

**THE RELATIONSHIP BETWEEN THE BIG FIVE  
PERSONALITY DIMENSIONS AND JOB SATISFACTION IN  
A PETRO-CHEMICAL ORGANISATION**

**T J Soni, Hons. B. Admin.**

Mini-dissertation submitted in partial fulfilment of the requirements for the Masters degree in  
Industrial Psychology at the Potchefstroomse Universiteit vir Christelike Hoër Onderwys

**Supervisor:** Prof. S. Rothmann

November 2003

**"Not what I have, but what I do is my kingdom"**

Thomas Carlyle  
(1795 – 1881)

## NOTE

The reader is reminded of the following:

- The method of representing references as well as the editorial style prescribed by the *Publication manual (4<sup>th</sup> edition)* of the American Psychological Association (APA) were followed in this dissertation. This practice is in line with the policy of the programme in Industrial Psychology of the PU for CHE to use the APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the *South African Journal of Industrial Psychology* (which agrees largely with the APA style) is used, but the APA guidelines were followed in preparing tables. In line with international practice, the name of the supervisor appears on the article in this mini-dissertation.

## **ACKNOWLEDGEMENTS**

I wish to express my appreciation towards the following people and institutions:

- God, for granting me the strength and courage to complete this article despite all the challenges that arose.
- My husband, Viresh for his understanding and support and the new addition to my life, Sanam, my daughter, for allowing me the 'time' to complete this manuscript.
- Prof. Ian Rothmann, my supervisor, for his support, understanding and respect. You have been a true supporter and for that I thank you.
- Jaco Pienaar for the valuable assistance.
- The employees of the organisation for their time and participation.
- Manisha Mavjee for her assistance with the editing.
- Lastly, to Suhaifa Ballim for her time and knowledge.

## **ABSTRACT**

**Topic:** The relationship between the Big Five personality dimensions and job satisfaction in a petro-chemical organisation.

**Key terms:** Five-Factor model of personality/Big Five personality dimensions, personality dimensions, extroversion, neuroticism, agreeableness, conscientiousness, openness, job satisfaction.

There is relatively little research based on the Big Five personality dimensions and job satisfaction and the relationship thereof. Job satisfaction of employees is a good indication of organisational effectiveness and is influenced by organisational and dispositional factors. The fundamental nature of the dispositional approach is that individuals have stable traits that significantly influence their affective and behavioural reactions to organisational settings. Job satisfaction can be considered a general feeling of well-being experienced by any employee about the work he or she does or as a related collection of attitudes about various aspects of the job. Employees, who perform at higher levels, will most likely make a greater contribution in the organisation. These individual's are more likely to achieve greater status; thus the importance of having satisfied employees in any organisation. The general objective of this study was to determine the relationship between personality dimensions and job satisfaction of engineers in a petro-chemical organisation.

A cross-sectional survey design was used in the empirical study. The sample consisted of 89 junior to middle level engineers within a petro-chemical organisation. The Minnesota Job Satisfaction Questionnaire (MSQ) and the Personality Characteristics Inventory (PCI) were administered. Descriptive statistics were used to analyse the data. Cronbach alpha coefficients, inter-item correlation coefficients and confirmatory factor analysis were used to assess the reliability and validity of the measuring instruments. Pearson and Spearman correlation coefficients were used to specify the relationships between the variables. Multiple regression analysis was used to determine which personality dimensions were the best predictors of job satisfaction.

The current research found that employees who are more stable and introverted tend to be more satisfied with achievement, independence as well as human and technical supervision at the work place. It was also established that extraverted and sociable individuals in the organization are less satisfied with human supervision.

The findings of this research showed that some personality dimensions are related to aspects of job satisfaction. However, overall personality dimensions explained relatively small percentages in the variance of job satisfaction. Because of this, the situational frame of reference, which is most common at present within the workplace, as well as the frame of reference that most supports this research, job satisfaction/dissatisfaction, is alleged to result from the nature of the job or from the conditions at work. This basically epitomizes the effects of situational forces on workers' job attitudes. The results showed that subscales predicted job satisfaction to a greater extent than personality dimensions.

Recommendations for future research were made.

## OPSOMMING

**Tema:** Die verwantskap tussen die Groot Vyf Persoonlikheidsdimensies en werkstevredenheid in 'n petrochemiese organisasie

**Sleutel terme:** Die Vyf-Faktor model van persoonlikheid, Groot Vyf persoonlikheidsdimensies, persoonlikheidsdimensies, ekstroversie, neurotisme, insiklikheid, konsensieusheid, openheid, werkstevredenheid.

Daar is relatief min navorsing wat op die Groot Vyf persoonlikheidsdimensies, werkstevredenheid en die verwantskap tussen hierdie entiteite gebaseer is. Werkstevredenheid onder werknemers is 'n goeie aanduiding van organisasie-effektiwiteit en word deur die organisasie- en disposisionele faktore beïnvloed. Die basiese aard van die disposisionele benadering is dat individue sterk ingesteldhede het wat betekenisvolle invloed het op hul affektiewe en gedragsreaksies in situasies binne die organisasie. Werkstevredenheid kan beskou word as die algemene gevoel wat 'n werknemer het oor die werk wat hy/sy doen; of verskeie ooreenstemmende gesindhede oor verskeie aspekte van sy werk. Werknemers wat op 'n hoër vlak presteer, sal geneig wees tot groter bydraes in die organisasie en dus heel waarskynlik hoër status in die organisasie geniet; vandaar die belangrikheid van tevrede werknemers.

'n Dwarsdeursnee opname-ontwerp is in die empiriese ondersoek gebruik. Die steekproef het 89 junior tot middelvlak-ingenieurs in 'n petrochemiese organisasie ingesluit. Die Minnesota Werkstevredenheidsvraelys (MSQ) en die Persoonlikheidskenmerke-inventaris (PCI) is geadministreer. Beskrywende data is gebruik om die data te analiseer. Cronbach alfa koëffisiënte, inter-item korrelasie-koëffisiënte en bevestigende faktoranalise is gebruik om die betroubaarheid en die geldigheid van die meetinstrumente te evalueer.

Person en Spearman korrelasie-koëffisiënte is gebruik om die verhouding tussen veranderlikes te identifiseer. Die algemene doelwit van hierdie studie was om die verhouding tussen persoonlikheidsdimensies en werkstevredenheid van ingenieurs in 'n petrochemiese organisasie te bepaal.

Meervoudige regressie-ontleding is gebruik om te bepaal watter persoonlikheidsdimensies werkstevredenheid die beste voorspel het. Huidige navorsing het bevind dat die introvert, meer stabiele werknemer, geneig is om gelukkiger te wees met prestasie, onafhanklikheid, sowel as menslike en tegniese toesig by die werk. Daar is voorts vasgestel dat individue wat neig na ekstroversie en sosialiteit minder tevrede was met toesighouding - mensaspekte.

Die bevindinge van hierdie navorsing toon dat sommige persoonlikheidsdimensies verband hou met aspekte van werkstevredenheid. Persoonlikheidsdimensies het egter oor die algemeen relatief klein persentasies in die afwyking van werkstevredenheid uitgewys. Dit impliseer dat die omstandighedsraamwerk, wat tans die mees algemene in die werkplek is, sowel as die verwysingsraamwerk wat hierdie navorsing van werkstevredenheid/ontevredenheid ondersteun, die gevolg sal wees van die aard van die werk of die omstandighede by die werk. Dit som basies die uitwerking van omstandighedsfaktore op die gesindheid van werknemers op. Die resultate het getoon dat subskale werkstevredenheid beter as persoonlikheidsdimensies voorspel het.

Aanbevelings vir toekomstige navorsing is aan die hand gedoen.



## TABLE OF CONTENTS

		<b>Page</b>
	<b>CHAPTER 1 : INTRODUCTION</b>	<b>1</b>
1.1	Problem statement	1
1.2	Research objectives	8
1.2.1	General objectives	8
1.2.2	Specific objectives	8
1.3	Research method	8
1.3.1	Literature review	8
1.3.2	Empirical study	9
1.3.2.1	Research design	9
1.3.2.2	Study population	9
1.3.2.3	Measuring instruments	9
1.3.2.4	Statistical analysis	10
1.4	Division of chapters	11
1.5	Chapter summary	11
	<b>CHAPTER 2 : RESEARCH ARTICLE</b>	<b>12</b>
	<b>CHAPTER 3 : CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS</b>	<b>53</b>
3.1	Conclusions	53
3.2	Limitations	56
3.3	Recommendations	57
3.3.1	Recommendations for the organisation	57
3.3.2	Recommendations for future research	58
	References	59

## LIST OF TABLES

<b>Table</b>	<b>Description</b>	<b>Page</b>
1	Big Five Primary Scales and 12 Related Subscales	23
2	Descriptive Statistics of the Minnesota Satisfaction Questionnaire	27
3	Descriptive Statistics of the Personality Characteristic Inventory	29
4	Correlation between the dimensions of the Minnesota Satisfaction Questionnaire and the PCI	30
5	Correlation between the dimensions of the Minnesota Satisfaction Questionnaire and the Subscales of the PCI	32
6	Regression Analysis of Personality Dimensions and the Achievement Factor of Job Satisfaction	33
7	Regression Analysis of Personality Dimensions and the Advancement Factor of Job Satisfaction	34
8	Regression Analysis of Personality Dimensions and the Authority Factor of Job Satisfaction	35
9	Regression Analysis of Personality Dimensions and the Compensation Factor of Job Satisfaction	35
10	Regression Analysis of Personality Dimensions and the Co-worker Factor of Job Satisfaction	36
11	Regression Analysis of Personality Dimensions and the Independence Factor of Job Satisfaction	37
12	Regression Analysis of Personality Dimensions and the Recognition Factor of Job Satisfaction	37
13	Regression Analysis of Personality Dimensions and the Security Factor of Job Satisfaction	38
14	Regression Analysis of Personality Dimensions and the Supervisor (Human) Factor of Job Satisfaction	39
15	Regression Analysis of Personality Dimensions and the Supervisor (Technical) Factor of Job Satisfaction	39
16	Regression Analysis of Personality Dimensions and the Variety Factor of Job Satisfaction	40

# **CHAPTER 1**

## **INTRODUCTION**

This mini-dissertation is about the relationship between the big five personality dimensions and job satisfaction within a petro-chemical organisation.

In this chapter, the problem statement of the research is provided. Thereafter the research objectives are presented, followed by the research methodology. Lastly, a division of the chapters is specified.

### **1.1 PROBLEM STATEMENT**

For many people having a job, serves functions other than the one of earning a living. Indeed, there appears to be a soul-searching epidemic manifesting in the workplace. For some employees, job satisfaction is a stable, enduring characteristic, independent of the aspects of the job. Changes in job status, pay, working conditions and goals have little effect on the job satisfaction of these people (Schultz & Schultz, 1998).

According to De Klerk (2001), employees are no longer content with a paycheque and benefits; they want meaning and passion. The search for meaning (purpose) in one's life is a spiritual search for meaningfulness of one's existence, for understanding how events fit into a bigger context. A person imposes meaning to find order and satisfaction in his existence. Meaning relates to finding a reason for "being" and a feeling that this "being" is of significance. The term also relates to a sense of fulfilling a higher purpose; a purpose that results in implication that is more than just surviving, but having made, or being able to extract the essence of life. Because work is generally a central part of human existence, much of the spiritual odyssey occurs within the context of the workplace, if personal transformation is to take place, some of it will most likely take place at work (De Klerk, 2001).

Universally, there seems to be a tendency for organisations to drift from local to international, no matter how diminutive the organisation may be. In order to survive, organisations need to become competitive.

Since researchers view that satisfied employees are supposed to be productive employees, being sensitive to their wellness, would be regarded as one of the important factors to improve job satisfaction, for the benefit of both the organisation and the employees (Robbins, 1998). Lately, concern has grown relating to the level of satisfaction that workers derive from their jobs (Chambers, 1999). This is definitely understandable as employees in an organisation are its most important asset. According to Chambers (1999), the assumption is that satisfied workers perform at higher levels than those who are not satisfied.

Employees who perform at higher levels will likely make a greater contribution in the organisation and therefore are more likely to achieve greater status within it; thus the importance of having satisfied employees in any organisation. Schultz and Schultz (1998) support these assumptions by stating that personal characteristics can influence job satisfaction; including among others, age, sex, race, intelligence, use of skills and job experience. Although these factors cannot be tainted by employing organisations, they can be used to predict satisfaction amongst various groups of workers. Organisations measure job satisfaction primarily because of its presumed direct relationship to the short-term goals of cost reduction through increased individual productivity and reduced absences, errors, and turnover (Cranny, Smith & Stone, 1992)

Although there are specific variations which are brought by the definitions of job satisfaction, this is supported by the generic definition of Cranny et al. (1992), which states that job satisfaction is an affective (emotional reaction) to a job that is the result of employees' comparison of the real outcomes with the outcomes they hoped for. According to Isen and Baron (1991), job satisfaction, as an attitude, involves several basic components: specific beliefs about one's job, behaviour tendencies (intentions) with regards to it, and feelings about it. The last of these components is clearly linked to affective states. Relating to aspects of the above definition, researchers such as Weiss and Cropanzano (1998) define job satisfaction as the process whereby employees seek to achieve and maintain correspondence with their environment.

According to Kreitner and Kinicki (2001), research demonstrates a moderate relationship between job characteristics and satisfaction. Spector (1997) highlights the fact that, study of the causes and consequences of employee attitudes is one of the major domains of industrial-organisational psychology and organizational behaviour.

He states that more studies have been done to understand job satisfaction than any other variable in organisation. Locke (1976) corroborates Spector's comments by speculating that extensive research has been conducted on the subject of job satisfaction over the last quarter century. For example, every year since 1949, the Gallup Poll asked a representative sample of U.S. workers the following question: On the whole, would you say you are satisfied or dissatisfied with the work you do? The results have shown consistently that only 10 to 13% of the workers questioned each year say that they are dissatisfied with their jobs. These findings were confirmed in a 1995 Gallup Poll of a representative sample of 657 adults. The results indicated that 88% of the respondents were "very satisfied" or "somewhat satisfied" with their jobs. The point being, that, for nearly 50 years job satisfaction has been measured, monitored and researched.

Robbins (1998) corroborates Locke's findings by stating that extensive review of the research on job satisfaction indicates that the following are conducive to job satisfaction:

- Mentally challenging work
- Equitable rewards, such as pay and promotion policies
- Working conditions
- Working with co-workers and bosses who are friendly and supportive.

Research findings suggest that job satisfaction is not a static state but subject to influence and modification from forces within and outside an individual, that is, his or her own personal characteristics and the immediate working environment (Baran, 1986).

Job satisfaction is a reaction to a job, which stems from the incumbent's comparison of actual outcomes with the required outcomes (Cranny et al., 1992). Locke (1976) defined job satisfaction as a function of the apparent relationship between what one wants from one's job and what one perceives it as offering. This definition points to the importance of both dispositional and situational factors as determinants of job satisfaction. Kreitner and Kinicki, (2001) define job satisfaction as "an affective or emotional response toward various facets of one's job" (p. 224). Personality can be defined as a "relatively enduring pattern of recurrent interpersonal situations which characterise a human life" Sullivan (1953b, p. 110-111).

According to Coetzer and Rothmann (2001), interactional explanations of job satisfaction are generally accepted, but the weight attached to dispositional and situational aspects diverge. Dispositionists (e.g. House, Shane & Herold, 1996) have contented that work attitudes and behaviour are determined by, or at least directly linked to, individual attributes. Dispositional variables can be described as personality characteristics, needs, attitudes, preferences and motives that result in a tendency to react to situations in a predetermined manner (House et al., 1996). The essence of the dispositional approach is that individuals possess stable traits that significantly influence their affective and behavioural reactions to organizational settings (Davis-Blake & Pfeffer, 1989).

The role of dispositional factors or traits as determinants of job satisfaction has been examined in three recent empirical studies. Pulakes and Schmitt (1983) reported that high school students' instrumentalities for job-related outcomes measured prior to taking a job were predictive of subsequent job satisfaction. In their view, this finding suggests that "personal selection might benefit from more attention to selecting individual who have a higher probability of being satisfied" (p. 311).

Staw, Bell and Clausen (1986) conducted studies designed to assess the impact of traits on job satisfaction. They found that adolescent "affective disposition" was correlated with adult job affect. In contrast to the Staw et al. (1986) study, Staw and Ross (1985) sought to explore both traits and job factors as determinants of job satisfaction, consistent with Locke's definition. Gerhart (1987) suggested that they found satisfaction in 1966 was the strongest and most significant predictor of 1971 job attitudes. Changes in pay and job status did not account for nearly as much variance as prior job attitudes.

Strümpfer, Danana, Gouws and Viviers (1998), underline that, in the situational frame of reference – which is unexceptional at present – job satisfaction/dissatisfaction is believed to be the result from the nature of the job or from the working conditions, that is, it represents the effects of situational forces on the workers' job attitudes. It is assumed to be associated with worker's perceptions that the organisation is acting in their interest. Situationists (e.g. Davis-Blake & Pfeffer, 1989, p. 92), on the other hand, have disputed that the world of work, "job characteristics, organisational situations and economic conditions affect people much more strongly than do individual differences – to the point that they tend to consider dispositional research as futile".

Arvey, Carter and Buerkley (1991) suggested that dispositional factors account for 10-30% of the variance in job satisfaction, that 40-60% of the variance is associated with situational factors, and that interactive elements account for 10-20%.

In the situational frame of reference, which is most common at present within the workplace, as well as, the frame of reference that most supports this research, job satisfaction/dissatisfaction is alleged to result from the nature of the job or from the conditions at work. This basically epitomizes the effects of situational forces on workers' job attitudes. Strümpfer et al. (1998), highlight that situational forces are assumed to be related to employees' perceptions that the organisation is executing activities in their interest, for instance, by creating favourable physical work environment, recognising and rewarding desirable performance and /or providing reward equity. At this point it is important to note the following, Smith, Kendall and Hulin (1969, p 6), stipulated that, "[J]ob satisfactions are feelings or affective responses to facets of the situation". However, reviews (e.g. Arvey et al., 1991; Fried & Ferris, 1987; Loher, Noe, Moeller & Fitzgerald, 1985) show that, although there are several situational variables that correlate significantly with job satisfaction, the correlations leave significant amounts of variance unexplained.

Traditionally industrial psychologists have questioned the usefulness of personality measures in predicting job-related criteria (such as job satisfaction), because of pessimistic conclusions of early reviews of the topic (e.g. Guion & Gottier, 1965) and concerns that most personality measures are faked (Reilly & Warech, 1993). However, evidence has suggested that personality measures are valid predictors of diverse job-related criteria (Goldberg, 1993). Unlike many measures of cognitive ability, personality measures typically do not have adverse impact on disadvantaged employees (Hogan, Hogan & Roberts, 1996) and thus can enhance fairness in personnel decisions. Furthermore, intentional faking does not attenuate the criterion-related validity of personality measures (Ones, Viswesvaran & Reiss, 1996).

Dunn, Mount, Barrick and Ones (1995) showed that emotional stability was one of the most important attributes negatively related to counter-productivity. Most meta-analyses have suggested that emotional stability is positively related with job performance in virtually all jobs (Anderson & Viswesvaran, 1998; Barrick & Mount, 1991, 1993; Dunn et al. 1995; Salgado, 1997; Tett, Jackson & Rothstein, 1991). Extraversion has been publicised to be a valid predictor of job performance (Barrick & Mount, 1991; Mount, Barrick & Steward,

It is essential to note, however, that only 3 to 5% of the variance in job satisfaction was predicted by personality. Therefore, they questioned the practical utility of either personality or congruence in predicting job satisfaction (Tokar & Subich, 1997).

Tokar and Subich (1997), Toker, Fisher and Subich (1998) and Day, Bedien and Conte (1998) found a positive relationship between extraversion and job satisfaction. According to Judge, Higgins, Thoresen and Barrick (1999), agreeable individuals would compromise their own job satisfaction to make others happy. Day and Bedeian (1995) and Schneider (1999) found that agreeableness is not related to job satisfaction. Schneider, (1999) who studied the relationship between conscientiousness and job satisfaction in various occupations, found significant relationships.

These studies have all been carried out elsewhere in the world and in other contexts. In South Africa, the use of psychometric tests in studies of job satisfaction is still a controversial and sensitive issue. The downside in the research of personality within the South African context is that the demands of legal proceedings and the associated guidelines and other pronouncements from the Government, courts and professional associations may lead to a lack of systematic study of individual differences (Rothmann, Meiring, Van Der Walt & Barrick, 2002). If relationships between personality dimensions and job satisfaction are found, the results could be used for recruitment, selection and career development purposes. Research regarding the relationship between personality dimensions and job satisfaction is therefore necessary.

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

- How is job satisfaction and its relationship to the big five personality dimensions conceptualised in the literature?
- What are the relationships between personality dimensions and job satisfaction in a petro-chemical organisation?
- Can personality dimensions be used to predict the job satisfaction of employees in a petro-chemical organisation?



## **1.2 RESEARCH OBJECTIVES**

### **1.2.1 General objective**

The general objective of this study is to establish the relationship between the Big Five Personality Dimensions and job satisfaction in a petro-chemical organisation.

### **1.2.2 Specific objectives**

The specific research objectives are to:

- Conceptualise the relationship between the big five personality dimensions and job satisfaction.
- Determine the relationships between personality dimensions and job satisfaction in a petro-chemical organisation.
- Establish whether personality dimensions can be used to predict job satisfaction of employees in a petro-chemical organisation.

## **1.3 RESEARCH METHOD**

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

### **1.3.1 Literature review**

The literature review focuses on previous research that has been conducted on the big five personality dimensions and job satisfaction in a petro-chemical organisation. The results of this research will be used to determine the relationship between the big five personality dimensions and job satisfaction on employees in a petro-chemical organisation.

## **1.3.2 Empirical study**

### **1.3.2.1 Research design**

A survey design is used to reach the research objectives. The specific design is the cross-sectional survey design, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. The design can also be used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to the descriptive and predictive functions associated with correctional research.

### **1.3.2.2 Study population**

The study population includes employees of a petro-chemical organisation in the Mpumalanga region ( $N = 89$ ). The total population of junior to middle level engineers ( $N = 89$ ) was included in the empirical study. All engineers have either a Degree or B Tech in an engineering field.

### **1.3.2.3 Measuring instruments**

The Personality Characteristics Inventory (PCI) is used to assess the five factor model (FFM) personality dimensions. It was designed to measure the characteristics of the environment adequately, including a description of the activities involved, the traits and abilities acquired, and the personal styles and values that are rewarded in the environment. It contains 120 items measuring the FFM constructs: 30 each for Conscientiousness (Alpha = 0,74) and Extraversion (Alpha = 0,82), and 20 each for Agreeableness (Alpha = 0,77), Emotional Stability (Alpha = 0,82), and Openness (Alpha = 0,75). Each item is rated on a 3-point Likert type scale (1 = disagree and 3 = agree). The PCI scales demonstrate adequate convergent validity and divergent validity with other measures of the FFM such as the Neo-Personality Inventory (Costa & McCrae, 1992) and the Hogan Personality Inventory (Hogan, 1986).

The Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England & Lofquist, 1967) is used to measure employees' job satisfaction and its components.

## **1.4 CHAPTER DIVISION**

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

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusion, shortcomings and recommendations

## **1.5 CHAPTER SUMMARY**

In this chapter the problem statement and motivation were discussed. The specific objectives of the research were formulated, the research method discussed and an indication was given of how the statically analysis had been performed.

The research article is presented in Chapter 2:

## **CHAPTER 2**

### **RESEARCH ARTICLE**

# THE RELATIONSHIP BETWEEN THE BIG FIVE PERSONALITY DIMENSIONS AND JOB SATISFACTION IN A PETRO-CHEMICAL ORGANISATION

T.J. SONI

S. ROTHMANN

*WorkWell: Research Unit for People, Policy and Performance, Faculty of Economic and Management Sciences, Potchefstroom University for CHE*

## ABSTRACT

The objective of this research was to determine the relationship between the Big Five personality dimensions and job satisfaction. The study population ( $N = 89$ ) consisted of junior to middle level engineers within a petro-chemical organisation. The Minnesota Satisfaction Questionnaire (MSQ) and the Personality Characteristic Inventory (PCI) were administered. The results showed that the subscales predicted job satisfaction to a greater extent than the dimensions itself. The findings of this research showed that some personality dimensions are related to aspects of job satisfaction. Overall personality dimensions however, explained relatively small percentages in the variance of job satisfaction. Hence, the situational frame of reference which alleges that job satisfaction is a result that occurs from the nature of the job or from the conditions at work environment most supports the findings of this research.

## OPSOMMING

Die doel van hierdie navorsing was om die verband tussen die Groot Vyf persoonlikheidsdimensies en werkstevredenheid te bepaal. Die studiepopulasie ( $N = 89$ ) het bestaan uit junior en middelvlak ingenieurs in 'n petro-chemiese maatskappy. Die Minnesota Satisfaction Questionnaire (MSQ) en die Personality Characteristics Inventory (PCI) is geadministreer. Hierdie navorsing het bevind dat die subskale werkstevredenheid tot 'n groter mate as die dimensies self, voorspel. Die bevindinge van hierdie navorsing toon dat sommige persoonlikheidsdimensies verband hou met werkstevredenheid. Persoonlikheidsdimensie het egter oor die algemeen relatief lae persentasies in die afwyking van werkstevredenheid uitgewys. Die omstandighedsraamwerk van verwysing wat beweer dat werkstevredenheid 'n gevolg is wat voortspuit uit die aard van die werk of die omstandighede in die werkplek, ondersteun dus die bevindinge van hierdie navorsing die beste.

For many having a job, serves functions other than the one of earning a living. According to Spector, (1997), job satisfaction refers to the degree to which people like their jobs. Some people enjoy work and find it to be a central part of life. Employees are no longer content with a paycheque and benefits; they want meaning and passion. Crow and Hartman (1995) believe that there is too much emphasis on job satisfaction and its impact on organisational effectiveness: so much so, that many employees now expect job satisfaction from their employers as an entitlement. They believe that employers need to eradicate sources of dissatisfaction and employees need to take responsibility for their own happiness.

Job satisfaction is a reaction to a job, which stems from the incumbent's comparison of actual outcomes with the required outcomes (Cranny, Smith & Stone, 1992). Locke (1976) defined job satisfaction as "a function of the perceived relationship between what one wants from one's job and what one perceives it as offering". Presumably, this definition points to the importance of both dispositional and situational factors as determinants of job satisfaction. According to Isen and Baron (1991), job satisfaction, as an attitude, involves several basic components: specific beliefs about one's job, behaviour tendencies (intentions) with regards to it, and feelings about it. The last of these components is clearly linked to affective states.

According to Clement (1992), the emphasis on job satisfaction is a lasting legacy of sensitivity training and attitudinal surveys. Their research has shown that even though these development tools are meant to attain employee opinions they emphasise the importance of job satisfaction and ignore other factors vital to organisational effectiveness such as, improvements in management techniques and the elimination of conditions that inhibit performance. As a result of this, employers focus on satisfying employees' current need rather than on understanding their dispositions towards their jobs. Crow and Hartman (1995) highlight their opinion that employers should not only focus on improving job satisfaction in an effort to improve organisational effectiveness, because an employee's level of job satisfaction is a result of a multiplicity of factors, most of which cannot be influenced by the employer.

It is a natural feeling that an employee's attention is captivated when a frustrating situation is being experienced. This is not the case when it comes to job satisfaction. We are not usually preoccupied with sources of job satisfaction to the extent that it deteriorates or enhances an employee's performance. The psychological rush from a salary increase, for example, is

usually short-lived. In the same way, the good feeling associated with praise for a good job done may cause the employee to work harder for a while. They soon return, however, to the way they felt before the salary adjustment or praise.

Job satisfaction is important for the effective productivity of any organisation. Oshagbemi (1999) and Roznowski and Hulin (1992) support this by stating that job satisfaction is related to the physical and psychological well-being of employees and that job dissatisfaction is related to absenteeism, trade union activities and psychological withdrawal. Agho, Price and Mueller (1992) also highlight the fact that, individuals who are satisfied with their jobs, are good ambassadors for their organisations.

Job satisfaction can be considered as a global feeling about the work an individual does or as a related collection of attitudes about various aspects or facets of the job (Spector, 1997). A job satisfaction facet can relate to any aspect of a job. Facets that are frequently assessed include rewards such as pay or fringe benefits, other people such as supervision, the nature of the work itself or personal growth and the organisation itself.

Universally, there seems to be a tendency for organisations to drift from local to international, no matter how diminutive the organisation may be. Since researchers view that satisfied employees are supposed to be productive employees, being sensitive to their wellness, would be regarded as one of the important factors to improve job satisfaction, for the benefit of both the organization and the employees (Robbins, 1998). In order to be able to retain employees long enough to transfer their knowledge to their successors, organisations need to fulfil not only their own vision and strategy, but the individuals as well. Day, Bedeian and Conte (1998), employees who are dissatisfied with their jobs, compared with those who are satisfied, have a higher propensity to quit.

Robbins (1998) corroborates Locke's findings by stating that extensive review of the research on job satisfaction indicates that the following are conducive to job satisfaction:

- Mentally challenging work
- Equitable rewards, such as pay and promotion policies
- Working conditions

- Working with co-workers and bosses who are friendly and supportive.

Research findings suggest that job satisfaction is not a static state but subject to influence and modification from forces within and outside an individual, that is his or her own personal characteristics and the immediate working environment (Baran, 1986).

Spector (1997) denotes that important influences of job satisfaction can be classified into two major categories. First, the job environment itself and factors associated with the work an individual does. This includes how people are treated, the nature of the job tasks, relations with other people at work and the rewards work convey. Secondly, there are individual factors that the person brings to the job. This includes both personality and prior experience. The above two categories together influence employee job satisfaction.

According to Coetzer and Rothmann (2001), interactional explanations of job satisfaction are generally accepted, but the weight attached to dispositional and situational aspects diverge. Dispositionists (e.g. House, Shane & Herold, 1996) have contented that work attitudes and behaviour are determined by, or at least directly linked to, individual attributes. Dispositional variables can be described as personality characteristics, needs, attitudes, preferences and motives that result in a tendency to react to situations in a predetermined manner (House et al. 1996). The essence of the dispositional approach is that individuals possess stable traits that significantly influence their affective and behavioural reactions to organizational settings (Davis-Blake & Pfeffer, 1989).

Strümpfer, Danana, Gouws and Viviers (1998), underline that, in the situational frame of reference – which is unexceptional at present – job satisfaction/dissatisfaction is believed to be the result from the nature of the job or from the working conditions, that is, it represents the effects of situational forces on the workers' job attitudes. It is assumed to be associated with worker's perceptions that the organisation is acting in their interest. Situationists (e.g. Davis-Blake & Pfeffer, 1989, p 92), on the other hand, have disputed that the world of work, "job characteristics, organisational situations and economic conditions affect people much more strongly than do individual differences – to the point that they tend to consider dispositional research as futile".



Arvey, Carter and Buerkley (1991) suggested that dispositional factors account for 10-30% of the variance in job satisfaction, that 40-60% of the variance is associated with situational factors, and that interactive elements account for 10-20%.

In the situational frame of reference, which is most common at present within the workplace, as well as, the frame of reference that most supports this research, job satisfaction/dissatisfaction is alleged to result from the nature of the job or from the conditions at work. This basically epitomizes the effects of situational forces on workers' job attitudes. Strümpfer et al. (1998), highlight that situational forces are assumed to be related to employees' perceptions that the organisation is executing activities in their interest, for instance, by creating favourable physical work environment, recognising and rewarding desirable performance and /or providing reward equity. At this point it is important to note the following, Smith, Kendall and Hulin (1969, p. 6), stipulated that, "Job satisfactions are feelings or affective responses to facets of the situation". However, reviews (e.g. Arvey et al., 1991; Fried & Ferris, 1987; Loher, Noe, Moeller & Fitzgerald, 1985) show that, although there are several situational variables that correlate significantly with job satisfaction, the correlations leave significant amounts of variance unexplained.

In the mid-1980s, there was increased interest in personality effects on job satisfaction. Studies have provided convincing evidence that personality is clearly a factor that impacts on employees' job satisfaction. With the big five, a model has been created that shows robustness across cultures (e.g. Church & Katibak, 1989), across media (e.g. Costa & McCrae, 1988b), across age groups (e.g., Digman & Takemoto-Chock, 1981), and which offers a model for unifying the field of personality attributes (Goldberg, 1993). In fact, some researchers have argued that there may be genetic predispositions to liking or disliking a job (Arvey, Bouchard, Segal & Abraham, 1989).

Industrial psychologists have questioned the usefulness of personality measures in predicting job-related criteria (such as job satisfaction), because of pessimistic conclusions of early reviews of the topic (e.g. Guion & Gottier, 1965) and concerns that most personality measures are faked (Reilly & Warech, 1993). However, evidence has suggested that personality measures are valid predictors of diverse job-related criteria (Goldberg, 1993).

Unlike many measures of cognitive ability, personality measures typically do not have adverse impact on disadvantaged employees (Hogan, Hogan & Roberts, 1996) and thus can enhance fairness in personnel decisions. Furthermore, intentional faking does not attenuate the criterion-related validity of personality measures (Ones, Viswesvaran & Reiss, 1996).

These studies have all been carried out elsewhere in the world and in other contexts. In South Africa, the use of psychometric tests in studies of job satisfaction is still a controversial and sensitive issue. Research regarding the relationship between personality dimensions and job satisfaction is therefore necessary. If relationships between personality dimensions and job satisfaction are found, the results could be used for recruitment, selection and career development purposes.

### **Job satisfaction and personality dimensions**

Job satisfaction is an attitudinal variable that can be a diagnostic indicator of how an individual is doing in one of the major realm of life. Many organisational conditions can lead to poor job attitudes. Sometimes events and factors outside the working environment can have negative effects on job satisfaction. These can include personal problems and the personality of the individual.

Schneider and Dachler (1978) noticed in a longitudinal study that when they assessed job satisfaction repeatedly over time, it was remarkably stable. These results were also attained by Staw and Ross (1985), who followed up on the job satisfaction consistency idea and assessed job satisfaction in people who changed employers and/or job type. Their results showed that job satisfaction was relatively stable in people who changed jobs. They concluded that job satisfaction was in part due to personality. Some people are predisposed to like their jobs, whereas others are not. Schneider and Dachler's study led them to hypothesise that job satisfaction was caused in part by an employee's personality rather than just the job. This is evident in research that investigated the implications of the Big Five model on interpersonal relations. To this end, high extraversion and neuroticism, along with low agreeableness and openness to experience were shown to be consistently related to anger, hostility, instability, and dissatisfaction in the individual's job (Buss, 1991, 1992; Bentler & Newcomb, 1978; Kelly & Conley, 1987).

Personality can be defined as a “relatively enduring pattern of recurrent interpersonal situations which characterise a human life” Sullivan (1953b, p. 110-111). Various studies have been done to assess the role of personality dimensions in job satisfaction. De Fruyt and Mervielde (1999), Tokar and Subich (1997), Schneider (1999), Vinchur, Schippmann, Switzer and Roth (1998) and Wright, Kacmar, McMahan and Deleeuw (1995) found that extraversion and conscientiousness predict employee job satisfaction in various contexts. Furthermore, Crapanzo, James and Konovsky (1993) found that low neuroticism is a good predictor of job satisfaction of employees. Openness to experience was found to be successful in consulting (Hamilton, 1988), training (Barrick & Mount, 1991; Vinchur et al. 1998) and adopting to change (Raudsepp, 1990). Furnham and Zacherl (1986), using the Eysenck Personality questionnaire (Eysenck & Eysenck, 1979) found neuroticism to be significantly related to scaled measuring satisfaction with the amount of work, co-workers and pay.

In two studies by Levin and Stokes (1989), negative affectivity (in the big five personality taxonomy, neuroticism) was found to be negatively and significantly associated with satisfaction, but the association was not strong. The affective and cognitive bias of negative affectivity seems likely to influence how people experience and evaluate their jobs.

The Five-Factor Model (FFM) posits that there is a structure to individual differences in human behaviour, such that the traits of personality can be reduced to five orthogonal factors of personality – the so called ‘Big Five’ (Paunonen & Jackson, 2000). Gordon Allport (1961, p. 28), defines personality as “the dynamic organisation within the individual of those psychophysical systems that determine his characteristic behaviour and thought”. Allport’s definition of personality is, on analysis, quite complex and complete. It recognises that personality is determined by the interaction of biological and psychological process; personality is an organised whole consisting of interdependent physical, cognitive and psychosocial aspects; personality is dynamic, in other words, it develops, grows and changes as the individual matures and learns; changes or variations in how personality is expressed may also from time to time or across situations; personality, through the psychophysical systems, motivates and directs behaviour; personality provides recognisable or characteristic unique attributes, thoughts and behaviours, which enable the individual to adapt in his or her environment” (Allport, 1961, p. 28). Cattell (1965, p. 25) also recognises that personality, “is a function of people and all their attributes in interaction with their environment”.

“Personality is defined as the combination of stable physical and mental characteristics that give the individual his or her identity. These characteristics or traits - including how one looks, thinks, acts and feels – are the product of interacting genetic and environmental influences” (Kreitner & Kinicki, 2000, p. 147).

Researchers agree that almost all personality measures could be categorised according to the five-factor model of personality (Goldberg, 1990; Hogan et al. 1996). It seems as if the five personality dimensions are relevant to different cultures (McCrae & Costa, 1997) and that the five personality factors have a genetic basis (Digman, 1989) and is probably inherited (Jang, Livesley & Vernon, 1996).

According to Bergh and Theron (1999), the FFM has developed into an approach that perhaps now enjoys the most support as an integrative trait description of personality (Digman 1990; Goldberg 1993; McCrae & John, 1992), despite criticism (Block 1995). Barrick, Mount and Judge (2001) response relating to the concerns were that a number of theoretical and empirical developments supporting the Big Five model have emerged in the past years. This evidence includes: (a) demonstrations of the genetic influences on measures constituting the five factor model, with (uncorrected) heritability estimates ranging from 0,39 for agreeableness to 0,49 for extraversion (Bouchard, 1997); (b) the span (Conley, 1984; Costa & McCrae 1988b); and (c) the replicability of the five factor structure across different theoretical frameworks, using different assessment approaches including questionnaires and lexical data, in different cultures, with different languages, and using ratings from different sources (e.g. Digman & Shmelyov, 1996).

Bergh and Theron (1999) indicate that Wiggins (1996) provide their readers with an in-depth account of the developmental nature of the big five personality dimensions, from its creation by Thurstone in the 1930s, through the many additions and participation from other researchers, Tupes and Christal, Norman, Eysenck, Guilford and Cattell, to its revival in the 1980s, through to the present where it is affirmed that the model really represents a new, integrative way of describing, assessing and studying personality. It was due to the constant research by Costa and McCrae that revived interest in this personality model.

The five dimensions of the five-factor model of personality are neuroticism, extraversion, openness, agreeableness and conscientiousness (Costa & McCrae, 1985, 1992). Neuroticism involves the degree to which the individual is insecure, anxious, depressed, and emotional opposed to calm, self-confident and cool. Extraversion involves the extent to which individuals are gregarious, sociable, assertive and active, as opposed to reserved, timid and quiet. Openness to experience defines individuals who are creative, curious and cultured as opposed to practical with narrow interests.

Agreeableness involves the degree to which individuals are cooperative, warm and agreeable as opposed to cold, disagreeable and antagonistic. Conscientiousness concerns the extent to which individuals are hardworking, organised, dependable and persevering as opposed to lazy, disorganised and unreliable.

Even though some authors have categorised the factors differently, factor analysis and content analysis of a great number of personality questionnaires show that there is a general consensus regarding the meaning of the dimensions and that differences are minor (John, 1990; Mount & Barrick, 1995).

- **Neuroticism.** Individuals that score high on this dimension may be at risk of developing some psychiatric problems. It is also an indication that a person is prone to being less able to control impulses, experience irrational ideas, and cope poorly with stress. However, a low score on neuroticism is indicative of emotional stability. Dunn, Mount, Barrick and Ones (1995) showed that the opposite of neuroticism, namely emotional stability, is the second most important characteristic that affects the employability of candidates. Warr, Cook and Wall (1979) used a six-item scale to measure anxiety about a variety of current and future concerns and found low but significant negative correlations with various components of their job satisfaction measure.
- **Extraversion.** Positive feelings and experiences, which are seen as a positive affect, characterise extraversion (Clark & Watson, 1991). It is important to note that introverts are not necessarily on the opposite end, that they are independent rather than followers, even-paced rather than sluggish and reserved rather than unfriendly.

Tokar and Subich (1997), Toker, Fisher and Subich (1998) and Day et al. (1998) found a positive relationship between extraversion and job satisfaction. Furnham and Zacherl (1986) found that extraversion on the Eysenck Personality Questionnaire correlate significantly with overall job satisfaction.

- **Openness.** Individuals, who tend to be conventional in behaviour and conservative in outlook, score low in openness of experience. Emotional responses are somewhat muted and they prefer the familiar to the unusual.

A tendency to experience the unconventional, a preparedness to entertain new ethical, political and social ideas and a willingness to question authority, characterise people who score high on openness of experience. Open individuals are curious about both inner and outer worlds, and their lives are experientially richer. A willingness to entertain novel ideas and unconventional values, enable such individuals to experience both positive and negative emotions more keenly as oppose to individuals that are closed (Coetzer & Rothmann, 2001).

- **Agreeableness.** An agreeable person is sympathetic to others, fundamentally unselfish and eager to help, and in return, believe that others will be equally supportive. In contrast the disagreeable/antagonistic person is sceptical of others' intentions, egocentric, and competitive rather than co-operative. According to Judge, Higgins, Thoresen and Barrick (1999), agreeable individuals would compromise their own job satisfaction to make others happy. It is important to note that Day and Bedeian (1995) and Schneider (1999) found that agreeableness is not related to job satisfaction.
- **Conscientiousness.** Self-control and the active process of planning, organising and carrying out tasks is referred to as conscientiousness (Barrick & Mount, 1993). Conscientiousness has a down side, such as behaviour leading to workaholic behaviour, annoying fastidiousness or compulsive neatness. Low scorers may not necessarily lack moral principles, but they are less exacting in applying them. Schneider (1999), who studied the relationship between conscientiousness and job satisfaction in various occupations, found significant relationships.

The Big Five personality dimensions with their characteristic traits or subscales are illustrated below in Table 1.

Table 1

*Big Five Primary Scales and 12 Related Subscales* (PCI User's Manual, p. 7)

<b>Primary Scales and Definition</b>	<b>Corresponding Subscales</b>
<b>Agreeableness:</b> The tendency to be courteous, helpful, trusting, good-natured, cooperative, tolerant, and forgiving.	<ul style="list-style-type: none"> <li>• Cooperation</li> <li>• Consideration</li> </ul>
<b>Extraversion</b> The tendency to be sociable, gregarious, talkative, assertive, adventurous, active, energetic, and ambitious	<ul style="list-style-type: none"> <li>• Sociability</li> <li>• Need for recognition</li> <li>• Leadership orientation</li> </ul>
<b>Conscientiousness</b> The tendency to be hardworking, dependable, efficient, and achievement striving	<ul style="list-style-type: none"> <li>• Dependable</li> <li>• Achievement Striving</li> <li>• Efficiency</li> </ul>
<b>Stability</b> The tendency to handle stress, to maintain an even temperament, and to have a high degree of composure and self-confidence across most situations.	<ul style="list-style-type: none"> <li>• Even-temperament</li> <li>• Self-confidence</li> </ul>
<b>Openness:</b> The tendency to be imaginative, cultured, curious, polished, original, broadminded, intelligent, and artistically sensitive	<ul style="list-style-type: none"> <li>• Abstract thinking</li> <li>• Creative thinking</li> </ul>

These personality dimensions have been verified by assessments in a broad range of personality questionnaires in various fields, as well as applications in fields such as psychopathology and work-related assessments (Barrick & Mount, 1991, 1993; Strack & Lorr 1994; Schneider & Hough 1995).

Crapanzo et al. (1993) confirmed that low neuroticism and extraversion were good predictors of job satisfaction. According to Rust (1999) there has been a tendency within working populations for low agreeableness (tough-mindedness) to correlate with high openness to experience opportunities and obstacles in the working environment.

Apparently this is the result of the relationship between status and education, because tough-minded individuals are generally more senior and at a higher educational level. Such individuals tend to be more able, which in turn relates to lower scores on conformity. High conformity scorers are more willing to take things on faith while low conformity scorers aim to change their own way of thinking. This is the result of the relationship between status and education. Tough-minded individuals are generally more senior and at a higher educational level.

Tokar and Subich (1997) noted the relations between greater extraversion and greater job satisfaction and lesser neuroticism and greater job satisfaction seem logically consistent. They are supportive with the literature which suggests that neuroticism versus emotional stability and negative affectivity are related and extraversion versus introversion and positive affectivity are related (Costa & McCrae, 1980). These results also are consistent with suggestions of Tranberg et al. (1993) and Meir (1995) regarding the importance of personality in predicting job satisfaction, although no support emerged for their hypothesis that personality moderates the congruence-satisfaction relation. It is essential to note, however, that only 3 to 5% of the variance in job satisfaction was predicted by personality. Therefore, they questioned the practical utility of either personality or congruence in predicting job satisfaction (Tokar & Subich, 1997).

## **METHOD**

### **Research design**

A survey design was used to reach the research objectives. This specific design is the cross-sectional survey design, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. The design can also be used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited to the descriptive and predictive functions associated with correctional research.



## **Sample**

The study population includes employees of a petro-chemical organisation in the Mpumalanga region. The total population of junior to middle level engineers ( $N = 89$ ) was included in the empirical study. All engineers have either a Degree or B Tech in an engineering field.

## **Measuring instruments**

The *Personality Characteristics Inventory (PCI)* assesses the five factor model (FFM) personality dimensions. It was designed to measure the characteristics of the environment adequately, including a description of the activities involved, the traits and abilities acquired, and the personal styles and values that are rewarded in the environment. It contains 120 items measuring the FFM constructs: 30 each for Conscientiousness ( $\alpha = 0,74$ ) and Extraversion ( $\alpha = 0,82$ ), and 20 each for Agreeableness ( $\alpha = 0,77$ ), Emotional Stability ( $\alpha = 0,82$ ), and Openness ( $\alpha = 0,75$ ). Each item is rated on a 3-point Likert type scale (1 = disagree and 3 = agree). The PCI scales also demonstrate adequate convergent validity and divergent validity with other measures of the FFM such as the Neo-Personality Inventory (Costa & McCrae, 1992) and the Hogan Personality Inventory (Hogan, 1986).

The *Minnesota Satisfaction Questionnaire (MSQ)* (Weiss, Dawis, England & Lofquist, 1967) was used to measure employees' job satisfaction and its components. The MSQ consists of 100 items that measure 20 components of job satisfaction. Test retest reliabilities of 0,70 and 0,80 were found over a span of a week and a year respectively (Cook, Hepworth, Wall & Warr, 1981). Rothmann (2000) found a Cronbach alpha coefficient of 0,96 for total job satisfaction. The mean inter-item correlation is 0,22, which is acceptable for broad higher order constructs (Clark & Watson, 1995). According to Durham and Smit (1997), the MSQ provides a valid indication of job satisfaction

## Statistical analysis

The statistical analysis was carried out by means of the SAS program (SAS Institute, 1996). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients inter-item correlation coefficients and confirmatory factor analysis were used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995).

Inter-item correlation coefficients were used to determine whether the internal constituencies of the constructs were too high that they affected the validity. Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In the case where the distribution of scores is skew, Spearman correlation coefficients were computed. A cut-off of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Multiple regression analysis was conducted to determine the proportion of variance in the dependent variable (job satisfaction) that is predicted by the independent variable (Big Five personality dimensions). In the case of multiple regressions, the effect size, which indicates practical significance, is given by the following formula (Steyn, 1999):

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

A cut-off point of 0,30 (medium effect, Cohen, 1988) set for the practical significance of  $f^2$ . Only when a random sample is drawn from a population is the statistical significance of a relationship appropriate, since the test result obtained from the sample is used to establish whether two variables are related within the population.

## RESULTS

The descriptive statistics, Cronbach alpha coefficients and mean inter-item correlation coefficients of the MSQ scales are reported in Table 2.

Table 2

*Descriptive Statistics of the Minnesota Satisfaction Questionnaire (N=89)*

Item	Mean	SD	Skewness	Kurtosis	Mean <i>r</i>	$\alpha$
Ability	24,66	8,77	-0,84	-0,49	0,70	0,92
Achieve	26,41	5,96	-0,46	-0,95	0,38	0,73
Active	24,31	6,24	-0,44	0,10	0,35	0,73
Advance	19,79	8,91	-0,15	-1,15	0,71	0,92
Authority	25,84	6,49	-0,60	-0,22	0,58	0,87
Company Policy	24,36	6,92	-0,17	-1,29	0,54	0,85
Compensation	20,65	7,70	-0,20	-1,06	0,61	0,88
Co-workers	28,83	4,68	-0,73	-0,09	0,45	0,77
Creativity	26,90	6,30	-0,91	0,67	0,44	0,80
Independence	29,21	3,92	-0,86	1,06	0,28	0,64
Moral Values	29,18	4,25	-1,03	0,78	0,20	0,58
Recognition	22,51	6,94	-0,41	-0,28	0,62	0,89
Responsibility	25,80	5,52	-0,89	0,50	0,38	0,75
Security	27,72	4,49	-0,44	-0,28	0,29	0,63
Social Services	28,35	4,52	-1,49	4,67	0,38	0,75
Social Status	25,34	5,10	-0,03	-0,85	0,26	0,58
Supervisor – Human	24,54	7,74	-0,67	-0,16	0,57	0,87
Supervisor – Technical	25,04	7,34	-0,52	-0,97	0,55	0,86
Variety	24,72	7,16	-0,49	-0,72	0,48	0,82
Work Conditions	23,64	7,15	-0,63	-0,41	0,52	0,83
<b>Total Satisfaction</b>	<b>507,28</b>	<b>80,50</b>	<b>0,16</b>	<b>-0,30</b>		<b>0,97</b>

Table 2 shows the total job satisfaction of the study population to be normally distributed, which indicates an average total job satisfaction. Rothmann and Naude (2000) found in their research a normal distribution of scores with a small level of kurtosis. Their research as well found that the scores to be predominately negatively skewed.

Regarding satisfaction, employees had the highest scores on:

- Independence – the opportunity to work alone
- Moral Values – the extent to which they are of the opinion that they are not expected to perform work that interferes with their moral values.
- Co-workers – relationships with colleagues at work
- Social Services – the extent to which they have the opportunity to render a service to other persons.

Employees experienced less satisfaction with:

- Advancement – the extent to which opportunities for advancement and growth exist in the job.
- Compensation – the compensation which they receive for their efforts.
- Recognition – the recognition which they receive for work well done.
- Work conditions – all facets of the work environment

The Cronbach alpha coefficients for the scales of the MSQ vary from 0,58 (moral values and social status) to 0,97 (total job satisfaction). Ability, Advancement, Compensation, Recognition, Supervisor-Human and Work conditions all showed high inter-item correlation but still shows acceptable alpha co-efficient. The mean inter-item correlation coefficients vary between 0,20 (moral values) and 0,71 (Advancement). The mean inter-item correlation coefficients of the subscales Ability, Advancement, Authority, Company Policy, Compensation, Recognition, Supervisor (Human) and Supervisor (Technical) and Work Conditions are somewhat higher than the guideline of 0,50 given by Clark and Watson (1995).

The alpha coefficients of the following job satisfaction scales were below 0,70 and were therefore not used in the remaining analyses:

- Independence ( $\alpha = 0,64$ )
- Moral Values ( $\alpha = 0,58$ )
- Security ( $\alpha = 0,63$ )
- Social Status ( $\alpha = 0,58$ )

Table 3 shows the descriptive statistics of the PCI.

Table 3

*Descriptive Statistics of the PCI (N=89)*

Item	Mean	SD	Skewness	Kurtosis
Agreeableness	57,45	33,67	-0,02	-1,48
Consideration	60,65	34,37	-0,14	-1,43
Cooperation	59,73	36,43	-0,00	-1,67
Conscientiousness	49,23	33,81	0,20	-1,35
Dependability	46,16	32,69	0,65	-0,87
Efficiency	58,44	37,85	-0,08	-1,60
Achieve-strive	75,41	35,46	-0,85	-1,06
Stability	56,94	31,52	0,05	-1,38
Self-confidence	59,48	33,57	0,11	-1,58
Even-tempered	58,85	33,14	-0,04	-1,44
Extraversion	76,79	21,67	-0,90	0,07
Leadership orientation	82,69	19,82	-1,35	1,83
Need for recognition	93,06	12,11	-3,45	13,40
Sociability	55,62	30,41	0,20	-1,31
Openness	83,98	17,27	-1,26	0,86
Creative thinking	79,94	19,79	-1,30	1,14
Abstract thinking	82,75	19,19	-0,78	-0,26

The mean scores for the PCI varies between 93,06 (Need for recognition) and 46,16 (dependability). Employees scored the highest on:

- Need for recognition
- Openness
- Abstract thinking
- Leadership orientation

Employees scored the lowest on:

- Dependability
- Conscientiousness
- Sociability
- Stability

Regarding skewness and kurtosis, the values in Table 3 shows slight deviations from 0, indicating that the scores attained are relatively normally distributed. The table however, also shows that there is a negatively skewed distribution and positively high kurtosis regarding the need for recognition.

Tables 4 and 5 illustrate the correlation between the two instruments (MSQ and PCI) used as well as the subscales within the PCI.

**Table 4**  
*Correlation Coefficients between the MSQ and the PCI*

Item	Agreeableness	Conscientiousness	Stability	Extraversion	Openness
Ability	-0,18	0,20	0,18	0,20	0,06
Achieve	0,06	0,19	0,22	-0,08	0,08
Active	-0,07	-0,01	0,04	-0,12	-0,06
Advancement	-0,21	-0,03	0,01	0,02	-0,24
Authority	0,01	0,20	0,04	0,03	0,14
Company Policy	0,02	-0,08	-0,17	-0,19	-0,31*
Compensation	-0,06	-0,03	-0,04	-0,05	-0,30*
Co-workers	0,14	-0,21	0,04	-0,04	-0,07
Creative	-0,09	0,18	0,11	0,03	0,10
Independence	0,01	0,08	0,12	-0,26	0,02
Moral values	0,03	-0,30*	-0,11	-0,10	-0,04
Recognition	-0,03	-0,03	-0,12	-0,17	-0,30*
Responsibility	-0,02	-0,00	0,09	0,12	0,04
Security	0,18	-0,25	0,04	-0,17	-0,15
Social Service	0,16	0,07	0,11	-0,04	0,12
Social Status	-0,21	-0,04	0,10	0,12	0,15
Supervisor ( Human)	0,03	-0,00	-0,04	-0,34*	-0,21
Supervisor (Technical)	0,24	0,18	0,12	-0,27	-0,04
Variety	-0,21	0,06	0,18	0,04	-0,02
Work Conditions	-0,11	0,19	0,11	0,07	-0,09

\* Correlation is practically significant  $r = 0,30$  (medium effect)

\*\* Correlation is practically significant  $r = 0,50$  (large effect)

Table 4 shows practically significant correlations of a medium effect between job satisfactions and dimensions of personality:

- Extraversion correlated negatively with the supervisor (human) dimension of job satisfaction.
- Conscientiousness correlated negatively with moral values
- Openness correlated negatively with company policy, secondly with compensation and lastly with the recognition dimensions of job satisfaction.

For the employees of this petro-chemical organisation, three personality dimensions, that is, extraversion, openness to experience and conscientiousness, showed a significant relationship with job satisfaction. Agreeableness and stability, on the other hand, did not correlate with job satisfaction positively.

Table 4 shows practically significant correlation coefficient (medium effect) between supervisor (human) and extraversion ( $r = -0,34$ ), conscientiousness and moral values ( $r = -0,30$ ) and between openness and the following variables:

- company policy ( $r = -0,31$ )
- compensation ( $r = -0,30$ )
- recognition ( $r = -0,30$ )

Table 5

*Correlation between the dimensions of the Minnesota Satisfaction Questionnaire and the Subscales of the PCI*

Item	Co-operation	Consideration	Sociability	Need for Recognition	Leadership Orientation	Dependability	Achievement Striving	Efficiency	Even-Temperament	Self-Confidence	Abstract Thinking	Creative Thinking
Ability	-0,14	-0,15	0,29	-0,10	-0,00	0,15	0,10	0,17	0,07	0,19	-0,04	0,12
Achieve	0,10	0,03	0,02	-0,13	-0,04	0,25	0,14	0,17	0,24	0,11	0,07	0,06
Active	-0,04	-0,02	-0,15	-0,05	-0,02	0,04	-0,08	0,01	-0,00	0,02	-0,05	-0,09
Advancement	-0,15	-0,23	0,17	-0,02	-0,03	-0,07	-0,04	-0,00	-0,12	0,07	-0,11	-0,24
Authority	-0,04	0,07	0,09	0,09	0,07	0,24	0,08	0,15	0,11	-0,07	0,15	0,11
Company Policy	-0,06	0,06	-0,11	-0,06	-0,11	0,04	-0,11	-0,15	0,00	-0,24	-0,15	-0,34*
Compensation	-0,07	-0,06	0,14	-0,12	-0,14	0,03	-0,07	-0,09	0,05	-0,08	-0,08	-0,33*
Co-workers	0,05	0,22	0,03	0,03	-0,04	-0,03	-0,13	-0,19	0,14	0,00	0,13	-0,16
Creative	-0,06	-0,09	0,05	0,00	0,04	0,21	0,24	0,15	0,02	0,08	0,06	0,07
Independence	0,06	0,14	-0,18	-0,21	-0,27	0,07	0,17	0,06	0,13	0,06	0,20	-0,10
Moral values	-0,01	0,08	-0,01	-0,21	-0,22	-0,23	-0,13	-0,32*	-0,04	-0,15	0,10	-0,13
Recognition	-0,13	0,04	-0,16	-0,08	-0,11	-0,07	-0,02	-0,05	-0,05	-0,14	-0,21	-0,30*
Responsibility	-0,07	0,02	0,17	0,02	0,06	0,09	0,01	-0,09	0,10	0,02	-0,01	0,07
Security	0,14	0,15	-0,07	-0,06	-0,13	-0,19	-0,07	-0,21	0,11	-0,01	0,09	-0,23
Social Service	0,13	0,17	0,01	-0,09	-0,05	0,20	0,05	0,07	0,13	-0,00	0,15	0,02
Social Status	-0,24	-0,12	0,23	-0,01	-0,08	0,01	-0,02	-0,09	-0,02	0,16	0,16	0,12
Supervisor (Human)	0,02	0,02	-0,34*	-0,16	-0,15	-0,06	0,11	0,03	-0,02	-0,06	-0,12	-0,29
Supervisor(Technical)	0,16	0,27	-0,21	-0,15	-0,16	0,22	0,22	0,14	0,28	-0,03	0,12	-0,14
Variety	-0,20	-0,16	0,10	-0,07	-0,03	0,08	0,10	0,11	-0,04	0,25	-0,03	-0,01
Work Conditions	-0,14	-0,05	0,07	-0,01	0,04	0,15	-0,02	0,23	0,04	0,11	-0,04	-0,07

\* Correlation is practically significant  $r = 0,30$  (medium effect)

\*\* Correlation is practically significant  $r = 0,50$  (large effect)



Table 5 shows that only five personality facets are practically significant in relation to aspects of job satisfaction.

- Sociability (a facet of extraversion) and satisfaction with supervisor (human) ( $r = -0,34$ )
- Efficiency (a facet of conscientiousness) is negatively related to moral values ( $r = -0,32$ )
- Creative thinking (a facet of openness) is negatively related to compensation ( $r = -0,33$ ), company policy ( $r = -0,34$ ) and recognition ( $r = -0,30$ )

The following tables stipulate the multiple regression analysis between the Big Five personality dimension and the various factors of the MSQ.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with achievement (as measured by the MSQ) as dependent variable, are shown in Table 6.

Table 6

*Regression Analysis of Personality Dimensions and the Achievement Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,32$	Regressions	2	314,89	157,44
$R^2 = 0,10$				
		$F = 4,82$	$f^2 = 0,111$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	28,12	2,24	157,41	<0,0001
Stability	0,07	0,02	9,04	0,0035
Extraversion	-0,07	0,03	4,89	0,0296

Table 6 shows that 10% of the variance of the achievement factor (as measured by the MSQ) is explained by Stability and Extraversion (as measured by the PCI).

The multiple correlation ( $R = 0,32$ ) is practically significant (medium effect) ( $f^2 = 0,11$ ). It seems that stability and low extraversion explained about 10% of the variance in satisfaction with achievement.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with advancement (as measured by the MSQ) as dependent variable, are shown in Table 7.

Table 7

*Regression Analysis of Personality Dimensions and the Advancement Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,24$	Regressions	1	416,23	416,23
$R^2 = 0,06$				
		$F = 5,51$	$f^2 = 0,06$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	30,37	4,60	43,60	<0,0001
Openness	-0,13	0,05	5,51	0,0212

Table 7 shows that 6% of the variance of the advancement factor (as measured by the MSQ) is explained by low openness. The multiple correlation ( $R = 0,24$ ) is not practically significant ( $f^2 = 0,06$ ).

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with authority (as measured by the MSQ) as dependent variable, are shown in Table 8.

Table 8

*Regression Analysis of Personality Dimensions and the Authority Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,31$	Regressions	1	401,09	401,09
$R^2 = 0,10$				
		$F = 9,14$	$F^2 = 0,1$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	34,75	3,51	98,21	<0,0001
Openness	-0,12	0,04	9,14	0,0033

Table 8 exemplifies that 10% of the variance in satisfaction with authority (as measured by the MSQ) is explained by openness (as measured by the PCI). The multiple correlation ( $R = 0,31$ ) is practically significant (medium effect) ( $f^2 = 0,105$ ). Thus, it seems that employees with low openness are more satisfied with authority.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with compensation (as measured by the MSQ) as dependent variable, are shown in Table 9.

Table 9

*Regression Analysis of Personality Dimensions and the Compensation Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,30$	Regressions	1	474,68	474,68
$R^2 = 0,09$				
		$F = 8,70$	$F^2 = 0,10$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	P
Constant	31,95	3,91	66,74	<0,0001
Openness	-0,13	0,05	8,69	0,0041

Table 9 illustrates that 9% of the variance of satisfaction with compensation factor (as measured by the MSQ) is explained by openness (as measured by the PCI).

The multiple correlation of 0,30 is practically significant (medium effect) ( $f^2 = 0,10$ ). Therefore, employees with low openness are more satisfied with their compensation.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with co-workers (as measured by the MSQ) as dependent variable, are shown in Table 10.

Table 10

*Regression Analysis of Personality Dimensions and the Co-worker Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,21$	Regressions	1	87,98	87,99
$R^2 = 0,05$				
		$F = 4,15$	$f^2 = 0,05$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	30,29	0,87	1225,94	<0,0001
Conscientiousness	-0,03	0,02	4,15	0,0446

Table 10 exemplifies that 5% of the variance of satisfaction with co-workers (as measured by the MSQ) is explained by conscientiousness (as measured by the PCI). However, the multiple correlation ( $R = 0,21$ ) is not practically significant ( $f^2 = 0,05$ ).

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with independence (as measured by the MSQ) as dependent variable, are shown in Table 11.

Table 11

*Regression Analysis of Personality Dimensions and the Independence Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,39$	Regressions	2	210,98	105,49
$R^2 = 0,16$				
		$F = 7,94$	$f^2 = 0,19$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	P
Constant	32,85	1,43	528,20	<0,0001
Stability	0,04	0,01	8,96	0,0036
Extraversion	-0,08	0,02	14,41	0,0003

Table 11 shows that 16% of the variance in satisfaction with independence (as measured by the MSQ) is explained stability and extraversion (as measured by the PCI). The multiple correlation ( $R = 0,39$ ) is practically significant (medium effect) ( $f^2 = 0,19$ ). Therefore, employees who are more stable and introverted are more satisfied with their independence at work.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with recognition (as measured by the MSQ) as dependent variable, are shown in Table 12.

Table 12

*Regression Analysis of Personality Dimensions and the Recognition Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,30$	Regressions	1	391,08	391,08
$R^2 = 0,09$				
		$F = 8,85$	$f^2 = 0,10$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	32,76	3,15	86,68	<0,0001
Openness	-0,12	0,04	8,85	0,0038

Table 12 illustrates that 9% of the variance of the satisfaction with recognition (as measured by the MSQ) is explained by openness (as measured by the PCI). The multiple correlation ( $R = 0,30$ ) is practically significant (medium effect) ( $f^2 = 0,10$ ). Therefore, employees with low openness seem to be more satisfied with recognition.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with security (as measured by the MSQ) as dependent variable, are shown in Table 13.

Table 13

*Regression Analysis of Personality Dimensions and the Security Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,25$	Regressions	1	108,65	108,65
$R^2 = 0,06$				
		$F = 5,67$	$f^2 = 0,94$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	P
Constant	29,34	0,82	1271,13	<0,0001
Conscientiousness	-0,03	0,01	5,67	0,0446

Table 13 shows that 6% of the variance of the security factor (as measured by the MSQ) is explained by personality dimensions (as measured by the PCI). The multiple correlation ( $R = 0,25$ ) is not practically significant.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with the supervisor (human aspects) (as measured by the MSQ) as dependent variable, are shown in Table 14.

Table 14

*Regression Analysis of Personality Dimensions and the Supervisor (Human) Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,34$	Regressions	1	618,36	618,36
$R^2 = 0,12$				
		$F = 11,57$	$f^2 = 0,13$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	33,93	2,87	139,98	<0,0001
Extraversion	-0,12	0,036	11,57	0,0010

Table 14 exemplifies that 12% of the variance in satisfaction with the supervisor (human) (as measured by the MSQ) is explained by extraversion (as measured by the PCI). The multiple correlation ( $R = 0,34$ ) is practically significant (medium effect) ( $f^2 = 0,13$ ). Therefore, introverts seem to be more satisfied with the human aspects of supervision.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with supervision (technical aspects) (as measured by the MSQ) as dependent variable, are shown in Table 15.

Table 15

*Regression Analysis of Personality Dimensions and the Supervisor (Technical) Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,40$	Regressions	2	770,31	385,15
$R^2 = 0,16$				
		$F = 8,34$	$f^2 = 0,19$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	31,97	2,67	143,92	<0,0001
Stability	0,082	0,03	9,46	0,0028
Extraversion	-0,15	0,04	15,10	0,0002

Table 15 shows that 16% of the variance in satisfaction with the supervisor (technical aspects) (as measured by the MSQ) is explained by extraversion (as measured by the PCI). The multiple correlation ( $R = 0,40$ ) is practical significant (medium effect) ( $f^2 = 0,19$ ). Therefore, it seems that introverts are more satisfied with the technical aspects of supervision than extroverts.

The results of the regression analysis, with personality dimensions (as measured by the PCI) and satisfaction with variety (as measured by the MSQ) as dependent variable, are shown in Table 6.

Table 16

*Regression Analysis of Personality Dimensions and the Variety Factor of Job Satisfaction*

ANALYSIS OF VARIANCE				
	Source	Degrees of Freedom	Sum of Squares	Mean Square
$R = 0,35$	Regressions	2	554,16	277,08
$R^2 = 0,12$				
		$F = 6,03$	$f^2 = 0,14$	
VARIABLES IN THE EQUATION				
Independent Variables	B	Standard Error of B	F	p
Constant	24,79	1,68	216,52	<0,0001
Agreeableness	-0,07	0,02	8,99	0,0035
Stability	0,07	0,03	7,73	0,0067

Table 16 exemplifies that 12% of the variance in satisfaction with variety (as measured by the MSQ) is explained by agreeableness and stability (as measured by the PCI). The multiple correlation ( $R = 0,35$ ) is practically significant (medium effect) ( $f^2 = 0,14$ ). Thus, it seems that less agreeable employees who stable, shows more satisfaction with the variety in their work.

## DISCUSSION

This study demonstrates that some personality dimensions could be used to predict job satisfaction. Significant relationships were found between the dimensions as well as the subscales of the Big Five and job satisfaction.



The current research found that employees who are more stable and introverted tend to be more satisfied with achievement, independence as well as supervision (human and technical aspects) at work compared to extraverted people. These findings can be due to the fact that introverted people tend to work for themselves (internal focused) and not towards a team goal. These people are less dependent on people for support, they may use authority for guidance but they work towards their personal achievement.

Research also indicates that extraversion predicts employee job satisfaction in various contexts (de Fruyt & Mervielde, 1999; Tokar & Subich, 1997; Schneider, 1999; Vinchur, Schippmann, Switzer & Roth, 1998; Wright, Kacmar, McMahan & Deleeuw, 1995). This research supported these studies, as extraverted individuals in the organisation, as opposed to introverted individuals that are satisfied with supervisor human, these individuals are less satisfied with human supervision and its subscale sociability. Extraverted people are talkative and sociable people, placing them in an environment that forces them to work independently and be internally focused, frustrate them and leave them dissatisfied.

Amongst the individuals, this research found that individuals low on openness (compared to those who measured high on openness) tend to be more satisfied with authority, compensation and recognition. This could be that these individuals are comfortable in their current working environment, not challenging the organisation's pay structures as well as accepting the status quo. These people typically ride with the waves of the organisation and not against it. It is important to look out for these individuals, as, should they feel that they do not receive the fundamental recognition from the organisation for the work they do, they will leave the organisation.

Individuals high on creative thinking (subscale of openness) are less satisfied with company policy, compensation and recognition. A generalist comment will be that, creative people do not usually enjoy a bureaucratic environment and it may occur that they visualise better alternatives in doing their work and these visualisations are not always acknowledged in the way they would like it to be. These creative individuals would like to live by more flexible pay structures as well as recognition acknowledgement. An organisation of this magnitude may not provide that individuality for them. It is also important for an organisation to notice that these individuals are less satisfied with the specific aspects within their work environment.

It was also found that individuals that have high conscientious levels are less satisfied with moral values. This could be due to the fact that these individuals live in a very small social and religious community that have high living standards. Since the organisation is attracting a great deal of younger and diverse cultural individuals who have a different way of living, these individuals may feel that the organisation is not adhering to their moral values. They may see these individuals act in a certain way and may incorrectly interpret it as part of the organisation's value system. Two meta-analyses studies have suggested that one dimension of personality – conscientiousness - is the strongest predictor for all work groups and all job-related criteria (Barrick & Mount, 1991, 1993; Hough, Eaton, Dunnette, Kamp & McCloy 1990).

This research established that low agreeable employees who are stable, show more satisfaction with variety in their work. This could be appropriate as low agreeable people that are stable in their work environment, can allow for variety in their work. Should these individuals believe in something, they will not be swayed from their beliefs, as compared to an agreeable person who is unstable who will allow for external manipulation to influence his work environment. Day and Bedeian (1995) and Schneider (1999) found that agreeableness is not related to job satisfaction. This study supports the above studies, as, no relationships were found between agreeableness and job satisfaction

Employees indicated a relatively low satisfaction level with advancement, compensation, recognition and work condition, which may be related to the way in which employees are managed. The organisation has been in operation for 50 years and there are many individuals who have grown with the organisation but do not have the formal qualification to back their development. Therefore their current chances of compensation, advancement and praise has now stagnated, resulting in the low level of job satisfaction.

The dissatisfaction with working conditions can relate to the fact that majority of the employees do not have private offices to work from. They either work in an open plan environment or work directly on the plant.

It is important to also note that the sample population used was based on junior to middle level engineers. Majority of these individuals are young and are in demand to the outside market. The organisation's turnover regarding these individuals is exceptionally high.

In this case these individuals continuously compare themselves to the outside market with regards to pay packages and career development for advancement.

Regarding employee job satisfaction, 6% of the variance was explained by conscientiousness and the security factor. Two traits, low openness with recognition and low openness with compensation, explained 9% of the variance in relationships of employees at work. Furthermore, two trait relationships were found that had a 10% variance, the first relate to stability and low extraversion with achievement, the second relate to low openness with authority. Another pair of trait relationship explained 12% of the variance, which were; low agreeableness and stability with the variety factor of job satisfaction and low openness with supervisor human. Lastly two dimensions, independence and supervisor technical, had an impact on stability and low extraversion on the employees, which explained 16% of the variance.

The findings of this research showed that some personality dimensions are related to aspects of job satisfaction. However, overall personality dimensions explained relatively small percentages in the variance of job satisfaction. Because of this, the situational frame of reference, which is most common at present within the workplace, as well as the frame of reference that most supports this research, job satisfaction/dissatisfaction is alleged to result from the nature of the job or from the conditions at work. This basically epitomizes the effects of situational forces on workers' job attitudes. Strümpfer et al. (1998) highlight that situational forces are assumed to be related to employees' perceptions that the organisation is executing activities in their interest, for instance, by creating a favourable physical work environment, recognising and rewarding desirable performance and /or providing reward equity.

The sample was one limitation of this study. Although the employees of this organisation seemed in many respects, typical of the employees in any petro-chemical organisation (e.g. age, length of service, gender, years of experience and educational level), future studies should attempt to replicate the findings with other organisations in diverse industries. Future studies should test the proposed universality of personality characteristics as predictors of employee job satisfaction. Although large diverse sample sizes are both favourable and encouraged, it is somewhat of a challenge to gain access to several employees in any one organisation.

A major downside that can be identified is, the limited number of studies that has been done, influencing the analysis possibilities and the ability to generalise the results. The findings of my research can only be seen as preliminary.

Another limitation identified, was the length of the questionnaire. The organisation itself has been experiencing questionnaire toxicity. This study questionnaire package contained three questionnaires (biographical information, MSQ and PCI) that totalled 274 items to be answered. The criticism that was received from individuals indicated that the package was time consuming. Further packages should minimise the number of items per questionnaire or introduce several questionnaires over a longer period of time.

### **RECOMMENDATIONS**

Research has shown that even though there is satisfaction with employee independence and co-worker relations, employees still show the least amount of satisfaction regarding advancement, compensation and recognition. This could be due to the fact that employees are diffident towards self-promotion because of the organisations' unofficial moral stance level. The organisation's management should focus more attention on entrepreneurial employees instead of allowing peer shunting to take place. Individuals high on creative thinking are sometimes perceived as peculiar individuals.

Management should encourage these individuals to stimulate the rest of the team to promote creative thinking rather than allow shunting. General Electric's legendary CEO, Jack Welch, enlightened *Fortune* magazine about his "tough love" approach: "Giving people self-confidence is by far the most important thing I can do. Because then they will act. I tell people, if this place is stifling you, shake it, shake it, break it. Check the system, because it wants to be a bureaucracy" (Huey & Colvin, 1999).

It is due to thinking like Jack Welch, that stimulating and encouraging individuals who have a different way of doing things within the organisation have become so critical for organisational success.

It is believed that the organisation's management promotes an open door policy. However, the question arises as to whether the organisation actually implements this policy. Supporting

the above recommendation, openness should also be given priority in an attempt to retain employees.

The important issue is, if the individual is freely recognised for his or her contributions to the organisation and compensated adequately; the organisation then, has a better chance of retaining his or her talent, knowledge and abilities. Turnover in junior to middle level engineers in this organisation is very high. It not only disrupts the organisation, but is very costly. Thus, managers would be well advised to try and reduce turnover by increasing employees' job satisfaction.

The organisation's management should not only focus on improving job satisfaction of their employees in an effort to improve organisational effectiveness, they should rather focus on the multiplicity of factors relating to job satisfaction, such as entrepreneurship, personality fit for a specific job and empowerment. Management should encourage unique behaviour in order to allow for a culture of continuous learning.

Due to the organisation's computer based systems, which incorporates e-mail, feedback reports and real time operation logins, the majority of employees literally 'live in front of their computers'. This type of environment minimises person-to-person socialisation. To alleviate this, direct leaders should rather promote team discussions about identified key problems than reading it off an e-mail. Another way of promoting communication will be to allow junior and middle level leaders to attend business communication training programmes.

Future research should cater for validity of the PCI within a South African context and should be done to determine in which direction the components within each Big Five factor are better predictors of job criteria than the factor as a whole. Although particular indication suggests that the components do not improve the predictive validity over a factor (Mount & Barrick, 1995).

It would be beneficial to see future research that makes use of a larger sample and that caters for a wider industry and not only focus research within a petro-chemical organisation. It should also deliberate on the relationship between job satisfaction of executive members and the Big Five personality dimensions.

## REFERENCES

- Agho, A.O., Price, J.L. & Mueller, C.W. (1992). Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity. *Journal of Occupational and Organizational Psychology*, 65, 185-196.
- Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rhinehart & Winston.
- Arvey, R.D., Bouchard, T.J., Segal, N.L. & Abraham, L.M. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology*, 74, 187-192.
- Arvey, R.D., Carter, G. W. & Buerkley, D.K. (1991). Job satisfaction: Dispositional and situational influences. In C.L. Cooper & I.T. Robertson (Eds.), *International Review of Industrial and Organisational Psychology*. Chichester, UK: Wiley.
- Baran, R. (1986). *Understanding behaviour in organisations*. Boston, MA: Allen & Bacon.
- Barrick, M.R. & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta- analysis. *Personnel Psychology*, 44, 1-26.
- Barrick, M.R. & Mount, M.K. (1993). Autonomy as a moderator of the relationship between the Big Five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111-118.
- Barrick, M.R., Mount, M.K. & Judge, T.A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9, 9-30.
- Bentler, P.M. & Newcomb, M.D., (1978). Longitudinal study of marital success and failure. *Journal of Consulting and Clinical Psychology*, 46, 1053-1070.
- Bergh, Z.C. & Theron, A.L. (1999). *Psychology in the work context*. Cape Town: Oxford University Press.
- Block, J. (1995). A contrarian view of the five factor approach to personality description. *Psychological Bulletin*, 117, 187-215.
- Bouchard, T.J. (1997). The genetics of personality. In K. Blum and E. P. Noble (Eds.), *Handbook of psychiatric genetics* (pp. 273-296). Boca Raton, FL: Circle Press, Inc.
- Buss, D.M. (1991). Conflict in married couples: Personality predictors of anger and upset. *Journal of Personality*, 59, 663-688.
- Buss, D.M. (1992). Manipulation in close relationships: Five personality factors in interactional context. *Journal of Personality*, 60, 477-499.
- Cattell, R.B. 1965. (1966). *The scientific analysis of personality*. Baltimore: Penguin.

- Church, A.T. & Katibak, M.S. (1989). Internal, external, and self-report structure of personality in a non-Western culture: An investigation of cross-language and cross-cultural generalizability. *Journal of Personality and Social Psychology*, 57, 857-872.
- Clark, L.A. & Watson, D. (1991). General affective dispositions in physical and psychological health. In C.R. Snyder and D.R. Forsyth (Eds.), *Handbook of Social and Clinical Psychology: The health perspective* (pp. 221-245). New York: Pergamon.
- Clark, L.A. & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Clement, R.W. (1992). The changing face of organisational development: Views of a manager-turned-academic. *Business Horizon*, 9, 6-12.
- Coetzer, E.P. & Rothmann, S. (2001, August). *The relationship between the Big Five personality dimensions and job performance*. Paper presented at the 7<sup>th</sup> Annual PsySSA Conference, Johannesburg.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>th</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Conley, J.J. (1984). Longitudinal consistency of adult personality: Self-reported psychological characteristics across 45 years. *Journal of Personality and Social Psychology*, 47, 1325-1333.
- 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.
- Costa, P.T. & McCrae, R.R. (1980). Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, 38, 668-678.
- Costa, P.T. & McCrae, R.R. (1988b). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology*, 54, 853-863.
- Costa, P.T. & McCrae, R.R. (1985). *The NEO-PI Personality Inventory*. Odessa, FL: Psychological Assessment Resources.
- Costa, P.T. & McCrae, R.R. (1992). *Revised NEO-PI Personality Inventory and Five-factor Model Inventory: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Cranny, C.J., Smith, P.C. & Stone, E.F. (1992). *Job satisfaction: How people feel about their jobs and how it affects their performance*. New York: Lexington Books.
- Cropanzano, R., James, K. & Konovsky, M.A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organisational Behaviour*, 14, 595-606.

- Crow, S.M. & Hartman, S.J. (1995). Can't get no satisfaction. *Leadership and Organisational Development Journal*, 16, 34-38.
- Davis-Blake, A. & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organisational research. *Academy of Management Review*, 14, 385-400.
- Day, D.V. & Bedeian, A.G. (1995). Personality similarity and work related outcomes among African-American nursing personnel: A test of the supplementary model of person-environment congruence. *Journal of Vocational Behaviour*, 46, 55-70.
- Day, D.V., Bedeian, A.G. & Conte, J.M. (1998). Personality as predictor of work-related outcomes: Test of a mediated latent structural model. *Journal of Applied Social Psychology*, 28, 2068-2088.
- De Fruyt, F. & Mervielde, I. (1999). RIASEC types and big five traits as predictors of employment status and nature of employment. *Personnel Psychology*, 52, 701-727.
- De Klerk, J.J. (2001). *Motivation to work, work commitment and man's world to meaning*. Unpublished doctoral dissertation, University of Pretoria. South Africa.
- Digman, J.M. & Takemoto-Chock, N. K. (1981). Factors in the natural language of personality: Reanalysis, comparison, and interpretation of six major studies. *Multivariate Behavioural Research*, 16, 149-160.
- Digman, J.M. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality*, 57, 195-214.
- Digman, J.M. (1990). Personality structure: emergence of the five-factor model. *Annual Review of Psychology*, 41, 417-440.
- Digman, J.M. & Shmelyov, A.G. (1996). The structure of temperament and personality in Russian children. *Journal of Personality and Social Psychology*, 71, 341-351.
- Dunn, W.S., Mount, M.K., Barrick, M.R. & Ones, D.S. (1995). Relative importance of personality and general mental ability in managers' judgements of applicant qualifications. *Journal of Applied Psychology*, 80, 500-209.
- Durham, R.B. & Smith, C.A. (1997). The measurement and dimensionality of job characteristics. *Journal of Applied Psychology*, 61, 404-409.
- Eysenck, H.J. & Eysenck, S.B.G. (1979). *Manual of the Eysenck Personality Questionnaire (Junior & Adult)*. Sevenoaks, Kent: Hodder & Stoughton.
- Fried, Y. & Ferris G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287- 322.
- Furnham, A. & Zacherl, M. (1986). Personality and job satisfaction. *Personality and Individual Differences*, 7, 453-459.



- Goldberg, L.R. (1990). An alternative "description of personality": The Big Five factor structure. *Journal of Personality and Social Psychology*, *59*, 1216-1229.
- Goldberg, L.R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*, 26-34.
- Guion, R.M. & Gottier, R.F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, *18*, 135-164.
- Hamilton, E.E. (1988). The facilitation of organizational change: An empirical study of factors predicting change agents' effectiveness. *Journal of Applied Behavioural Science*, *24*, 37-59.
- House, R.J., Shane, S.A., & Herold, D.M. (1996). Rumours of the death of dispositional research are vastly exaggerated. *Academy of Management Review*, *21*, 203-224.
- Hogan, R., Hogan, J. & Roberts, B.W. (1996). Personality measurement and employment decisions: Questions and Answers. *American Psychologist*, *51*, 467-477.
- Huey, J. & Colvin, G. (1999). "The Jack and Herb Show", *Fortune*, *11*, 164.
- Isen, A.M. & Baron, R.A. (1991). Positive affect as a factor in organisational behaviour. *Research on Organisational Behaviour*, *13*, 1-53.
- Jang, K.L., Livesley, W.J. & Vernon, P.A. (1996). Heritability of the big five personality dimensions and their facets: A twin study. *Journal of Personality*, *64*, 577-591.
- John, O.P. (1990). The "Big-Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66-100). New York: Guilford Press.
- Judge, T. A., Higgins, C.A., Thoresen, C.J. & Barrick, M.R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, *52*, 621-652.
- Kelly, E.L. & Conley, J.J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology*, *52*, 27-40.
- Kreitner, R. & Kinicki, A. (2000). *Organizational Behaviour* (5<sup>th</sup> ed.). New York: McGraw-Hill.
- Levin, I. & Stokes, J. P. (1989). Dispositional approach to job satisfaction: Role of negative affectivity. *Journal of Applied Psychology*, *74*, 752-758.
- Locke, E.A. (1976). The nature and cause of job satisfaction. In M.D. Dunnette (Ed.), *Handbook of Industrial and Organisational Psychology* (pp. 1297-1349). Chicago, IL: Rand-McNally.

- Loher, B.T., Noe, R.A., Moeller, N.L. & Fitzgerald, M.P. (1985). A meta-analysis of the relation of job characteristics to job satisfaction. *Journal of Applied Psychology*, 70, 280-289.
- McCrae, R.R. & Costa, P.T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 5710-578.
- McCrae, R.R. & John, O.P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175-215.
- McCrae, R.R. & Costa, P.T. (1997). Personality trait structure as human universal. *American Psychologist*, 52, 509-516.
- Meir, E.I. (1995). Elaboration of the relation between interest congruence and satisfaction. *Journal of Career Assessment*, 3, 341-346.
- Mount, M.K. & Barrick, M.R. (1995). The Big Five personality dimensions: Implications for research and practice in human resources management. In K.M. Rowland & G. Ferris (Eds.), *Research in Personnel and Human Resources Management* (pp. 1153-200). Greenwich, CT: JAI Press.
- Mount, M.K. & Barrick, M.R. (2002). *Personality Characteristics Inventory: User's Manual*. Libertyville, IL, Wonderlic, Inc.
- Naude, J.L.P. & Rothmann, S. (2000). Psychological strengths and job satisfaction of agricultural representatives. *Management Dynamics*, 9, 57-81.
- Ones, D.S., Viswesvaran, C. & Reiss, A.D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, 81, 66-67.
- Oshagbemi, T. (1999). Overall job satisfaction: How good are single versus multiple-item measures? *Journal of Managerial Psychology*, 14, 388-403.
- Paunonen, S.V. & Jackson, D.N. (2000). What is beyond the Big Five? Plenty! *Journal of Personality*, 68, 821-835.
- Pervin, L.A. & John, P.J. 1997, *Personality: theory and research* (7<sup>th</sup> ed.). New York: Wiley.
- Raudsepp, E. (1990). Are you flexible enough to succeed? *Manage*, 41, 6
- Reilly, R.R. & Warech, M.A. (1993). The validity and fairness of alternatives to cognitive tests. In C.C. Wing & B.R. Gifford (Eds.), *Policy issues in employment testing* (pp. 131-224). Norwell, MA: Kluwer Academic.
- Robertson, I.T. & Kinder, A. (1993). Personality and job competencies: The criterion-related validity of some personality variables. *Journal of Occupational and Organisational Psychology*, 66, 226-244.

- Rothmann, S. (2000, August). *Sense of coherence, locus of control, self-efficacy and job satisfaction*. Paper presented at the 28th International Congress of Psychology, Stockholm, Sweden.
- Roznovski, M. & Hulin, C. (1992). The scientific merit of valid measures of general constructs with special reference to job satisfaction and job withdrawal. In C.J. Cranny, P.J. Smith & E.F. Stone (Eds.), *Job satisfaction: How people feel about their jobs and how it affects their performance*. New York: Lexington Books.
- Rust, J. (1999). Discriminant validity of the 'Big Five' personality traits in employment settings. *Social Behaviour and Personality*, 49, 787-830.
- SAS Institute. (1996). *SAS Users Guide: Basic* (6<sup>th</sup> ed.). Cary, NC: SAS Institute.
- Schneider, B. & Dachler, H.P. (1978). A note on the stability of the Job Descriptive Index. *Journal of Applied Psychology*, 63, 650-653.
- Schneider, M.H. (1999). The relationship of personality and job settings to job satisfaction. *Dissertation Abstracts International: Section B: The Science and Engineering*, 59, 6103.
- Schneider, R.J. & Hough, L.M. (1995). Personality and industrial/organisational psychology. In C.L. Cooper & I.V. Robertson (Eds.), *International review of industrial and organisational psychology*. Chichester: Wiley & Sons.
- Schultz, D.P. & Schultz, S.E. (1998). *Psychology and work today. An introduction to Industrial and Organisational Psychology* (7<sup>th</sup> ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4<sup>th</sup> ed.). New York: McGraw-Hill.
- Smith, P.C., Kendall, L.M. & Hulin, C.L. (1969). *The measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.
- Spector, P.E. (1997). *Job satisfaction: Application, assessment, causes and consequences*. Thousand Oaks, CA: Sage.
- Staw, B.M. & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 70, 469-480.
- Staw, B.M., Bell, N.E. & Clausen, J.A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56-77.
- Steyn, H.S. (1999). *Praktiese betekenisvolheid. Die gebruik van effekgroottes*. Wetenskaplike bydraes-reeks B: Natuurwetenskappe Nr,117. Potchefstroom: PU vir CHO.
- Strack, S. & Lorr, M. 1994. *Differentiating normal and abnormal personality*. New York: Springer.

- Strümpfer, D.J.W., Danana, N., Gouws, J.F. & Viviers, M.R. (1998). Personality dispositions and job satisfaction. *South African Journal of Psychology*, 28, 92-100.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Tokar, D.M. & Subich, L.M. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behaviour*, 50, 482-491.
- Tokar, D.M., Fischer, A.R. & Subich, L.M. (1998). Personality and vocational behaviour: A selective review of the literature, 1993-1997. *Journal of Vocational Behaviour*, 53, 115-153.
- Transberg, M., Slane, S. & Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: A meta-analysis. *Journal of Vocational Behaviour*, 42, 253-264.
- Vinchur, A.J., Schippmann, J.S., Switzer, F.S. & Roth, P.L. (1998). A meta-analysis review of predictors of job performance for salespeople. *Journal of Applied Psychology*, 83, 586-597.
- Warr, P., Cook, J. & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52, 129-148.
- Weiss, D.J., Dawis, R.V., England, G.W. & Lofquist, L.H. (1967). *Manual for the Minnesota Satisfaction Questionnaire*. Minneapolis, MN: University of Minnesota.
- Wiggins, J.S. (1996). *The five factor model of personality: Theoretical perspectives*. New York: Guilford Press.
- Wright, P.M., Kacmar, K.M., McMahan, G.C. & Deleeuw, K. (1995). Cognitive ability and job performance. *Journal of Management*, 21, 1129-1139.

## **CHAPTER 3**

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

Chapter 3 includes the conclusions reached, based on the findings of the empirical study. In addition, limitations of the research are discussed. Furthermore, recommendations are made in terms of related future research.

#### **3.1 CONCLUSIONS**

The findings as they relate to the objectives set for this research, can be summarised as follows:

- The first objective was to conceptualise the big five personality dimensions and job satisfaction.

Job satisfaction is a reaction to a job which stems from an individual's comparison of actual purpose with the required outcomes. The Five-Factor model hypothesizes that there is a structure to individual differences in human behaviour, such that the traits of personality can be reduced to five orthogonal factors of personality – the Big Five personality dimensions. This implies that personality can be the combination of physical and mental characteristics that give each individual an identity.

Personality can be defined as a comparatively enduring pattern of frequent interpersonal situations which characterise a human life. The five personality dimensions which make up the 'Big Five' are; neuroticism, extraversion, openness, agreeableness and conscientiousness (Costa & McCrae, 1985).

Neuroticism involves the degree to which the individual is insecure, anxious, depressed, and emotional; opposed to calm, self-confident and cool. The opposite of neuroticism is stability. It refers to the tendency to handle stress, to maintain an even temperament, and to have a high degree of composure and self-confidence across most situations.

Openness to Experience defines individuals who are creative, curious and cultured as opposed to practical; with narrow interests. Openness refers to the tendency to be imaginative, cultured, curious, polished, original, broadminded, intelligent, and artistically sensitive.

Agreeableness involves the degree to which individuals are cooperative, warm and agreeable as opposed to cold, disagreeable and antagonistic. Agreeable people have the tendency to be courteous, helpful, trusting, good-natured, cooperative, tolerant, and forgiving.

Conscientiousness concerns the extent to which individuals are hardworking, organised, dependable and persevering as opposed to lazy, disorganised and unreliable. This relates to individuals who have the tendency to be hardworking, dependable, efficient, and achievement striving

Extraversion involves the extent to which individuals are gregarious, sociable, assertive, and active, as opposed to reserved, timid and quiet. Extraverted individuals have a tendency to be sociable, gregarious, talkative, assertive, adventurous, active, energetic, and ambitious

- The second objective was to determine relationships between personality dimensions and job satisfaction in a petro-chemical organisation.

In the mid-1980's there was increased interest in personality effects on job satisfaction. Studies have provided convincing evidence that personality is clearly a factor which impacts on employees' job satisfaction. Research indicates that extraversion and conscientiousness predict employee job satisfaction in various contexts (de Fruyt & Mervielde, 1999; Tokar & Subich, 1997; Schneider, 1999; Vinchur, Schippmann, Switzer & Roth, 1998; Wright, Kacmar, McMahan & Deleeuw, 1995).

This research supported the above studies. The results show a practical significant correlation exists between extraversion and its subscale sociability with supervisor human. This is supported by the research done by Barrick & Mount (1991, 1993) that extraversion was also found to be a valid predictor for positions requiring social skills.

It was also found that individuals that have high conscientious levels are less satisfied with moral values. This could be due to the fact that these individuals live in a very small social and religious community that have high living standards. Since the organisation is attracting a great deal of younger and diverse cultural individuals who have an absolutely different way of living, these individuals may feel that the organisation is not adhering to their moral values. Two meta-analyses studies have suggested that one dimension of personality, conscientiousness, is the strongest predictor for all work groups and all job-related criteria (Barrick & Mount, 1991, 1993; Hough, Eaton, Dunnette, Kamp & McCloy 1990).

Individuals high on creative thinking (subscale of openness) were less satisfied with company policy, compensation and recognition. A generalist comment will be that creative people do not usually enjoy a bureaucratic environment and it may occur that they visualise better alternatives in doing their work and these visualisations are not always acknowledged in the way they would like it to be. These creative individuals would like to live by more flexible pay structures as well as recognition acknowledgement.

In the situational frame of reference, which is most common at present within the workplace, as well as, the frame of reference that most supports this research, job satisfaction/dissatisfaction is alleged to result from the nature of the job or from the conditions at work. This basically epitomizes the effects of situational forces on workers' job attitudes. Strümpfer et al. (1998), highlight that situational forces are assumed to be related to employees' perceptions that the organisation is executing activities in their interest, for instance, by creating favourable physical work environment, recognising and rewarding desirable performance and /or providing reward equity.

- The final objective was to establish whether personality dimensions can be used to predict job satisfaction of employees in a petro-chemical organisation.

Because of the above relationships that were identified in this research, personality dimensions can predict job satisfaction, but to an average extent. This research found that the subscales predicted job satisfaction to a greater extent than the dimensions itself.

This ties up with Mount & Barrick (1995), which states that conceptually relevant subscales of personality were better predictors of absence than less relevant subscales. In addition, the predictive powers of the subscales were similar to the predictive power demonstrated by their respective general personality factors.

The findings of this research showed that some personality dimensions are related to aspects of job satisfaction. However, overall personality dimensions explained relatively small percentages in the variance of job satisfaction. Thus because of this the situational frame of reference, which is most common at present within the workplace, as well as, the frame of reference that most supports this research, job satisfaction/dissatisfaction is alleged to result from the nature of the job or from the conditions at work.

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

The following limitations of the research should be taken into account:

- A stratified random sample in this particular petro-chemical organisation could not be used in this study. This makes it difficult to generalise the findings to the whole organisation. Also, generalisations to other contexts are not possible.
- The sample size was small. This is a major limitation, because it makes it difficult to hold to the assumptions of the statistical techniques.
- The questionnaire was long; this which might cause reliability problems. Also, because of copyright problems, it was not possible to obtain the reliability and validity of the PCI. The MSQ was also too long. Future studies could employ the short version of the MSQ.
- With regards to the research design, a casual study would have been more suited for this research due to the fact that we would have been able to state possible causes and effects of the variables.



### **3.3 RECOMMENDATIONS**

#### **3.3.1 Recommendations for the organisation:**

The following recommendations, based on the findings, should be considered:

- Even though there is job satisfaction with employee independence and co-worker relations, employees still show the least amount of satisfaction regarding advancement, compensation and recognition. This could be due to the fact that employees are diffident towards self-promotion because of the organisations' unofficial moral stance level. It is suggested that the organisation management should focus more attention on entrepreneurial employees instead of allowing peer shunting to take place.
- Openness should also be given priority in an attempt to retain employees. The important issue is, if individuals are feely recognised for their contributions to the organisation and compensated adequately; there will be a better opportunity of retaining talent, knowledge and abilities.
- The organisation's management should not only focus on improving job satisfaction of their employees in an effort to improve organisational effectiveness, they should rather focus on the multiplicity of factors relating to job satisfaction, such as entrepreneurship and personality fit for a specific job.
- Due to the organisation's computer based systems, incorporates e-mail, feedback reports and real time operation logins, majority of employees literally 'live in front of their computers'. This type of environment minimises person-to-person socialisation. To alleviate this, direct leaders should rather promote team discussions, than to read it off an e-mail. Another way of promoting communication will be to allow junior and middle level leaders to attend formal business communication training programs.

### **3.3.2 Recommendations for future research**

The following recommendations for future research have been made:

- To determine in which direction the components within each Big Five factor are better predictors of job criteria than the factor as a whole. Although particular indication suggests that the components do not improve the predictive validity over a factor (Mount & Barrick, 1995).
- Future research could make use of larger samples.
- Future research should cater for validity of the PCI within a South African context.
- Studies should cater for a wider industry and not only focus research within a petro-chemical organisation.
- Future research should deliberate on the relationship between job satisfaction of executive members and the Big Five personality dimensions.

## REFERENCES

- Allport, G.W. (1961). *Pattern and growth in personality*. New York: Holt, Rhinehart & Winston.
- Anderson, G. & Viswesvaran, C. (1998). *An update of the validity of personality scales in personal selection: A meta-analysis of studies published after 1992*. Paper presented at the 13th Annual Conference of the Society of Industrial and Organisational Psychology, Dallas.
- Arvey, R.D., Bouchard, T.J., Segal, N.L. & Abraham, L.M. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology*, 74, 187-192.
- Arvey, R.D., Carter, G. W. & Buerkley, D.K. (1991). Job satisfaction: Dispositional and situational influences. In C.L. Cooper & I.T. Robertson (Eds.), *International review of Industrial and Organisational Psychology*, Chichester, UK: Wiley.
- Baran, R. (1986). *Understanding behaviour in organisations*. Boston, MA: Allyn & Bacon.
- Barrick, M.R. & Mount, M.K. (1993). Autonomy as a moderator of the relationship between the Big Five personality dimensions and job performance. *Journal of Applied Psychology*, 78, 111-118.
- Barrick, M.R. & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta- analysis. *Personnel Psychology*, 44, 1-26.
- Barrick, M.R., Mount, M.K. & Judge, T.A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?. *International Journal of Selection and Assessment*, 9, 9-30.
- Bassett, G. (1994). The case against job satisfaction. *Business Horizons*, 9, 61-68.
- Bentler, P.M. & Newcomb, M.D., (1978). Longitudinal study of marital success and failure. *Journal of Consulting and Clinical Psychology*, 46, 1053-1070.
- Bergh, Z.C. & Theron, A.L. (1999). *Psychology in the work context*. Southern Africa: Oxford University Press.
- Block, J. (1995). A contrarian view of the five factor approach to personality description. *Psychological bulletin*, 11, 187-215.
- Bouchard, T.J. (1997). The genetics of personality. In K. Blum and E. P. Noble (Eds.), *Handbook of Psychiatric Genetics* (pp. 273-296). Boca Raton, FL: Circle Press, Inc.
- Buss, D.M. (1991). Conflict in married couples: Personality predictors of anger and upset. *Journal of Personality*, 59, 663-688.

- Buss, D.M. (1992). Manipulation in close relationships: Five personality factors in interactional context. *Journal of Personality*, 60, 477-499.
- Cattell, R.B. 1965. (1966). *The scientific analysis of personality*. Baltimore: Penguin.
- Chambers, J.M. (1999). The job satisfaction of managerial and executive women: Revisiting the assumptions. *Journal of Education for Business*, 75, 69.
- Clark, L.A. & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.
- Coetzer, E.P. & Rothmann, S. (2001, August). The relationship between the big five personality dimensions and job performance. *Paper presented at the 7<sup>th</sup> Annual PsySSA Conference*, Johannesburg.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>th</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Conley, J.J. (1984). Longitudinal consistency of adult personality: Self-reported psychological characteristics across 45 years. *Journal of Personality and Social Psychology*, 47, 1325-1333.
- Cook, J.D., Hepworth, S.J., Wall, T.D. & Warr, P.B. (1981). *The experience of work: A compendium and spouse of 249 measures and their use*. London: Academic Press.
- Costa, P.T. & McCrae, R.R. (1980). Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, 38, 668-678.
- Costa, P.T. & McCrae, R.R. (1988b). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology*, 54, 853-863.
- Costa, P.T. & McCrae, R.R. (1985). *The NEO-PI Personality Inventory*. Odessa, FL: Psychological Assessment Resources.
- Costa, P.T. & McCrae, R.R. (1992). *Revised NEO-PI Personality Inventory and Five-factor Model Inventory: Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Cranny, C.J., Smith, P.C. & Stone, E.F. (1992). *Job satisfaction: How people feel about their jobs and how it affects their performance*. New York: Lexington Books.
- Cropanzano, R., James, K. & Konovsky, M.A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organisational Behaviour*, 14, 595-606.
- Crow, S.M. & Hartman, S.J. (1995). Can't get no satisfaction. *Leadership and Organisational Development Journal*, 16, 34-38.

- Day, D.V. & Bedeian, A.G. (1995). Personality similarity and work related outcomes among African-American nursing personnel: A test of the supplementary model of person-environment congruence. *Journal of Vocational Behaviour*, 46, 55-70.
- Day, D.V., Bedeian, A.G. & Conte, J.M. (1998). Personality as predictor of work-related outcomes: Test of a mediated latent structural model. *Journal of Applied Social Psychology*, 28, 2068-2088.
- Davis-Blake, A. & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organisational research. *Academy of Management Review*, 14, 385-400.
- De Fruyt, F. & Mervielde, I. (1999). RIASEC types and big five traits as predictors of employment status and nature of employment. *Personnel Psychology*, 52, 701-727.
- De Klerk, J.J. (2001). *Motivation to work, work commitment and man's world to meaning*. Unpublished doctoral dissertation, University of Pretoria. South Africa.
- Digman, J.M. (1989). Five robust trait dimensions: Development, stability, and utility. *Journal of Personality*, 57, 195-214.
- Digman, J.M. (1990). Personality structure: emergence of the five-factor model. *Annual review of Psychology*, 41, 417-440.
- Digman, J.M. & Shmelyov, A.G. (1996). The structure of temperament and personality in Russian children. *Journal of Personality and Social Psychology*, 71, 341-351.
- Dunn, W.S., Mount, M.K., Barrick, M.R. & Ones, D.S. (1995). Relative importance of personality and general mental ability in managers' judgements of applicant qualifications. *Journal of Applied Psychology*, 80, 500-209.
- Durham, R.B. & Smith, C.A. (1997). The measurement and dimensionality of job characteristics. *Journal of Applied Psychology*, 61, 404-409.
- Eysenck, H.J. & Eysenck, S.B.G. (1979). *Manual of the Eysenck Personality Questionnaire (Junior & Adult)*. Sevenoaks, Kent: Hodder & Stoughton.
- Fried, Y. & Ferris G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287- 322.
- Furnham, A. & Zacherl, M. (1986). Personality and job satisfaction. *Personality and Individual Differences*, 7, 453-459.
- Garson, E.G. & Stanwyck, D.J. (1997). Locus of control and incentive in self-managing teams. *Human Resource Development Quarterly*, 8, 17-23.
- Gerhart, B. (1987). How important are dispositional factors as determinants of job satisfaction? Implications for job design and other personnel programs. *Journal of Applied Psychology*, 3, 366-373.

- Goldberg, L.R. (1990). An alternative "description of personality": The big five factor structure. *Journal of Personality and Social Psychology*, *59*, 1216-1229.
- Goldberg, L.R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*, 26-34.
- Greenberg, J. & Baron, R.A. (1993). *Behaviour in organisation* (4<sup>th</sup> ed.). Needham Heights, MA: Allyn and Bacon.
- Guion, R.M. & Gottier, R.F. (1965). Validity of personality measures in personnel selection. *Personnel Psychology*, *18*, 135-164.
- Hamilton, E.E. (1988). The facilitation of organizational change: An empirical study of factors predicting change agents' effectiveness. *Journal of Applied Behavioural Science*, *24*, 37-59.
- House, R.J., Shane, S.A. & Herold, D.M. (1996). Rumours of the death of dispositional research are vastly exaggerated. *Academy of Management Review*, *21*, 203-224.
- Hogan, R., Hogan, J. & Roberts, B.W. (1996). Personality measurement and employment decisions: Questions and Answers. *American Psychologist*, *51*, 467-477.
- Hough, L.M., Eaton, N.K., Dunnette, M.D., Kamp, J.D. & McCloy, R.A. (1990). Criterion-related validities of personality constructs and the effect of response distortion on those validities, Monograph, *Journal of Applied Psychology*, *75*, 581-595.
- Huey, J. & Colvin, G. (1999). "The Jack and Herb Show", *Fortune*, *11*, 164.
- Iaffaldano, M.T. & Muchinsky, P.M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, *97*, 251-273.
- Isen, A.M. & Baron, R.A. (1991). Positive affect as a factor in organisational behaviour. *Research on Organisational Behaviour*, *13*, 1-53.
- Jain, V.K., McLaughlin, D.G., Lall, R. & Johnson, W.B. (1996). Effects of locus of control, occupational stress and psychological distress on job satisfaction among nurses. *Psychological Reports*, *78*, 1256-1258.
- Jang, K.L., Livesley, W.J. & Vernon, P.A. (1996). Heritability of the big five personality dimensions and their facets: A twin study. *Journal of Personality*, *64*, 577-591.
- John, O.P. (1990). The "Big-Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66-100). New York: Guilford Press.
- Judge, T.A., Locke, E.A., Durham, C.C. & Kluger, A.N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*, 17-34.

- Judge, T.A., Higgins, C.A., Thoresen, C.J. & Barrick, M.R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, 52, 621-652.
- Kelly, E.L. & Conley, J.J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology*, 52, 27-40.
- Kreitner, R. & Kinicki, A. (2000). *Organizational behaviour* (5<sup>th</sup> ed.). New York: McGraw-Hill.
- Landy, F.J. (1989). *Psychology of work behaviour* (4<sup>th</sup> ed.). Pacific Grove, CA: Brooks/Cole.
- Levin, I. & Stokes, J. P. (1989). Dispositional approach to job satisfaction: Role of negative affectivity. *Journal of Applied Psychology*, 74, 752-758.
- Locke, E.A. (1976). The nature and cause of job satisfaction. In M.D. Dunnette (Ed.), *Handbook of Industrial and Organisational Psychology* (pp. 1297-1349). Chicago, IL: Rand-McNally.
- Loher, B.T., Noe, R.A., Moeller, N.L. & Fitzgerald, M.P. (1985). A meta-analysis of the relation of job characteristics to job satisfaction. *Journal of Applied Psychology*, 70, 280-289.
- McCrae, R.R. & Costa, P.T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52, 5710-578.
- McCrae, R.R. & Costa, P.T. (1997). Personality trait structure as human universal. *American Psychologist*, 52, 509-516.
- McCrae, R.R. & John, O.P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175-215.
- Meir, E.I. (1995). Elaboration of the relation between interest congruence and satisfaction. *Journal of Career Assessment*, 3, 341-346.
- Mount, M.K. & Barrick, M. R. (1995). The Big Five personality dimensions: Implications for research and practice in human resource management. In K.M. Rowland & G. Ferris (Eds.), *Research in Personnel and Human Resources Management* (pp.153-200). Greenwich, CT: JAI Press.
- Mount, M.K. Barrick, M.R. & Steward, G.L. (1998). Five-factor model of personality and performance in jobs involving interpersonal interactions. *Human Performance*, 11, 145-165.
- Mount, M.K. & Barrick, M.R. (2002). *Personality Characteristics Inventory: User's Manual*. Libertyville, IL, Wonderlic, Inc.

- Naude, J.L.P. & Rothmann, S. (2000). Psychological strengths and job satisfaction of agricultural representatives. *Management Dynamics*, 9, 57-81.
- Ones, D.S., Viswesvaran, C. & Reiss, A.D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, 81, 66-67.
- Ones, D.S. & Viswesvaran, C. (1997). Personality determinants in the prediction aspects of expatriate job success. In Z. Aycan (Eds.), *Expatriate management: Theory and practice* (pp. 63-92). Greenwich, CT: JAI Press.
- Paunonen, S.V. & Jackson, D.N. (2000). What is beyond the Big Five? Plenty! *Journal of Personality*, 68(5), pp. 821-835.
- Pervin, L.A. & John, P.J. (1997) *Personality: theory and research* (7<sup>th</sup> ed.). New York: Wiley.
- Pulakos, E.D. & Schmitt, N. (1983). A longitudinal study of a valence model approach for the prediction of job satisfaction. *Journal of Applied Psychology*, 68, 307-312.
- Raudsepp, E. (1990). Are you flexible enough to succeed? *Manage*, 41, 6
- Reilly, R.R. & Warech, M.A. (1993). The validity and fairness of alternatives to cognitive tests. In C.C. Wing & B.R. Gifford (Eds.), *Policy issues in employment testing* (pp. 131-224). Norwell, MA: Kluwer Academic.
- Robbins, S.P. (1998). *Organisational behaviour: Concepts, controversies and applications* (8<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice-Hall.
- Rothmann, S. (2000). *Sense of coherence, locus of control, self-efficacy and job satisfaction*. Paper presented at the 28th International Congress of Psychology, Stockholm, Sweden.
- Rothmann, S., Meiring, D., Barrick, M.R. & Van Der Walt, H.S. (2002). *Predicting job performance using personality measures in South Africa*. Paper presented at the 17th Annual Conference of the Society for Industrial and Organisational Psychology. Toronto, Canada.
- Rust, J. (1999). Discriminant validity of the 'Big Five' personality traits in employment settings. *Social Behaviour and Personality*, 49, 787-830.
- Salgado, J.F. (1997). The five factor model of personality and job performance in the European community. *Journal of Applied Psychology*, 82, 30-41.
- SAS Institute. (1996). *SAS users guide: Basic* (6<sup>th</sup> ed.). Cary, NC: SAS Institute.
- Schneider, B. & Dachler, H.P. (1978). A note on the stability of the Job Descriptive Index. *Journal of Applied Psychology*, 63, 650-653.



- Schneider, R.J. & Hough, L.M. 1995. Personality and industrial/organisational psychology. In C.L. Cooper & I.V. Robertson (Eds.), *International review of industrial and organisational psychology* (Vol.10). Chichester, UK: Wiley.
- Schneider, M.H. (1999). The relationship of personality and job settings to job satisfaction. *Dissertation Abstracts International: Section B: The Science and Engineering*, 59, 6103.
- Schultz, D.P. & Schultz, S.E. (1998). *Psychology and work today. An introduction to industrial and organisational psychology* (7th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Shaughnessy, J.J. & Zechmeister, E.B. (1997). *Research methods in psychology* (4<sup>th</sup> ed.). New York: McGraw-Hill.
- Smith, P.C., Kendall, L.M. & Hulin, C.L. (1969). *The measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.
- Spector, P.E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39, 1005-1016.
- Spector, P.E. (1997). *Job satisfaction: Application, assessment, causes and consequences*. Thousand Oaks, California: Sage.
- Staw, B.M. & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 70, 469-480.
- Staw, B.M., Bell, N.E. & Clausen, J.A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56-77.
- Steyn, H.S. (1999). *Praktiese betekenisvolheid: Die gebruik van effekgroottes*. Wetenskaplike bydraes – Reeks B: Natuurwetenskappe Nr. 117. Potchefstroom: PU vir CHO.
- Strack, S. & Lorr, M. (1994). *Differentiating normal and abnormal personality*. New York: Springer.
- Strümpfer, D.J.W., Danana, N., Gouws, J.F. & Viviers, M.R. (1998). Personality dispositions and job satisfaction. *South African Journal of Psychology*, 28, 92-100.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Tett, R.P., Jackson, D.N. & Rothstein, M. (1991). Personality measures as predictors of job performance: a meta-analytic review. *Personnel Psychology*, 44, 703-742.
- Tokar, D.M. & Subich, L.M. (1997). Relative contributions of congruence and personality dimensions to job satisfaction. *Journal of Vocational Behaviour*, 50, 482-491.
- Tokar, D.M., Fischer, A.R. & Subich, L.M. (1998). Personality and vocational behaviour: A selective review of the literature, 1993-1997. *Journal of Vocational Behaviour*, 53, 115-153.

- Transberg, M., Slane, S. & Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: A meta-analysis. *Journal of Vocational Behaviour*, 42, 253-264.
- Vinchur, A.J., Schippmann, J.S., Switzer, F.S. & Roth, P.L. (1998). A meta-analysis review of predictors of job performance for salespeople. *Journal of Applied Psychology*, 83, 586-597.
- Warr, P., Cook, J. & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52, 129-148.
- Weiss, D.J., Dawis, R.V., England, G.W. & Lofquist, L.H. (1967). *Manual for the Minnesota Satisfaction Questionnaire*. Minneapolis, MN: University of Minnesota.
- Weiss, H.M. & Cropanzano, R. (1998). Affective events theory: A theoretical discussion of the structure, causes, and consequences of affective experiences at work. *Research in Organisational Behaviour*, 18, 1-74.
- Wiggins, J S. 1996. *The five factor model of personality: Theoretical perspectives*. New York: Guilford Press.
- Wright, P.M., Kacmar, K.M., McMahan, G.C. & Deleeuw, K. (1995). Cognitive ability and job performance. *Journal of Management*, 21, 1129-1139.
- Zellars, K.L., Perrewe, P.L. & Hochwarter, W.A. (2000). Burnout in health care: The role of the five factors of personality. *Journal of Applied Social Psychology*, 30, 1570-1598.