001). The association between job insecurity and intention to leave has been well established in previous research (Burke, 1998; Williams, 2003; Mauno et al., 2005).

According to the literature, job insecurity has been linked with a number of negative consequences for the individual employee (Sverke & Hellgren, 2002). This includes lower scores in self-rated general health, an increase in distress and the use of medication, and negative effects on health-related behaviour (Sparks et al., 2001). Depression, anxiety, reduced job satisfaction and stress reactions are some of the negative consequences reported by De Witte (1999). Employees may experience mental, emotional and physical exhaustion (Decker & Schaufeli, 1995) as well as reduced self-esteem, altered self-perception with

regard to the work role (Canaff & Wright, 2004), uncontrollability and a feeling of powerlessness (De Witte, 1999; Sverke & Hellgren, 2002).

"What we are and how we regard ourselves is to a great part determined by our occupation and our performance and success at work" (Joelson & Wahlquist, 1987, p. 181). The implication of this is that job insecurity may have a detrimental effect on an individual's sense of self if he or she is unable to perform optimally and achieve success at work due to the various negative effects of job insecurity that he or she may be experiencing.

Jahoda (1982) explained that a threat to employees' jobs may mean the loss of important resources as working fulfils a number of employees' needs. These include acquiring an income, social participation, recognition, the opportunity for personal development and the structuring of one's time. Unemployment would thus result in the frustration of these needs. Job insecurity increases unpredictability, which makes it difficult for employees to react appropriately as it is not clear what has to be done. This further reduces psychological well-being (Warr, 1987).

Cartwright and Holmes (2006, p. 206) warn that "as individuals become increasingly disenchanted and disillusioned with work and fatigued by the constant demand to change and to be flexible to organisational needs, employers now need to actively restore the balance, recognise the meaning and emotional aspects of work and move towards creating a more energised, fulfilled and engaged workforce". Mauno et al. (2005) emphasises the importance of increasing levels of engagement among employees, as job insecurity was found to correlate negatively with engagement.

Although many definitions exist, engagement can be described as the extent to which an individual is attentive and absorbed in the performance of their roles. It is a discrete and unique construct that consists of cognitive, emotional and behavioural components that are linked with individual role performance (Saks, 2006). Schaufeli, Salanova, Gonzáles-Romá and Bakker (2002, p. 74) define engagement as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption". High energy levels and mental resilience while working denote vigour. It entails willingness to invest effort in one's work and to persevere when challenges arise. Dedication refers to deriving a sense of significance from one's work as well as feeling enthusiastic, inspired and proud. Absorption,

as the term indicates, refers to being happily immersed in one's work. One does not notice the swift passing of time as it is difficult to disconnect oneself from work. Schaufeli et al. (2002) further states that engagement is not a momentary and specific state, but rather a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual or behaviour.

Engagement has positive consequences for organisations, as it is generally believed that there is a link between employee engagement and business results (Harter, Schmidt, & Hayes, 2002). Employee engagement results in energetic employees (Maslach & Leiter, 2005), which is beneficial to the organisation. In addition, engagement is a significant predictor of employees' intention to leave their organisation (Saks, 2006).

A lower tendency to leave their organisation can be noted among employees with a greater sense of engagement due to their attachment to their organisation (Schaufeli & Bakker, 2004). Engagement is therefore negatively related to intention to leave and a significant predictor of employees' intention to leave their organisation (Saks, 2006). This is significant as workforce turnover is of critical importance to organisations. Lack of employee continuity, lack of organisational stability, productivity and the cost of induction and training of new staff are challenges that result from turnover (Firth et al., 2004; Siong, Mellor, Moore, & Firth, 2006).

Intention to leave is essential to organisations as it is the single most important predictor of actual turnover behaviour (Firth et al., 2004; McCarthy, Tyrrell, & Lehane, 2007). Vandenberg and Nelson (1999, p. 1315) defined intention to leave as an "individual's own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future". Jones, Katak, Futrell and Johnston (1996) refer to turnover as employees leaving an organisation. Insufficient research exists as to what determines intentions to resign (Firth et al., 2004).

The above discussion focused on conceptualising leadership empowerment behaviour, job insecurity, engagement and intention to leave. The background of the organisation in which the research will be conducted will now be outlined.

The significant change that organisations must endure in order to survive, let alone prosper, has grown tremendously in the past two decades (Kotter, 1996). The petrochemical organisation in which this study will be conducted consists of several business units. External consultants (Stander, Scholtz, & Verster, 2006) have assessed the current situation in a business unit of the organisation, namely the Laboratory, and identified a number of areas that prevent optimal functioning. Based on these findings the Laboratory is at the initial stage of a long term, transformational change process.

The findings of Stander et al. (2006), which is summarised below, serve to depict the setting within the Laboratory. Generally, employees were found to be negative and dissatisfied. They experience a distance between themselves and the management team and view management as uninvolved in influencing the future of the Laboratory. Employees furthermore experience a lack of support, recognition and motivation from their managers. They expressed a need to be involved in decision-making processes as they currently feel that they cannot make a difference. Employees expect a transformation of managers to leaders.

Stander et al. (2006) also indicates that the management style is in need of improvement in the availability of managers, openness to employees' suggestions, communication of expectations and valuing employees' contribution. Development and training do not receive adequate attention and some employees experience their work to be tedious and wearisome. Career paths and development plans are not in place and the workforce's sense of belonging is low while the retention of talented people is a concern.

The findings of Stander et al. (2006) in the petrochemical Laboratory initiated this research and contributed to the decision to demarcate this study to the relevant business unit. A literature study reveals no specific research conducted in a petrochemical laboratory environment. For consistency, further discussions will refer to a petrochemical Laboratory. This is based on the manner in which all business units within the larger petrochemical organisation functions, that is, as an independent unit.

Based upon the above discussion, there exist three important facets for exploration. They are as follows: (1) leadership empowerment behaviour may influence job insecurity; (2) job insecurity may influence engagement; (3) engagement may influence an employee's intention to leave the organisation. Intention to leave is related to actual turnover (Firth et al., 2003;

McCarthy et al., 2007). Research has been conducted to determine the relationship between individual constructs. Tjeku (2006) reports a relationship between leadership empowerment behaviour and job insecurity. Maré (2007) establishes a correlation between leadership empowerment behaviour and intention to leave. Mauno et al. (2005) obtains a relationship between job insecurity and engagement. Burke (1998) and Williams (2003) find a correlation between job insecurity and intention to leave. Saks (2006) reports a relationship between engagement and intention to leave. However, no research could be found that specifically examines the relationship between these four constructs, namely leadership empowerment behaviour, job insecurity, engagement and intention to leave. The purpose of this study is to determine the relationship between all four constructs in a petrochemical laboratory.

The research will make the following contributions to the subject of Industrial Psychology and the practice thereof in organisations:

- It will conceptualise the constructs leadership empowerment behaviour, job insecurity, engagement and intention to leave from the literature.
- It will contribute to determine the relationship between the constructs leadership empowerment behaviour, job insecurity, engagement and intention to leave.
- It will contribute to determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of intention to leave.
- It will contribute to determine the difference between demographical groups with regard to leadership empowerment behaviour, job insecurity, engagement and intention to leave.

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 determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.

1.2.2 Specific objectives

The specific objectives of this research are:

- To conceptualise the constructs leadership empowerment behaviour, job insecurity, engagement and intention to leave from the literature.
- To determine the relationship between the constructs leadership empowerment, job insecurity, engagement and intention to leave in the literature.
- To determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.
- To determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of the intention to leave of employees in a petrochemical laboratory.
- To determine the difference between the demographical groups of employees in a petrochemical laboratory with regard to leadership empowerment behaviour, job insecurity, engagement and intention to leave.

1.3 PARADIGM PERSPECTIVE OF THE RESEARCH

A certain paradigm perspective that includes the intellectual climate and the market of intellectual resources (Mouton & Marais, 1992) directs the research.

1.3.1 Intellectual climate

The intellectual climate refers to the variety of non-epistemological convictions that are endorsed by a discipline in a specific period. They are convictions, values and assumptions that are not directly connected to the epistemological aims of the specific research practice (Mouton & Marais, 1992). These convictions are often not directly testable or are not meant to be testable. It postulates underlying testable judgements. In order to determine the intellectual climate of the research the disciplinary relevance will be discussed.

1.3.1.1 Discipline

This research falls within the boundaries of the behavioural sciences and more specifically Industrial Psychology. According to Bergh and Theron (1999), Industrial Psychology refers to psychology in the work context. It aims to understand and explain, as well as predict and influence, human behaviour and experience in the work context. It is a branch of psychology that applies principles of psychology to the workplace (Aamodt, 2004).

The sub-disciplines of Industrial Psychology that are focused on in this research are Personnel Psychology, Organisational Psychology and Psychometrics. Personnel Psychology, also called human resource management, focuses on individual differences and predicting a fit between the employee and the organisation. It is concerned with recruitment, selection, placement and training of employees and the study of factors that affect the utilisation of personnel (Bergh & Theron, 1999; Louw & Edwards, 1998).

According to Aamodt (2004), Organisational Psychology is concerned with leadership, job satisfaction, employee motivation, organisational communication, conflict management, organisational change and group processes within an organisation. It also refers to employees' perception of an organisation's strengths and weaknesses. Psychometrics refers to the theory and research regarding scientific measurement principles that are applied to the measurement of psychological characteristics to ensure that measurement is valid and reliable (Foxcroft & Roodt, 2001).

The wellness frame of thought is relevant to this research. Fortigenesis or positive psychology, which includes wellness, is the study of human strengths and optimal functioning. One of its main aims is to promote research on the positive personal traits and dispositions that are thought to contribute to well-being and psychological health (Seligman & Csikszentmihalyi, 2000).

1.3.2 Market of intellectual resources

The market of intellectual resources refers to the assumptions with epistemological status as scientific hypothesis, in other words, with their status as knowledge-claims (Mouton & Marais, 1992). It is divided into theoretical and methodological beliefs.

1.3.2.1 Theoretical beliefs

Theoretical beliefs can be described as all beliefs that yield testable results regarding social phenomena (Mouton & Marais, 1992). The following theoretical hypotheses serve as starting points for this research and are divided into: (A) conceptual definitions and (B) models and theories.

A. Conceptual definitions

The relevant conceptual definitions are given below.

In cognisance of various definitions, the researcher regards leadership empowerment behaviour as the behaviour demonstrated by leaders that result in the empowerment of employees (Lee & Koh, 2001). The dimensions of leadership empowerment behaviour are regarded as delegation of authority, emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance (Konczak et al., 2000).

Job insecurity is defined as a phenomenon in which employees subjectively perceive that their future is uncertain due to the possibility that they might lose their job or important aspects of their jobs. It is experienced as a stressor and creates a sense of powerlessness (Greenhalgh & Rosenblatt, 1984). This definition includes the cognitive and affective qualities of job insecurity as explained by De Witte (2000).

Engagement refers to the degree to which employees are attentive and absorbed in the performance of their roles (Saks, 2006). It is regarded as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Shaufeli et al., 2002, p 74).

Intention to leave is associated with employees' tendency to quit working for their organisation. Firth et al. (2004) argues that the intention to leave is a strong indicator for actual quitting behaviour.

B. Theories and Models

A theory is "a set of assumptions or propositions, together with relevant concepts, used to explain and predict psychic and behavioural phenomena and processes and possible relationships between such variables in a systematic way" (Bergh & Theron, 1999, p. 25). It is a proposition about the relationship between things (Denscombe, 2003).

"A model is aimed at the simplified expression of relationships between main components of a process. It does not only classify phenomena, but also tries to systematise the relationships among them" (Mouton & Marais, 1992, p. 143).

The model of healthy work organisations proposed by Wilson, DeJoy, Vandenberg, Richardson and McGrath (2004), as shown in figure 1, will be used as a framework for this study.

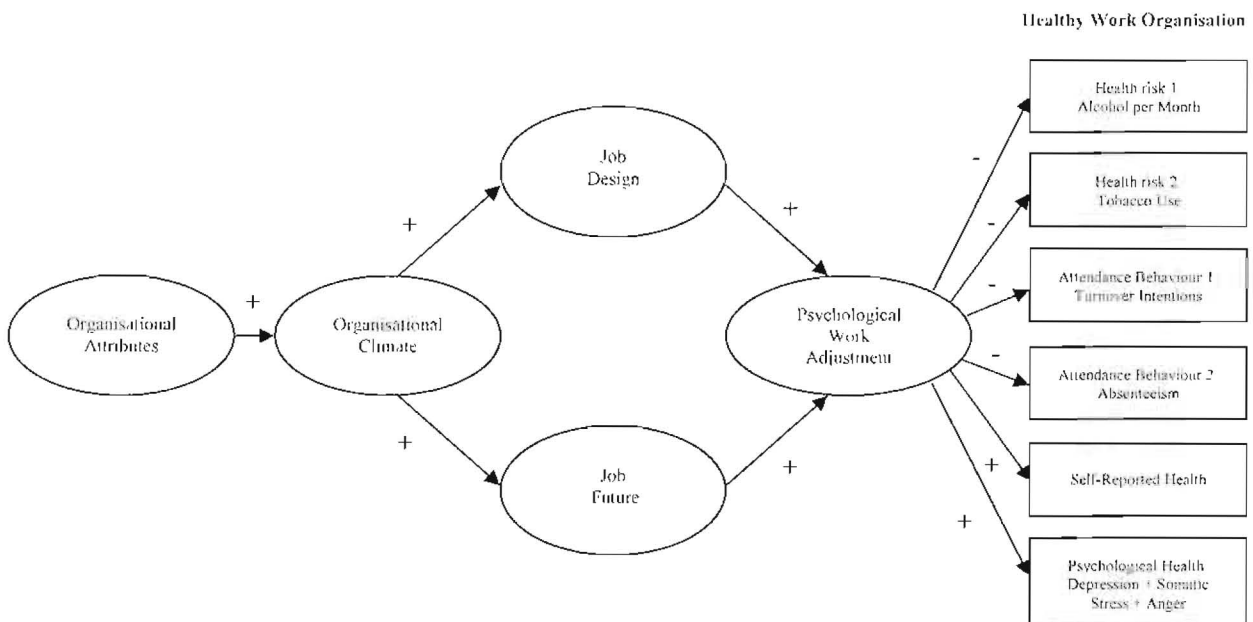


Figure 1. Model of healthy work organisation (Wilson *et al.*, 2004).

A healthy organisation is characterised by "intentional, systematic, and collaborative efforts to maximise employee well-being and productivity by providing well-designed and meaningful jobs, a supportive social-organisational environment, and accessible and equitable opportunities for career and work-life enhancement" (Wilson *et al.*, 2004, p. 567).

This model, that provides a framework for empirical testing, conceptualises healthy work organisations as consisting of six interrelated components which include the following:

- *Organisational attributes* that comprise organisational values, organisational beliefs and organisational policies and procedures,
- *Organisational climate* which entails organisational support, co-worker support, participation with others and with supervisors, communication and safety, and health climate,
- *Job design* which includes workload, control autonomy, job content, role clarity, environmental and physical work conditions and work scheduling,
- *Job future* that consists of job security, procedural and distributive equity, learning opportunities and flexible work arrangements,
- *Psychological work adjustment* that comprises job satisfaction, organisational commitment, efficacy and job stress, and
- *Employee health and well being outcomes* which entail self-reported health, psychological health, health risk behaviours and attendance behaviours (Wilson et al., 2004).

The concept of healthy work organisations are based on the principle that it is possible to identify the job and organisational characteristics of healthy organisations and also that such organisations should have a healthier and more productive workforce (Wilson et al., 2004). Wilson et al. (2004) suggests that the manner in which employees view the organisation influences the perception they have of the organisational climate. This perception has an impact on the way employees relate to their job and perceive their future in the organisation. Psychological work adjustment is subsequently influenced, which ultimately has an impact on the health and well-being of employees.

The constructs that will be investigated in this study are related to the components of this model, excluding the component 'job design' as it is not relevant to this research.

The first and second components of the model, namely organisational attributes and organisational climate, deal with leadership empowerment behaviour. Organisational attributes are related to leadership, and the climate of the organisation, which plays a

fundamental role in organisational effectiveness, is shaped by the interaction between leaders and employees (Wilson et al., 2004). Empowerment can be characterised as a process that involves a manager sharing power with subordinates (Conger & Kanungo, 1988) and is therefore the result of behaviour on the part of a leader who empowers his or her subordinates (Lee & Koh, 2001). Empowerment creates instant partnerships (Green, 2006).

Job future, the next component according to the model, refers to employees' experience of job certainty with regard to the likelihood of continued employment, fairness, learning opportunities and flexible work arrangements (Wilson et al., 2004). Greenhalgh and Rosenblatt (1984) define job insecurity as a phenomenon in which employees subjectively perceive that their future is uncertain due to the possibility that they might lose their job or important aspects of their jobs. This definition corresponds with the component 'job future' of the model.

Engagement fits in with the subsequent component, namely psychological work adjustment, because engagement relates to employees' attachment to the organisation (Schaufeli & Bakker, 2004). The involvement of the components outlined above, namely organisational attributes, organisational climate, job future and psychological work adjustment will lead to a healthy work organisation that has, amongst other, a lower turnover rate (Wilson et al., 2004). Intention to leave, which is related to turnover behaviour (Firth et al., 2004), fits the last component of the model (Wilson et al., 2004).

This study will be conducted within the framework of this model of Wilson et al. (2004). Figure 2 illustrates the general objective of this study, namely to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.

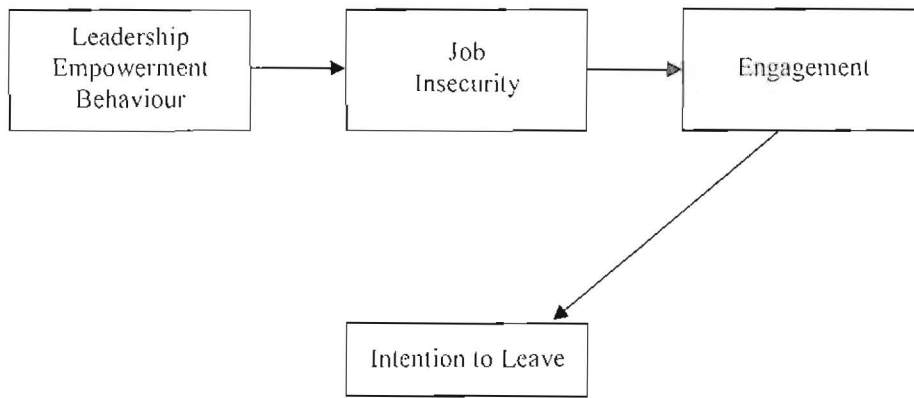


Figure 2. Model of relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave.

Correlations between individual constructs have been reported by previous researchers. In the discussion that follows these results will be cited in support of this investigation. It should be noted that no research could be found that specifically examined the relationship between all four constructs. Relationships between individual constructs as indicated by previous research are shown in solid lines in the figures that follow. Figure 3 indicates the relationship between leadership empowerment behaviour and job insecurity.

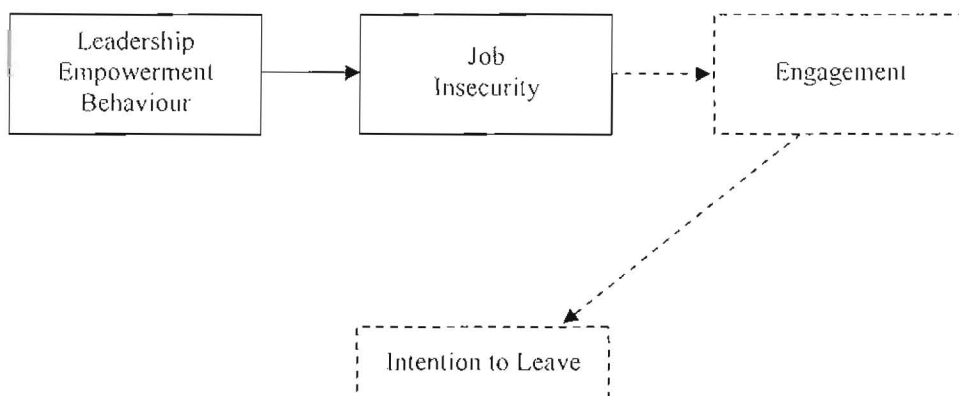


Figure 3. Relationship between leadership empowerment behaviour and job insecurity.

Tjeku (2006) emphasises the importance of leadership empowerment behaviour to establish empowerment in the organisation as a strategy to manage job insecurity. A significant correlation between leadership empowerment behaviour and job insecurity were reported by Tjeku (2006). He indicated that increased levels of leadership empowerment behaviour imply decreased levels of job insecurity and further found that leadership empowerment behaviour

predicts job insecurity. The relationship between job insecurity and engagement is indicated in figure 4.

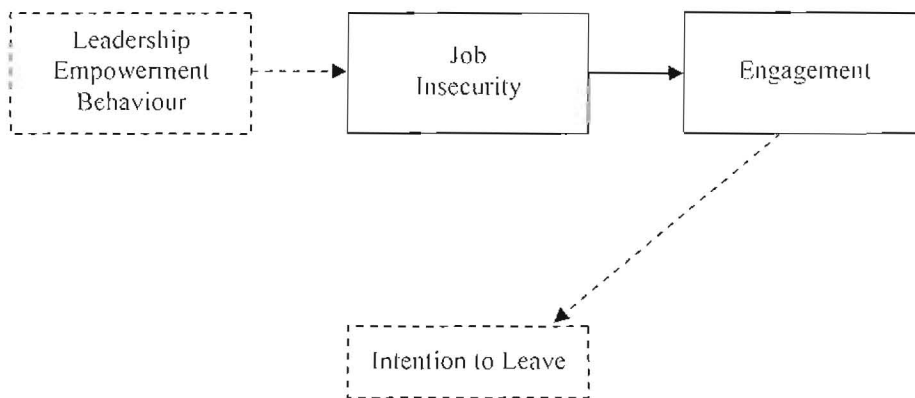


Figure 4. Relationship between job insecurity and engagement.

According to Van Zyl (2005) engagement is related to job insecurity. She reports that engaged employees tend to be more secure in their jobs. Mauno et al. (2005) emphasises the importance of increasing levels of engagement among employees, as job insecurity was found to correlate negatively with engagement. The relationship between engagement and intention to leave is indicated in figure 5.

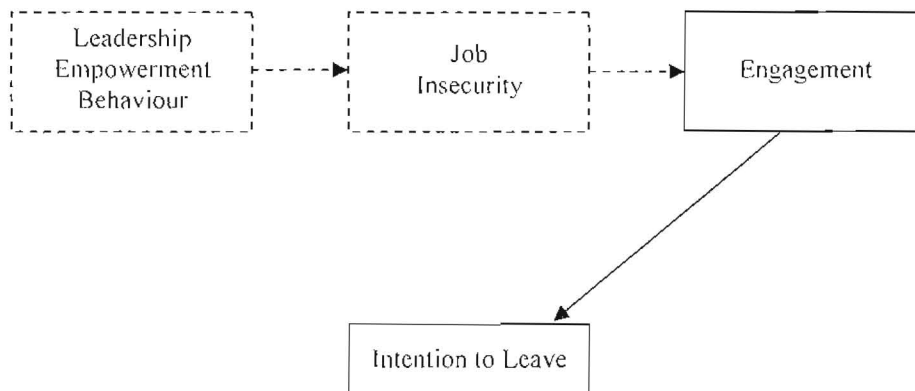


Figure 5. Relationship between engagement and intention to leave.

The relationship between engagement and intention to leave is indicated by the findings of Saks (2006). A lower tendency to leave their organisation can be noted among employees with a greater sense of engagement (Schaufeli & Bakker, 2004).

Figure 6 illustrates a specific objective of this study, which is to determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of intention to leave of employees in a petrochemical laboratory.

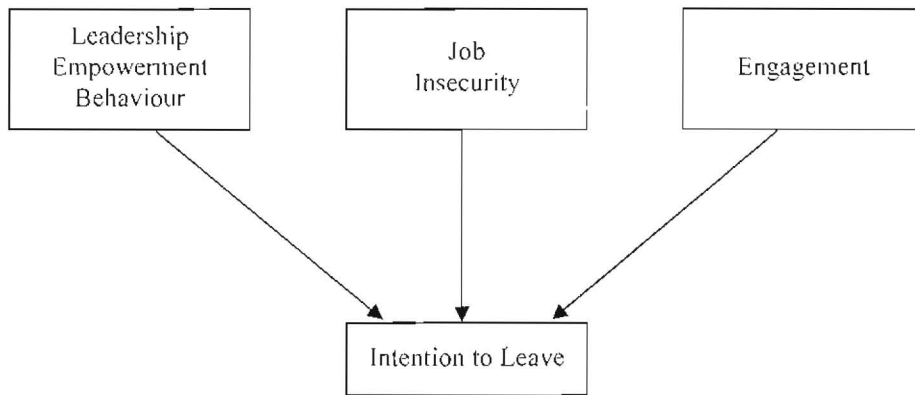


Figure 6. Model of leadership empowerment behaviour, job insecurity and engagement as indicators of intention to leave.

Maré (2007) reports a correlation between leadership empowerment behaviour and intention to leave. The association between job insecurity and intention to leave has been well established in previous research (Burke, 1998; Williams, 2003; Mauno et al., 2005). According to Saks (2006) engagement is a significant predictor of employees' intention to leave their organisation.

1.3.2.2 Methodological beliefs

Methodological beliefs can be defined as beliefs that make judgements as to the disposition and structure of science and scientific research (Mouton & Marais, 1992). This includes scientific-philosophical traditions and the most important methodological models (qualitative and quantitative).

1.4 RESEARCH METHOD

The research method constitutes a literature review and an empirical study.

1.4.1 Literature review

The literature review focuses on previous research on leadership empowerment behaviour, job insecurity, engagement and intention to leave, and the relationship between these constructs. An overview is given of the conceptualisation of these constructs in the literature, and of the findings in terms of measuring leadership empowerment behaviour, job insecurity, engagement and intention to leave.

1.4.2 Research design

The research can be classified as quantitative because it relies on measurements to compare and analyse different variables. A cross-sectional survey design will be used to reach the research objectives, as all data will be collected at a single point in time. It can further be classified as correlational research as the primary aim is to establish correlational relationships between variables (Bless & Higson-Smith, 2000).

1.4.3 Participants

The participants could be defined as an available sample of employees working in a petrochemical laboratory. The total population of employees working will be targeted. Workers from all levels, ranging from professional to semi-skilled, will be included in the study population.

1.4.4 Measuring battery

Four standardised questionnaires will be used in the empirical study. A biographical questionnaire, regarding participants' age, gender, race, education and years employed will also be included in the measuring battery.

The *Leader Empowering Behaviour Questionnaire (LEBQ)* (Konczak et al., 2000) will be used to measure leadership empowerment behaviour. This six-factor model, that identifies leader behaviours associated with employee empowerment, was developed to prescribe strategies and behaviours for managers trying to develop their empowerment skills. According to Konczak et al. (2000) it provides managers with very prescriptive and useful

feedback concerning the types of behaviour necessary to empower subordinates. This scale contains six dimensions, namely the delegation of authority, the emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance. It consists of nineteen items that are arranged along a 7-point Likert-type scale with one indicating “strongly disagree” to seven indicating “strongly agree”. The LEBQ has shown internal consistency ratings ranging from 0,85 to 0,90 (Koneczak et al., 2000). The original questionnaire consists of seventeen items. Two items (“My manager explains his/her decisions and actions to my work group” and “My manager explains company goals to my work group”) have been added to increase the number of items that give an indication of the dimension ‘information sharing’. In a South African sample of 388 employees in the gold mining industry, Maré (2007) found alpha coefficients ranging from 0,57 to 0,78. Tjeku (2006) obtained an alpha coefficient of 0,92 in his study of a South African steel manufacturing organisation.

The *Job Insecurity Inventory (JII)* (De Witte, 2000), an eleven-item questionnaire that measures both the cognitive and affective dimensions of job insecurity, will be used. The items are arranged along a 5-point scale where one indicates “strongly disagree” and five indicates “strongly agree”. The Cronbach alpha coefficient of the items measuring global insecurity was reported to be 0,92. Six items measure cognitive job insecurity ($\alpha = 0,90$) and five items affective job insecurity ($\alpha = 0,85$) (De Witte, 2000). Reynders (2005) obtained an alpha coefficient of 0,82 for total job insecurity in her study of a South African government organisation. She further obtained 0,62 for the alpha coefficient of the cognitive scale and 0,73 for the affective scale. Tjeku (2006) reported an alpha coefficient of 0,81 for total job insecurity in his study of a South African steel manufacturing organisation. He found an alpha coefficient of 0,81 for the cognitive scale and 0,70 for the affective scale.

The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) that consists of seventeen items that measure vigour (six items), dedication (five items) and absorption (six items) will be used. High levels of these three scales indicate that a person experiences a high level of engagement. Items are arranged along a 7-point scale with zero indicating “never” to six indicating “everyday”. Schaufeli et al. (2002) obtained an alpha coefficient of between 0,68 and 0,91. In their South African studies conducted in a government organisation, Reynders (2005) and Bosman (2005) both obtained an alpha coefficient of 0,94. Brand

(2006) reported an identical alpha coefficient after conducting a study in the South African insurance industry. According to other South African studies, one of these factors, absorption, indicates problems in terms of low internal consistencies or insignificant loadings (Coetzer, 2004; Naudé & Rothmann, 2004; Rothmann, 2005; Storm & Rothmann, 2003; Van der Linde, 2004). As a result, translation and simplification in the South African context should be considered (Naudé & Rothmann, 2004). While engagement is primarily characterised by vigour and dedication, it is possible that absorption plays a less central role in the engagement concept. As a result, researchers have asked the question as to whether or not absorption should be included in the measurement of engagement in South African studies (Coetzer, 2004; Naudé & Rothmann, 2004; Van der Linde, 2004). Within this study items related to absorption within the UWES will be left out.

Intention to leave (ITL) (Firth et al., 2004) will be measured by two questions that reflect how participants feel about quitting their job (i.e. "How often do you think about leaving the job?" and "How likely are you to look for a new job within the next year?"). Items are arranged along a 5-point scale with one indicating "very often" to five indicating "rarely or never". Firth et al. (2004) have shown that this measure has satisfactory internal reliability estimates ($\alpha = 0,75$).

1.4.5 Statistical analysis

The statistical analysis will be carried out with the SPSS (2007) programme. Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) will be used to analyse the data. Cronbach alpha coefficients will be used to determine the internal consistency, homogeneity and un-dimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by that particular scale.

Pearson product-moment correlation coefficients will be used to specify the relationships between the variables. In terms of statistical significance, it is decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) will be used to determine the practical significance of the findings. A cut-off point of 0.30 (medium effect, Cohen, 1988) is set for the practical significance of correlation coefficients.

A multiple regression analysis was conducted to determine the percentage variance in the dependent variables (intention to leave) that is predicted by the independent variables (leadership empowerment behaviour, job insecurity and engagement). The effect size (which indicates practical significance) in the case of multiple regressions are given by the following formula (Steyn, 1999):

$$f^2 = R^2 / 1 - R^2$$

A cut-off point of 0,35 (large effect, Steyn, 1999) is set for the practical significance.

Multivariate analysis of variance (MANOVA) will be used to determine the significance of differences between the levels of leadership empowerment behaviour, job insecurity, engagement and intention to leave of demographic groups. MANOVA tests whether or not mean differences among groups in a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001).

1.5 CHAPTER DIVISION

The chapters in this mini-dissertation are presented as follows:

Chapter 1: Introduction, problem statement and objectives.

Chapter 2: Research Article.

Chapter 3: Conclusions, limitations and recommendations.

1.6 CHAPTER SUMMARY

Chapter 1 provided a discussion of the problem statement, research objectives and paradigm perspective of the research. An explanation was provided of the research method, followed by an outline of the chapters that comprise this mini-dissertation.

Chapter 2 will focus on the empirical study.

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CHAPTER 2

RESEARCH ARTICLE

Leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical organisation¹

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ABSTRACT

The objective of this research was to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory. A cross-section survey design was used and the entire population of employees working in a petrochemical Laboratory was targeted. The measuring instruments that were used included the LEBQ, JII and the UWES. Two questions formulated by Firth, Mellor, Moore and Loquet (2004) were used to measure intention to leave. In addition, a biographical questionnaire was administered. Out of a total of 240 a response of 169 completed questionnaires were obtained. Results indicated a significant negative relationship between leadership empowerment behaviour and cognitive job insecurity and a significant positive relationship between leadership empowerment behaviour and engagement. A significant negative correlation between leadership empowerment behaviour and intention to leave was established. Cognitive job insecurity was found to have a significant positive relationship with affective job insecurity as well as a significant negative relationship with engagement. Results further indicated a significant positive relationship between cognitive job insecurity and intention to leave. A significant negative relationship was obtained between engagement and intention to leave. Regression analysis demonstrated that cognitive job insecurity and engagement are significant indicators of intention to leave.

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OPSOMMING

Die doelstelling van hierdie navorsing was om die verhouding tussen leierbemagtigingsgedrag, werksonsekerheid, begeestering en geneigdheid om te bedank in 'n petro-chemiese laboratorium te bepaal. 'n Dwars deursnee-opnameontwerp is gebruik en die totale werknemerspopulasie van 'n petro-chemiese laboratorium is ingesluit by die navorsing. Die meetinstrumente wat gebruik is sluit die LEBQ, JII en UWES in. Twee vrae wat deur Firth, Mellor, Moore en Loquet (2004) geformuleer is, is gebruik om geneigdheid om te bedank te meet. 'n Biografiese vraelys is afgeneem. Uit 240 vraelyste is 'n responskoers van 169 vraelyste behaal. Resultate dui op 'n beduidende negatiewe verband tussen leier bemagtigingsgedrag en kognitiewe werksonsekerheid en 'n beduidende positiewe verband tussen leier bemagtigingsgedrag en begeestering. 'n Beduidende negatiewe korrelasie tussen leier bemagtigingsgedrag en geneigdheid om te bedank is vasgestel. Kognitiewe werksonsekerheid het 'n beduidende positiewe verband met affektiewe werksonsekerheid en 'n beduidende negatiewe verband met begeestering getoon. Resultate dui verder op 'n beduidende positiewe verband tussen kognitiewe werksonsekerheid en geneigdheid om te bedank. 'n Beduidende negatiewe verband is gevind tussen begeestering en geneigdheid om te bedank. Die regressie-analise dui aan dat kognitiewe werksonsekerheid en begeestering beduidende aanwysers is vir geneigdheid om te bedank.

INTRODUCTION

Years after the country's first democratic elections, South Africa has made vast progress in dismantling its old economic system and has witnessed a remarkable turn around in its social fabric. Despite South Africa's potential to compete on a global level, numerous challenges remain. Staff costs are rising due to the shortage of skilled individuals and the "brain drain" characterised by the emigration of highly skilled people to Europe countries such as the United States and Australia (Peralta & Stark, 2006). The chemical industry, the largest industry in South Africa in terms of value-added output and a significant contributor to the global chemical industry (Anonymous, 2006), is faced with the challenge of retaining talented employees, especially among the previously disadvantaged groups (Peralta & Stark, 2006).

Skill shortage and the high unemployment rate have a negative impact on the availability of competent people in the country. Organisations in the chemical industry find that investment is often made in training employees only to later lose them to larger companies offering higher salaries. This is especially true in the case of employment equity candidates. Reaching employment equity targets is an essential element of each organisation's objective and smaller companies are struggling to compete with the large players in the industry, especially when it comes to retaining these individuals (Peralta & Stark, 2006).

A significant employee turnover rate has a negative impact on organisational effectiveness (Hom & Griffeth, 1995; Hom & Kinichi, 2001). The importance of understanding staff turnover in the chemical industry is apparent when the contest for talented employees between companies is considered. By identifying the determinants of employees' intention to leave, turnover behaviours could be predicted more precisely and measures to prevent turnover could be taken in advance (Hwang & Kuo, 2006). Variables found to relate to intention to leave include a sense of powerlessness and a lack of engagement (Firth, Mellor, Moore, & Loquet, 2004). This sense of powerlessness and the lack of engagement were explored by examining the constructs leadership empowerment behaviour, job insecurity and engagement. These constructs as possible indicators for intention to leave, and the relationship between them, will now be discussed.

Leadership empowerment behaviour

The demands of the 21st century require organisations to transform (Ahearne, Mathieu, & Rapp, 2005) and employee empowerment has been a significant aspect of this transformation (Forrester, 2000). Krawitz (2000) proposes that if people are the key to a competitive advantage, then the way companies treat people becomes critical to their success. Because people issues are becoming more central to business success, the roles and responsibilities of leaders have changed. According to Randolph (1995, p. 5) the earlier view on management, that is "the manager in control and the employee being controlled", is not relevant anymore. In traditional organisations managers were regarded as the sole holders of authority, employees were expected to fulfil rule-bound tasks without questioning (Cunningham, Hyman, & Baldry, 1996) and leaders influenced, rather than empowered, their subordinates (Kark, Shamir, & Chen, 2003). It is necessary to move from this traditional hierarchical position-based leadership found in many organisations (Abramson, 1997) and to propel it toward a leadership style that allows for the empowerment of employees (Carson & King, 2005).

Empowerment is characterised by the redistribution or devolution of decision-making power to those who do not currently have it (Cunningham et al., 1996; Johnson, 1994; Carson & King 2005) and gives employees the power to do the job their positions demand (Johnson, 1994). Empowered employees become active problem solvers who contribute to the planning and executing of tasks (Cunningham et al., 1996). Empowered employees are the result of behaviour on the part of a leader who empowers his or her subordinates (Lee & Koh, 2001). The types of leadership behaviours leaders employ therefore require alteration (Arnold, Arad, Rhoades, & Drasgow, 2000). According to Johnson (1994), leadership empowerment behaviour creates an environment that fosters success because employees are empowered through greater responsibility, decision-making authority, information and feedback as well as motivation, support and encouragement.

Johnson (1994) reports that the common denominator between well-managed companies is the conscious effort to empower employees. In their study, Arnold et al. (2000) reveals that the dimensions of leadership empowerment behaviours include leading by example, coaching, participative decision-making, informing and showing concern/interacting. The leader behaviour dimensions found to empower employees, as identified by Konczak, Stelly

and Trusty (2000), are important to this study. These dimensions include delegation of authority, emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance.

According to Conger and Kanungo (1988) empowerment can be characterised as a process that involves a manager sharing power with subordinates. It therefore implies the *delegation of authority*. *Accountability for outcomes* should be transferred to employees, as opposed to managers being solely responsible for results. Power is therefore redistributed (Ford & Fottler, 1995). *Self-directed decision making*, the third dimension of leadership empowerment behaviour and an important element in the empowerment process, refers to the degree to which managers encourage independent decision-making (Konczak et al., 2000). In order for employees to contribute optimally to organisational performance, managers need to share information and knowledge that will enable them to do so (Ford & Fottler, 1995). According to Wellins, Byham and Wilson (1991), a significant amount of a leader's time should be spent facilitating skills development and securing appropriate training. The facilitation, rather than directing or controlling, of development and training are emphasised. *Information sharing* and *skill development* are therefore included as dimensions of leadership empowerment behaviour. Cunningham et al. (1996) emphasises that leaders should learn to coach and develop their ability to motivate, facilitate and listen. *Coaching for innovative performance* is related to behaviour that encourages calculated risk taking and new ideas, provide performance feedback and treat mistakes and setbacks as opportunities to learn (Konczak et al., 2000).

Leadership empowerment behaviour therefore entails broadening the range of employee activities and increasing the degree of discretion that is attached to their jobs (Cunningham et al., 1996). Leaders should furthermore offer employees the required opportunities, skills and support that will enable them to make decisions and take actions that will affect their work. Leadership empowerment behaviour therefore does not simply refer to sharing power with employees, but includes engaging in behaviour that will cultivate a supportive, enabling climate (Church & Waclawski, 1995).

Measuring empowering leader behaviour should assist organisations in prioritising human resource interventions intended to increase empowerment in the workplace (Konczak et al., 2000). Increased empowerment is an important driver of organisational effectiveness as

turnover intention decrease when leadership empowerment behaviour is increased (Maré, 2007). Empowerment creates instant partnerships (Green, 2006) and further results in a less risk averse workforce that is flexible, innovative and creative (Johnson, 1994). Byham and Cox (1988) measured organisational success in terms of the organisation's ability to channel the creative energy of employees towards constant improvement.

Appelbaum, Hébert and Leroux (1999) indicate that empowered employees have a sense of self-determination, meaning, competence and impact. A sense of self-determination refers to having the freedom to choose the way in which tasks are executed, while a sense of meaning indicates that employees care about the work they deliver. Confidence with regard to ability to perform is indicative of a sense of competence, and having a sense of impact means that employees believe that their ideas are considered and that they can influence the organisation (Appelbaum et al., 1999). Empowered employees are self-motivated and believe in their ability to cope and perform successfully (Kark et al., 2003). The opposite is true of employees who feel insecure about their jobs (Canaff & Wright, 2004). Leadership empowerment behaviour is related to job insecurity and have predictive value with regard to job insecurity (Tjeku, 2006).

Job insecurity

Organisations and the work environment have witnessed a dramatic change over the past decades. This has been, among other things, the result of economic recessions, new information technology, industrial restructuring and accelerated global competition (Hartley, Jacobson, Klandermans, & Van Vuuren, 1991). As a consequence, employees have been subjected to an accelerating sense of job insecurity (Greenhalgh & Rosenblatt, 1984).

Van Wyk (2007) establishes that, throughout the literature, job insecurity has been conceptualised from two distinct perspectives, namely global and multidimensional. According to the global perspective job insecurity can be conceptualised as the overall concern about the future of one's job (Hartley et al., 1991). Greenhalgh and Rosenblatt (1984) argue that job insecurity is more complex than only the fear of losing one's job and include the fear of losing job features in their multidimensional definition. They refer to job insecurity as a "sense of powerlessness to maintain desired continuity in a threatened job situation" (Greenhalgh & Rosenblatt, 1984). Job insecurity can therefore be conceptualised as

comprising of two components, these being the recognition of threats to job security and the concern about these threats (Van Wyk, 2007). The likelihood of job loss refers to the cognitive aspect of job insecurity while the fear of job loss is related to the affective aspect thereof (De Witte, 2000). The cognitive appraisal of the future situation, whether certain or uncertain, triggers emotions based on the meaning connected to the potential job loss (De Witte, 2000). Sverke and Hellgren (2002) highlight that all the definitions of job insecurity are underlined by one general theme, namely that it is a subjective phenomenon. Mauno, Kinnunen, Mäkikangas and Nätti (2005) state that the subjective estimate of the probability that one will lose one's job is based on the objective circumstances. These researchers relate objective job insecurity to fixed term job contracts, or other forms of temporary employment, and subjective job insecurity, as a perceived threat of job loss, to permanent employment. Although objective and subjective job insecurity have an association with each other, there is a stronger correlation between the subjective sense of job insecurity and the negative consequences related to job insecurity than objective job insecurity (Mauno et al., 2005). Job insecurity is therefore a subjective experience, possibly based on objective circumstances, which implies uncertainty about the future and doubts about the continuation of the job as such.

Job insecurity is a chronic job stressor (Mauno, Leskinen, & Kinnunen, 2001) that not only has an impact on the well-being of the individual employee, but also affects organisational vitality (Hellgren, Sverke, & Isaksson, 1999). Employee job insecurity results in detrimental effects for the organisation (Holm & Hovland, 1999). Employees are less supportive of organisational goals and do not make an effort to deliver quality work (Sparks, Faragher, & Cooper, 2001; Greenhalg & Rosenblatt, 1984). According to Holm and Hovland (1999), one of the largest concerns about job insecurity for the organisation is the increased turnover rate of employees. This is supported by Firth et al. (2003), who reported that job stressors are among the factors that contribute to individuals' intention to quit their jobs. Leaving the organisation in search of more secure career opportunities is common among employees who feel insecure about their jobs (Ashford, Lee, & Bobko, 1989). This appears to be true especially among high performers who typically have an easier time securing new employment. The result of increased turnover is increased cost in terms of the recruitment and training of new employees. Organisations may consequently lose their most valuable employees, the ones they most want to retain (Ashford et al., 1989). The association between

job insecurity and intention to leave has been well established in previous research (Burke, 1998; Williams, 2003; Mauno et al., 2005).

Consequences of job insecurity for the individual employee include mental and physical health problems (Strazdins, D'Souza, Lim, Broon, & Rodgers, 2004; Holm & Hovland, 1999). Sparks et al. (2001) reports lower scores in self-rated general health, an increase in distress and the use of medication and negative effects on health-related behaviour. Depression, anxiety, reduced job satisfaction and stress reactions are some of the negative consequences reported by De Witte (1999). Employees may experience mental, emotional and physical exhaustion (Dekker & Schaufeli, 1995) as well as reduced self-esteem, altered self-perception with regard to the work role (Canaff & Wright, 2004), uncontrollability and a feeling of powerlessness (De Witte, 1999; Sverke & Hellgren, 2002).

Cartwright and Holmes (2006, p. 206) warned that "as individuals become increasingly disenchanted and disillusioned with work and fatigued by the constant demand to change and to be flexible to organisational needs, employers now need to actively restore the balance, recognise the meaning and emotional aspects of work and move towards creating a more energised, fulfilled and engaged workforce". Mauno et al. (2005) emphasises the importance of increasing levels of engagement among employees, as job insecurity was found to correlate negatively with engagement.

Engagement

Schaufeli and Bakker (2001) introduced the construct of engagement as the opposite pole of burnout, and the Utrecht Work Engagement Scale (UWES) (Schaufeli, Salanova, González-Romá, & Bakker, 2002) was developed for the purpose of measuring engagement. Engagement may be described as "a positive, fulfilling work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74). High energy levels and mental resilience while working denote vigour. It entails willingness to invest effort in one's work and to persevere when challenges arise. Dedication refers to deriving a sense of significance from one's work as well as feeling enthusiastic, inspired and proud. Absorption, as the term indicates, refers to being happily immersed in one's work. One does not notice the swift passing of time because it is difficult to disconnect oneself from work. Haudan and MacLean (2002) describe engagement as a sustained connection and

undivided concentration where time seems unimportant and the hearts and minds of employees are involved. Schaufeli et al. (2002) further states that engagement is not a momentary and specific state, but rather a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual or behaviour.

Engagement is a positive experience in itself (Schaufeli et al., 2002) and has positive consequences for the organisation as it is generally believed that a relationship exists between employee engagement and business results (Harter, Schmidt, & Hayes, 2002). Kahn (1990) expected engagement to affect employee performance and Maslach and Leiter (2005) reported that it results in energetic employees. The concept is therefore relevant for employee well-being and work behaviour and is beneficial to the organisation as it is a significant predictor of employees' intention to leave their organisation (Saks, 2006).

Intention to leave

The determinants of employee turnover has great relevance to the employee who may be thinking about quitting his or her job, as well as for the manager who is faced with the lack of employee continuity, the high costs involved in the induction and training of new personnel and the issue of organisational productivity (Firth et al., 2003; Siong, Mellor, Moore, & Firth, 2006). According to Ajzen and Fishbein (1980), Igbaria and Greenhaus (1992) and McCarthy, Tyrrell and Lehane (2007) intentions are the most immediate determinants of actual behaviour. Intentions are therefore an accurate indicator of subsequent behaviour, but the reasons for these intentions are still unknown (Firth et al., 2003) and according to Firth et al. (2003) there has been little consistency in research findings as to what determines employees' intention to resign. Van Dick et al. (2004) agrees that the phenomenon is far from being fully understood, especially because some of the psychological processes underlying the withdrawal from the organisation are still unclear.

Vandenberg and Nelson (1999, p. 1315) define intention to leave as an "individual's own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future". According to Jones, Katak, Futrell and Johnston (1996), turnover refers to an individual leaving an organisation.

Identifying the determinants of employees' intention to leave will allow organisations to predict turnover behaviours more accurately and take proactive actions to prevent it (Hwang & Kuo, 2006).

The above discussion focused on conceptualising leadership empowerment behaviour, job insecurity, engagement and intention to leave. The background of the organisation in which the research was conducted will now be outlined.

The significant change that organisations must endure in order to survive, let alone prosper, has grown tremendously in the past two decades (Kotter, 1996). The petrochemical organisation in which this study will be conducted consists of several business units. External consultants (Stander, Scholtz, & Verster, 2006) have assessed the current situation in a business unit of the organisation, namely the Laboratory, and identified a number of areas that prevent optimal functioning. Based on these findings the relevant business unit in which this study will be conducted (the Laboratory) is at the onset of a long term, transformational change process.

The findings of Stander et al. (2006), which is summarised below, serve to depict the setting within the Laboratory. Generally, employees were found to be negative and dissatisfied. They experience a distance between themselves and the management team and view management as uninvolved in influencing the future of the Laboratory. Employees furthermore experience a lack of support, recognition and motivation from their managers. They expressed a need to be involved in decision-making processes as they currently feel that they cannot make a difference. Employees expect a transformation of managers to leaders.

Stander et al. (2006) also indicates that the management style is in need of improvement in the availability of managers, openness to employees' suggestions, communication of expectations and valuing employees' contribution. Development and training do not receive adequate attention and some employees experience their work to be tedious and wearisome. Career paths and development plans are not in place and the workforce's sense of belonging is low while the retention of talented people is a concern.

The findings of Stander et al. (2006) in the petrochemical Laboratory initiated this research and contributed to the decision to demarcate this study to the relevant business unit. A

literature study revealed no specific research of this nature conducted in a petrochemical laboratory environment. For consistency, further discussions will refer to a petrochemical laboratory. This is based on the manner in which all business units within the larger petrochemical organisation functions, that is, as an independent unit.

Based upon the above discussion, three important facets exist for exploration. They are as follows: (1) leadership empowerment behaviour may influence job insecurity; (2) job insecurity may influence engagement; (3) engagement may influence an employee's intention to leave the organisation. Intention to leave is related to actual turnover (Firth et al., 2003; McCarthy et al., 2007). Research has been conducted to determine the relationship between individual constructs. Tjeku (2006) reports a relationship between leadership empowerment behaviour and job insecurity. Maré (2007) establishes a correlation between leadership empowerment behaviour and intention to leave. Mauno et al. (2005) obtains a relationship between job insecurity and engagement. Burke (1998) and Williams (2003) find a correlation between job insecurity and intention to leave. Saks (2006) reports a relationship between engagement and intention to leave. However, no research could be found that specifically examines the relationship between the four constructs leadership empowerment behaviour, job insecurity, engagement and intention to leave. The purpose of this study is to determine the relationship between all four constructs in a petrochemical laboratory.

AIM OF THE STUDY

General objective

The general objective of this research is to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.

Specific objectives

The specific objectives of this research are:

- To conceptualise the constructs leadership empowerment behaviour, job insecurity, engagement and intention to leave from the literature.

- To determine the relationship between the constructs leadership empowerment, job insecurity, engagement and intention to leave in the literature.
- To determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.
- To determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of the intention to leave of employees in a petrochemical laboratory.
- To determine the difference between the demographical groups of employees in a petrochemical laboratory with regard to leadership empowerment behaviour, job insecurity, engagement and intention to leave.

HYPOTHESES

Based on the discussion above, the following hypotheses are formulated:

- H₁: Leadership empowerment behaviour has a negative correlation with intention to leave.
- H₂: Job insecurity has a positive correlation with intention to leave.
- H₃: Engagement has a negative correlation with intention to leave.
- H₄: Differences between demographic groups of employees exist regarding levels of leadership empowerment behaviour.
- H₅: Differences between demographic groups of employees exist regarding levels of job insecurity.
- H₆: Differences between demographic groups of employees exist regarding levels of engagement.
- H₇: Differences between demographic groups of employees exist regarding levels of intention to leave.

METHOD

Research design

The research can be classified as quantitative because it relies on measurements to compare

and analyse different variables. A cross-sectional survey design will be used to reach the research objectives, as all data will be collected at a single point in time. It can further be classified as correlational research as the primary aim is to establish correlational relationships between variables (Bless & Higson-Smith, 2000).

Participants

The participants can be defined as an available sample of employees working in a petrochemical laboratory. A total population of 240 employees was targeted. A response rate of 169 (70,42%) was achieved, of which 168 responses (99%) could be utilised.

Descriptive information of the sample is given in Table 1.

Table 1
Characteristics of the Participants

Item	Category	Frequency	Percentage
Gender	Male	105	62,50
	Female	63	37,50
Age	24 years and younger	29	17,30
	25 to 35 years	75	44,60
	36 to 45 years	33	19,60
	46 to 55 years	24	14,30
	56 years and older	7	4,20
Race	African	84	50,00
	White	75	44,60
	Indian	3	1,80
	Coloured	1	0,60
	Other	1	0,60
	Missing Values	4	2,40
Education level	Up to Grade 12	3	1,80
	Grade 12	88	52,40
	Diploma	54	32,10
	Degree	13	7,70
	Postgraduate degree	9	5,40

Table 1 (continued)

Characteristics of the Participants

Item	Category	Frequency	Percentage
Division	Missing Values	1	0,60
	Routine Section	54	32,10
	Project & Technology Section	37	22,00
	Analysers	30	17,90
	Administration and Support	14	8,30
	Shift Supervisor / Courier / Administrator	24	14,30
	Management	4	2,40
	Satellite Group	2	1,20
	Missing Values	3	1,80
Job level	Junior non-management	43	25,60
	Middle non-management	55	32,70
	Senior non-management	45	26,80
	Management	5	3,00
	Senior management	14	8,30
	Missing Values	6	3,60
Years of service in organisation (In this case organisation refers to the business unit as demarcated in the study)	Less than 1 year	34	20,20
	2 to 5 years	48	28,60
	6 to 10 years	33	19,60
	11 to 20 years	23	13,70
	More than 20 years	29	17,30
	Missing Values	1	0,60
Years of service in organisation (In this case organisation refers to the entire organisation)	Less than 1 year	27	16,10
	2 to 5 years	48	28,60
	6 to 10 years	30	17,90
	11 to 20 years	33	19,60
	More than 20 years	30	17,90

The study population consisted mainly of male (62,50%) African (50,00%) employees between the ages of 25 and 35 (44,60%). The majority of the sample had a grade 12 (52,40%) and a diploma (32,14%) qualification. 32,10% of the participants worked in the routine

section of the Laboratory. The majority of the participants were on a non-management level with between 2 and 5 years working experience in the Laboratory.

Measuring battery

The following measurement instruments were used in the empirical study:

A *biographical questionnaire* was developed to gather information about the demographical characteristics of the participants. Information gathered included age, gender, race, education, and years employed.

The *Leader Empowering Behaviour Questionnaire (LEBQ)* (Konczak et al., 2000) was used to measure leadership empowerment behaviour. This six-factor model that identifies leader behaviours associated with employee empowerment was developed to prescribe strategies and behaviours for managers trying to develop their empowerment skills. According to Konczak et al. (2000) it provides managers with very prescriptive and useful feedback concerning the types of behaviour necessary to empower subordinates. This scale contains six dimensions, namely the delegation of authority, the emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance. It consists of nineteen items that are arranged along a 7-point Likert-type scale with one indicating "strongly disagree" to seven indicating "strongly agree". The LEBQ has shown internal consistency ratings ranging from 0.85 to 0.90 (Konczak et al., 2000). The original questionnaire consists of seventeen items. Two items ("My manager explains his/her decisions and actions to my work group" and "My manager explains company goals to my work group") have been added to increase the number of items that give an indication of the dimension 'information sharing'. In a South African sample of 388 employees in the gold mining industry, Maré (2007) found alpha coefficients ranging from 0.57 to 0.78. Tjcku (2006) obtained an alpha coefficient of 0.92 in his study of a South African steel manufacturing organisation.

The *Job Insecurity Inventory (JII)* (De Witte, 2000), an eleven-item questionnaire that measures both the cognitive and affective dimensions of job insecurity was used. The items are arranged along a 5-point scale where one indicates "strongly disagree" and five indicates "strongly agree". The Cronbach alpha coefficient of the items measuring global insecurity

was reported to be 0,92. Six items measure cognitive job insecurity ($\alpha = 0,90$) and five items affective job insecurity ($\alpha = 0,85$) (De Witte, 2000). Reynders (2005) obtained an alpha coefficient of 0,82 for total job insecurity in her study of a South African government organisation. She further obtained 0,62 for the alpha coefficient of the cognitive scale and 0,73 for the affective scale. Tjeku (2006) reported an alpha coefficient of 0,81 for total job insecurity in his study of a South African steel manufacturing organisation. He found an alpha coefficient of 0,81 for the cognitive scale and 0,70 for the affective scale.

The *Utrecht Work Engagement Scale (UWES)* (Schaufeli et al., 2002) that consists of seventeen items that measure vigour (six items), dedication (five items) and absorption (six items) was used. High levels of these three scales indicate that a person experiences a high level of engagement. Items are arranged along a 7-point scale with zero indicating “never” to six indicating “everyday”. Schaufeli et al. (2002) obtained an alpha coefficient of between 0,68 and 0,91. In their South African studies, conducted in a government organisation, Reynders (2005) and Bosman (2005) both obtained an alpha coefficient of 0,94. Brand (2006) reported an identical alpha coefficient after conducting a study in the South African insurance industry. According to other South African studies, one of these factors, absorption, indicated problems in terms of low internal consistencies or insignificant loadings (Coetzer, 2004; Naudé & Rothmann, 2004; Rothmann, 2005; Storm & Rothmann, 2003; Van der Linde, 2004). As a result, translation and simplification in the South African context should be considered (Naudé & Rothmann, 2004). While engagement is primarily characterised by vigour and dedication, it is possible that absorption plays a less central role in the engagement concept. As a result, researchers have asked the question as to whether or not absorption should be included in the measurement of engagement in South African studies (Coetzer, 2004; Naudé & Rothmann, 2004; Van der Linde, 2004). In this study items related to absorption within the UWES was left out.

Intention to leave (ITL) was measured by two questions that reflect how participants feel about quitting their job (“How often do you think about leaving the job?” and “How likely are you to look for a new job within the next year?”). Items are arranged along a 5-point scale with one indicating “very often” to five indicating “rarely or never”. Firth et al. (2004) have shown that this measure has satisfactory internal reliability estimates ($\alpha = 0,75$).

Statistical analysis

The statistical analysis was carried out with the SPSS (2007) programme. Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients were used to determine the internal consistency, homogeneity and un-dimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by that particular scale.

Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

A multiple regression analysis was conducted to determine the percentage variance in the dependent variables (intention to leave) that is predicted by the independent variables (leadership empowerment behaviour, job insecurity and engagement). The effect size (which indicates practical significance) in the case of multiple regressions are given by the following formula (Steyn, 1999):

$$f^2 = R^2 / 1 - R^2$$

A cut-off point of 0,35 (large effect, Steyn, 1999) was set for the practical significance.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the experience of leadership empowerment behaviour, job insecurity, engagement and intention to leave of demographic groups. MANOVA tests whether or not mean differences among groups in a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA, a new dependent variable that maximises group differences is created from the set of dependent variables. Wilks' lambda was used to test the likelihood of the data, on the assumption of equal population mean vectors for all groups, against the likelihood on the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When

an effect was significant in MANOVA, one-way analysis of variance (ANOVA) was used to discover which dependent variables had been affected. Seeing that multiple ANOVA's were used, a Bonferroni-type adjustment is made for inflated Type I error. Tukey tests were done to indicate which groups differed significantly when ANOVA's were performed.

RESULTS

To establish the factor structure of the measuring instruments, factor analysis was performed on each instrument. The reliability of the measuring instruments was determined through descriptive statistics and alpha coefficients.

A principal component factor analysis was performed on the adapted 19 items of the LEBQ on the total sample of employees working in a petrochemical laboratory. Analysis of the eigenvalues (larger than 1) and the scree plot indicated that one factor could be extracted, explaining 54,19% of the total variance (see Table 2). Next, a simple principle axis factoring analysis was performed on the adapted 19 items of the LEBQ on the total sample of employees working in a petrochemical laboratory. This factor was labelled Leadership Empowerment Behaviour.

The results of the factor analysis on the LEBQ are indicated in Table 2. The loading of variables on the factor (Leadership Empowerment Behaviour), as well as communalities and percentage of variance, is indicated. Variables are ordered and grouped by size of loading to facilitate interpretation.

Table 2

Factor Loadings, Communalities (h^2), Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on LEBQ Items

Item	Leadership Empowerment Behaviour	h^2
My manager tries to help me arrive at my own solutions when problems arise, rather than telling me what he/she would do	0,83	0,70
My manager provides me with the information I need to meet customers' needs	0,82	0,67
My manager gives me the authority I need to make decisions that improve work processes and procedures	0,81	0,65
My manager shares information that I need to ensure high quality results	0,81	0,65
My manager encourages me to use systematic problem-solving methods	0,80	0,63
My manager ensures that continuous learning and skill development are priorities in our department	0,79	0,63
My manager delegates authority to me that is equal to the level of responsibility that I am assigned to	0,78	0,62
My manager provides me with frequent opportunities to develop new skills	0,78	0,62
I am encouraged to try out new ideas even if there is a chance they may not succeed	0,78	0,62
My manager encourages me to develop my own solutions to problems I encounter in my work	0,76	0,58
My manager explains his/her decisions and actions to my work group	0,75	0,56
My manager gives me the authority to make changes necessary to improve things	0,72	0,51
My manager focuses on corrective action rather than placing blame when I make a mistake	0,70	0,49
My manager explains company goals to my work group	0,70	0,49
My manager is willing to risk mistakes on my part if, over the long term, I will learn and develop as a result of the experience	0,68	0,46
My manager relies on me to make my own decisions about issues that affect how work gets done	0,60	0,36
My manager holds me accountable for the work I am assigned to	0,55	0,31
I am held accountable for performance and results	0,45	0,20
My manager holds people in the department accountable for customer satisfaction	0,38	0,15
Percentage Variance Explained	54,19	

Table 2 indicates that the principal analysis resulted in one factor. Items loading on this factor were related to Leadership Empowerment Behaviour (e.g., "My manager shares information that I need to ensure high quality results" and "My manager encourages me to use systematic problem-solving methods" and "My manager gives me the authority I need to make decisions that improve work processes and procedures"). Maré (2007), in her study among a sample of employees in the gold mining industry, found that the LEBQ can consist out of either a one-factor structure or a six-factor structure. This supports the one-factor structure found in this analysis.

A principal component factor analysis was performed on the 11 items of the JII on the total sample of employees working in a petrochemical laboratory. Analysis of the eigenvalues

(larger than 1) and the scree plot indicated that two factors (Affective Job Insecurity and Cognitive Job Insecurity) could be extracted, explaining 55,85% of the total variance. Next, a simple principle axis factoring analysis was followed using a direct oblimin rotation to perform further factor analysis. Item two ("There is only a small chance that I will become unemployed"), however, was left out in further analysis as it had an insignificant (between -0.30 and 0.30) loading.

The results of the factor analysis on the JII are indicated in Table 3. The loading of variables on the two factors (Affective Job Insecurity and Cognitive Job Insecurity), as well as communalities and percentage of variance, is indicated. Variables are ordered and grouped by size of loading to facilitate interpretation.

Table 3

Factor Loadings, Communalities (h^2), Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on JII Items

Item	Affective Job Insecurity	Cognitive Job Insecurity	h^2
I think that I might be dismissed in the near future	0,90	0,00	0,74
I fear that I might get fired	0,87	0,00	0,70
There is a possibility that I might lose my job in the near future	0,87	0,00	0,71
I fear that I might lose my job	0,78	0,00	0,69
It makes me anxious that I might become unemployed	0,62	0,00	0,41
I feel uncertain about the future of my job	0,57	0,00	0,48
I worry about the continuation of my career	0,38	0,00	0,25
I am certain/sure of my job environment	0,00	0,60	0,42
I am very sure that I will be able to keep my job	0,00	0,45	0,52
I think that I will be able to continue working here	0,00	0,39	0,17
Percentage Variance Explained	43,09	12,77	

Table 3 indicates that the principal analysis with an oblimin rotation resulted in two factors. Items loading on the first factor were related to Affective Job Insecurity (e.g., "I fear that I might get fired" and "I feel uncertain about the future of my job"). The second factor addresses Cognitive Job Insecurity (e.g., "I think that I will be able to continue working here" and "I am certain/sure of my job environment"). Viljoen (2004) obtained similar results in her study conducted in a South African government organisation and the two factor structure is

further supported by Tjeku (2006), who obtained results in a steel manufacturing organisation.

Van Wyk (2007) reported that most of the South African studies on the topic of job insecurity found that individuals who cognitively persuade themselves of the possibility of job loss also react emotionally on this cognition. The two factors of job insecurity, namely Affective Job Insecurity and Cognitive Job Insecurity, are therefore dealt with separately in this study.

De Witte (2000) reported that five items measure affective job insecurity and six items measure cognitive job insecurity, which differs from the results obtained in this study. Item two of the inventory was left out due to an insignificant (between -0,3 and 0,3) loading and analysis resulted in seven items related to affective job insecurity and three items related to cognitive job insecurity.

A principal component factor analysis was performed on the remaining 11 items of the UWES (without the Absorption items) on the total sample of employees working in a petrochemical laboratory. Analysis of the eigenvalues (larger than 1) and the scree plot indicated that one factor could be extracted, explaining 56,82% of the total variance. Next, a simple principle axis factoring analysis was performed on the 11 items of the UWES.

The results of the factor analysis on the UWES are indicated in Table 4. The loading of variables on the factor (Engagement), as well as communalities and percentage of variance, is indicated. Variables are ordered and grouped by size of loading to facilitate interpretation.

Table 4

Factor Loadings, Communalities (h^2), Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on UWES Items

Item	Engagement	h^2
I am enthusiastic about my job	0,85	0,72
My job inspires me	0,84	0,70
To me, my work is challenging	0,82	0,67
I find my work full of meaning and purpose	0,78	0,61
I feel strong and vigorous in my job	0,77	0,60
When I get up in the morning, I feel like going to work	0,77	0,59
I am very resilient, mentally, in my job	0,73	0,53
I am proud of the work that I do	0,72	0,52
In my job, I can continue working for very long periods at a time	0,61	0,37
I am bursting with energy in my work	0,55	0,30
I always persevere at work, even when things do not go well	0,47	0,23
Percentage Variance Explained	56,82	

Table 4 indicates that the principal analysis with an oblimin rotation resulted in one factor. Items loading on this factor were related to Engagement (e.g. "I am enthusiastic about my work" and "My job inspires me"). The one-factor structure is supported by Brand (2006), who found similar results in the South African insurance industry and by Rathbone (2006), who obtained a one-factor structure among employees in the South African mining industry.

Furthermore, a simple principal component factor analysis was performed on the two items measuring intention to leave (e.g. "How often do you think about leaving the job?" and "How likely are you to look for a new job within the next year?") on the total sample of employees working in a petrochemical laboratory. Analysis of the eigenvalues (larger than 1) and the scree plot indicated that one factor could be extracted, explaining 78,68% of the total variance. Next, a simple principle axis factoring analysis was performed on the two items measuring intention to leave.

The results of the factor analysis on the two items measuring intention to leave are indicated in Table 5. The loading of variables on the factor (Intention to Leave), as well as communalities and percentage of variance, is indicated.

Table 5

Factor Loadings, Communalities (h^2), Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on Intention to Leave Items

Item	Intention to Leave	h^2
How often do you think about leaving the job?	0,76	0,57
How likely are you to look for a new job within the next year?	0,76	0,57
Percentage Variance Explained	78,68	

Table 5 indicates that the principal analysis with an oblimin rotation resulted in one factor. Items loading on this factor were related to Intention to Leave (e.g. "How often do you think about leaving the job?" and "How likely are you to look for a new job within the next year?"). Firth et al. (2003) obtained a one-factor structure, which supports the findings of this analysis.

The descriptive statistics and alpha coefficients of the one factor of the LEBQ, two factors of the JII, one factor of the UWES and one factor of Intention to Leave are indicated in Table 6.

Table 6

Descriptive Statistics and Alpha Coefficients of the LEBQ, JII, UWES and ITL

Item	Mean	SD	Skewness	Kurtosis	α
LEBQ					
Leadership Empowerment Behaviour	95,07	23,66	-0,76	0,16	0,95
JII					
Cognitive Job Insecurity	9,27	2,80	0,13	0,01	0,60
Affective Job Insecurity	17,25	6,30	0,19	-0,40	0,88
UWES					
Engagement	49,70	13,74	-1,15	1,21	0,92
ITL					
Intention to Leave	5,63	2,52	0,16	-0,97	0,73

Table 6 indicates that acceptable Cronbach alpha coefficients varying from 0,73 to 0,95 were obtained, except for Cognitive Job Insecurity ($\alpha = 0,60$). These alpha coefficients compare reasonably well with the guideline of 0,70 (0,55 in basic research), demonstrating that a large portion of the variance is explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). It is evident from Table 6 that most of the scales

of the measuring instruments have relatively normal distributions, with low skewness and kurtosis, except for engagement.

A Cronbach alpha coefficient of 0,95 was obtained for Leadership Empowerment Behaviour and the results indicate a normal distribution with low skewness and kurtosis. This is in line with the finding of Maré (2007) and Tjeku (2006) who obtained similar results. Maré (2007) reported alpha coefficients ranging from 0,57 to 0,78 and Tjeku (2006) obtained an alpha coefficient of 0,92. Konczak et al. (2000) obtained internal consistency ratings ranging from 0,85 to 0,90.

The Cronbach alpha coefficients obtained for job insecurity was 0,60 for Cognitive Job Insecurity and 0,88 for Affective Job Insecurity. The Cronbach alpha coefficient reported for Cognitive Job Insecurity does not indicate a satisfactory internal reliability estimate. Reynders (2005) obtained similar results with an alpha coefficient of 0,62 for the cognitive scale and an alpha coefficient of 0,73 for the affective scale in her study of a South African government organisation. The results for both Cognitive Job Insecurity and Affective Job Insecurity indicated a normal distribution with low skewness and kurtosis which is supported by the results reported by Reynders (2005) and Bosman (2005). De Witte (2000) reported an alpha coefficient of 0,90 for cognitive job insecurity and 0,85 for affective job insecurity.

A reliability coefficient of 0,92 was obtained for Engagement, although it did not show a normal distribution (skewness and kurtosis larger than one). The internal reliability estimate obtained is supported by various South African studies (Coetzer, 2006; Mostert & Rothmann, 2006; Rothmann & Joubert, 2007; Van Greunen, 2004). Schaufeli et al. (2002) obtained an alpha coefficient ranging from 0,68 to 0,91.

The result obtained for Intention to Leave indicated a Cronbach alpha coefficient of 0,73 and a normal distribution with low skewness and kurtosis. Firth et al. (2004) have shown that this measure has satisfactory internal reliability estimates ($\alpha = 0,75$).

Based on the results of previous research, as indicated, it can be concluded that the results obtained from the measuring instruments are reliable.

The product-moment correlation coefficients between the factors labelled Leadership Empowerment Behaviour, Cognitive Job Insecurity, Affective Job Insecurity, Engagement and Intention to Leave are given in Table 7.

Table 7

Product-Moment Correlation Coefficients between Leadership Empowerment Behaviour, Cognitive Job Insecurity, Affective Job Insecurity, Engagement and Intention to Leave

Item	Leadership Empowerment Behaviour	Cognitive Job Insecurity	Affective Job Insecurity	Engagement
1. Leadership Empowerment Behaviour	-			
2. Cognitive Job Insecurity	-0,39**			
3. Affective Job Insecurity	-0,21*	0,37**		
4. Engagement	0,40**	-0,35**	-0,15*	
5. Intention to Leave	-0,36**	0,35**	0,10	-0,55**

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

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

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

Table 7 shows that leadership empowerment behaviour has a statistically significant negative correlation (practically significant, medium effect) with cognitive job insecurity (-0.39). This indicates that increased leadership empowerment behaviour should result in decreased cognitive job insecurity. The relationship obtained between leadership empowerment behaviour and cognitive job insecurity is in line with the findings of Tjeku (2006), who obtained a negative correlation between leadership empowerment behaviour and cognitive job insecurity.

Leadership empowerment behaviour is statistically significant, negatively correlated (practically significant, medium effect) with intention to leave (-0,36). This implies that when leadership empowerment behaviour increases, intention to leave decreases. Maré (2007) reported a negative correlation between leadership empowerment behaviour and intention to leave.

Leadership empowerment behaviour shows a statistically significant positive correlation (practically significant, medium effect) with engagement (0,40). An increase in leadership empowerment behaviour should lead to improved levels of engagement among employees.

Previous research supporting the relationship between leadership empowerment behaviour and engagement could not be found.

Cognitive job insecurity is statistically significant, positively correlated (practically significant, medium effect) with affective job insecurity (0,37) as well as with intention to leave (0,35). Increased levels of cognitive job insecurity should therefore result in increased levels of affective job insecurity and may result in a stronger intention to leave. The relationship obtained between cognitive job insecurity and affective job insecurity is in line with the findings of Tjeku (2006), who reported a positive correlation. Support exists for the positive correlation obtained between cognitive job insecurity and intention to leave (Burke, 1998; Williams, 2003; Mauno et al., 2005).

Cognitive job insecurity is statistically significant, negatively correlated (practically significant, medium effect) with engagement (-0.35). Decreased levels of engagement should therefore be the consequence of increased levels of cognitive job insecurity. Mauno et al. (2005), Bosman (2005) and Van Zyl (2005) reported a negative correlation between cognitive job insecurity and engagement, which supports the findings of this study.

Engagement shows a statistically significant, negative correlation (practically significant, large effect) with intention to leave (-0,55). Employees who experience higher levels of engagement may be less inclined to leave the organisation. The relationship obtained between engagement and intention to leave is in line with findings indicated by Saks (2006) who reported that engagement are negatively related to intention to leave.

The correlations between affective job insecurity and engagement (-0,15) and between affective job insecurity and intention to leave (0,10) did not meet the cut off point of 0.35 (large effect, Steyn, 1999) that was set for practical significance.

The relationship obtained between leadership empowerment behaviour and intention to leave, cognitive job insecurity and intention to leave, as well as between engagement and intention to leave, should be highlighted. A specific objective of this research was to determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of the intention to leave of employees in a petrochemical laboratory.

The results of a multiple regression analysis with Intention to Leave as dependent variable and Cognitive and Affective Job Insecurity, Leadership Empowerment Behaviour and Engagement as independent variables are reported in Table 8.

Table 8

Multiple Regression Analyses with Intention to Leave as Dependent Variable

Model		Unstandardised		Standardised	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
		Coefficients		Coefficients						
		B	SE	Beta						
1	(Constant)	2,87	0,71		4,06	0,00	11,49*	0,35	0,12	0,12
	Cognitive Job Insecurity	0,33	0,07	0,36	4,61	0,00				
	Affective Job Insecurity	-0,02	0,03	-0,04	-0,46	0,65				
2	(Constant)	6,52	1,25		5,23	0,00	12,27*	0,43	0,18	0,06
	Cognitive Job Insecurity	0,50	0,18	0,12	0,27	0,00				
	Affective Job Insecurity	-0,21	0,03	-0,05	-0,69	0,49				
	Leadership Empowerment Behaviour	-0,03	0,01	-0,27	-3,50	0,01				
3	(Constant)	10,09	1,25		8,05	0,00	21,46*	0,59	0,35	0,16
	Cognitive Job Insecurity	0,14	0,07	0,16	2,14	0,03				
	Affective Job Insecurity	-0,02	0,03	-0,05	-0,75	0,45				
	Leadership Empowerment Behaviour	-0,01	0,01	-0,13	-1,81	0,07				
	Engagement	-0,08	0,01	-0,45	-6,34	0,00				

* $p < 0,05$

Table 8 shows that 12.00% of the variance explained in Intention to Leave are predicted by cognitive and affective job insecurity ($F = 11,49, p < 0,05$). Only cognitive job insecurity made a significant contribution to the variance explained. By adding leadership empowerment behaviour, the statistical significance of the R^2 was slightly increased ($\Delta R^2 = 0,06$) and when engagement was added into the multiple regression analysis the statistical significance of R^2 increased more ($\Delta R^2 = 0,16$). From table 8 it is evident that 35,00% of the variance explained in Intention to Leave are predicted by cognitive and affective job insecurity, leadership empowerment behaviour and engagement ($F = 21,46, p < 0,05$). Cognitive job insecurity and engagement were the only statistical significant predictors of intention to leave.

MANOVA analysis was conducted to determine differences between demographic groups (such as gender, racial groups, age, education levels, division and job levels) in the experience of leadership empowerment behaviour, cognitive and affective job insecurity,

engagement and intention to leave. Results were first analysed for statistical significance using Wilks' lambda statistics. ANOVA was used to determine specific difference whenever statistical differences were found. The results of the MANOVA analysis are given in Table 9.

Table 9

MANOVA - Differences in Leadership Empowerment Behaviour, Cognitive and Affective Job Insecurity, Engagement and Intention to Leave

Variable	Value	F	Df	p	Partial Eta squared
Gender	0,98	0,69	5,00	0,63	0,02
Racial groups	0,82	1,54	20,00	0,06	0,05
Age	0,84	1,38	20,00	0,13	0,04
Education levels	0,82	1,63	20,00	0,04*	0,05
Division	0,81	1,13	30,00	0,29	0,04
Job level	0,77	2,04	20,00	0,01*	0,06

* $p < 0,05$

In analysis of Wilks' lambda values, no statistically significant differences ($p < 0,05$) regarding leadership empowerment behaviour, cognitive and affective job insecurity, engagement and intention to leave could be found between gender, racial groups, age and division. However, statistically significant differences ($p < 0,05$) were found for education and job levels. In investigating the significance levels of the independent variables in terms of education levels, none of the variables' significance levels were lower than the adjusted Bonferri adjustment of $p < 0,01$. The relationship between leadership empowerment behaviour, cognitive and affective job insecurity, engagement and intention to leave and these demographic variable levels that showed a statistically significant difference was further analysed using ANOVA. The Games-Howell procedure was used to determine whether there were any statistical differences between the groups.

The results of the ANOVA based on job levels are given in Table 10.

Table 10

Differences in Leadership Empowerment Behaviour, Cognitive and Affective Job Insecurity, Engagement and Intention to Leave levels based on job levels

Item	Junior non-management	Middle non-management	Senior non-management	Management	Senior management	<i>p</i>	Partial Eta Squared
Leadership Empowerment	91.64	90.01	101.82	100.80	101.00	0.88	0.05
Behaviour							
Cognitive Job Insecurity	8.69	9.67 ^a	9.67	9.60	9.27	0.22	0.04
Affective Job Insecurity	17.83	19.07 ^a	16.64	15.00	11.86 ^b	0.00 [*]	0.10
Engagement	49.92	47.04	51.34	52.00	52.71	0.49	0.02
Intention to Leave	5.76	6.24	4.80	5.60	5.43	0.08	0.05

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

^a Group differs statistically significantly from type (in row) where ^b is indicated

Table 10 shows that there are statistically significant differences between levels of affective job insecurity based on job levels. It seems that employees in middle non-management positions experience statistically significantly higher levels of affective job insecurity than employees in senior management positions. The relevant petrochemical organisation in which this study was conducted, namely the Laboratory, was at the onset of a long term, transformational change process. It may be possible that employees in middle non-management positions do not understand the rationale behind the change process in the same manner as employees in senior management positions. This may have resulted in employees in middle non-management positions experiencing higher levels of fear with regard to the future employment situation.

DISCUSSION

The aim of this study was to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory. A further objective was to establish whether leadership empowerment, job insecurity and engagement are indicators of intention to leave. Differences in the levels of leadership empowerment behaviour, job insecurity, engagement and intention to leave of different demographic groups of employees in a petrochemical laboratory were established.

In order to establish the number of factors of each measuring instrument, the factor structures of the instruments were firstly determined with principal component analysis and then followed up with principle axis factoring. When there was more than one factor and when the factors were found to be correlated a direct oblimin rotation was used.

One factor could be extracted on the LEBQ, explaining 54,19% of the total variance. This factor was labelled Leadership Empowerment Behaviour. Regarding the JII, two factors could be extracted, explaining 43,09% and 12,77% respectively of the total variance. These factors were labelled Affective Job Insecurity and Cognitive Job Insecurity. One factor could be extracted on the UWES, explaining 56,82% of the total variance and was labelled Engagement. One factor could be extracted from the items measuring intention to leave, explaining 78,68% of the total variance. This factor was labelled Intention to Leave.

Cronbach alpha coefficients varying from 0,73 to 0,95 were obtained. All the measuring instruments had acceptable levels of internal consistency with alpha coefficients that compared reasonably well with the guideline of 0,70 (0,55 in basic research), which demonstrated that a large portion of the variance was explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994), except for cognitive job insecurity ($\alpha = 0,60$). Most of the scales of the measuring instruments had relatively normal distributions, with low skewness and kurtosis, except for engagement.

A Cronbach alpha coefficient of 0,95 was obtained for Leadership Empowerment Behaviour. This is in line with the finding of Maré (2007) and Tjeku (2006), who obtained similar results. Maré (2007) reported alpha coefficients ranging from 0,57 to 0,78 and Tjeku (2006) obtained an alpha coefficient of 0,92. Konczak et al. (2000) obtained internal consistency ratings ranging from 0,85 to 0,90.

The Cronbach alpha coefficients obtained for job insecurity was 0,60 for Cognitive Job Insecurity and 0,88 for Affective Job Insecurity. The Cronbach alpha coefficient reported for Cognitive Job Insecurity does not indicate a satisfactory internal reliability estimate. Reynders (2005) obtained similar results with an alpha coefficient of 0,62 for the cognitive scale and an alpha coefficient of 0,73 for the affective scale in her study of a South African government organisation. De Witte (2000) reported an alpha coefficient of 0,90 for cognitive job insecurity and 0,85 for affective job insecurity.

A Cronbach alpha coefficient of 0,92 was obtained for Engagement. The internal reliability estimate obtained is supported by various South African studies (Van Greunen, 2004; Mostert & Rothmann, 2006; Coetzer, 2006; Rothmann & Joubert, 2007). Schaufeli et al. (2002) obtained an alpha coefficient ranging from 0.68 to 0.91.

The result obtained for Intention to Leave indicated a Cronbach alpha coefficient of 0,73 and a normal distribution with low skewness and kurtosis. Firth et al. (2004) have shown that this measure has satisfactory internal reliability estimates ($\alpha = 0.75$).

It was concluded that the results obtained from the measuring instruments were reliable.

A Pearson product-moment correlation was conducted to determine the relationship between the variables. The results obtained indicated that leadership empowerment behaviour correlated negatively with cognitive job insecurity. This implies that when leadership empowerment behaviour increases, cognitive job insecurity decreases. Through leadership empowerment behaviour, employees' responsibility and decision-making authority are increased (Johnson, 1994). Employees receive information, feedback, motivation, support and encouragement, which results in empowerment (Johnson, 1994). Empowered employees are self-motivated and believe in their ability to cope and perform successfully (Kark et al., 2003). The opposite is true of employees who feel insecure about their jobs (Canaff & Wright, 2004). Leadership empowerment behaviour may therefore influence employees' cognitive appraisal of their future employment situation.

Leadership empowerment behaviour further correlated negatively with intention to leave. This implies that when leadership empowerment behaviour increases intention to leave decreases. Hypotheses 1, leadership empowerment behaviour has a negative correlation with intention to leave, is accepted as a significant negative correlation between leadership empowerment behaviour and intention to leave was established. Leadership empowerment behaviour entails the delegation of authority, emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance, which result in empowered employees (Konczak et al., 2000). According to Appelbaum et al. (1999) empowered employees have a sense of self-determination, meaning, competence and impact. The behaviour on the part of leaders that

allows employees the freedom to choose the way in which tasks are executed, encourages employees to care about the work they deliver, instils a sense of competence and ensures that their ideas are considered (Appelbaum et al., 1999) may result in employees who are disinclined to leave the organisation.

Leadership empowerment behaviour showed a positive relationship with engagement, which indicates that an increase in leadership empowerment behaviour could lead to improved levels of engagement among employees. Consequently, one may surmise that the behaviour on the part of leaders will result in employees who are able to maintain high energy levels and mental resilience while working. Employees should be willing to invest effort in their work and to persevere when challenges arise. They should also derive a sense of significance from their work and experience feelings of enthusiasm, inspiration and pride (Schaufeli et al., 2002). The behaviour that leaders display to increase engagement levels of employees includes sharing power with subordinates (Burke, 1986), emphasising accountability for outcomes, encouraging independent decision-making (Konczak et al., 2000), sharing information and knowledge (Ford & Fottler, 1995), facilitating skills development (Wellins et al., 1991), encouraging calculated risk taking and new ideas, offering feedback with regards to performance and treating mistakes and setbacks as opportunities to learn (Konczak et al., 2000).

A positive correlation between cognitive job insecurity and affective job insecurity were confirmed. Increased levels of cognitive job insecurity should therefore result in increased levels of affective job insecurity. De Witte (2000) stated that the cognitive appraisal of the future employment situation, whether certain or uncertain, triggers emotions based on the meaning connected to the potential job loss. Employees who are convinced that the likelihood of job loss is high, may therefore experience increased levels of fear with regard to job loss.

A positive correlation between cognitive job insecurity and intention to leave were confirmed. Increased levels of cognitive job insecurity may therefore result in a stronger intention to quit. Hypotheses 2, where job insecurity has a positive correlation with intention to leave, was partially accepted as only cognitive job insecurity was found to significantly correlate positively with intention to leave. The second factor of job insecurity, namely affective job insecurity, did not show a significant correlation with intention to leave. The association between job insecurity and intention to leave has been well established in

previous research (Burke, 1998; Mauno et al., 2005; Williams, 2003). De Witte (1999) reported that the literature, in general, confirms that job insecurity generates stress reactions. Employees who view job loss as a probability may be seeking different employment options more actively (Sparks et al., 2001) to escape these stress reactions. De Witte (1999) further indicated that uncertainty about the future employment situation seems to be more of a psychological burden than confirmed job loss. Leaving the organisation may therefore be a more attractive option than confronting the likelihood of job loss and the uncertainty that accompanies it.

A negative correlation was established between cognitive job insecurity and engagement. Decreased levels of engagement may therefore be the consequence of increased levels of cognitive job insecurity. A discrepancy between the level of job security employees desire, and the level they actually experience, are likely to result in various negative psychological and physiological consequences (Mauno et al., 2005). This may prevent employees from connecting with their roles and diminish the positive, fulfilling, work-related state of mind that is fundamental in the experience of engagement.

A negatively correlated relationship was found between engagement and intention to leave. Employees who experience higher levels of engagement should be less inclined to leave the organisation. Hypotheses 3, where engagement has a negative correlation with intention to leave, was accepted based on the significant negative correlation established between engagement and intention to leave. Schaufeli and Bakker (2004) reported that a lower tendency to leave their organisation can be noted among employees with a greater sense of engagement due to their attachment to their organisation.

All the correlations in the above discussion were found to be statistically and practically significant, with a medium to large effect.

The general objective of this research, namely to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory, was achieved based on hypotheses one, two and three, which was accepted, as well as the following:

- Leadership empowerment behaviour significantly correlated negatively with cognitive job insecurity.
- A significantly positive relationship was obtained between leadership empowerment behaviour and engagement.
- Cognitive job insecurity showed a significantly positive correlation with affective job insecurity.
- A significantly negative correlation was established between cognitive job insecurity and engagement.

Regression analysis indicated that leadership empowerment behaviour, cognitive and affective job insecurity and engagement predict 35,00% of the variance explained in intention to leave. It was found that leadership empowerment behaviour and affective job insecurity did not have a significant amount of predictive value with regard to intention to leave. It can be concluded that cognitive job insecurity and engagement are indicators of an employees' intention to leave.

MANOVA analysis was used to investigate whether differences between demographic groups of employees (such as gender, racial groups, age, education levels, division and job levels) exist regarding levels of leadership empowerment behaviour, job insecurity, engagement and intention to leave experienced. No significant differences were found between gender, racial groups, age, education levels and division. The results indicated that participants in middle non-management positions experienced higher levels of affective job insecurity than those in senior management positions. Van Wyk (2007) reported that numerous studies identified organisational change, amongst other, as an important environmental cue to feelings of job insecurity for employees in South African organisations. Mauno et al. (2005) argued that the objective circumstances of a job insecure situation may be regarded as the antecedents of job insecurity. It may be possible that employees in middle non-management positions experience higher levels of fear with regard to their future employment situation due to the change process that the petrochemical Laboratory embarked upon. The researcher is of the opinion that employees in senior management positions may understand the change process to a larger extent and are therefore less inclined to fear job loss. Tjeku (2006) and Reynders (2005) reported higher levels of affective job insecurity than

cognitive job insecurity among employees in a steel manufacturing organisation and a government organisation.

Hypotheses 4, where differences between demographic groups of employees exist regarding levels of leadership empowerment behaviour, was rejected as no significant differences were obtained. Based on the findings of Stander et al. (2006) a possible explanation may be that employees on all levels in the organisation do not experience leadership empowerment behaviour. This may therefore be a characteristic specific to the organisation. One should also note that only 11,30% of the participants in this study indicated that they are on management or senior management level. 85,11% of the participants were on a non-management level. According to Stander et al. (2006) employees experienced a distance between themselves and the management team and viewed management as uninvolved in influencing the future of the Laboratory. Employees also experienced a lack of support, recognition and motivation from their managers. They expressed a need to be involved in decision-making processes as they currently feel that they can't make a difference. Employees expected a transformation of managers to leaders. Stander et al. (2006) further indicated that the management style was in need of improvement in the availability of managers, openness to employees' suggestions, communication of expectations and valuing employees' contribution.

In her study of the South African gold mining industry, Maré (2007) reported higher levels of delegation of authority and self-directed decision-making, dimensions of leadership empowerment behaviour, among employees in supervisory positions than employees appointed in non-supervisory positions. She accounted this to the exposure of supervisors to leadership empowerment behaviour and argued that supervisors may not expose their subordinates to leadership empowerment behaviour in a similar way, as this may threaten their positions. Maré (2007) further reported that female employees experienced higher levels of delegation of authority, skills development and coaching for innovative performance than male employees.

Hypotheses 5, where differences between demographic groups of employees exist regarding levels of job insecurity, was partially accepted as significant differences could only be established between levels of affective job insecurity based on job levels. The second factor of job insecurity, namely cognitive job insecurity, did not show any significant differences. The relevant petrochemical laboratory in which this study was conducted was at the onset of

a long term, transformational change process. It may be possible that employees in middle non-management positions do not understand the rationale behind the change process in the same manner as employees in senior management positions. This may have resulted in employees in middle non-management positions experiencing higher levels of fear with regard to the future employment situation. Bothma (2005) reported differences in the job insecurity levels of employees with different qualifications, job levels and work categories in his study in a South African financial institution.

Hypotheses 6, where differences between demographic groups of employees exist regarding levels of engagement, was rejected as no significant differences were attained. A possible explanation may be that the engagement levels of all employees in the organisation are insignificant. Stander et al. (2006) reported that in general, employees were found to be negative and dissatisfied. Employees indicated a need to be supported, to receive recognition and to be motivated by their managers. They further expressed a need to be involved in decision-making processes and to be given the opportunity to make a difference in the organisation. Development and training do not receive adequate attention and some employees experience their work to be tedious and wearisome. Career paths and development plans are not in place and the workforce's sense of belonging is low (Stander et al., 2006). The insignificant differences between demographic groups of employees regarding levels of engagement may be an organisation specific characteristic. Bosman (2005), who conducted her study in a South African government organisation, reported differences between the levels of engagement as experienced by different cultural groups. She reported that employees with different qualifications experienced different levels of engagement, but obtained no differences with regards to different age groups.

Hypotheses 7, where differences between demographic groups of employees exist regarding levels of intention to leave, was rejected as no significant differences were obtained. A possible explanation may be that demographic variables like gender, age and racial group do not contribute to an employee's intention to leave the organisation. These demographic variables are related to whom employees are, not to what they experience in the organisation and are therefore not related to reasons that trigger employees' intention to leave the organisation.

RECOMMENDATIONS

This study encloses important information for the petrochemical Laboratory as well as for future research.

It is recommended that the management team of the relevant petrochemical laboratory gain thorough knowledge of the determinants of employees' intention to leave as outlined in this study. This should enable them to identify turnover behaviours and implement interventions to retain employees in a proactive manner. Leadership empowerment behaviour, cognitive job insecurity and engagement were found to be indicators of intention to leave. This implies that leaders in the organisation should incorporate empowerment behaviours in their management style and practice it consistently. Attention should be given to the delegation of authority, emphasis on accountability for outcomes, self-directed decision-making, skill development and coaching for innovative performance (Konczak et al., 2000). Leaders who are not comfortable with these behaviours should receive coaching in order to develop these skills. Leadership empowerment behaviour should result in decreased levels of cognitive job insecurity and increased levels of engagement among employees.

The management team as well as employees of the petrochemical Laboratory should benefit from understanding the risks associated with job insecurity and the importance of decreasing levels of job insecurity among employees. Job insecure employees have been reported to score lower in self-rated general health, experience an increase in distress and the use of medication and engage in negative health-related behaviour (Sparks et al., 2001). Employees may experience mental, emotional and physical exhaustion (Dekker & Schaufeli, 1995) as well as reduced self-esteem, altered self-perception with regard to the work role (Canaff & Wright, 2004), uncontrollability and a feeling of powerlessness (De Witte, 1999; Sverke & Hellgren, 2002). Depression, anxiety, reduced job satisfaction, and stress reactions are further negative consequences for individual employees (De Witte, 1999). The organisation may bear financial loss due to increased absenteeism and sickness, resulting from lowered employee well-being (Sparks et al., 2001). Job insecurity further has an impact on the organisation as employees are less supportive of organisational goals and do not make an effort to deliver quality work (Sparks et al., 2001).

The benefits of improving engagement levels among employees in the petrochemical Laboratory should be considered. It is generally believed that there is a link between employee engagement and business results (Harter et al., 2002). Engagement is a positive experience in itself (Schaufeli et al., 2002) and results in energetic employees (Maslach & Leiter, 2005), which is beneficial to the organisation.

Participants in junior positions experienced higher levels of affective job insecurity than those in senior positions. As perceived job insecurity has negative consequences for the individual employee as well as the organisation, the fear that they might lose their job should be addressed without delay. As organisational change may be an antecedent for job insecurity (Van Wyk, 2007), the researcher suggests that the rationale behind the transformation process initiated by the petrochemical Laboratory is explained to these employees in order to address areas that prevent optimal functioning (as indicated by Stander et al., 2006). The relevant petrochemical laboratory in which this study was conducted is at the onset of a long term, transformational change process. It may be possible that employees in middle non-management positions do not understand the rationale behind the change process in the same manner as employees in senior management positions. This may have resulted in employees in middle non-management positions experiencing higher levels of fear with regards to the future employment situation.

Further research is needed to establish the validity, reliability and usefulness of the LEBQ and the UWES within the South African context because a one-factor structure was obtained for both measures in this study. The original researchers obtained a six-factor structure for the LEBQ (Konczak et al., 2000) and a three-factor structure for the UWES (Schaufeli et al., 2002). It is further suggested that the importance of the element 'absorption' in the engagement concept should be clarified. It may be necessary to simplify the UWES for use in the South African framework.

It is recommended that larger samples with a more powerful sampling method be utilised to enable generalisation of the findings to other similar groups in the petrochemical industry. Longitudinal research is recommended to establish levels of leadership empowerment behaviour, job insecurity, engagement and intention to leave over a period of time.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

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CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

3.1 INTRODUCTION

This chapter contains conclusions regarding the literature review and the empirical research according to the specific objectives. Limitations of the study are discussed and recommendations for the organisation and future research are presented.

3.2 CONCLUSIONS

Conclusions regarding the specific theoretical objectives and the results of the empirical study are made.

3.2.1 Conclusions regarding the specific theoretical objectives

In line with the first and second specific objectives of this study, leadership empowerment behaviour, job insecurity, engagement and intention to leave, as well as the relationship between these constructs, were conceptualised from the literature.

Leadership empowerment behaviour has been conceptualised from the literature as the behaviour on the part of a leader that results in employee empowerment (Lee & Koh, 2001). Empowerment is characterised by the delegation of power to employees and in doing so decentralising decision-making in the organisation (Johnson, 1994; Cunningham, Hyman, & Baldry, 1996; Carson & King, 2005). Empowered employees become active problem solvers who contribute to the planning and executing of tasks (Cunningham et al., 1996). The dimensions of leadership empowerment behaviour include delegation of authority, emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance (Konczak, Stelly, & Trusty, 2000).

Leaders should offer employees the required opportunities, skills and support that will enable them to make decisions and take actions that will affect their work. Leadership empowerment behaviour therefore does not simply refer to sharing power with employees, but includes

engaging in behaviour that will cultivate a supportive, enabling climate (Church & Waclawski, 1995). Leadership empowerment behaviour is related to job insecurity and have predictive value with regards to job insecurity (Tjeku, 2006).

Throughout the literature, job insecurity has been conceptualised from two distinct perspectives, namely global and multidimensional (Van Wyk, 2007). According to the global perspective job insecurity can be conceptualised as the overall concern about the future of one's job (Hartley, Jacobson, Klandermans, & Van Vuuren, 1991). The fear of losing job features are included in the multidimensional definition of Greenhalgh and Rosenblatt (1984), who argued that job insecurity is more complex than only the fear of losing one's job. Job insecurity can therefore be conceptualised as comprising of two components, these being the recognition of threats to job security and the concern about these threats (Van Wyk, 2007). The likelihood of job loss refers to the cognitive aspect of job insecurity while the fear of job loss is related to the affective aspect thereof (De Witte, 2000). The cognitive appraisal of the future situation, whether certain or uncertain, triggers emotions based on the meaning connected to the potential job loss (De Witte, 2000). Sverke and Hellgren (2002) emphasised the experience of job insecurity as a subjective phenomenon while Mauno, Kinnunen, Mäkikangas and Nätti (2005) stated that the subjective estimate of the probability that one will lose one's job is based on the objective circumstances.

Job insecurity is a chronic job stressor (Mauno, Leskinen, & Kinnunen, 2001) that has an impact not only on the well-being of the individual employee, but also affects organisational vitality (Hellgren, Sverke, & Isaksson, 1999). According to Holm and Hovland (1999) one of the largest concerns about job insecurity for the organisation is the increased turnover rate of employees. The association between job insecurity and intention to leave has been well established in previous research (Burke, 1998; Williams, 2003; Mauno et al., 2005). Mauno et al. (2005) emphasised the importance of increasing levels of engagement among employees, as job insecurity was found to correlate negatively with engagement.

Haudan and MacLean (2002) described engagement as a sustained connection and undivided concentration where time seems unimportant and the hearts and minds of employees are involved. Schaufeli, Salanova, Gozáles-Romá and Bakker (2002) further stated that engagement is not a momentary and specific state, but rather, a more persistent and pervasive

affective-cognitive state that is not focused on any particular object, event, individual, or behaviour.

Engagement is a positive experience in itself (Schaufeli et al., 2002) and has positive consequences for the organisation as it is generally believed that a relationship exists between employee engagement and business results (Harter, Schmidt, & Hayes, 2002). Kahn (1990) expected engagement to affect employee performance and Maslach and Leiter (2005) reported that it results in energetic employees. The concept is therefore relevant for employee well-being and work behaviour and is beneficial to the organisation as it is a significant predictor of employees' intention to leave their organisation (Saks, 2006).

Intention to leave is essential to organisations as it is the single most important predictor of actual turnover behaviour (Firth, Mellor, Moore, & Loquet, 2004; McCarthy, Tyrrell, & Lehane, 2007). Vandenberg and Nelson (1999, p. 1315) defined intention to leave as an "individual's own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future". Jones, Katak, Futrell and Johnston (1996) referred to turnover as employees leaving an organisation. From the discussion it can be concluded that the first and second objective of the study has been reached.

3.2.2 Conclusions regarding the specific empirical objectives

The first empirical objective was to determine the relationship between leadership empowerment behaviour, job insecurity, engagement and intention to leave in a petrochemical laboratory.

Leadership empowerment behaviour correlated negatively with cognitive job insecurity as well as with intention to leave. Leadership empowerment behaviour showed a positive relationship with engagement, although no supporting results could be found. Leaders within the petrochemical Laboratory could employ leadership empowerment behaviour as a strategy to decrease levels of cognitive job insecurity among employees, reduce employees' intention to leave the organisation and to improve levels of engagement among employees.

The relationship obtained between leadership empowerment behaviour and cognitive job insecurity is in line with the findings of Tjeku (2006), who obtained a negative correlation

between leadership empowerment behaviour and cognitive job insecurity. Maré (2007) reported a negative correlation between leadership empowerment behaviour and intention to leave.

A positive correlation between cognitive job insecurity and affective job insecurity were confirmed as well as between cognitive job insecurity and intention to leave. A negative correlation was established between cognitive job insecurity and engagement. Employees who experience cognitive job insecurity may therefore be inclined to experience affective job insecurity. Their cognitive appraisal of the future situation, whether certain or uncertain, triggers emotions based on the meaning connected to the potential job loss and they may experience an increased fear of job loss. Employees who experience cognitive job insecurity could experience a stronger intention to leave the Laboratory as well as decreased levels of engagement.

The relationship obtained between cognitive job insecurity and affective job insecurity is in line with the findings of Tjeku (2006), who reported a positive correlation. Support exists for the positive correlation obtained between cognitive job insecurity and intention to leave (Burke, 1998; Williams, 2003; Mauno et al., 2005). Mauno et al. (2005), Bosman (2005) and Van Zyl (2005) reported a negative correlation between cognitive job insecurity and engagement, which supports the findings of this study.

A negatively correlated relationship was found between engagement and intention to leave. Employees who experience higher levels of engagement may be less inclined to leave the organisation. The relationship obtained between engagement and intention to leave is in line with findings indicated by Saks (2006), who reported that engagement are negatively related to intention to leave.

In conclusion, leadership empowerment behaviour should be highlighted as essential to the petrochemical Laboratory as it correlates, directly and indirectly, to employees' levels of job insecurity, engagement and intention to leave. Through employing leadership empowerment behaviour, the leaders within the Laboratory should be able to address most of the areas that prevent optimal functioning as indicated by Stander, Scholtz and Verster (2006). Should leaders demonstrate the dimension of leadership empowerment behaviour, the situation within the Laboratory may be changed to one where employees feel that their contributions

are valued. This should be achieved as employees will be involved in decision-making processes, receive support, motivation and recognition from their managers, receive the opportunity to voice their suggestions and feel that attention is given to their personal development.

With this discussion, the first empirical objective has been achieved.

The second empirical objective was to determine whether leadership empowerment behaviour, job insecurity and engagement are indicators of the intention to leave of employees in a petrochemical Laboratory. It was found that leadership empowerment behaviour and affective job insecurity did not have a significant amount of predictive value with regard to intention to leave. It can be concluded that cognitive job insecurity and engagement are indicators of an employees' intention to leave. Thus the second empirical objective has been achieved.

The last empirical objective was to determine the difference between the demographical groups of employees in a petrochemical laboratory with regard to leadership empowerment behaviour, job insecurity, engagement and intention to leave. No statistically significant differences regarding leadership empowerment behaviour, cognitive and affective job insecurity, engagement and intention to leave could be found between gender, racial groups, age, education levels and division. Participants in middle non-management positions experienced higher levels of affective job insecurity than those in senior management positions. Therefore, it can be concluded that the last empirical objective has been achieved.

3.3 LIMITATIONS

The following limitations regarding the research were identified:

- A further limitation of this study was the one-factor structure of the LEBQ indicated by the results. Konczak et al. (2000), who developed the LEBQ to identify leader behaviours associated with employee empowerment, obtained a six-factor structure (delegation of authority, the emphasis on accountability for outcomes, self-directed decision-making, information sharing, skill development and coaching for innovative performance). Maré (2007) indicated, in her study among a sample of employees in the South African gold

mining industry, that the LEBQ can consist out of either a one-factor structure or a six-factor structure. This supports the one-factor structure obtained in this study.

- The one-factor structure of the UWES obtained in this study may be regarded as a limitation. A three-factor structure (vigour, absorption and dedication) was reported by Schaufeli et al. (2002), who developed the UWES for the purpose of measuring engagement. However, the one-factor structure is supported by Brand (2006), who found similar results in the South African insurance industry and by Rathbone (2006), who obtained a one-factor structure among employees in the South African mining industry.
- The findings reported in this study may not be generalised as the results were obtained from a relatively small sample of employees in a petrochemical laboratory in South Africa.
- The cross-sectional survey design allows for the identification of the existence of relationships between variables, but implies that more complicated forms of infrequent connections could not be examined. Prospective longitudinal and quasi-experimental research designs are needed to further validate the interpreted relationships within this study.
- Common method variance may be another possible limitation as the data were collected from the same respondents using the same instruments.

3.4 RECOMMENDATIONS

Recommendations pertaining to the specific organisation in which this study was conducted, as well as recommendations for future research, are made.

3.4.1 Recommendations for the organisation

The results obtained in this study allows for the proactive implementation of interventions in the relevant petrochemical Laboratory. To retain talented employees the management team should strive to decrease cognitive job insecurity among employees and cultivate an

environment that fosters engagement, as these constructs were found to be indicators of employees' intention to leave.

Leadership empowerment behaviour should result in decreased levels of cognitive job insecurity and increased levels of engagement among employees. It is recommended that the leaders in the organisation incorporate empowerment behaviours in their management style and practice it consistently. The following dimensions of leadership empowerment behaviour should be employed (Konczak et al., 2000):

- *Delegation of authority.* Leaders need to share power with their employees.
- *Emphasis on accountability for outcomes.* Leaders should transfer responsibility for results to employees.
- *Self-directed decision-making.* Independent decision-making should be encouraged.
- *Information sharing.* Leaders need to share information and knowledge with employees that will enable them to contribute optimally to organisational performance.
- *Skill development.* Leaders should facilitate skills development and secure appropriate training.
- *Coaching for innovative performance.* Leaders should encourage calculated risk taking and new ideas, provide performance feedback and treat mistakes and setbacks as opportunities to learn.

Leaders who are not comfortable with these behaviours should receive coaching in order to develop these skills.

In addition to empowering employees through leader behaviour as a strategy to counteract the negative consequences of cognitive job insecurity, it is recommended that the organisation provide support to employees by making use of counsellors to assist employees who experience job insecurity. Individuals are affected by job insecurity in a number of ways and because the effects are widespread, counsellors can be helpful in a number of areas of the individual's life, as well as that of the organisation. Holm and Hovland (1999) recommended that counsellors assist job-insecure employees to shift their focus towards self-management and taking ownership of their career paths and in doing so taking an active role in helping

employees manage job insecurity. Leaders should be knowledgeable with regard to the process of referring employees to professional counsellors.

Participants in junior positions experienced higher levels of affective job insecurity than those in senior positions. As organisational change may be an antecedent for job insecurity (Van Wyk, 2007), the researcher suggests that the rationale behind the transformation process initiated by the petrochemical Laboratory in order to address areas that prevent optimal functioning (as indicated by Stander et al., 2006) are explained to these employees in an attempt to address their fear of job loss. This implies that leaders within the Laboratory need to spend time with employees and engage with them in a way that is meaningful to both parties. Leaders should recognise the importance of coaching employees in order to overcome the barrier of job insecurity and help employees realise their potential and as a result achieve more for themselves and the Laboratory.

Decreasing job insecurity among employees is one of the means to retain talented employees. Another strategy - improving employees' level of engagement - should be pursued to decrease employees' intention to leave the organisation. Coffman (2002) indicated that leaders can increase the engagement levels of employees by building a strong relationship with their subordinates and establishing a clear channel for communication. Leaders should create opportunities for employees to perform the tasks that they excel at and present them with challenges that will improve their knowledge and skills. A clear career path should be provided and employees should be encouraged to take ownership for goals and targets. This enhances employees' contribution to the organisation. Strong relationships with colleagues should be promoted. Engaged employees know what is expected of them and have access to the resources necessary to perform their duties. Engaged employees are further given the opportunity to use their knowledge, skills and talents and receive recognition for their performance (Coffman, 2002).

3.4.2 Recommendations for future research

Regardless of the limitations of the present study, the findings of this study offer valuable suggestions for future research.

The findings obtained in this study need to be replicated with larger sample groups in order to draw conclusions about the factor-structure of the LEBQ and the UWES in the South African context. A one-factor structure was obtained for both measures in this study. It is further suggested that the importance of the element 'absorption' in the engagement concept should be clarified. It may be necessary to simplify the UWES for use in the South African framework.

It is recommended that larger samples with a more powerful sampling method be utilised to enable generalisation of the findings to other similar groups in the petrochemical industry. Longitudinal research is recommended to establish levels of leadership empowerment behaviour, job insecurity, engagement and intention to leave over a period of time.

Participants in junior positions experienced higher levels of affective job insecurity than those in senior positions. Possible reasons for this should be established by further research.

3.5 CHAPTER SUMMARY

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

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