

**JOB INSECURITY, JOB SATISFACTION, SOCIAL SUPPORT AND INTENTION
TO LEAVE OF PROCESS CONTROLLERS IN A SOUTH AFRICAN PETRO-
CHEMICAL COMPANY**

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1. 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.
- The mini-dissertation is submitted in the form of a research article.
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ABSTRACT

Title: Job insecurity, job satisfaction, social support and intention to leave of process controllers at a South African petro-chemical company

Key words: job insecurity, qualifications/NQF level, tenure, job satisfaction, social support, intention to leave, turnover intention

With South Africa currently experiencing a skills shortage, companies need to take job insecurity, job satisfaction and social support into consideration as part of their retention strategy. There is also tremendous pressure being placed on organisations to improve their performance and to become increasingly competitive, which has resulted in job insecurity becoming a reality in South Africa. A petro-chemical company in South Africa was studied to determine the possible relationships between job insecurity, job satisfaction, social support, tenure, intention to leave and qualifications. The participants (N=184) included process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders of various business units of the petro-chemical company. A quantitative study was conducted using a cross-sectional survey design. Self-administered questionnaires were used which included the Job Insecurity Questionnaire (JIQ), The Turnover Scale, Social Support and the Job Satisfaction Scale. The statistical analysis included descriptive statistics, factor analysis, Pearson product-moment correlation coefficients as well as MANOVA and structural equation modelling. The statistical analysis included descriptive statistics, factor analysis, Pearson product-moment correlation coefficients as well as MANOVA and structural equation modelling. Results indicated there was no correlation between job insecurity and tenure, nor between qualifications and job insecurity. It was concluded that lower job satisfaction resulted in higher job insecurity and that higher job satisfaction resulted in lower levels of intentions to leave. There was a positive correlation between social support and job satisfaction. With these results and the model developed it would be possible for the company to adjust their retention strategy to achieve optimal results.

OPSOMMING

Onderwerp: Werksonsekerheid, werksbevrediging, sosiale ondersteuningstelsels en voorneme om die maatskappy te verlaat van proseskontroleurs van 'n Suid Afrikaanse petro-chemiese maatskappy

Sleuteltermes: werksonsekerheid, kwalifikasies, dienstyl, werksbevrediging, sosiale-ondersteuningstelsels, voorneme om maatskappy te verlaat

Ondernemings in Suid-Afrika ondervind tans 'n vaardigheidstekort wat noodsaak dat hulle werksekerheid, werksbevrediging en sosiale-ondersteuningstelsels in ag moet neem binne hulle retensiestrategie. Geweldige druk word op besighede geplaas om hulle prestasie te verhoog en meer mededingend te raak. Dit het daartoe gelei dat werksonsekerheid 'n realiteit geword het. 'n Petro-chemiese maatskappy in Suid-Afrika is bestudeer om die moontlike verhouding vas te stel tussen werksonsekerheid, werksbevrediging, sosiale ondersteuning, dienstyl, kwalifikasies en die voorneme om die maatskappy te verlaat. Die deelnemers ($N=184$) sluit proseskontroleurs, senior proseskontroleurs, groepleiers/voormanne, seksieleiers en arealeiers van die verskillende besigheidsenhede van die petro-chemiese maatskappy in. 'n Kwantitatiewe studie is onderneem waartydens van 'n dwarsnee opname-ontwerp gebruik gemaak is. Selftoegepaste vraelyste is gebruik wat die *Job Insecurity Questionnaire (JIQ)*, *The Turnover Scale*, *Social Support* en die *Job Satisfaction Scale* insluit. Die statistiese analise sluit beskrywende statistiek, faktoranalise, Pearson-produk-momentkorrelasiekoëffisiënte, meervoudige variasie-analise (MANOVA) en strukturele-vergelykingsmodellering in. Die statistiese analise het beskrywende statistiek, faktoranalise, Pearson-produk-momentkorrelasiekoëffisiënte, meervoudige variasie-analise (MANOVA) en strukturele-vergelykingsmodellering ingesluit. Resultate het aangedui dat daar geen korrelasie tussen werksonsekerheid en dienstyl, en kwalifikasies en werksonsekerheid is nie. Daar is tot die gevolgtrekking gekom dat lae werksbevrediging tot hoër vlakke van werksonsekerheid lei en dat hoër werksbevrediging die intensie verlaag om die maatskappy te verlaat. Daar was 'n positiewe korrelasie tussen sosiale ondersteuning en werksbevrediging. Hierdie kennis en die model wat ontwikkel is, stel die maatskappy in staat om sy retensiestrategie aan te pas om optimale resultate te behaal.

CHAPTER 1

Title: Job insecurity, job satisfaction, social support and intention to leave of process controllers at a South African petro-chemical company

Key words: job insecurity, qualifications/NQF level, tenure, job satisfaction, social support, intention to leave, turnover intention

1. PROBLEM STATEMENT

1.1 Overview of the problem

At one of the largest petro-chemical companies in South Africa, staff employed as process controllers have different NQF level accreditations, ranging from NQF 2 (Grade 10) to NQF 5 (Diplomas and occupational certificates). Previously process controllers and senior process controllers with NQF level 2 (Grade 10) were appointed. However, the policy of the company has changed and, to be employed, at least an NQF level 4 (Grade 12/N3) is required (Internal vacancy Sasol Synfuels/Human Resources Department, 2008). It is also difficult to be promoted without an NQF level 4 (Grade 12/N3). The result is that there are process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders, who have years of irreplaceable experience within the company but they are not easily promoted.

Should the more experienced and older process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders experience job insecurity because of this situation, it could lead to their leaving the company for other opportunities. This would cause the company to lose valuable skilled workers. With South Africa currently experiencing a skills shortage, the company needs to take this into consideration as part of their retention strategy, as it contributes to increased risk factors which could result in the loss of valuable scarce skills.

According to an electronic communication from Hlatshwayo (2008), from January 2006 to March 2007, the turnover for the total company was 7.5%. The majority of employees who resigned were senior process controllers and senior artisans. From July 2007 to June 2008 the employee turnover for the business unit producing petrol was 6.67%. The target employee turnover rate that the Managing Director had set was 3%. To reach this target the Human Resources department of the business unit has put together a retention strategy. One of the objectives is to reduce labour turnover, with a view of retaining their most valuable (scarce skills) talent. To determine the reason why employees are leaving the company, exit interviews are conducted. From July 2007 to June 2008 the main factors contributing to employee turnover based on information obtained from exit interviews for all positions were identified as:

1. Remuneration and benefits
2. Career scope
3. Housing
4. Emigration
5. Family reasons

For the business unit to reach its target employee turnover rate, it is essential to investigate the relationship between job insecurity, job satisfaction, social support and intention to leave of the process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders who play a critical role in the manufacturing process. It is also important to look at the bigger picture in South Africa regarding the current skills shortage and economic crisis. It is essential to understand why individuals are leaving the organisation and how retention strategies can be improved on in order to reduce the cost of high turnover volumes.

1.2 Literature review

Developments within the business unit reflect the worldwide development of new technology, globalisation of the economy and as a result increased competition. Schabracq and Cooper (2000) state that, during the last two decades, the worldwide

development of new technologies, as well as the growing globalisation of the economy, has produced the fastest and greatest technological changes ever. This has resulted in extreme competition, deregulation and rising costs which have forced companies to restructure their organisations in terms of business, finances, processes and structures (Chirumbolo & Areni, 2005).

With regard to South Africa, Labuschagne, Bosman and Buitendach (2005) concur that tremendous pressure is being placed on South African organisations to improve their performance and to become increasingly competitive, which has resulted in job insecurity becoming a reality in South Africa. De Witte (2005) contends that long-term job insecurity can be associated with lower levels of job satisfaction and with less positive attitudes toward the organisation, which in turn can increase the possibility of intention to leave.

1.2.1 Job insecurity

According to De Witte (2005), job insecurity is the perceived threat of job loss and the worries related to that threat. Sverke and Hellgren (2002) define job insecurity as employees' negative reactions to changes concerning their jobs and conclude that job insecurity refers to the anticipation of this stressful event which places the nature and continued existence of one's job as perceived to be at risk.

Klein Hesselink and Van Vuuren (1999) state that job insecurity is based on three aspects. Firstly, individuals may feel insecure even though there is no valid reason. Secondly, job insecurity has to do with the future - an individual may be concerned about future job development. Thirdly, job insecurity has to do with personal retention of the job and not the continuation of the job itself.

Borg and Elizur (1992) differentiate between *cognitive* job insecurity and *affective* job insecurity. Cognitive job insecurity refers to the extent of subjective security with regard to the future of the employee's position and career (likelihood of job loss), while

affective job insecurity refers to an individual's concern or fear about his future job (fear of job loss).

Relationship between level of education (NQF level) and job insecurity

According to Buitendach, Rothmann and De Witte (2005), an individual's level of education influences the number of choices that he/she has in the labour market. In a study conducted by Buitendach, Rothmann and De Witte it was concluded that individuals with a Grade 12 (NQF 4), a diploma or a degree (NQF 5, 6) showed higher levels of job insecurity compared to those with qualifications lower than Grade 12 (NQF 1-3) and postgraduate qualifications (NQF 7, 8).

Affective versus cognitive job insecurity and qualifications

A study conducted by Buitendach, Oosthuyzen and Van Wyk (2005) concluded that individuals with qualifications lower than Grade 12 displayed higher affective job insecurity when compared to individuals with a degree or postgraduate qualifications. However, individuals with higher qualifications displayed higher levels of cognitive job insecurity. It was concluded that individuals with qualifications lower than Grade 12 experience higher levels of affective job insecurity because they perceive that their qualifications do not give them a variety of choices within the labour market. Whereas individuals with higher qualifications who have more choices within the labour market experience lower levels of affective job insecurity, but higher levels of cognitive insecurity.

Job insecurity and tenure

Bender and Sloane (1999) concluded that job insecurity increased with tenure. However, a study conducted by Buitendach et al. (2005) in South Africa, found no significant relationship between job insecurity and tenure. The participants in their study included

employees from the administration, production, services, mining and maintenance departments.

1.2.2 Job Satisfaction

According to Buitendach and De Witte (2005) job satisfaction may be described as an affective or emotional reaction to a job, resulting from the incumbent's comparison of actual outcomes with the required outcomes. Employees experience job satisfaction if they feel that their individual capacities, experience and values can be utilised in their work environment and that the work environment offers them opportunities and rewards.

A study conducted by De Witte (2005) found insecure workers were less satisfied with their jobs. These findings support a study by Burke (1997) which found that low levels of self-reported job insecurity were negatively related to job satisfaction. Buitendach and De Witte (2005) reported that higher levels of job insecurity were associated with a lower level of extrinsic job satisfaction and that intrinsic job satisfaction had no significant effect on job insecurity. If the more experienced, older process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders experience job insecurity, it would have a negative impact on their extrinsic job satisfaction and may contribute to their looking for better opportunities outside the company, which leads to valuable skills leaving the company and higher staff turnover figures

1.2.3 Intention to leave

Carmeli and Weisberg (2006) define intention to leave as a subjective estimation of an individual regarding the probability that he/she will be leaving the organisation in the near future. It is conceived of as a conscious and deliberate desire to leave the organisation within the near future. According to Eberhardt, Pooyan and Mostert (1995) the negative relationship between job satisfaction and intention to leave is well known. Sweeney and Boyle (2005) support this by stating that in organisational behaviour literature, higher levels of job satisfaction have been strongly linked to greater intentions

to remain with a firm. However, a study on construction managers in China conducted by Hwang and Kuo (2006) found that job satisfaction did not significantly affect intention to leave.

If the more experienced process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders therefore experience lower levels of job satisfaction, it could result in their having intentions to leave, which would lead to a higher staff turnover rate than desired by the company.

1.2.4 Social Support

McIntosh (1991) defines social support as perceived or actual resources available from one or more individuals to another, which assist individuals to deal with stress and enhance their wellbeing. The two dimensions of social support that have been identified are source and type of support. Social support is expected to interact with the stressor so that those who perceive that they have strong social support may react less negatively (Fenlason & Beehr, 1994). In a study conducted by Pienaar, Sieberhagen and Mostert (2007) social support from the supervisor was strongly related to job satisfaction.

This raises the question, if increasing the job satisfaction of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders through improved social support, it would decrease job insecurity, which in turn might decrease intention to leave.

1.3 Institute for Social Research (ISR) Model

According to Katz and Kahn's ISR Model (1978), an individual perceives the objective environment in a certain way, i.e. the psychological environment, and as individuals perceive the environment differently their response will also vary. This evaluation and reaction partly depends on individual features and in part depend on the social relations between the individuals and the important people and groups in their environment. This

response has a mental and physical health consequence. If process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders perceive that their jobs are threatened, their reaction will depend on individual features and social relations. The individual will most probably experience job insecurity which in turn will have a negative effect on the individual's job satisfaction and wellbeing, which could lead to a higher intention to leave. However, if the process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders experience social support, it could increase job satisfaction, decrease job insecurity and decrease intention to leave.

The following research questions may be formulated based on the above-mentioned description of the research problem:

- What is the relationship between job insecurity and tenure among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders?
- What is the difference in the levels of job insecurity among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders with various levels of qualifications?
- What is the difference in the levels of job insecurity experienced by process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders and their levels of job satisfaction?
- What is the relationship between job satisfaction and intention to leave of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders?
- What is the relationship between social support and job satisfaction among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders?

To answer these research questions, the following research objectives were set.

2. RESEARCH OBJECTIVES

The research objectives are divided into general and specific objectives.

2.1 General objectives

The general objective of this study is to determine whether qualifications (NQF levels), tenure, job satisfaction and social support impact on the job insecurity of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders and whether this leads to higher intentions to leave the petro-chemical company. The objective of the study includes determining whether social support will increase their levels of job satisfaction and whether their level of job satisfaction has an impact on their intention to leave the company.

2.2 Specific objectives

The specific objectives of this research are:

- To investigate whether there is a significant relationship between job insecurity and tenure among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders at a petro-chemical company.
- To investigate whether there is a significant relationship between the difference in the levels of job insecurity among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders with various levels of qualifications at the petro-chemical company.
- To investigate whether there is a significant difference in the levels of job insecurity experienced by process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders and their levels of job satisfaction at a petro-chemical company.
- To investigate whether there is a significant relationship between the job satisfaction and intention to leave/resign of the process controllers, senior process

controllers, group leaders/foremen, section leaders and area leaders at the petro-chemical company.

- To investigate whether there is a significant relationship between social support and job satisfaction of the process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders at the petro-chemical company.

Delimitation of the study

For the purpose of this research age, gender, race and language will not be investigated.

3. PARADIGM PERSPECTIVE OF THE RESEARCH

Monette, Sullivan and De Jonge (2005) state that scientific activity is shaped by paradigms.

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

3.1 Intellectual climate

Intellectual climate refers to the variety of meta-theoretical values or beliefs that are held by those practising within a discipline at any given stage. They are convictions, values and assumptions that are not directly connected to the epistemological aims of the specific research practice. These convictions are often not directly testable or are not meant to be testable (Mouton & Marais, 1992).

3.2 Discipline

This research falls within the boundaries of the behavioural sciences and more specifically, Industrial Psychology. Industrial Psychology is the study of psychology in

the work context. The applied fields of Industrial Psychology are (Bergh & Theron, 2000):

- Research Methodology
- Personnel Psychology
- Organisational Psychology
- Career Psychology
- Ergonomics
- Consumer Psychology
- Labour Relations
- Occupational Mental Health

The sub-discipline of Industrial Psychology that is focused on in this research is Personnel Psychology. To utilise an organisation's workforce effectively, the personnel must function at an optimal level. Job insecurity has a negative effect on optimal job functioning (De Witte, 2005). Other sub-disciplines that are focused on are Organisational Psychology, Career Psychology and Occupational Mental Health. Job insecurity has various negative outcomes for individuals (De Witte, 2005; Greenhalg & Rosenblatt, 1984) which may lead to maladjustment within the work context and less satisfied workers.

3.3 Meta-theoretical assumptions

Babbie and Mouton (2001) state that meta-theories refer to the critical reflection on the nature of scientific inquiry and that meta-theoretical reflection addresses issues such as the nature and structure of scientific theories, the nature of scientific growth, the meaning of truth, explanation and objectivity. According to Bergh and Theron (2000) the aim of meta-psychology is to view human behaviour and experience in a holistic perspective. Five paradigms are relevant to this research. The literature review will be conducted within the humanistic paradigm and systems theory, and the empirical study within the behaviouristic, positivistic and functionalistic paradigms.

3.4 Literature review

According to Bergh and Theron (2000) the humanistic approach takes a more optimistic view of personality; the Humanists emphasise joy, love and creativity in people's striving to achieve self-realisation. The following assumptions are relevant in this regard:

- **Subjective or phenomenological experiences**

People react to physical realities (things that are seen, felt, heard and smelt) and how an individual interprets events and phenomena.

- **Uniqueness of every individual**

Every individual's experience is unique. Thus, the emphasis is rather on focusing on individual experience than comparing numerical scores and norms of other individuals.

- **Personality as a Gestalt or holistic phenomenon**

The emphasis is on individuals and their behaviour as a whole, in totality or gestalt. The integration of physical, mental, psychological and social characteristics and all their attributes and relationships are what make individuals function as a coherent whole person.

- **Intrinsic goodness (potential) of people and self-actualisation**

The focus is on an individual's intrinsic ability to grow toward healthy adjustment, maturity and the achievement of goals. Self-actualisation is used to refer to an individual's intrinsic ability to choose and achieve what he/she wants to be.

- **Free will or self-determination**

Individuals have the ability and freedom to choose to be governed by their own wishes instead of the forces of the past or those outside their control.

Bergh and Theron (2000) state that a systems model for studying psychology in the work context is akin to information technology, in which the computer is the processor of information. They contend that studying individuals and groups and their work environment in terms of a systems model is aimed at holistic thinking. The essence of an open system is that it is dynamic and characterised by change. Processes function as

inputs to the system and outputs can provide feedback to the system, thereby eliciting renewed or maintained inputs. Inputs to the system include individual processes within the individual, the personality of the individual, the social processes that involve the interaction between individuals, organisational processes that affect individuals, as well as social processes and processes that involve the execution of work tasks.

In this research the inputs are the employees' qualifications (NQF level), tenure, job satisfaction and social support. The output of this research is the measurement of job insecurity, job satisfaction and intention to leave. Findings will provide feedback to the system or organisation on their employees' levels of job insecurity with regard to their qualifications and tenure, as well as those employees' levels of job satisfaction, levels of social support and intention to leave.

3.5 Empirical study

The empirical study will be conducted within the behaviouristic, positivistic and functionalistic paradigms.

Behaviouristic paradigm

Bergh and Theron (2000) state that, according to the behaviouristic paradigm, only if behaviour can be accurately observed can it be effectively assessed, controlled and predicted. The behaviourists believe that human behaviour can be controlled, manipulated and accurately assessed. The main assumptions of behaviouristic theories according to Bergh and Theron (2000) are:

- **Observable behaviour**

According to behaviourists the best methods to study personality are controlled experiments, field studies, physical measurements of behavioural responses and checking behaviour on checklists and questionnaires. In this research the Job Insecurity Questionnaire (JIQ), Social Support, the Job Satisfaction Scale and

Turnover Intention Scale will be used to determine levels of affective and cognitive job insecurity, as well as the employees' job satisfaction.

- **Environment shapes behaviour**

Human behaviour is directed, controlled and formed by environmental and situational influences. Individuals are conditioned to react in certain ways to various types of environmental stimuli, which may be simple or complex.

- **Personality as a learned response**

Individuals react in specific ways to certain stimuli or in situations, because they have learned to do so. As an individual grows and develops, learned responses accumulate, allowing an individual to function at higher and more complex levels.

- **Learning and unconscious factors**

Behaviourists' explanation of an individual's tendencies not to think about or to avoid unpleasant stimuli is in essence similar to Freud's concept of repression, although the behaviourists explain learning not to think about certain stimuli as a conditioned response and not an unconscious motive. They also indicate that much of an individual's thinking occurs at a level of 'unawareness' of information.

Positivistic paradigm

Monette et al. (2005) state that positivism argues that the world exists independently of individual perceptions of it and that science uses objective techniques to discover what exists in the world. For positivists, quantifying measurements is merely a precise way of describing and summarising an objective reality.

This research is a quantitative study and involves the measurement of the variables by using numbers and counts through the use of the SPSS program (SPSS, 2005). Methods that will be used are descriptive statistics. Where appropriate, inductive and idiographic explanations and field observations to a research question will also be used.

Functionalistic paradigm

Although functionalism no longer exists as a school, it left a lasting legacy in the spirit of pragmatism in Industrial Psychology, according to Bergh and Theron (2000). The application of tests, questionnaires and statistics is of major importance in Industrial Psychology. In personnel selection the basic premise is that individuals differ with regard to intelligence, aptitude, skill, interest and other characteristics.

3.6 Market of intellectual resources

The market of intellectual resources refers to the collection of beliefs that have a direct bearing on the epistemic status of scientific statements (Mouton & Marais, 1992).

3.7 Theoretical beliefs

Theoretical beliefs may be described as all beliefs that yield testable results regarding social phenomena (Mouton & Marais, 1992). In this study testable results will be obtained from four questionnaires on job insecurity, job satisfaction, social support and intention to leave.

3.8 Methodological beliefs

Methodological beliefs may be defined as beliefs that make judgements as to the disposition and structure of science and scientific research (Mouton & Marais, 1992).

The empirical study is presented within the positivistic and functionalistic frameworks as discussed above.

4. RESEARCH DESIGN

Monette et al. (2005) define research design as a detailed plan outlining how observations will be made. A research design addresses certain key issues such as who will be studied, how these individuals will be selected and what information will be gathered from them. The aim of the research design is to provide a plan of how the research will be conducted, who will be studied, how they will be selected and what information the researcher wants to get from these individuals.

This research may can be classified as descriptive, explorative and explanative, according to Babbie and Mouton (2001).

- **Descriptive**

This is a quantitative analysis using descriptive statistics based on data obtained from the questionnaires.

- **Explorative**

A topic is explored, especially a new interest or if the subject of study itself is relatively new. Exploratory studies usually lead to insight and comprehension rather than the collection of detailed, accurate and replicable data. The most important research design is to follow an open and flexible research strategy and to use methods such as literature reviews, case studies and informants. These studies are essential whenever a researcher is breaking new ground. In this research the job insecurity and job satisfaction, intention to leave and social support of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders are explored. The researcher could not trace any research conducted in South Africa on process controllers in a petro-chemical company.

- **Explanative**

The aim of explanatory studies is to indicate causality between variables or events.

5. RESEARCH METHODS

This research, pertaining to the specific objectives, consisted of two phases, namely a literature review and an empirical study.

5.1 Phase 1: Literature review

In phase 1 a literature review will be conducted on:

- Job insecurity
- The relationship between level of education (NQF level) and job insecurity
- Job insecurity and tenure
- Job satisfaction
- Intention to leave
- Social support

5.2 Phase 2: Empirical study

Phase 2 consists of the following steps in the form of descriptive research:

5.2.1 Step 1: Selection of a study population

The population consists of process controllers, senior process controllers, group leaders, foremen, section leaders and area leaders, who are responsible for the efficient operation of the different process plants within a petro-chemical company. Working in shifts, they physically monitor the production process, take readings and samples of the product at various stages and conduct visual inspections on the process and the equipment. They currently need a Grade 12/N3 (NQF 4) with Mathematics and Science. In the past the qualification for a process controller was a Grade 10 (NQF 2) certificate. As a result there are currently process controllers in the petro-chemical company with Grade 10 (NQF 2), Grade 12 (NQF 4) and S4 diplomas (NQF 5).

5.2.2 Step 2: Research design

A quantitative study using a cross-sectional survey design will be used. According to Neuman (2002), this survey is the most widely used data gathering technique in which researchers sample many respondents who answer the same questions. The researchers measure many variables, test multiple hypotheses and infer temporal order from questions about past behaviour, experiences or characteristics. In this study self-administered questionnaires will be used. A cross-section of the population will be taken on a specific date and time for analysis (Babbie & Mouton, 2001). Inter-relationships among variables within the population will be assessed. Shaughnessy and Zechmeister (1997) concur that this method is ideally suited when the aim of the study is predictive and descriptive.

5.2.3 Step 3: Measuring instruments

The *Job Insecurity Questionnaire (JIQ)* (De Witte, 2000) will be used. This questionnaire consists of 11 items that measure the perceived affective and cognitive dimensions of participants' job insecurity. The items are arranged along a 5-point Likert-type scale with 1 = strongly agree, 3 = unsure and 5 = strongly disagree. Buitendach et al. (2005) reported a Cronbach alpha of 0,90 for the cognitive scale and a Cronbach alpha of 0,85 for the affective scale.

The *Job Satisfaction Scale* will be used (Macdonald & MacIntyre, 1997). The scale measures job satisfaction and the Cronbach alpha as reported by Macdonald and MacIntyre is 0,77. The sample used to develop this scale incorporated different occupational groups as well as individuals who work shifts. The scale consists of ten (10) questions on a five-point Likert scale with 1 = strongly disagree and 5 = strongly agree. An example of one of the questions is, "I receive recognition for a job well done."

The *Turnover Intention Scale (TIS)* (Sjöberg & Sverke, 2000) will be used to measure the turnover intention. This scale measures the strength of the respondents' intentions to

leave their present position. This questionnaire comprises three (3) questions measured on a five-point Likert scale with 1 (*strongly disagree*) and 5 (*strongly agree*). An example of one of the questions is, "I feel that I could leave this job." A principal component analysis which was carried out on the TIS showed that one factor could be extracted. This factor explained 79% of the total variance. This factor was labelled turnover intention. The reported Cronbach alpha coefficient for this scale is 0,83 (Sjöberg & Sverke, 2000).

Social support (supervisor support and colleague support) will be measured using a scale developed by Caplan, Cobb, French, Harrison and Pinneau (1975). The questionnaire consists of six (6) questions on a five-point Likert scale, where a higher response reflects a greater sense of social support. Pienaar et al. (2007) declare that the questionnaire will perform well in the South African context. They reported a Cronbach alpha of 0,91 for the supervisor support scale and 0,80 for the colleague support scale.

5.2.4 Step 4: Statistical analysis

Ian Rothmann and Associates will conduct the statistical analysis using the SPSS program (SPSS, 2005).

Firstly the data will be coded, entered and cleaned. According to Neuman (2000) it is necessary to reorganise or code the data into a format that is machine readable. Neuman (2000) cautions that it is extremely important that the researcher checks the accuracy of the coding and cleans the data before it is statistically analysed.

Neuman (2000) contends that descriptive statistics describe numerical data which can be categorised by the number of variables involved. The descriptive statistics that will be used in this study are means, standard deviations, skewness and kurtosis. Babbie and Mouton (2001) further caution that, as the mean is the average which is strongly affected by extreme values, it must be carefully scrutinised before it is statistically analysed and deductions made.

Confirmatory factor analysis will be conducted as a means to identify patterns among the variations in values of several variables (Babbie & Mouton, 2001). Structural Equation Modelling (SEM) as implemented in Amos (Arbuckle, 2006) will be used. Among the fit indices produced by the Amos program is the Chi-square statistic (χ^2), which is the test of absolute fit of the model. The goodness-of-fit indices, such as the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root Mean Square Error of Approximation (RMSEA) will also be used in this study.

6. CHAPTER DIVISION

The chapters in this mini dissertation are presented as follows:

- Chapter 1: Problem statement, research objectives, paradigm perspective of the research, research design and research method
- Chapter 2: Research article
- Chapter 3: Conclusions, limitations and recommendations

REFERENCES

- Arbuckle, J. L. (2006). *Amos user's guide version 7.0*. Chicago, IL: Amos Development Corporation.
- Babbie, E., & Mouton, J. (2001). *The practice of social research*. Cape Town, South Africa: Oxford University Press Southern Africa.
- Bender, K. A., & Sloane, P. J. (1999). Trade union membership, tenure and the level of job insecurity. *Applied Economics*, 31, 123-135.
- Bergh, Z. C., & Theron, A. L. (2000). *Psychology in the work context*. Cape Town, South Africa: Oxford University Press Southern Africa.
- Borg, I., & Elizur, D. (1992). Job insecurity: Correlates, moderators and measurement. *International Journal Of Manpower*, 13(2), 13-26.
- Buitendach, J. H., & De Witte, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance workers in a parastatal. *South African Journal of Business Management*, 36(2), 27-37.
- Buitendach, J. H., Oosthuizen, A., & Van Wyk, C. (2005). Predicting job insecurity from background variables. *SA Journal of Industrial Psychology*, 31(3), 70-78.
- Buitendach, J.H., Rothmann, S., & De Witte, H. (2005). The psychometric properties of the Job Insecurity Questionnaire in South Africa. *SA Journal of Industrial Psychology*, 31(4), 7-16.
- Burke, J.R. (1997). Correlates of job insecurity among recent business school graduates. *Employee Relations*, 20(1), 92-99.

- Carmeli, A., & Weisberg, J. (2006). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, 9(2), 191-206.
- Caplan, R. D., Cobb, S., French, J. R. P., Jr., Harrison, R. V., & Pinneau, S. R. (1975). *Job demands and worker health: Main effects and occupational differences*. Washington, DC: U.S. Government Printing Office.
- Chirumbolo, A., & Areni, A. (2005). The influence of job insecurity on job performance and absenteeism: The moderating effect of work attitudes. *SA Journal of Industrial Psychology*, 31(4), 65-71.
- De Witte, H. (2000). Arbeidsthos en jobonzekerheid: Meting en gevolgen voor welzijn, tevredenheid en inzet op het werk (Work ethic and job insecurity: Assessment and consequences for wellbeing, satisfaction and performance at work). In R. Bouwn, K., De Witte, H., & Taillieu, T., (Eds.), *Van groep tot gemeenskap (From group to community)* (pp. 325 – 350). Leuven, Belgium: Garant.
- De Witte, H. (2005). Job insecurity: Review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology*, 31(4), 1-6.
- Eberhardt, B. J., Pooyan, A., & Mostert, S. B. (1995). Moderators of the relationship between job satisfaction and nurses' intention to quit. *The International Journal of Organizational Analysis*, 3(4), 394-406.
- Fenlason, J. K., & Beehr, T. A. (1994). Social support and occupational stress: Effects of talking to others. *Journal of Organizational Behaviour*, 15, 157-175.
- Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Towards conceptual clarity. *Academy of Management Review*, 9, 438-448.

- Hlatshwayo, E. (edwin.hlatshwayo@sasol.com). 2008. *Why employees leave Sasol*. Presentation to the Area Leaders. [E-mail to:] Bam, L. (lize.bam@sasol.com). 23 September.
- Hwang, L., & Kuo, J. (2006). Effects of job satisfaction and perceived alternative employment opportunities on turnover intention. *The Journal of American Academy of Business, Cambridge*, 8, 254-259
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed). New York : John Wiley & Sons Inc.
- Klein Hesselink, D. J., & Van Vuuren, T. (1999). Job flexibility and job insecurity: The Dutch case. *European Journal of Work And Organizational Psychology*, 8, 273-293.
- Labuschagne, M., Bosman, J., & Buitendach, J. H. (2005). Job insecurity, job satisfaction and work locus of control of employees in a government organisation. *SA Journal of Human Resource Management*, 3(2), 26-35.
- Macdonald S., & MacIntyre, P. (1997). The Generic Job Satisfaction Scale: Scale development and it is correlates. *Employee Assistance Quarterly*, 13(2), 1-16.
- McIntosh, N. J. (1991). Identification and investigation of properties of social support. *Journal of Organizational Behaviour*, 12, 201-217.
- Monette, D. R., Sullivan, T. J., & De Jonge, C. R. (2005). *Applied social research*. California: Brooks/Cole-Thomson learning.
- Mouton, J., & Marais, H. C. (1992). *Basiese begrippe: metodologie van die geesteswetenskappe*. Pretoria, South Africa: Gutenberg Boekdrukkers (Edms.) Bpk.

- Neuman, W. L. (2000). *Social research methods. Qualitative and quantitative approaches*. Boston: Pearson Education Company.
- Pienaar, J., Sieberhagen, C. F., & Mostert, K. (2007). Investigating turnover intentions by role overload, job satisfaction and social support moderation. *SA Journal of Industrial Psychology*, 33(2), 62 – 67.
- Schabracq, M. J., & Cooper, C. L. (2000). The changing nature of work and stress. *Journal Of Managerial Psychology*, 15, 227-241.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology*. New York, USA: McGraw-Hill.
- Sjöberg, A., & Sverke, M. (2000). The interactive effect of job involvement and organizational commitment on job turnover revisited: A note on the mediating role of turnover intention. *Scandinavian Journal of Psychology*, 3, 247–252.
- SPSS (2005). *SPSS for Windows*. Chicago, IL: SPSS Incorporated.
- Sverke, M., & Hellgren, J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied Psychology: An International Review*, 51, 23-42.
- Sweeney, B., & Boyle, B. (2005). Supervisory actions, job satisfaction and turnover intentions of Irish trainee accountants. *The Irish Accounting Review*, 12(2), 47-73.

CHAPTER 2: ARTICLE

JOB INSECURITY, JOB SATISFACTION, SOCIAL SUPPORT AND INTENTION TO LEAVE OF PROCESS CONTROLLERS IN A SOUTH AFRICAN PETRO-CHEMICAL COMPANY

L BAM

LR RAIJMAKERS

Abstract

South Africa is currently experiencing a skills shortage and companies need to take job insecurity, job satisfaction and social support into consideration as part of their retention strategy. Pressure is being exerted on organisations to improve their performance and to become increasingly competitive, which has resulted in job insecurity becoming a reality. The objective of this study was to determine whether qualifications, tenure, job satisfaction and social support impact on job insecurity, as well as determining whether social support would increase levels of job satisfaction. The participants ($N=184$) included process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders. From January 2006 to March 2007 the turnover rate for the company was 7,5%. The majority of employees who resigned were senior process controllers and senior artisans. From July 2007 to June 2008 the turnover rate was 6,67%. For the company to reach its target turnover rate as well as retain scarce skills, the relationships between job insecurity, job satisfaction, social support and intention to leave needed

to be investigated. A quantitative study was conducted using a cross-sectional survey design. Self-administered questionnaires were used. The statistical analysis included descriptive statistics, factor analysis, Pearson product-moment correlation coefficients as well as MANOVA and structural equation modelling. Results indicated there was no correlation between job insecurity and tenure, nor between qualifications and job insecurity. It was concluded that lower job satisfaction resulted in higher job insecurity and that higher job satisfaction resulted in lower levels of intentions to leave. There was a positive correlation between social support and job satisfaction. With these results and the model developed it would be possible for the company to adjust their retention strategy to achieve optimal results.

Opsomming

Suid-Afrika ondervind tans 'n vaardigheidstekort en maatskappye word genoodsaak om werksonsekerheid, werksbevredegiging en sosiale ondersteuningstelsels in hul retensiestrategie in ag te neem. Druk word op besighede geplaas om hul werksprestasie en -prosesse te verbeter en meer mededingend te raak. Dit lei daartoe dat werksonsekerheid 'n realiteit geword het. Die doel was om vas te stel of kwalifikasies, diens tyd, werksbevredegiging en sosiale ondersteuning 'n invloed op werksonsekerheid het en om te bepaal of sosiale ondersteuning werksbevredegiging verhoog of beïnvloed. Die deelnemers (N=184) het proseskontroleurs, senior proseskontroleurs, groepleiers/voormanne, seksieleiers en arealeiers ingesluit. Van Januarie 2006 tot Maart 2007 was die personeelomsetkoers by die maatskappy 7,5%. Die meeste werkers wat bedank het, was senior proseskontroleurs en senior ambagsmanne. Vanaf Julie 2007 tot Junie 2008 was die personeelomsetkoers 6,67%. Die maatskappy moes die verhouding tussen werksonsekerheid, werksbevredegiging, sosiale ondersteuningstelsels en die voorneme om die maatskappy te verlaat bepaal om hulle in staat te stel om hulle beplande personeelomsetkoers te bereik en terselfdertyd skaars vaardighede te behou. 'n Kwantitatiewe studie is onderneem waartydens gebruik gemaak is van 'n dwarsnee opname-ontwerp. Die statistiese analise het beskrywende statistiek, faktoranalise, Pearson-produktmomentkorrelasie koëffisiënte, meervoudige variasie-analise (MANOVA) en strukturele-vergelykingsmodellering ingesluit.

Resultate het aangedui dat daar geen korrelasie tussen werksonsekerheid en dienstyd, en kwalifikasies en werksonsekerheid is nie. Daar is tot die gevolgtrekking gekom dat lae werksbevrediging tot hoër vlakke van werksonsekerheid lei en dat hoër werksbevrediging die intensie verlaag om die maatskappy te verlaat. Daar was 'n positiewe korrelasie tussen sosiale ondersteuning en werksbevrediging. Hierdie kennis en die model wat ontwikkel is, stel die maatskappy in staat om sy retensiestrategie aan te pas om optimale resultate te behaal.

Schabracq and Cooper (2000) state that during the last two decades the development of new technologies as well as the growing globalisation of the economy produced the fastest technological changes ever. An avalanche of new products and production processes has been developed. Extreme competition, deregulations and rising costs have forced companies to restructure their organisations in terms of business, finances, processes and structures (Chirumbolo & Areni, 2005). In order to survive and to remain the 'fittest', companies turned to downsizing, delayering, mergers and restructuring. Labuschagne, Bosman and Buitendach (2005) report that tremendous pressure is being placed on South African organisations to improve their performance and to become increasingly competitive. According to them, factors contributing to higher job insecurity in the South African labour market include the increasing flexibility of jobs and changes at political level, which include the Employment Equity Act and Black Economic Empowerment. As a result, job insecurity has become more evident and has increased the need to research factors which influence it. The high volume of staff turnover is also a major problem for many organisations because of the costs involved (Van Dick et al., 2004).

At one of South Africa's largest petro-chemical companies, process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders all have different NQF level accreditations, ranging from NQF 1 (below Grade 10) to NQF 7 (higher degrees). In previous years process controllers with a NQF level 1 were appointed. However, the employment policy of the company changed and to be employed and promoted, staff need at least a NQF level 4 (Grade 12/N3). This has resulted in major problems, as a large part of the existing staff component (process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders) with years of irreplaceable experience, but not in possession of a NQF level 4 qualification, could not be promoted and are stuck within a specific salary bracket. They are expected to coach the newer (possibly younger) staff, who could then be promoted to supervisor/manager positions. As a result, the more experienced and older process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders might experience job insecurity, which would contribute to their leaving the company. The company would

then lose valuable scarce skilled workers. With South Africa currently experiencing a skills shortage, companies in the petro-chemical industry need to take this into consideration as part of their retention strategy methods to retain valuable scarce skills.

According to Hlatshwayo (2008) statistics of the petro-chemical company being studied reflect that from January 2006 to March 2007, the labour turnover for the whole company was 7,5%. The majority of employees who resigned were senior process controllers and senior artisans. From July 2007 to June 2008 the turnover for the business unit producing petrol was 6,67%. To reach the target turnover rate set by the Managing Director, the Human Resources Department compiled a retention strategy. One of the objectives was to reduce labour turnover, with a view of retaining valuable (scarce skills) talent. Exit interviews were used in an attempt to identify the reason why employees left the company. For the period July 2007 to June 2008 the main factors identified in contributing to employee turnover for all positions were:

1. Remuneration and benefits
2. Career scope
3. Housing
4. Emigration
5. Family reasons

The importance of this study is that, for the company to reach its target turnover rate, it is essential to investigate the relationship between job insecurity, job satisfaction, social support and intention to leave of the process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders who play a critical role in the manufacturing process. It is also important to consider the bigger picture in South Africa with its current skills shortage and economical crisis. There is a need to understand why staff are leaving the organisation and how retention strategies can be improved on to reduce costs incurred because of high turnover volumes.

ELUCIDATION OF TERMINOLOGY

Job insecurity

Sverke and Hellgren (2002) define job insecurity as employees' negative reactions to changes concerning their jobs and conclude that job insecurity refers to the anticipation of this stressful event which places the nature and continued existence of one's job as perceived to be at risk. According to Greenhalgh and Rosenblatt (1984), job insecurity may be defined as a perceived powerlessness to maintain desired continuity in a threatened job situation. They also state that individuals react to this feeling of insecurity and that these reactions have consequences for the effectiveness of the organisation. De Witte (2005) defines job insecurity as the perceived threat of job loss and the worries related to that threat. He also states that most authors agree that job insecurity is a subjective perception. The same objective situations may evoke different feelings and reactions in different employees. Job insecurity is a reaction and feelings of powerlessness are present.

According to Klein Hesselink and Van Vuuren (1999), job insecurity is based on three aspects. They contend that job insecurity firstly is a subjective phenomenon in that individuals can feel insecure even though there is no valid reason for feeling this way. Secondly, job insecurity has to do with the future - an individual may be concerned about future job development; and thirdly, job insecurity has to do with personal retention of the job and not the continuation of the job itself. Klein Hesselink and Van Vuuren define job insecurity as a personal concern about the continuity of the job.

However, Borg and Elizur (1992) differentiate between cognitive job insecurity and affective job insecurity. Cognitive job insecurity refers to the extent of subjective security with regard to the future of an employee's position and career (likelihood of job loss). Affective job insecurity refers to an individual's concern or fear about his/her future job (fear of job loss).

Relationship between level of education (NQF level) and job insecurity

According to Buitendach, Rothmann and De Witte (2005), the level of education of individuals influences the number of choices that they have in the labour market. They conclude that individuals with a Grade 12 (NQF 4), a diploma or a degree (NQF 5, 6), showed higher levels of job insecurity compared to those with qualifications lower than Grade 12 (NQF 1-3) and postgraduate qualifications (NQF 7, 8). Another study conducted by Buitendach, Oosthuyzen and Van Wyk (2005) concluded that individuals with qualifications lower than Grade 12 (NQF 4) displayed higher affective job insecurity as compared to individuals with a degree or postgraduate qualifications. However, individuals with higher qualifications displayed higher levels of cognitive job insecurity. It was concluded that individuals with qualifications lower than Grade 12 (NQF 4) experienced higher levels of affective job insecurity because they perceived that their qualifications did not give them a variety of choices in the labour market, whereas individuals with higher qualifications who had more choices in the labour market experienced lower levels of affective job insecurity but higher levels of cognitive insecurity.

Job insecurity and job satisfaction

De Witte (2005) states that long-term job insecurity can be associated with lower levels of job satisfaction and with less positive attitudes toward the organisation, as well as a less favourable evaluation of the direct supervisor. This is supported by a study conducted by Burke (1997) who found that low levels of self-reported job insecurity related negatively to job satisfaction. A study conducted by Labuschagne et al. (2005) concluded that there was a negative relation between job insecurity and job satisfaction.

Results obtained by Buitendach and De Witte (2005) indicated that higher levels of job insecurity were associated with lower levels of extrinsic job satisfaction. They concluded that intrinsic job satisfaction had no significant effect on job insecurity. It can therefore

be concluded that the effect of job insecurity on the total scale of job satisfaction is due to the extrinsic dimension of job satisfaction.

Job insecurity and tenure

Bender and Sloane (1999) contend that job insecurity increases with tenure. However, a study conducted in South Africa by Buitendach et al. (2005) found no significant relationship between job insecurity and tenure.

Job Satisfaction

Rothmann and Agathagelou (2000) define job satisfaction as a complex variable which is influenced by situational factors related to the job environment, as well as the dispositional characteristics of an individual. Hirschfeld (2000) states that job satisfaction is the extent to which people like their jobs and that it is an emotional reaction to the job, resulting from the individual's comparison of actual outcomes with the required outcomes. Schneider and Snyder (1975) defined job satisfaction as a personal evaluation of conditions present in the job, or outcomes that arise as a result of having a job. Weiss, Dawis, England and Lofquist (1967) expand the definition of job satisfaction further by stating that employees seek to achieve and maintain correspondence with their work environment. This correspondence may be described in terms of the individual fulfilling the requirements of the work environment and the work environment fulfilling the requirements of the individual. According to Cook, Hepworth, Wall and Warr (1981) this means that employees will experience job satisfaction if they feel that their individual capacities, experiences and values can be utilised in their work environment and that the work environment offers them opportunities and rewards.

Hirschfeld (2000) and Spector (1997) indicate that different aspects of job satisfaction may be divided into two dimensions, namely intrinsic job satisfaction and extrinsic job satisfaction. Intrinsic job satisfaction refers to job tasks such as variety, skill utilisation

and autonomy. While extrinsic job satisfaction refers to aspects that have little to do with the job tasks such as pay, working hours and co-workers.

According to Harris, Winskowski and Engdahl (2007), support from colleagues does not predict job satisfaction.

Intention to leave

Carmeli and Weisberg (2006) define intention to leave as a subjective estimation of an individual regarding the probability that he/she will be leaving the organisation in the near future. It is conceived of as a conscious and deliberate desire to leave the organisation within the near future. Tett and Meyer (1993) contend that the intention to leave is a conscious and deliberate will to leave the organisation and it is measured with reference to a specific time interval, while Brough and Frame (2004) define intention to leave as an individual's estimated probability that he/she will leave an organisation at some point in the near future. They conclude that the identification of the variable/s contributing to intention to leave would be effective in reducing actual turnover levels.

According to Eberhardt, Pooyan and Mostert (1995) the negative relationship between job satisfaction and intention to leave is well known. Sweeney and Boyle (2005) support this by stating that in organisational behaviour literature higher levels of job satisfaction have been strongly linked to greater intentions to remain in a firm. However, a study conducted by Hwang and Kuo (2006) on construction managers in China, found that job satisfaction did not significantly affect intention to leave, while a study by Guimaraes and Igbaria (1992) found that the level of job satisfaction has a direct effect on intention to leave.

It follows that if the more experienced process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders experience lower levels of job satisfaction, it would result in their having intentions to leave the organisation, which

would lead to a higher staff turnover rate than desired by the company and increased costs.

Social Support

McIntosh (1991) describes social support as perceived or actual resources available from one or more individuals to another which assist the individual in dealing with stress or enhance their wellbeing. Social support interacts with the stressor so that those who perceive that they have strong social support react less negatively (Fenlason & Beehr, 1994). McCalister, Dolbier, Webster, Mallon and Steinhardt (2006) contend that support at work refers to an individual's perception of available social support from supervisors or colleagues on the job and that this can influence their levels of perceived work stress and job satisfaction.

According to Naswall, Sverke and Hellgren (2005), social support may take on different forms, i.e. emotional, instrumental or informative. Emotional support entails having someone to talk to about a stressful situation, while instrumental support supplies the individual with assistance when faced with uncertainty. Social support may also originate from different sources such as the individual's work situation, family and friends.

Findings of a study by Brough and Frame (2004) indicate that supervisor support produced strong associations with job satisfaction and impacted on intention to leave. These findings are supported by research done by McCalister et al. (2006) who found that supervisor support had a direct and positive effect on job satisfaction. A study conducted by Pienaar, Sieberhagen and Mostert (2007) also concluded that social support from the supervisor was strongly related to job satisfaction, while Harris et al. (2007) found that workplace social support was a significant predictor of job tenure.

This raises the question of whether, by increasing job satisfaction through improving social support, the impact on process controllers, senior process controllers, group

leaders/foremen, section leaders and area leaders would decrease job insecurity which in turn would decrease intention to leave.

Institute for Social Research (IRS) Model

According to Katz and Kahn's IRS Model (1978), because individuals perceive the objective environment (psychological environment) in a certain way, their responses will also vary. This evaluation and reaction depend partly on individual features and on the social relations among individuals and important people and groups in their environment. This response has a mental and physical health consequence. If process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders perceive that their job is threatened, their reaction would depend on their individual attributes and on social relations. Should this be negative, an individual would most probably experience job insecurity which in turn would have an effect on job satisfaction, intention to leave and well being.

Based on the literature review the following hypotheses are formulated:

H₁: Job insecurity is positively related to tenure among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders

H₂: NQF qualification is inversely related to job insecurity of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders

H₃: Lower job satisfaction will lead to higher levels of job insecurity of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders

H₄: The higher the job satisfaction, the lower the intention to leave will be of process controllers, senior process controllers, group leaders and foremen.

H₅: A higher level of social support will result in higher job satisfaction of process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders.

RESEARCH METHOD

Research design

A quantitative study using a cross-sectional survey design was conducted. According to Neuman (2002) the survey is the most widely used data gathering technique in which researchers sample many respondents who answer the same questions. The researchers measure many variables, test multiple hypotheses and infer temporal order from questions about past behaviour, experiences or characteristics. In this study self-administered questionnaires were used. Inter-relationships among variables within the population were assessed. Shaughnessy and Zechmeister (1997) concur that this method is ideally suited when the aim of the study is predictive and descriptive.

Participants

The participants consisted of process controllers, senior process controllers, group leaders, foremen, section leaders and area leaders who are responsible for the efficient operation of the different process plants in a petro-chemical company in South Africa. Process controllers and senior process controllers work shifts and currently need a Grade 12/N3 (NQF 4) with Mathematics and Science. In the past the qualification required was a Grade 10 (NQF 2) certificate. The result is that there are currently process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders in the petro-chemical company with Grade 10 (NQF 2), Grade 12 (NQF 4) and S4 diplomas (NQF 5).

A description of the participants with regard to gender, race, qualifications, years in position and position are reported in Table 1 below.

Table 1

Description of Participants (N=184)

Item	Category	Frequency	Percentage
Gender	Male	173	94
	Female	11	6
Race	African	77	41,8
	White	100	54,3
	Indian	5	2,7
	Coloured	1	0,5
	Missing	1	0,5
Qualification	NQF 1 - 3	25	13,5
	NQF 4	99	53,8
	NQF 5	22	11,9
	NQF 6 - 8	19	10,3
	Missing	19	10,3
Years in position	0-3 years	83	45,1
	4 – 9 years	39	21,1
	10 – 19 years	22	11,9
	20 – 30 years	28	15,2
	Missing	12	6,5
Position	Area Leader	3	1,6
	Group Leader/Foreman	37	20,1
	Process Controller	45	24,5
	Section Leader	12	6,5
	Senior Process Controller	86	46,7
	Missing	1	0,5

Measuring Instruments

The *Job Insecurity Questionnaire* (JIQ) (De Witte, 2000) was used to measure job insecurity. This questionnaire consists of 11 items that measure participants' perceived affective and cognitive dimensions of job insecurity. The items are arranged along a 5-point Likert-type scale varying from 1 (*strongly agree*) to 5 (*strongly disagree*). An example of a statement relating to cognitive job insecurity would be, "I think that I will be able to continue working here", whereas an example of a statement relating to affective job insecurity would be, "I am worried about keeping my job". Regarding job insecurity, a principal component analysis was conducted on the 11 items on the questionnaire. The eigenvalues > 1 as well as the scree plot showed that two factors could be extracted. These two factors explained 57,07% of the total variance. The pattern matrix showed that seven items on the first factor (Affective Job Insecurity) had factor loadings $> 0,30$, while three items on the second factor (Cognitive Job Insecurity) had item loadings of less than 0,30. Buitendach et al. (2005) reported a Cronbach alpha of 0,90 for the cognitive scale and a Cronbach alpha of 0,85 for the affective scale. Their study population consisted of a random sample of employees in selected organisations in South Africa. The population also included employees in different departments in a steel manufacturing industry as well as employees in a chemical industry.

The *Job Satisfaction Scale* (JSS) (Macdonald & MacIntyre, 1997) was used to measure job satisfaction. The scale consists of ten (10) questions on a five-point Likert scale varying from 1 (*strongly disagree*) to 5 (*strongly agree*). One example of the questions is, "I receive recognition for a job well done." A simple principal component analysis showed that one factor, which explained 48,80% of the total variance, could be extracted. The component matrix showed all items had high loadings on the component. This factor was labelled job satisfaction. The scale measures job satisfaction and the Cronbach alpha as reported by Macdonald and MacIntyre is 0,77. One of the goals in developing the scale was to create a short scale. For this reason it was necessary to measure the various facets of job satisfaction with single items to cover the widest possible domain. The results of this study indicate that this combination of the facets approach and the general approach

can be successful because the model of job satisfaction presented focuses on the reaction to events rather than on the events themselves (Macdonald & MacIntyre, 1997).

The *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000) was used to measure turnover intention. This scale measures the strength of the respondents' intentions to leave their present position. This questionnaire consists of three (3) questions measured on a five-point Likert scale with 1 (*strongly disagree*) and 5 (*strongly agree*). One example of the questions is, "I feel that I could leave this job." A principal component analysis which was carried out on the TIS showed that one factor could be extracted. This factor explained 79% of the total variance. This factor was labelled *turnover intention*. The reported Cronbach alpha coefficient for this scale is 0,83 (Sjöberg & Sverke, 2000).

Social support was measured using a questionnaire developed by Caplan, Cobb, French, Harrison and Pinneau (1975). The questionnaire consists of ten (10) questions on a five-point Likert scale where a higher response reflects a greater sense of social support. The following is a sample of the questions: "How much does each of these people go out of their way to do things to make your work life easier for you?" The respondent is asked to answer this question with regard to three categories of people, namely (1) Your immediate supervisor, (2) Other people at work, and (3) Your wife/husband, friends and relatives (Caplan et al., 1975). Pienaar et al. (2007) concluded that the questionnaire would perform well in the South African context.

Regarding social support, a simple principal component analysis was conducted. The results showed that three factors with eigenvalues > 1 could be extracted. These three factors explained 75,83% of the total variance. The pattern matrix showed that three items with loadings $> 0,30$ loaded on the first factor (Social Support by Supervisor), four on the second factor (Social Support by Colleagues) and three on the third factor (Social Support by Family). Pienaar et al. (2007) reported a Cronbach alpha of 0,91 for the scale of supervisor support and 0,80 for the colleague support scale. The participants in this study included employees from a South African mining company.

Statistical Analysis

The statistical analysis was conducted by means of the SPSS Program (SPSS, 2005). Descriptive statistics, including means, standard deviations, skewness and kurtosis were used to explore the data. Cronbach alpha coefficients were used to assess the internal consistency of the measuring instruments (Clark & Watson, 1995). Coefficient alpha conveys important information on the proportion of error variance contained in a scale.

Pearson 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 ($p < 0,05$). Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings. A cut-off point of 0,30 (medium effect) was set for the practical significance of correlation coefficients. Exploratory factor analysis was used to assess the validity and reliability of the measurements. According to Kerlinger and Lee (2000), the main aim of factor analysis is to indicate whether variables measure similar dimensions and how much they do.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the levels of job insecurity, tenure and qualifications. 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). Wilk's 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. Structural equation modelling (SEM) as implemented in Amos (Arbuckle, 2006) was used to test the structural model. Among the fit indices produced by the Amos program is the Chi-square statistic (χ^2), which is the test of absolute fit of the model. The goodness-of-fit indices such as the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root Mean Square Error of Approximation (RMSEA) were also used in this study.

The usual procedure is to create a latent variable which is measured by a single indicator. The path from the single indicator to latent variable must be specified with a value of 1 and the error variance must be specified as 0. Attempting to estimate either of these parameters instead of setting them as constraints would cause the model to be underidentified, preventing a convergent solution of the SEM model. If one has a variable one wants to include which has lower reliability, say 0,80, then the measurement error term for that variable would be constrained to $(1 - 0,80) = 0,20$ times its observed variance (that is, to the estimated error variance in the variable). *Error variance when reliability is known*: If the reliability coefficient for a measure has been determined, then $\text{error variance} = (1 - \text{reliability}) * \text{standard deviation squared}$.

RESULTS

Descriptive statistics, Cronbach alpha coefficients and Pearson correlations, Skewness and Kurtosis of the Job Insecurity Questionnaire, Job Satisfaction Scale, Turnover Intention Scale and the Social Support Scale are reported in Table 2.

Table 2

Descriptive Statistics, Alpha Coefficients and Pearson Correlations of the Scales

	Mean	SD	Skewness	SE of skewness	z score	Kurtosis	SE of Kurtosis	z score	α	1	2	3	4	5	6
Affective Job Insecurity	2,3756	0,87968	0,347	0,182	1,91	-0,242	0,362	-0,67	0,83	-	-	-	-	-	-
Cognitive Job Insecurity	4,1236	0,75561	-0,963	0,182	-5,29	0,597	0,362	1,65	0,73	-0,519††	-	-	-	-	-
Job Satisfaction	3,7469	0,70261	-0,809	0,184	-4,40	0,837	0,365	2,29	0,88	-0,436†	0,606††	-	-	-	-
Support: Supervisor	3,9890	1,15995	-1,244	0,18	-6,91	0,819	0,358	2,29	0,91	-0,241*	0,244*	0,543††	-	-	-
Support: Colleagues	4,2022	0,89213	-1,345	0,18	-7,47	2,001	0,357	5,61	0,80	-0,101*	0,158*	0,422†	0,464†	-	-
Support: Family	3,5681	1,22041	-0,656	0,181	-3,62	-0,505	0,36	-1,40	0,84	-0,127*	0,038*	0,200*	0,206*	0,313†	-
Intention to leave	2,3114	1,32252	0,635	0,18	3,53	-0,831	0,358	-2,32	0,84	0,273†	-0,398†	-0,496†	-0,328†	-0,233*	-0,035*

* Correlation is significant at the 0,05 level (2-tailed).

† Correlation is practically significant $r > 0,30$ (medium effect)†† Correlation is practically significant $r > 0,50$ (large effect)

From the information supplied in Table 2 it is evident that the Cronbach alpha coefficients of all the measuring instruments are considered to be acceptable compared to the guidelines of $\alpha > 0,70$ (Nunnally & Bernstein, 1994).

Table 2 indicates that Cognitive Job Insecurity is statistically and practically significantly negative related to Affective Job Insecurity (with large effect). Job Satisfaction is statistically and practically significantly negative related to Affective Job Insecurity (with medium effect) and positively related to Cognitive Job Insecurity (with large effect).

Social Support of the supervisor is statistically negative related to Affective Job Insecurity and positive related to Cognitive Job Insecurity and also statistically and practically significantly positive related (with large effect) to Job Satisfaction. Social Support of the family is statistically positive related to Job Satisfaction and Social Support of the supervisor. It is also statistically and practically significantly positive related to Social Support of the colleagues (with medium effect). Social Support of the colleagues are statistically positively related to Cognitive Job Insecurity and statistically and significantly positively related to Job Satisfaction. It is also positively related to Social Support of the supervisor (with medium effect). There is a negative significant correlation between Social Support of the colleagues and Affective Job Insecurity.

Intention to Leave relates negatively to Cognitive Job Insecurity (with medium effect), Job Satisfaction (with medium effect), Social Support of the supervisor (medium effect), colleagues and family. There is a positive correlation between Intention to Leave and Affective Job Insecurity.

Results from Table 2 indicate that the skewness of Cognitive Job Insecurity, Job Satisfaction, support from the supervisor, support from the colleagues, support from the family and Intention to Leave have a significance of 99% ($z > 2,58$). The results also indicate that the kurtosis of Job Satisfaction and support from the supervisor has a significance of 95% ($z > 1,96$). For support from the colleagues and Intention to Leave a significance of 99% is indicated ($z > 2,58$).

MANOVA for qualifications and years in position are reported in Table 3.

Table 3

MANOVA with Qualification and Years In Position

Variable	Wilk's Lambda Value	<i>F</i>	<i>df</i>	Error <i>df</i>	<i>p</i>	η^2
Qualifications	0.02	1.83	6	320	0.09	0.03
Years in Position	0.94	1.78	6	334	0.11	0.03

* Statistically significant differences: $p < 0.01$

MANOVA analysis was used to determine the relationship between Job Insecurity and the different variables of qualifications and tenure (years in position). Table 3 shows that there is no significant effect on Job Insecurity and qualifications and years in position (tenure).

Accordingly H_1 and H_2 are not accepted.

Next, the hypothesised structural model (unconstrained) for low and high negative affectivity groups was tested using structural equation modelling as implemented by AMOS (Arbuckle, 2006). According to Byrne (2001), the primary focus of the estimation process in SEM is to yield parameter values such that the residual between the sample covariance matrix and population covariance matrix implied by the model is minimal.

Two of the four dimensions (namely Job Insecurity and Social Support) were covered by at least two scales. For this dimension a latent variable was specified on which the corresponding scales loaded, separating random measurement error from true score variance. For Job Satisfaction there was only one indicator, meaning that in these cases there was a one-to-one correspondence between the manifested variables (scales) and the underlying latent dimensions. Usually no distinction is made in these cases between random error variance and true score variance, so that the correlations among these one-indicator latent variables and other latent variables may be biased (Little, Cunningham, Shahar & Widaman, 2002). This problem was overcome by means of a procedure proposed by Bagozzi and Heatherton (1994). First, a one-factor model was fitted for all items belonging to the scale. Second, separate indicators for the scale were formed by selecting items on the basis of their

loadings, alternating items with high and low loadings. Thus, two parcels of items were created for Job Satisfaction.

The goodness-of-fit statistics for the Structural Model of Job Insecurity, Social Support and Job Satisfaction are reported in Table 4.

Table 4

Goodness-of-fit Statistics for Structural Model of Job Insecurity, Social Support and Job Satisfaction

Model	χ^2	χ^2/df	GFI	AGFI	PGFI	NFI	TLI	CFI	RMSEA
Default model	32,12	1,78	0,96	0,92	0,48	0,94	0,96	0,97	0,07

Results indicate that the model fitted adequately to the data: $\chi^2 = 32,12$ $p < 0,01$; $\chi^2/df = 1,78$; GFI = 0,96; CFI = 0,97 and RMSEA = 0,07. The model is presented in Figure 1.

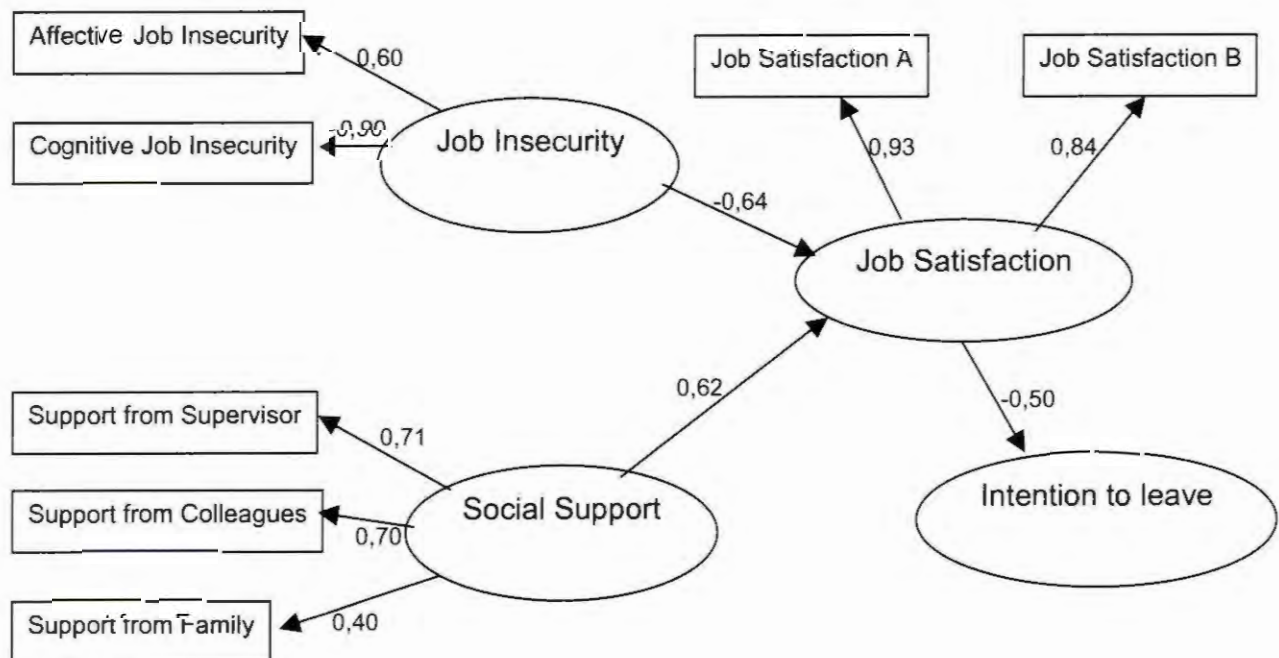


Figure 1: Structural Model of Job Insecurity, Social Support and Job Satisfaction

From the model it may be concluded that job satisfaction plays a mediating role between job insecurity and social support on the one hand and intention to leave on the other. As can be

seen, Job Satisfaction correlates positively with Social Support (consisting of social support from supervisor, family and colleagues). This means that the higher the Social Support of an individual, the higher his/her Job Satisfaction will be. There is a negative correlation between Job Satisfaction and Job Insecurity. The lower Job Satisfaction will lead to an increase in Job Insecurity. There is also a negative correlation between Job Satisfaction and Intention to Leave. If an individual's Job Satisfaction decreases the Intention to Leave will increase. If one would then like to decrease an individual's intentions to leave, one needs to increase job satisfaction by lowering job insecurity and improving social support.

Accordingly, hypotheses H₃, H₄ and H₅ are accepted.

DISCUSSION

The objective of this study was to determine whether qualifications (NQF levels), tenure, job satisfaction and social support impact on job insecurity of process controllers, senior process controllers, group leaders, foremen, section leaders and area leaders; if this would lead to higher turnover intentions among the study population of a petro-chemical company; whether social support will increase levels of job satisfaction; and whether the level of job satisfaction has an impact on the intention to leave the company.

Cognitive job insecurity statistically and practically significantly negatively correlated with affective job insecurity (with large effect). Job satisfaction statistically and practically significantly negatively correlated with affective job insecurity (with medium effect) and positively correlated with cognitive job insecurity (with large effect). Accordingly, if an individual experiences affective job insecurity (fear of job loss) his cognitive job insecurity (likelihood of job loss) decreases. This is in contradiction with a study conducted by Labuschagne et al. (2005). The company is currently implementing numerous change initiatives which include optimisation of operations. In this study it might be that the individual knew he/she would not lose his/her job based on communication from management, but he/her might still fear losing his job.

Social support of the supervisor statistically negatively correlates with affective job insecurity and statistically positively correlates with cognitive job insecurity; it statistically and

practically significantly positively correlates with job satisfaction (with large effect). Social support of the family statistically positively correlates with job satisfaction as does social support of the supervisor. It also statistically and practically significantly positively correlates with social support of the colleagues (with medium effect). Social support of the colleagues statistically positively correlates with affective job insecurity and negatively correlates with cognitive job insecurity. It statistically and significantly positively correlates with job satisfaction and social support of the supervisor (with medium effect). This supports research by Brough and Frame (2004), McCalister et al. (2006) and Pienaar et al.(2007). Findings of these studies indicated that social support was strongly related to job satisfaction. If an individual feels supported by his/her supervisor, colleagues and family, job satisfaction will increase.

Intention to leave statistically positively correlates with affective job insecurity and negatively correlates with cognitive job insecurity. It negatively correlates with social support of the colleagues, social support of the supervisor and social support of the family (with medium effect). Intention to leave also statistically and practically significantly negatively correlates to job satisfaction (with large effect). These findings support research conducted by Guimaraes and Igbaria (1992) where the study showed that job satisfaction has a direct effect on intention to leave. The findings of this research is in contrast with those of Hwang and Kuo (2006) who reported that job satisfaction had no significant effect on intention to leave.

From the Structural Equation Modelling (SEM) methods it can be seen that Job Satisfaction correlates positively with Social Support (consisting of social support from supervisor, family and colleagues). This means that the higher the Social Support of an individual, the higher the Job Satisfaction will be. There is a negative correlation between Job Satisfaction and Job Insecurity. The results from the structural equation modelling are supported by the results in Table 2. From the structural equation modelling it may be concluded that the lower Job Satisfaction will lead to an increase in Job Insecurity. There is also a negative correlation between Job Satisfaction and Intention to Leave. If an individual's Job Satisfaction decreases, the Intention to leave will increase. These results are supported by the results in Table 2. If an organisation wishes to decrease its employees' intentions to leave, it needs to increase their job satisfaction by lowering job insecurity and improving social support.

Increased tenure (years in a position) will not lead to an increase in job insecurity. In previous studies Bender and Sloane (1999) found that job insecurity increased with tenure. However, this study supports the findings of Buitendach et al. (2005) that there is no significant relationship between job insecurity and tenure. A possible explanation could be that participants who had more years of experience in the job felt more confident about their skills, business specific knowledge and experience. Job insecurity will also not increase with a lower qualification (NQF level). A possible explanation could be that because of the skills shortage, the individuals with lower NQF levels are confident that they will still have a position within the company. These findings are in contrast with those of Buitendach et al. (2005) who found that the lower the qualification (NQF level), the higher the job insecurity will be.

RECOMMENDATIONS

Future research should focus on proposing a comprehensive skills retention model for petro-chemical companies in South Africa which are in line with South Africa's unique policies and economic environment. A larger population should be included in the study and a joint research project launched for the petro-chemical industry in South Africa.

REFERENCES

- Arbuckle, J. L. (2006). *Amos user's guide version 7.0*. Chicago, IL: Amos Development Corporation.
- Bagozzi, R. P. & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modeling, 1*, 35-67.
- Bender, K. A., & Sloane, P. J. (1999). Trade union membership, tenure and the level of job insecurity. *Applied Economics, 31*, 123-135.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.
- Borg, I., & Elizur, D. (1992). Job insecurity: Correlates, moderators and measurement. *International Journal Of Manpower, 13*(2), 13-26.
- Brough, P., & Frame, R. (2004). Predicting police job satisfaction and turnover intentions: The role of social support and police organizational variables. *New Zealand Journal of Psychology, 33*(1)
- Buitendach, J. H., & De Witte, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance workers in a parastatal. *South African Journal of Business Management, 36*(2), 27-37.
- Buitendach, J. H., Oosthuyzen, A., & Van Wyk, C. (2005). Predicting job insecurity from background variables. *SA Journal of Industrial Psychology, 31*(3), 70-78.
- Buitendach, J. H., Rothmann, S., & De Witte, H. (2005). The psychometric properties of the Job Insecurity Questionnaire in South Africa. *SA Journal of Industrial Psychology, 31*(4), 7-16.

- Burke, J. R. (1997). Correlates of job insecurity among recent business school graduates. *Employee Relations* 20(1), 92-99.
- Byrne, B. M., (2001). Structural equation modelling with AMOS: Basic concepts, applications, and programming. Mahwah, NJ: Lawrence Erlbaum.
- Caplan, R. D., Cobb, S., French, J. R. P. Jr., Harrison, R.V., & Pinneau, S. R. (1975). Job demands and worker health: Main effects and occupational differences. Washington, DC: U.S. Government Printing Office.
- Carmeli, A., & Weisberg, J. (2006). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, 9(2), 191-206.
- Chirumbolo, A., & Areni, A. (2005). The influence of job insecurity on job performance and absenteeism: The moderating effect of work attitudes. *SA Journal of Industrial Psychology*, 31(4), 65-71.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309 – 319.
- Cook, J. D., Hepworth, S. J., Wall, T. D., & Warr, P. B. (1981). *The experience of work: A compendium and review of 249 measures and their use*. London: Academic Press.
- De Witte, H. (2000). Arbeidsthos en jobonzekerheid: Meting en gevolgen voor welzijn, tevredenheid en inzet op het werk [Work ethic and job insecurity: assessment and consequences for wellbeing, satisfaction and performance at work]. In R. Bouwn, K. De Witte, H. De Witte, & T. Taillieu (Eds.), *Van groep to gemeenskap (From group to community)* (pp. 325 – 350). Leuven, Belgium: Garant.
- De Witte, H. (2005b). Long-term job insecurity, job satisfaction and organisational attitudes: Test of Warr's curvilinear hypothesis. *SA Journal of Industrial Psychology*, 31(4), 41 – 47.

- De Witte, H. (2005a). Job insecurity: Review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology*, 31(4), 1-6.
- Eberhardt, B. J., Pooyan, A., & Moser, S. B. (1995). Moderators of the relationship between job satisfaction and nurses' intention to quit. *The International Journal of Organizational Analysis*, 3, 394-406.
- Fenlason, J. K., & Beehr, T. A. (1994). Social support and occupational stress: Effects of talking to others. *Journal of Organizational Behaviour*, 15, 157-175.
- Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Towards conceptual clarity. *Academy of Management Review*, 9, 438-448.
- Guimaraes, T., & Igbaria, M. (1992). Determinants of turnover intentions: Comparing IC and IS personnel. *Information Systems Research*, 3, 273-303.
- Harris, I., Winskowski, A. M., & Engdahl, B. E. (2007). Types of workplace social support in the prediction of job satisfaction. *The Career Development Quarterly*, 56, 150 – 156.
- Hirschfeld, R. R. (2000). Validity studies. Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire Short Form make a difference? *Educational Psychological Measurement*, 60, 255-270.
- Hlatshwayo, E. (edwin.hlatshwayo@sasol.com). 2008. *Why employees leave Sasol*. Presentation at the Area Leaders. [E-mail to:] Bam, L. (lize.bam@sasol.com). 23 September.
- Hwang, L., & Kuo, J. (2006). Effects of job satisfaction and perceived alternative employment opportunities on turnover intention. *The Journal of American Academy of Business, Cambridge*, 8, 254-259.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: John Wiley & Sons Inc.

- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.) Fort Worth, TX: Harcourt College Publishers.
- Klein Hesselink, D. J., & Van Vuuren, T. (1999). Job flexibility and job insecurity: The Dutch case. *European Journal of Work And Organizational Psychology*, 8, 273-293.
- Labuschagne, M., Bosman, J., & Buitendach, J. H. (2005). Job insecurity, job satisfaction and work locus of control of employees in a government organisation. *SA Journal of Human Resource Management*, 3(2), 26-35.
- Little, T. D., Cunningham, W. A., Shahar, G. & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151-173.
- Macdonald S., & MacIntyre, P. (1997). The Generic Job Satisfaction Scale: Scale development and it's correlates. *Employee Assistance Quarterly*, 13(2), 1-16.
- McCalister, K. T., Doblier, C. L., Webster, J. A., Mallon, M. W., & Steinhardt, M. A. (2006). Hardiness and support at work as predictors of work stress and job satisfaction. *American Journal of Health Promotion*, 20 (3), 183-191.
- McIntosh, N. J. (1991). Identification and investigation of properties of social support. *Journal of Organizational Behaviour*, 12, 201-217.
- Naswall, K., Sverke, M., & Hellgren, J. (2005). The moderating effects of work-based and non-work based support on the relation between job insecurity and subsequent strain. *SA Journal of Industrial Psychology*, 31, 57 – 64.
- Neuman, W. L. (2000). *Social research methods. Qualitative and quantitative approaches*. Boston : Pearson Education Company.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.) New York: McGraw-Hill.

- Pienaar, J., Sieberhagen, C. F., & Mostert, K. (2007). Investigating turnover intentions by role overload, job satisfaction and social support moderation. *SA Journal of Industrial Psychology*, 33 (2), 62 – 67.
- Rothmann, S., & Agathagelou A. M. (2000). Die verband tussen lokus van beheer en werkstevredenheid by senior polisiepersoneel. *Journal of Industrial Psychology*, 26(2), 20-26.
- Schabracq, M. J., & Cooper, C. L. (2000). The changing nature of work and stress. *Journal of Managerial Psychology*, 15, 227-241.
- Schneider, B., & Snyder, R.A. (1975). Some relations between job satisfaction and organizational climate. *Journal of Applied Psychology*, 60,318-328.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology*. New York: McGraw-Hill.
- Sjöberg, A., & Sverke, M. (2000). The interactive effect of job involvement and organizational commitment on job turnover revisited: A note on the mediating role of turnover intention. *Scandinavian Journal of Psychology*, 3, 247–252.
- Spector, P. E. (1997). *Job satisfaction: Applications, assessment, causes and consequences*. Thousand Oaks, CA: Sage.
- SPSS (2005). *SPSS for Windows*. Chicago, IL: SPSS Incorporated.
- Steyn, H. S. (1999). *Praktiese betekensvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes-Reeks B: Natuurwetenskappe Nr. 117 Potchefstroom: PU vir CHO.
- Sverke, M., & Hellgren, J. (2002). The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied Psychology: An International Review*, 51, 23-42.

- Sweeney, B., & Boyle, B. (2005). Supervisory actions, job satisfaction and turnover intentions of Irish trainee accountants. *The Irish Accounting Review*, 12(2), 47-73.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.) Boston, MA: Allyn & Bacon.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, 46, 259 – 286.
- Van Dick, R., Christ, C., Stellmacher, J., Wagner, U., Ahlswede, O., Grubba, C. et al. (2004). Should I stay or should I go? Explaining turnover intentions with organizational identification and job satisfaction. *British Journal of Management*, 15, 351 – 360.
- Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). *Manual for the Minnesota Satisfaction Questionnaire*. Minneapolis, MN: University of Minnesota.

CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to reach conclusions based on the objectives of this study. The conclusion and limitations of this research, as well as recommendations for future research, are presented.

3.1 CONCLUSIONS

The objectives of this study is to determine whether qualifications (NQF levels), tenure, job satisfaction and social support impact on the job insecurity of process controllers, senior process controllers, group leaders, foremen, section leaders and area leaders; whether this would lead to higher turnover intentions among the study population; whether social support will increase levels of job satisfaction and whether the level of job satisfaction has an impact on the intention to leave the company.

The first research objective was to investigate whether there is a significant relationship between job insecurity and tenure among the study population. The results showed that there is no significant relationship between job insecurity and years in position (tenure). Previous research from Buitendach and De Witte (2005) in South Africa found no significant relationship between job insecurity and tenure. The participants in their study included employees from the administration, production, services, mining and maintenance departments.

The second research objective was to investigate whether there is a significant relationship between the difference in the levels of job insecurity among process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders with various levels of qualifications at the petro-chemical company. The results showed that there is no significant relationship between job insecurity and qualifications (NQF level). In a study conducted by Buitendach, Rothmann and De Witte (2005) it was concluded that individuals with a Grade 12 (NQF 4), a diploma or a degree (NQF 5, 6) showed higher levels of job insecurity compared to those with qualifications lower than Grade 12 (NQF 1-3) and

postgraduate qualifications (NQF 7, 8). A possible explanation why there is no significant relationship could be that the study population forms part of a group of skilled workers that are in great demand. There is a skills shortage and candidates that qualify for process controller learnerships might feel that whatever qualification they have is sufficient as they are already in the post.

The third research objective was to investigate whether there is a significant difference in the levels of job insecurity experienced by the study population and their levels of job satisfaction at a petro-chemical company. Results from the structural equation modelling show that lower job satisfaction will lead to an increase in job insecurity. A study conducted by De Witte (2005) found insecure workers were less satisfied with their jobs. If individuals are dissatisfied with their jobs, they would probably feel insecure about their future in that post.

The fourth research objective was to investigate whether there is a significant relationship between job satisfaction and intention to leave of the process controllers, senior process controllers, group leaders/foremen, section leaders and area leaders at the petro-chemical company. The results from the structural equation modelling showed that higher job satisfaction will lead to lower intention to leave. According to Eberhardt, Pooyan and Mostert (1995) the negative relationship between job satisfaction and intention to leave is well known. Sweeney and Boyle (2005) support this by stating that in organisational behaviour literature, higher levels of job satisfaction have been strongly linked to greater intentions to remain with a firm. However, a study on construction managers in China conducted by Hwang and Kuo (2006) found that job satisfaction did not significantly affect intention to leave. From the structural equation model presented in this study it is evident that social support as well as job insecurity has a significant relationship with job satisfaction. If individuals receive the necessary social support, they would probably be happier workers. If workers do not have any insecurity regarding their future position, they would also be happier workers. All these factors will make for a more satisfying work experience.

The fifth research objective was to investigate whether there is a significant relationship between social support and job satisfaction in the study population at the petro-chemical company. Results from the structural equation modelling show that higher social support from the colleagues, supervisor and family will lead to higher levels of job satisfaction. A

study conducted by Pienaar, Sieberhagen and Mostert (2007) found that social support from the supervisor was strongly related to job satisfaction. In this study, however, social support from the family and colleagues was also strongly related to job satisfaction. A possible explanation could be that the town where the company is situated is a very closed and small community. Friends and family are possibly colleagues. This creates the situation where they only have their friends (that possibly work with them) and family as social support.

Findings of this research show the mediating role of job satisfaction between social support, job insecurity and intention to leave. Based on the research it is clear that job satisfaction plays a significant role in whether a process controller, senior process controller, group leader, foreman, section leader or area leader experience intentions to leave the organisation.

A surprising finding is that cognitive job insecurity significantly negatively correlates with affective job insecurity. If individuals experience affective job insecurity (fear of job loss), their cognitive job insecurity (likelihood of job loss) decreases. This is in contradiction with a study conducted by Labuschagne, Bosman and Buitendach (2005). The company is currently implementing numerous change initiatives, which include optimisation of operations. In this study it might be that individuals know that they will not lose their jobs, based on communication from management, but they might still fear losing their jobs.

3.2 LIMITATIONS

A limitation of the study is that only one specific petro-chemical organisation was targeted. Because the organisation consists of different clusters and companies, results within this organisation could differ from one section to another as a result of organisational culture.

Another limitation is the skewness and kurtosis that indicate a normal distribution was probably not present in all the scales.

The use of a cross-sectional study design represents a further limitation. Longitudinal data would allow for a better understanding of the true nature of the variables measured.

The language used was English, but for many employees it could be their second or third language; there could consequently have been misinterpretation of the questions.

3.3 RECOMMENDATIONS

Organisation

It is recommended that the Human Resources Department builds into its retention strategy a focus area of improving employees' job satisfaction, specifically focusing on improving social support (colleagues, supervisor and family) as well as decreasing job insecurity. If the retention policy focuses on these aspects it would also improve job satisfaction of staff and subsequently result in a decrease in the intention to leave.

Future research

Future research should seek to identify additional aspects that have an influence on job satisfaction. An increased identification and study of variables would result in a more comprehensive model being designed to support petro-chemical organisations with their retention strategies. This is especially important and valuable for the South African petro-chemical companies that are experiencing high turnover rates. Many skilled and professional individuals leave South Africa to work in other countries, which results in a huge loss of expertise and talent. South Africa needs these individuals to stay in order to boost the economy.

Future research could also focus on proposing a comprehensive model for South Africa. South Africa's unique policies and situations would probably have a different effect on job insecurity, social support and job satisfaction. A comprehensive population needs to participate and different companies could benefit from forming a joint research project.

REFERENCE

- Buitendach, J. H., & De Witte, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance workers in a parastatal. *South African Journal of Business Management*, 36(2), 27-37.
- Buitendach, J. H., Rothmann, S., & De Witte, H. (2005). The psychometric properties of the Job Insecurity Questionnaire in South Africa. *SA Journal of Industrial Psychology*, 31(4), 7-16.
- De Witte, H. (2005). Job insecurity: Review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology*, 31(4), 1-6.
- Eberhardt, B. J., Pooyan, A., & Mostert, S. B. (1995). Moderators of the relationship between job satisfaction and nurses' intention to quit. *The International Journal of Organizational Analysis*, 3, 394-406.
- Hwang, L., & Kuo, J. (2006). Effects of job satisfaction and perceived alternative employment opportunities on turnover intention. *The Journal of American Academy of Business, Cambridge*, 8, 254-259
- Labuschagne, M., Bosman, J., & Buitendach, J. H. (2005). Job insecurity, job satisfaction and work locus of control of employees in a government organisation. *SA Journal of Human Resource Management*, 3(2), 26-35.
- Pienaar, J., Sieberhagen, C. F., & Mostert, K. (2007). Investigating turnover intentions by role overload, job satisfaction and social support moderation. *SA Journal of Industrial Psychology*, 33 (2), 62 – 67.
- Sweeney, B., & Boyle, B. (2005). Supervisory actions, job satisfaction and turnover intentions of Irish trainee accountants. *The Irish Accounting Review*, 12(2), 47-73.