JOB SATISFACTION AS A PREDICTOR OF INTENTION TO QUIT AMONGST
ENGINEERING PROFESSIONALS WITHIN A PETROCHEMICAL ORGANISATION

by

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INDUSTRIAL AND ORGANISATIONAL PSYCHOLOGY

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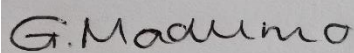SUPERVISOR: DR CEBILE TEBELE

31 DECEMBER 2021

DECLARATION

I, Gontse M Madumo student number 35157038, declare that this dissertation titled "**Job Satisfaction as a Predictor of Intention to Quit Amongst Engineering Professionals Within a Petrochemical Organisation**", is my own work and that all the sources that I used or quoted have been indicated and acknowledged by means of complete references. The APA 7th edition guidelines for referencing style were applied in the dissertation.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality as verified by my supervisor.

I further declare that the study has been carried out in strict accordance with the Policy for Research Ethics of the University of South Africa (Unisa). I took great care that the research was conducted with the highest integrity, taking into account Unisa's Policy for Infringement and Plagiarism.

I further declare that I have not previously submitted this work, or part of it, for examination for another qualification or at any other higher education institution

I further declare that the study has been carried out strictly in accordance with the Policy for Research Ethics of the University of South Africa (UNISA). I further declare that ethical clearance to conduct the research was obtained from the Department of Industrial and Organisational Psychology at UNISA 2019_CEMS/IOP_026. Permission was also obtained from the participating organisations to conduct the research.

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I whizzed through my undergraduate and honours degree and somehow believed I had the formula to complete all my degrees with the same speed – it wasn't to be. Attach bum to chair – that is the solution if you're asking. This degree proved to be the loneliest, most trying of my being. It is for that reason that everyone who has supported me through this journey deserves mention, but given that it won't be possible to list all of you, I would like to extend my gratitude to the following people for their support during the writing of this dissertation:

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SUMMARY

JOB SATISFACTION AS A PREDICTOR OF INTENTION TO QUIT AMONGST ENGINEERING PROFESSIONALS WITHIN A PETROCHEMICAL ORGANISATION
by
GONTSE MADUMO

SUPERVISOR   :   Dr Cebile Tebele

DEPARTMENT   :   Industrial and Organisational Psychology

DEGREE   :   MCom (Industrial and Organisational Psychology)

The objectives of this study were to (1) determine whether job satisfaction significantly predicts intention to quit; (2) determine whether people from different age, gender, race and job level differ significantly regarding their job satisfaction and intention to quit and (3) accentuate the implications for retention practices in the South African petrochemical context. The Minnesota Job Satisfaction questionnaire (MSQ) was used to measure job satisfaction and The Intention to Quit Scale (IQS) was used to measure intention to quit. A cross sectional quantitative research design was applied to a systematic random sample of 157 engineering professionals at a global petrochemical organisation.

Job satisfaction was found to negatively influence intention to quit. The results of the research also indicated that intrinsic and extrinsic job satisfaction has a statistically significant impact on employees' intention to quit meaning that employees' decision to stay or leave their jobs is influenced by their satisfaction with their jobs. The study found no significant difference on the demographic variables of age, gender and race on both variables – job satisfaction and intention to quit. However, an engineering professional's job level is found to have an impact on their level of satisfaction with their job as well as their potential to quit the organisation.

KEY TERMS: job satisfaction; intention to quit; engineering professionals; engineers; petrochemical industry; retention strategies; engineers; employment; age; gender; race; job level

ISISHWANKATHELO

UKWANELISEKA NGUMSEBENZI NJENGOMQONDISO WOKUSHIYA UMSEBENZI KWIINGCALI ZOMSEBENZI KWIQUMRHU LAMACHIZA AMAFUTHA EZITHUTHI
ngu
GONTSE MADUMO

UMCEBISI: Dr Cebile Tebele

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ISIDANGA: MCom (Industrial and Organisational Psychology)

Iinjongo zesi sifundo yayikukufumanisa ukuba (1) ingaba ukwaneliseka ngumsebenzi kungangumqondiso wokuzimisela ukuwushiya na umsebenzi; (2) ingaba abantu abahlukeneyo ngokobudala, ngokwesini, ngokobuhlanga nangokwamaqela obungcali bemfundo bahluke kakhulu na malunga nokwaneliseka ngumsebenzi kunye nokuzimisela ukuwushiya umsebenzi; kwaye (3) ingaba oku kuyaziqinisa na iindlela zokugcina abasebenzi kwimisebenzi yamachiza amafutha ezithuthi eMzantsi Afrika. Kwasetyenziswa uluhlu lwemibuzo olwaziwa ngokuba yi*Minnesota Satisfaction Questionnaire (MSQ)* xa kuphandwa ngokwaneliseka ngumsebenzi, kwaphinda kwasetyenziswa oluyi- *Intention to Quit Scale (IQS)* xa kuphandwa ngokuba nenjongo yokushiya umsebenzi. Kwasetyenziswa uphando ngokuqwalasela ubuninzi beempendulo kwisampulu yabasebenzi abali-157 abakhethwa ngokungacwangciswanga kwiqumrhu lamachiza amafutha ezithuthi.

Kwafumaniseka ukuba ukwaneliseka ngumsebenzi kunefuthe elibi kwinjongo yokushiya umsebenzi. Abasebenzi abangalinganiyo ngobudala bakubona ngeendlela ezahlukeneyo ukwaneliseka ngumsebenzi okungaphandle. Abasebenzi beentlanga ezahlukeneyo banezimvo ezifanayo malunga nabantu, imisebenzi, ukwaneliseka okungaphakathi nokwaneliseka okungaphandle ngumsebenzi.

AMAGAMA APHAMBILI: ukwaneliseka ngumsebenzi; iinjongo zokushiya umsebenzi, iingcali zobunjineli; amachiza amafutha ezithuthi; amacebo okugcina abasebenzi

OPSOMMING

WERKSBEVREDIGING AS 'N AANDUIDING VAN VOORNEME OM TE BEDANK ONDER PROFESSIONELE INGENIEURS IN DIENS VAN 'N PETROCHEMIESE ORGANISASIE

deur

GONTSE MADUMO

PROMOTOR: Dr Cebile Tebele

DEPARTEMENT: Bedryfs- en Organisasiesielkunde

GRAAD: MCom (Bedryfs- en Organisasiesielkunde)

Die doelwitte van hierdie studie was om (1) te bepaal of werksbevrediging 'n beduidende aanwyser is van voorneme om te bedank; (2) te bepaal of mense van verskillende ouderdomme, geslagte, rasse en wat oor verskillende opvoedkundige kwalifikasies beskik beduidend verskil wat betref hul werksbevrediging en voorneme om te bedank; en (3) die aandag te vestig op tersaaklike implikasies wat betref retensiepraktyke in Suid-Afrikaanse petrochemiese verband. 'n Tevredenheidsvraelys, die *Minnesota Satisfaction Questionnaire* (MSQ), en 'n likert-skaal, die Intention to Quit Scale (IQS), is aangewend om voorneme om werksbevrediging te meet. 'n Kwantitatiewe navorsingsontwerp is op 'n sistematiese ewekansige steekproefneming bestaande uit 157 werknemers by 'n wêreldwye petrochemiese organisasie toegepas.

Daar is bevind dat voorneme om te bedank negatief deur werksbevrediging beïnvloed word, asook dat werknemers van verskillende ouderdomsgroepe ekstrinsieke werksbevrediging verskillend ervaar. Werknemers van alle rasse ervaar mense, take, intrinsieke en ekstrinsieke werksbevrediging en werksbevrediging dieselfde.

Sleutelwoorde: werksbevrediging; voorneme om te bedank; professionele ingenieurs; petrochemiese; retensiestrategieë

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CHAPTER 1: SCIENTIFIC ORIENTATION TO THE RESEARCH

The purpose of this study is to investigate job satisfaction as a predictor of intention to quit amongst engineering professionals within a petrochemical organisation based in Mpumalanga, South Africa. This chapter will cover the background of the study as well as the motivation for conducting the study. The chapter will further include the methodology, instruments used, data analysis as well as the ethical considerations underpinning the proposed study. The chapter also presents the summary and conclusion.

1.1   BACKGROUND TO AND MOTIVATION FOR THE RESEARCH

South Africa is currently in a stagnated economic phase where job seekers are struggling to find employment and organisations are finding it challenging to find suitable skills. Engineering plays a pivotal role in a country's economic developments (Rivombo & Motseke, 2021; Siwela & Van der Bank, 2021) and to this end a shortage of engineering skills in the country adds to the stagnation currently being experienced in the economy. There are various factors contributing to the severe under supply of engineering professionals in South Africa. Some of those reasons include: failure by high school graduates to meet the requirements for entry into engineering programmes and, ironically, the high quality of engineering education in South Africa leading to emigration. Crime, violence, lack of confidence in the South African government and political uncertainty are some of the reasons engineers are leaving South Africa at an alarming rate (BusinessTech, 2020; Halstein, 2021; Ngcamu & Mantzaris, 2021; Wöcke & Barnard, 2021). South Africa is often the beneficiary of skilled professionals from other African countries, however according to Ehrhart et al. (2014), about three percent of the African migrants left the continent from 1980 to 2010. The shortage of engineering practitioners is evident in the number of competent engineers available for ongoing projects (Mlambo & Adetiba, 2019). The shortage of engineering skills has also led to cases where work which requires the input of competent engineers is carried out without such input (Mlambo & Adetiba, 2019). The recent insurrection of 2021 that saw looting and violence which is rooted in deep-seated inequality and growing poverty is likely to create an even bleaker picture as unemployment continues to escalate and businesses attempt to recover (Harriman et al., 2021). This is highly problematic as public and private sectors are dependent on engineering services to address vital needs of South African communities.

A 2019 article by the South African Institution of Civil Engineering stated that, of its 12 000 registered members hundreds of engineers between the ages of 20 – 60 had left the country over the past three years. Their reasons for leaving are "seeking greener pastures and

opportunities" (BusinessTech, 2020). City Press recently reported that nearly one million South Africans emigrated in 2020. The top three countries South African citizens are leaving for are the United Kingdom, Australia and United States. Various skills are impacted by this, many doctors, nurses, teachers, engineers and other skilled professionals are being actively recruited by companies in Canada, the US, the UK, the United Arab Emirates, Australia and New Zealand.

Business Unity SA CEO Cas Coovadia lamented that South Africa is losing skilled talent, especially among younger professionals. Although some skilled individuals returned due to the pandemic, there is a renewed uptick of professionals emigrating once again due to the termination of many lockdowns across the world. Coovadia places the blame on an ardent lack of economic growth and a seeming inability to do anything about it, the lack of law and order, corruption and inappropriate application of broad-based BEE policies resulting in shrinking opportunities.

The aim of this study is to investigate factors that influence engineers' intention to quit employment at a petrochemical organisation based in Mpumalanga. Often retention is managed in a reactive manner where employees are asked questions to understand their motivation for exiting only at resignation stage (Furo & Fabunmi, 2021). Intention to quit is a proactive approach where the climate is surveyed while the employees are still employed for an organisation to proactively put measures in place to prevent employees from leaving their employ. Studies have been conducted on related topics such as emigration potential of South African engineers (Mlambo & Adetiba, 2019; Swart, 2009). Siwela (2018) found that companies would need to focus on job fit, meaningful work, organisational support and satisfaction with pay. As anticipated, pay level satisfaction was influenced by perceived organisational justice, and interestingly also by organisational support.

Domela- Serobanyane's 2022 study of intention to quit attempted to investigate the moderating effect of psychological safety on the relationship between job demands, job resources, and intention to quit. Whereas the existing literature on conservation resources theory provides valuable frameworks for understanding intention to quit, few researchers have investigated how the intention to quit may be influenced by job demands and job resources, through the mediating effect of psychological safety. Domela-Serobanyane's (2022) findings was a weak and negative correlation between job resources and intention to quit existed, there was not sufficient evidence that job resources could be a good predictor of intention to quit since the regression model highlighted an insignificant value of 0.411 which is greater than 0.05. The multiple regression highlighted that when psychological safety was introduced, it

was found that combined psychological safety and job demand were good predictors of intention to quit and it was significant at 0.05 since the significance level of the model was 0.03. The results of the research study embrace a practical implication for organisations in that the findings support the literature suggesting that psychological safety moderates the relationship between job demands, job resources, and intention to quit. The findings further contribute to a growing body of knowledge surrounding intention to quit, job demands, job resources, and psychological safety fields of research.

The primary objective of Mthembu's (2017) study was to integrate Hofstede's cultural value dimensions at individual level, job satisfaction, organisational commitment, perceived organisational support (POS) and perceived supervisory support (PSS), and to describe the manner in which these latent variables combine to affect turnover intention. The study was conducted in a public sector department that experiences a relatively high level of skilled employee turnover. Significant relationships were identified between collectivism and job satisfaction; collectivism and organisational commitment; collectivism and perceived supervisory support; collectivism and perceived organisational support; job satisfaction and organisational commitment; organisational commitment and turnover intention; job satisfaction and turnover intention; perceived supervisory support and job satisfaction; perceived supervisory support and organisational commitment; perceived organisational support and job satisfaction; perceived supervisory support and perceived organisational support; perceived organisational support and job satisfaction; perceived organisational support and organisational commitment; perceived organisational support and turnover intention.

In the present study where the focus is on engineers, the solution would be to replace engineers as they leave but that can be a costly exercise and given the scarcity of the skill it can be quite a challenge

Coetzee et al. (2014) examined whether human resource practices (as a core aspect of organisational culture) positively predict organisational commitment. Their findings were that job satisfaction; training and development; and rewards and remuneration positively predicted affective commitment which are critical levers to retention of employees. Factors such as leadership, rewards and remuneration and training had also positively predicted normative commitment while human resource policies and procedures positively predicted continuance commitment (Coetzee et al., 2014). Baloyi et al. (2014) studied the role that supervisor support in predicting employee job satisfaction from their perception of the performance management system in engineering organisations. They found that supervisor support partially explains why employees have positive perceptions of their jobs based on their evaluation of the current

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performance management system and therefore supervisor support enhances performance in engineering organisations (Baloyi et al., 2014). Experiencing positive supervisor support aids in the retention of engineering professionals.

The solution would be to replace engineers as they leave but that can be a costly exercise and given the scarcity of the skill it can be quite a challenge (Makhubela & Ngoepe, 2018; Mlambo & Adetiba, 2019). Muindi (2011) and Turner (2020) posit that the relationship between organisations and people is interdependent with both parties impacting one's ability to achieve positive results (Roodt et al., 2002; Turner, 2020). March and Simon (1958) introduced the theory of organisational equilibrium, it emphasised the importance of the balance between employee and organisation contributions and inducements (Gibson et al., 2019; Holtom et al., 2008). Naidoo (2018) argues that pay satisfaction may have a direct and indirect effect on intention to quit. The indirect effect of pay satisfaction resulted through job satisfaction and organisational commitment (Naidoo, 2018).

Mobley (1977) explored the more comprehensive withdrawal processes considering what employees do before turning over (Holtom et al., 2008, Park & Min, 2020). Essentially his employee turnover model explains the processes that a dissatisfied employee follows until they reach the resignation point. A set of withdrawal conditions were proposed in his intermediate linkages model which included thoughts of quitting, expected utility of withdrawal, job search behaviours that link job dissatisfaction to actual turnover behaviour (Holtom et al., 2008).

Organisations stand to lose out quite significantly when voluntary turnover occurs, but it also has an impact on employees in that they expand a lot of energy on finding new jobs and adjusting to new situations (Holtom et al., 2008; Ramlawati et al., 2021; Rosander et al., 2022). Employees must give up known routines and interpersonal connections at their previous places of employ which can be quite stressful (Boswell et al., 2005; Chong et al., 2020). Organisations suffer financially from the cost of voluntary turnover, but managers do not always have line of sight of these numbers as they are often hidden in items such as recruitment, selection, temporary staffing and training but, Holtom et al. (2008), argue that the real unmeasured costs are those from losses of customer service continuity or critical knowledge. Maren Hogan, a talent acquisition expert provided the three following points in the changing world of work: 1) One-third of new joiners quit after six months of joining an organisation; 2) After a week of joining an organisation, few decide on whether they want to remain for the long term or not; 3) a third of leaders in companies having more than 100 employees are searching for new opportunities (Bandyopadhyay & Jadhav, 2021). Millennials

are often labelled as "job hoppers" as they frequently change or quit their jobs in order to propel their careers to the next level (Nguyen & Le, 2022). Past generations tended to remain within one organisation for longer periods of time. Proper recognition, communication, ethnicity, age, gender are some of the challenges facing millennials (Bandyopadhyay & Jadhav, 2021). There are, therefore many reasons to study intention to quit from an individual, organisation and even country perspective (Holtom et al., 2008; Bandyopadhyay & Jadhav, 2021; Ndembele et al., 2021). Groblena (2021) found that employees leaving hotels reduces quality of service and performance. Retention of employees is an economical challenge.

Research has proven the link between intention to quit with job satisfaction as an essential component to employee turnover due to the construct's empirical relationship. This has been established through various studies where a negative relationship with intention to quit was established continuously (Martin & Roodt, 2008; Mathieu & Zajac, 1990; Meyer et al., 2002; Steel & Ovalle, 1984; Sungu et al., 2019; Tett & Meyer, 1993; Stefanovska-Petkovska et al., 2021; Redondo, 2021). Martin and Roodt (2008) found that when individuals are satisfied with their jobs, they are less likely to have intentions to quit.

Martin (2007) posits that the more employees are satisfied with their jobs, the more they are committed to the goals of the organisation and unlikely to leave. Martin (2007, p. 24) identified various independent variables of job satisfaction, namely:

- Opportunity – refers to the availability of other jobs within the organisation.
- Routinisation – the level to which the job is repetitive in terms of routine.
- Participation – the level to which employees have power concerning their job and performance.
- Instrumental communication – the level to which employees have access to information from their managers.
- Integration – the level to which an employee relates to co-workers and friends within the working environment.
- Pay – refers to monetary and non-monetary benefits that are received by the employees for their service.
- Distributive justice – the level "to which rewards and punishments are related to performance inputs into the organisation".
- Promotional opportunity – is the level to which vertical or horizontal promotional growth is available for employees.

- Professionalism – refers to the level to which employees are dedicated to occupational standards of performance. The more dedicated employees are to occupational standards, the more professionalism there is.
- General training – the level to which "occupational socialism of an individual results in the ability to increase the productivity of diverse organisations" and kinship responsibility (Martin, 2007).

Job resources are those aspects of the job that assist in achieving work goals, stimulate personal growth and reduce job demands (Bakker & Demerouti, 2018). Job resources serve the multiple purpose of acting as buffers to the demands set by a job as well as to motivate employees to engage in their work (Bakker & Demerouti, 2018).

Barkhuizen and Gumede (2021) looked at the relationship between talent management, job satisfaction and voluntary turnover at selected South Africa government institution. Their motivation for the study was to determine the current state of South African government institutions. The results revealed a low leadership talent mindset wherein talent management practices such talent development, performance management, talent retention strategies and compensation practices were poorly applied (Barkhuizen & Gumede. 2021). Job satisfaction was found to moderated the relationship between talent management and voluntary turnover intentions (Barkhuizen & Gumede. 2021).

1.2   PROBLEM STATEMENT

Scholars have conducted empirical studies to understand the reasons why employees leave organisations (Coetzer & Rothmann, 2007; Radic et al., 2020; Sandhya & Sulphey, 2020; Wakabi et al., 2016). Common findings are that when employees are satisfied in their jobs, they have less intention to quit as compared to those who are less satisfied in their jobs (Martin & Roodt, 2005; Takawira et al., 2014). Studies conducted in South Africa have found that job satisfaction influences an employee's decision to voluntarily leave the organisation or to stay (Jauhar et al., 2017). These studies have also highlighted the influence of demographical factors such as age, race, and gender in the decision to voluntarily leave or stay in an organisation (Nazir & Islam, 2017; Robyn & Du Preez, 2013; Singh & Gupta, 2015).

The turnover of engineers is a worldwide phenomenon studied across the globe because of the significance felt by the loss of engineers in any economy (Nauman et al., 2021; Richards, 2021; Siwela & Van der Bank, 2021). Kerdngern and Thanitbenjasith (2017) studied the influence of construction project managers' contemporary leadership on job satisfaction,

organisational commitment and intention to quit of civil engineers in Taiwan. It found that contemporary leadership had a direct impact on job satisfaction and organisational culture and a direct negative influence on intention to quit. The COVID-19 pandemic has done more harm than good as what has been coined "The Great Resignation" by Anthony Klotz – professor management at Mays Business School has occupied the minds of organisations around the globe (BusinessTech, 2022). The Great Resignation refers to the voluntary resignation of employees amid the global pandemic (BusinessTech, 2022; Mujtaba, 2022; Robertson, 2021). A recent McKinsey survey in the United States revealed that 40% of employees anticipate leaving their job in the next three to six months (BusinessTech, 2022). The top three factors employees cited as their intention to quit are that they don't feel valued by the organisation (54%) or their managers (52%) or they didn't feel a sense of belonging in the workplace (51%) (BusinessTech, 2022).

Old Mutual's reward management platform Remchannel released that employee turnover has increased by 16% across all industries, while 69% of its survey respondents indicated that they were battling to attract new employees or retain their existing talent. South Africa's unemployment has reached 35.3% at the end of 2021 (Business Insider South Africa, 2022). The country has an abundance of unskilled labour in low wage positions which stands to reason that the majority of South African won't look to quit their jobs. However, Silberman, Group CEO of Webfluential believes that the growing resignations rates in South Africa can be attributed to the emerging gig economy. The gig economy refers to a market system in which companies or individual requesters hire workers to perform short assignments (Williams, et al., 2021). Some employees quit their salaried jobs to return to offering their skills to their previous employees on their own terms (Barrios, 2020).

Masale et al., (2021) explored how individual traits and psychological strengths (i.e. adult state hope, meaning in life and work locus of control) moderate or mediate the relationship between job satisfaction and organisational commitment in a Botswana local government institution. The motivation for the study was led by the emergence of the COVID-19 pandemic which forced employers to rely on the foundations of positive organisational psychology to navigate employee wellbeing more effectively during times of unprecedented crisis (Masale, et al., 2021). The authors found that adult state hope, meaning in life and work locus of control partially mediated the relationship between job satisfaction and organisational commitment – a construct related to intention to quit (Masale, et al., 2021).

Empathy has been studied and written about by various authors and psychologists (Choi et al., 2019; Archer & Turner, 2019; Nöthling et al., 2021). Empathy has become more relevant

in the new world of work. The construct is seen as essential to social behaviour. It is seen as the key to stimulating one's need for achievement which leads to improved job satisfaction which directly impacts performance. Mukhtar et al., (2022) asserts that job seniority, financial compensation and position in the organisation are factors that impact job satisfaction. Mukhtar et al., (2022) found that leader empathy has a positive and significant effect on job satisfaction.

The turnover of engineers is a worldwide phenomenon studied across the globe because of the significance felt by the loss of engineers in any economy. Kerdngern and Thanitbenjasith (2017) studied the influence of construction project managers' contemporary leadership on job satisfaction, organisational commitment and intention to quit of civil engineers in Taiwan. They found that contemporary leadership had a direct impact on job satisfaction and organisational culture and a direct negative influence on intention to quit.

Hamid and Ahmad (2017) studied the Malaysian context in relation to intention to quit amongst women engineers. They found that work-family conflict did not have a significant positive relationship with intention to quit. However, work-family conflict has a positive relationship with burnout which is identified as a mediating factor for intention to quit amongst Malaysian women engineers.

Lin et al. (2020) took a different approach, taking into consideration an organisation's learning culture. They found that an organisation's learning culture has an impact on employees' job satisfaction and intention to quit. They stated that employees become more satisfied with their jobs when they become more capable of adapting to the changing environment (Lin et al., 2020).

In a related industry, Swart (2009) studied the potential emigration of engineers in the mining sector advising that there needed to be government intervention allowing engineers to start their own organisations that would contribute to the South African economy.

With specific focus on the petrochemical industry, Rowe (2010) using Engen Refinery as a case study, focused on an in-depth examination of the experiences of engineers working at the Refinery. Rowe's (2010) findings were that the dynamics that underline the skills shortage of engineers in the South African Petrochemical Industry are manifold and are both a consequence of internal and external labour market factors which she argued are intertwined.

A related organisation is Eskom, where Maya et al., (2014) investigated the reasons why, despite Eskom attracting suitably skilled engineers, they still have the challenge of skills

shortages. Maya's (2014) study sought to examine the different programmes and processes that Eskom put in place with the intention to contribute in building and retaining the successfully attracted engineers.

Ada (2014) recommended that the South African government should embark on strategies aimed at curbing the exodus of skilled and experienced engineers. Ada (2014) posited that this could be achieved through the creation of congenial working environments for local engineers including financial incentives in the form of competitive remuneration. Ada (2014) also examined labour laws as a concern of attracting expatriate engineers without bureaucracy. In the long-term Ada (2014) suggested that the South African government should send their mathematics and science teachers and lecturers to leading countries in those fields to increase the quality of South African education. The rationale being that well equipped matriculants stood a better chance of meeting the demands of engineering programmes at tertiary levels.

Marais et al. (2017) placed a focal point on the retention of Generation Y engineers. They found that engineers need to feel psychologically safe by determining that their hygiene factor expectations are being met prior to them availing themselves or by remaining in an organisation and potentially being engaged. Marais et al., (2017) recommended organisations focus on career engagement and craft innovative career pathways that accommodate generation Y's independence and self-reliance in pursuing a career.

Mabaso and Dlamini (2018) found performance management, compensation, benefits, recognition, talent development and career opportunities significantly predicted organisational commitment. Ogunleye (2020) looked at the relationship between employee engagement, job satisfaction, career satisfaction, intention to quit and organisational commitment amongst professional engineers in the United States.

One of the latest studies in the South African context is that of Siwela and van der Bank (2021) who looked at the facilitating role of commitment in the retention of engineers. Siwela and van der Bank (2021) found that job fit, psychological meaningfulness, perceived organisational support and satisfaction with pay all explained the significant variance in affective commitment whilst affective commitment demonstrated a strong negative relationship with intention to quit. The various studies mentioned demonstrate the significance of job satisfaction and intention to quit across the globe. However, there is a paucity of research studies conducted in the South African context on the relationship between job satisfaction and intention to quit amongst engineers.

This study, therefore, aims to benefit not only Industrial and Organisational Psychologists and Human Resources Practitioners, but organisations within the engineering fields in understanding why these professionals leave petrochemical organisations. It is anticipated that the findings from this study may inform interventions for retention strategies and continued organisational citizenship of engineering professionals in engineering and related companies.

1.2.1 General research question relevant to the study

The general question that requires further research is:

What is the relationship between job satisfaction in predicting intention to quit of employees in a petrochemical company in South Africa, and do individuals from different age, gender, race and job level groups differ significantly in terms of these variables?

1.2.2 Research questions relevant to the literature review

The research questions of relevance to the literature study are set out below.

Research question 1: How is job satisfaction conceptualised in the literature?

Research question 2: How is intention to quit conceptualised in the literature?

Research question 3: What is the theoretical relationship between job satisfaction and intention to quit?

Research question 4: How do demographical factors such as age, gender, race and job level influence engineers' decision to quit as conceptualised in the literature?

1.2.3 Research questions of relevance to the empirical research

The research questions relevant to the empirical research appear below.

Research question 1: What is the nature of the empirical relationship between job satisfaction and intention to quit as manifested in a sample of respondents within a petrochemical organisation in South Africa?

Research question 2: Does job satisfaction predict intention to quit amongst engineers in a petrochemical organisation?

Research question 3: Do engineering professionals from different age, gender, race, and job level groups differ significantly regarding job satisfaction and intention to quit in a petrochemical organisation in South Africa?

Research question 4:   What recommendations and areas for future research based on the research findings, can be proposed for the field of Industrial and Organisational Psychology regarding employee retention?

1.3   AIMS OF THE RESEARCH

In relation to the empirical research questions as stated above the following aims are formulated:

1.3.1   General aim of the study

The primary aim of the study is to explore the relationship between job satisfaction regarding intention to quit.

1.3.2   Specific aims of the research

The following aims are formulated for the literature review and empirical study:

Specific aim 1:   Conceptualise job satisfaction from a theoretical perspective;

Specific aim 2:   Conceptualise intention to quit from a theoretical perspective; and

Specific aim 3:   Explain the theoretical relationship in job satisfaction predicting intention to quit with specific reference to engineers in a petrochemical organisation.

Specific aim 4:   Explain the theoretical relationship between age, gender, race and job level.

In terms of the empirical study, the specific aims of the research are as follows:

Specific aim 1:   Investigate the relationship between job satisfaction and intention to quit.

Specific aim 2:   Determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation.

Specific aim 3:   Ascertain whether engineering professionals from different age, gender, race, and job level groups differ significantly with regard to job satisfaction in predicting intention to quit.

Specific aim 4:   Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit.

1.4 PARADIGM PERSPECTIVE

A paradigm is a set of beliefs that informs how research within a specific discipline should be implemented and how the results will be interpreted (Kankam, 2019). Tashakkori and Teddlie (2010) describe paradigms as sets of beliefs that incorporate the theories of a group of researchers (Gómez Sánchez, 2021). These ideas underpin research methods and interpretations (Bernard, 2017; Kumar, 2018). Kivunja and Kuyini's (2017) definition is that a paradigm is a lens through which researchers view the obvious and not so obvious principles of reality.

1.4.1 Intellectual climate

The literature review of job satisfaction as a predictor of intention to quit will be presented from the humanistic paradigm. The empirical study will be presented from the post-positivism paradigm.

1.4.1.1   Literature review

Humanism is "...associated with the worth, dignity, rights, responsibilities, and fulfilment of man" (Sutich & Vich, 1969, p. 8). The objective of humanism is to gain an understanding of how reality is negotiated or constructed by human subjects realising that the investigator is also involved in both the negotiations and construction (Wong, 2017). Hiemstra and Brockett (1994) provide the following principles underlying humanism:

(a)   human nature is inherently good;
(b)   individuals are free and autonomous, being capable of making major personal decisions;
(c)   human potential for growth is essentially unlimited;
(d)   self-concept has an important role to play in growth and development;
(e)   individuals have an urge towards self-actualisation;
(f)   reality is defined by each person; and
(g)   individuals have a responsibility to themselves and others. What makes humanism well suited to this study is its relevance to the supposition that individuals have freedom of choice on whether they will remain in an organisation or leave the organisation.

Systems theories purport to explain how social systems work. Systemism is the alternative to both individualism and holism (Bunge, 2017; James & James, 2016). It is an approach

researchers employ when they want to explain "the formation, maintenance, repair, dismantling of a concrete complex thing of any kind" Pickel (2007, p. 400). The parts of the system constitute its structure (Pickle, 2007). McMahon (1994) and Patton and McMahon (2015) described systems theory as being able to consider a broad range of influences, portray the area of interest as an evolving process rather than it being seen as static, recognising the dynamic nature of the area of interest through reciprocal interaction while taking into account the unpredictable nature of area of interest through the inclusion of "chance" as an influence. Flood (2010) summarised it as a flow of energy and information between the individual and the environment. This paradigm will assist in placing the individual in the environment while determining their job satisfaction, transformational leadership experience and intention to quit.

1.4.1.2 *Empirical study*

The empirical study will be presented from the postpositivism research paradigm. The aim of positivists is to test a theory or describe an experience by observing and measuring it in order to then predict and control forces that surround it (Weideman, 2015). The assumption of postpositivism is that research is influenced by several well-developed theories apart from and including the one being tested (Campbell & Stanley, 2015; Cook & Campbell, 1979; Young & Ryan, 2020)

Postpositivism's view of the world is as ambiguous, variable and having varying realities. "Reality is viewed as real, but it can never be completely apprehended but can rather be approximated" (Guba, 1990, p. 8; Kivunja & Kuyini, 2017). Postpositivism assumes that "(1) knowledge can be gained through a search for regularities and causal relationships among components of the social world; (2) regularities and causal relationships can best be discovered if there is a complete separation between the investigator and the subject of the investigation; and (3) this necessary separation between the knower and the known can be guaranteed through the use of the scientific method" (Miller, 2000, p. 60; Panhwar et al., 2017). Postpositivism will assist in guiding the research to an objective and scientific analysis of the empirical evidence.

1.4.2 Meta-theoretical statement

Meta-theories place specific research questions within a broader framework and encourage the integration of theorising for a range of potentially disparate phenomena according to Abrams and Hogg (2004). They set parameters for predictions by specific theories and contexts (Abrams & Hogg, 2004; Mayo et al., 2016). In terms of the empirical context, the

study will be based on models and theory in relation to the variables identified. In the disciplinary context, the research focuses on Industrial and Organisational Psychology as a field of application.

1.4.2.1   Theoretical models

The theoretical model for job satisfaction will be based on Weiss et al's (1965) definition as an individual's assessment of the working environment in terms of how well it meets their needs (Weiss et al., 1965). Intention to quit will be presented from the Unfolding model of voluntary turnover conceptualised by Lee and Mitchell (1994).

1.4.2.1.1   Conceptual descriptions

A brief description of the core constructs of relevance to the present study is provided below.

- Job satisfaction is an affective attachment to one's job. It's an attitude people hold either positively or negatively towards their jobs and organisations (Greenberg & Baron, 2003).
- Intention to quit is "the conscious and deliberate wilfulness to leave the organisation" (Tett & Meyer 1993, p. 262). It is the extent to which an employee plans to leave or stay with the organisation (Bothma & Roodt 2013; Gan & Voon, 2021; Jacobs & Roodt, 2011; Jadoo et al., 2015; Mawardi, 2022).

1.4.3 Central hypothesis

The central hypothesis of the research is formulated as follows:

Job satisfaction positively predicts intention to quit. Further to that, individuals from different age, gender, race and job level differ significantly in terms of job satisfaction and intention to quit.

1.5   RESEARCH DESIGN

The following section will highlight the research design of the study.

1.5.1   Research approach and sampling

A quantitative survey design aimed at permanently employed engineering professionals working at a petrochemical organisation in South Africa will be used with the main purpose of describing the empirical relationship between the variables (Babbie & Mouton, 2009; Mogawane et al., 2015). A reference to the predictive influence of job satisfaction and intention to quit will be provided making the research descriptive. An online survey will be used to collect data from a sample of permanently employed engineering professionals in the population.

A cross-sectional survey research design will be employed for this study as it aims to provide a quantitative description of trends, attitudes or even opinions of a population by investigating a sample of engineering professionals (Babbie & Mouton, 2009; Creswell, 2021; Retrouvey, et al., 2020). The defining characteristics of the sample size will be that the subjects are employed permanently within a petrochemical organisation. Surveys will be used to acquire information from the respondents about their beliefs, opinions, characteristics and present behaviour.

1.5.2   Data analysis

The intention would be to generalise on the population based on the sample (Creswell, 2021). This is best suited to this study as it aims to determine the predictive validity of job satisfaction on intention to quit with the aim of improving the concern of retention amongst engineering employees in a petrochemical organisation. The independent variable is job satisfaction and the dependent variable is intention to quit. The focus of the study is to establish a statistically significant relationship between these variables.

The Statistical Package for Social Sciences (SPSS) (2019) is a comprehensive system for analysing data as it can take data from different file types and use it to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analysis (Merrill, 2021). The data will be processed and analysed by means of descriptive, correlational and inferential statistics using SPSS.

1.5.3   Measuring instruments

In order to enhance and ensure the reliability and internal validity of the research, only instruments which have been found to be valid and reliable to different groups under different sets of circumstances in previous studies will be used. The instruments which will be employed

in this research are the Minnesota Job Satisfaction (MSQ) (Weiss, 1967) and the Intention to Quit Scale (IQS) (Roodt, 2004).

1.5.4   Validity and reliability

External validity will be achieved through the selection of a representative sample in order to allow for the generalisability of findings (Meyer, 2011; Van Zyl et al., 2016). Relevant theories and models will be used in the literature review thereby eradicating possible rival hypotheses.

1.5.5   Unit of analysis

Units of analysis are of great importance to research as they directly affect the results of the research (Cooper, 2015). Units of study refers to the objects or things that are being researched in order to formulate generalisations of these objects and to further explain the differences among them (Babbie & Mouton, 2009). While the unit of analysis for the study will be the individuals employed in the petrochemical industry, focusing on job satisfaction and intention to quit. The analysis of data will be generalised to the group.

1.5.6   Ethical considerations

Ethical guidelines, as stipulated by the Health Professions Councils of South Africa (HPCSA) and the department of Industrial and Organisational Psychology, will form the basis of the study. This study addressed the following ethical considerations. Permission to conduct the study was obtained from the petrochemical organisation pertinent to the study (see Appendix A). An ethics form from the Department of IO Psychology Ethics committee at UNISA was also completed. This application provided the details about the study and all measures applied to ensure that the research was conducted in an ethical manner. The IOP Ethics Review Committee issued Ethics approval, certificate number **2019_CEMS/IOP_026** (Appendix B), granting permission for me to proceed with the study. Research participants were informed about the intention to conduct the study at their school, including the purpose, aim, how data will be collected and reported, as well as the measures that will be taken to ensure confidentiality. Participants were given an informed consent form to complete and sign as proof that they voluntarily consent to being part of the study (see Appendix C). All the files and documents used during the research process were kept in a secure space and will only be destroyed after five years.

1.6   RESEARCH METHOD

The study will consist of two phases. The first phase will be the literature review which is utilised to conceptualise the variables. The second phase will consist of the empirical study which operationalises the variables. Figure 1.1 provides a diagrammatic presentation of the research method.

1.6.1   Phase one: Literature review

The literature review will probe the constructs of job satisfaction and intention to quit. The aim of the literature review is to determine the theoretical relationship of job satisfaction regarding intention to quit. It will also test the theory that age, gender, race and job level influence an employee's decision to leave an organisation.

The following is proposed in this phase.

Step 1:   Conceptualise job satisfaction from a theoretical perspective
Step 2:   Conceptualise intention to quit from a theoretical perspective
Step 3:   Integrate the variables and conceptualise the theoretical relationship
             between the variables
Step 4:   Formulate the study hypotheses in order to achieve the study objectives.

1.6.2   Phase two: Empirical study

The empirical study will be presented in Chapter 3 as a research article. It will outline the basis of the study, the background of the study, the trends identified from the research literature, the research's potential benefit, the research design, the results, a discussion of the results, the conclusions drawn, the limitations of the study and recommendations for practice and future research. Chapter 4 will integrate the research study and discuss the conclusions, limitations and implications in further detail.

Figure 1.1

Flow Chart of the Research Method (Babbie & Mouton, 2009)

PHASE 1- LITERATURE REVIEW

- Conceptualisation of constructs.
  Identification of theoretical relationships between constructs.
  Identification of differences between demographical groups.
  Discussion of implications for retention.

PHASE 2- EMPIRICAL STUDY (Cross sectional survey research design)

Sampling

- 299 engineers at petrochemical organisation
- Systematic random

Instruments

- Minnesota Job Satisfaction (MSQ) (Weiss, 1965)
- Intention to Quit Scale (IQS) (Roodt, 2004)

Data collection

- Electronic survey design that was emailed to sample

QUANTITATIVE DATA ANALYSIS

SPSS will be used to score data from the psychometric battery

Stage 1	Descriptive statistics- Cronbach alpha coefficients, means and standard deviation
Stage 2	Correlational statistics- Pearson Product-moment correlation coefficients ($r \geq .30 \leq .49$ will be set for interpreting the practical significance of correlational analysis)
Stage 3	Inferential statistics-multiple regression analysis ($R^2 \geq .13$, will be regarded as practical significance for multiple regression results)
Stage 4	Independent sample T-tests (level of significance $p \leq .05$ to counter Type 1 error) and ANOVA's (Eta square values will be computed to access power effects of tests for significant mean differences

TEST RESEARCH HYPOTHESES

REPORT AND INTERPRET THE RESULTS

INTEGRATE RESERACH FINDINGS

FORMULATE RESEARCH CONLCUSIONS, LIMITATIONS AND IMPLICATIONS

1.7 CHAPTER LAYOUT

The below details the structure of the dissertation, in terms of chapter layout:

Chapter 1: Scientific orientation to the study

Introduced the topic and discusses the variables that are to be investigated in the study. The chapter provides guidelines on what design the research will take as well as the methodology to be used in collecting and analysing the data.

Chapter 2: Literature review

Aims to conceptualise the research variables, i.e. job satisfaction and intention to quit. The practical implications of the relationship for job satisfaction in predicting intention to quit will be discussed. The influence of demographical factors such as age, gender, race, and job level will be highlighted regarding employees' decisions to leave or remain in the employ of an organisation.

Chapter 3: Research article

This chapter's structure will be that of a research article. The basis of the study, the background of the study, trends from the research literature, the potential benefit of the study and the research design will be presented herein. This will be followed by a presentation of the results, a discussion of the results, the conclusions, the limitations of the study and recommendations for practice and future research.

Chapter 4: Conclusions, limitations and recommendations

The final chapter will integrate the discussion and conclusion of the results. It will also include recommendations to the organisation. The limitations experienced in the research will be noted and recommendations for future research for the field of Industrial and Organisational Psychology will be made here.

1.8 CHAPTER SUMMARY

This will present the background to and the motivation for the research, aims of the research, paradigmatic perspectives and research design, the methodological approach and the chapter layout of the complete dissertation.

CHAPTER 2: LITERATURE REVIEW OF JOB SATISFACTION AND INTENTION TO QUIT

The purpose of this chapter is to address the research aims of the literature review which are to conceptualise job satisfaction from a theoretical perspective and to conceptualise intention to quit from a theoretical perspective; to explain the theoretical relationship in job satisfaction in predicting intention to quit with specific reference to engineers in a petrochemical organisation; and to explain the theoretical relationship between age, gender, race and job level as well as present a discussion of the constructs of job satisfaction and intention to quit. The relationship between the variables is displayed in Figure 2.1.

Theoretical perspectives underpinning the constructs are explained, followed by a discussion of the variables influencing the constructs. In conclusion, an integration of the constructs highlighting similarities and differences is presented.

Figure 2.1

Relationship Between Variables
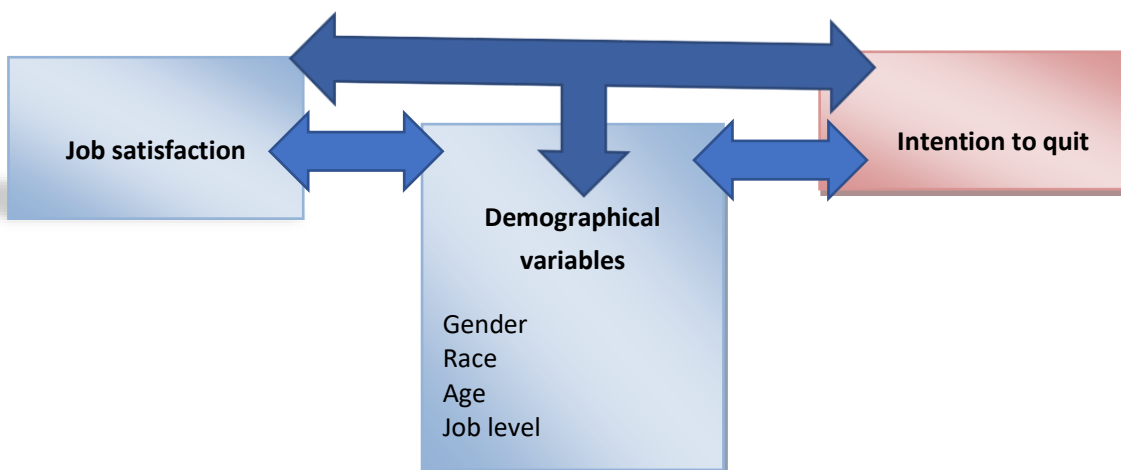
Source: Author's own work

2.1   JOB SATISFACTION

2.1.1   Conceptualisation of job satisfaction

This section provides an overview of job satisfaction conceptualising the construct and discussing its theoretical foundations and models.

2.1.2 Definition of job satisfaction

Job satisfaction is an individual's assessment of the working environment in terms of how well it meets their needs (Weiss et al., 1967). Hoy and Miskel (1991) defined job satisfaction as a multidimensional concept that comprises a present and past oriented pleasurable feeling that results when an individual evaluates their work role (Park & Min, 2020). Chipunza and Malo (2017) illustrate job satisfaction as the individual's perception and evaluation of the job. A similar definition by Ivancevich and Matteson (2002) provide job satisfaction as an attitude and perception that individuals have towards their jobs that influences the degree to which there is a good fit between the individual and the organisation (Wening & Choerudin, 2015). Van der Schyff et al. (2018) describe job satisfaction as an affective reaction to a job, resulting from an employee's comparison of actual outcomes and required outcomes. Herzberg et al. (1959) describe job satisfaction as the physical working conditions that are seen to be or experienced as frustrating and unpleasant. These physical working conditions can be regarded as "dissatisfiers". Rothmann and Cooper (2008) offer a similar description and further suggest that job satisfaction is a pleasurable emotional state resulting from the appraisal of one's job or job experience. This is mainly influenced by organisational factors (working conditions, the work itself, promotions and pay), group factors (co-workers and the role of the supervisor) and personal factors (needs and aspiration and how these are met, and how one views the instrumental benefit of a job) (Adegboye et al., 2021; Morton et al., 2020). The Minnesota Satisfaction Questionnaire (MSQ) is the instrument that will be utilised in this study. The MSQis based on the work adjustment project of the University of Minnesota which was concerned with the problems of individuals in the world of work (Weiss, 1967). The definition of job satisfaction by Weiss (1969) will underpin this study.

2.1.3 Theoretical models of job satisfaction

Campbell et al. (1970) state that workplace motivation theories are classified into theories, namely: process and content. Theorists differentiate between content and process theories (Steers & Porter, 1991). Content theories focus on employees' internal motivators that energise their working behaviour and are considered the product of internal drives that compel workers to advance towards what satisfies them (Sahito & Vaisanen, 2017). Process theories focus on the process by which employees will take to reach their expectations, needs and values in comparison to meeting their work tasks to determine their motivation (Sahito & Vaisanen, 2017). Process theories also detail how individual behaviour is motivated and maintained in employees' cognitive processes (Steers et al., 2004).

Various theories influence job satisfaction namely Maslow's (1943) needs theory, Alderfer's (1969) ERG Theory, McClelland's (1961) learned needs theory and Herzberg's (1959) two-factor theory which will be discussed below.

2.1.3.1   Content theories

2.1.3.1.1   Maslow's (1943) needs theory

Maslow's theory arranged human needs in a hierarchy that includes physical, social, and psychological needs (Radwan & Zhu, 2017). Maslow stated that the needs that the individual had not met yet acted as a motivator to the individual. Once one of these needs has been satisfied, it will not act as a motivator and the individual will move to satisfy the next need higher up in the hierarchy. The lowest of Maslow's five levels is physiological needs which consist of the physical necessities for survival, such as food, water, and air. As employees satisfy their lower level needs such as attaining a job, they then begin to concern themselves with higher level needs such a promotion, increase in pay, who their supervisor and co-workers are. The second level includes the safety needs, such as security and protection. The third level constitutes social needs like love. The fourth level consists of esteem needs, such as self-respect. The fifth and highest level refers to reaching one's potential and achievement (Radwan & Zhu, 2017).

2.1.3.1.2   Alderfer's (1969) ERG Theory

Alderfer ERG Theory (1969) is considered an extension to Maslow's Hierarchy of Needs theory (Fallatah & Syed, 2018). In the ERG (Existence, Relatedness and Growth) theory, Alderfer (1969) argues that these five levels of needs could be based on a three-dimensional conceptualisation of human needs namely existence, relatedness, and growth (Van der Schyff et al., 2018). The name of the theory is derived from the first letters of these three categories (Radwan & Zhu, 2017). Existence needs include objects that address physiological necessities for survival, such as water, as well as those basic material needs or desires, such as salary (Fallatah & Syed, 2018). Relatedness needs resemble Maslow's social needs including relationships with family members, friends and co-workers (Van der Schyff et al., 2018). The third category is the growth needs which involve productivity or creativity on the individual or work environment levels.

2.1.3.1.3   McClelland's (1961) learned needs theory

Unlike other theories that consider individual urges to pursue some needs rather than others, McClelland's (1961) theory considers the need for achievement (Saif & Ghania, 2020). The strengths of the McClelland's acquired needs theory are that it provides a clear picture of the organisation and the supervisors. McClelland's theory also includes identification of the types of jobs suitable for employees and which types of people that can make the organisations more successful. Frey (1984) argue that McClelland's theory is empirically invalid, theoretically inadequate, and offers little value to those interested in promoting economic growth (Lee, 2017).

2.1.3.1.4   Herzberg's (1959) two-factor theory

Herzberg (1959) identified two sets of factors that influence motivation and job satisfaction, namely hygiene factors and motivators (Wiseman et al., 2017). Hygiene factors are related to the working environment and include organisational policy and administration, equipment, supervision, interpersonal relationships with colleagues, supervisors and subordinates, salary, status, working conditions, and work security. On the other hand, motivational factors include achievement, recognition, the job itself, progress or growth, responsibility and feedback (Wiseman et al., 2017). According to Raziq and Maulabakhsh (2015), hygiene factors aim to prevent an individual's negative feelings, or job dissatisfaction, but do not necessarily lead to job satisfaction, whereas motivation factors aim to achieve job satisfaction. Herzberg's theory (1959) argues that an individual is more likely to experience job satisfaction in a working environment with a high level of hygiene and motivational factors (Chiat & Panatik, 2019). Herzberg's theory can be linked to Maslow's (1943) hierarchy of needs theory. Hygiene factors relate to the lower level needs in the hierarchy and motivational factors to the higher-level needs (Chiat & Panatik, 2019).

Herzberg's (1959) two-factor theory is most relevant to this study as it focuses on two sets of factors that influence employee's intention to quit, namely hygiene factors and motivators. Masenya et al., (2020) further states that Herzberg's model can be utilised to decrease intention to quit and improve retention. Job satisfaction straddles both hygiene factors as well as motivational factors as it is an overarching concept which broadly covers the defined factors (environment, organisational policy, supervision, recognition and job security) (Ahmad, 2018).

2.1.3.1.5 The Theory of Work Adjustment (Weiss et al., 1967)

The Work Adjustment Project began in 1957 with two objectives (1) the development of diagnostic tools for assessing the workplace adjustment potential of applicants for vocational rehabilitation and (2) the evaluation of work adjustment outcomes (Weiss et al., 1967). The Theory of Work Adjustment (TWA) uses the correspondence between the work personality and the work environment as the principal reason for explanation of observed work adjustment outcomes such as satisfaction and tenure (Weiss et al., 1967). Work adjustment is predicted by matching a person's work personality with their work environment considering how well the individual corresponds to the reinforcers available in the work environment (Weiss et al., 1967). According to the TWA, the individual's job satisfaction is represented by their subjective evaluation of the degree to which his or her requirements are met by the environment. Therefore "fit" between individual and organisation is based on the individual perceiving a satisfactory work environment. Fit is essentially congruence between an individual and the work environment. Tenure is seen as the most basic indicator of satisfaction because it represents a state in which the individual finds the work environment to be acceptable (satisfaction) and the environment finds the individual to be acceptable (satisfactoriness). Dawis and Lofquist (1984) post therefore that tenure is an indicator of stable correspondence between the persona and the work setting. Dawis and Lofquist (1984) go further to state that fit can also be linked to various positive occupational outcomes. Blau (1987) found fit to have positive implications for job involvement, organisational commitment (Meglino et al., 1989), individual health and adaptation (Moos, 1987), job performance (Caldwell & O'Reilly, 1990) and work attitudes (Smart et al., 1986). Organisational fit has also been shown to affect both applicant preferences and behaviours as well as recruiter perceptions of applicant suitability. What is suggested by this is that those who fit are more likely to be attracted to the organisation; be favourably evaluated by established organisational members; display greater work motivation; and perform better than those who are not a good fit. The MSQ is an instrument used for the measurement of work adjustment and will be employed in this study.

2.1.3.1.6 Factors influencing job satisfaction:

2.1.3.1.6.1 Pay

Pay level satisfaction is defined as an employee's satisfaction with his or her base pay (Yao et al., 2018; Aufdemberge, 2021). Pay level satisfaction has been studied since the 1960s (Haire et al., 1963; Heneman & Schwab, 1985; Hackman & Lawler, 1971; Locke, 1969; Opsahl & Dunnette, 1966; Heneman & Judge, 2000; Judge et al., 2010; Williams et al., 2006; Arya et

al., 2017). Matla and Xaba (2019) argue that it is unlikely to find literature that does not state pay as a motivator for performance as well as a determinant for job satisfaction, even though there are conflicting views regarding the effect of pay on job satisfaction. Herzberg's (1959) two factor theory postulates that if pay is acceptable to an employee, the level of job satisfaction may be increased to the extent that the employee's level of job satisfaction is dependent on pay. Sherly et al., (2021) concur that pay and job satisfaction have a positive relationship while cautioning that money is not desired to the same extent by all people. Schultz and Schultz (2015) state that some employees are willing to accept less physically demanding work, less responsibility or fewer working hours for less pay. This is especially apparent regarding employees' reactions to overtime according to Herzberg (1959). Pelders and Nelson (2019) and Bae et al., (2021) further state that there are employees who are eager to earn money through overtime while there are those who will actively avoid it. Locke and Schattke, (2019) and Filipenko et al., (2021) argue that although money is a symbolic way of showing employees that they are valued it might also be a dangerous motivator.

Underhill (2016) identified three ways that money can have critical repercussions for the creative process: (1) Financial rewards can distract employees from the organisation's underlying goals; (2) Employees may not put forward their best work if they are 'bought out' for limited rewards; and (3) Extrinsic rewards such as money can actually damage intrinsic motivation. Seemingly, low uncompetitive pay is often one of the factors that detracts from overall job satisfaction of employees (Pillai et al., 2017; Jolly, 2021). However, high pay may not be the solution either, so employers need to pay employees a competitive salary but not use pay as a sole motivator for job satisfaction.

A higher salary leads to more economic and psychological advantages. More wealth means more buying power and more job security with the added vote of confidence and a sign of objective recognition (Srivastava et al., 2001). Heneman and Judge (2000) referred to pay as not only the most important but also argued that it is one of the easiest rewards to manipulate (Luna-Arocas et al., 2020; Dang et al., 2020). However, Hackman and Lawler (1971) noted that people's satisfaction with their pay is not only dependent on how much they earn but also on how much they think they ought to earn.

De Coning et al.'s (2019) study aimed to determine the relationship between life satisfaction, job satisfaction and wage satisfaction and how they related to gross wage category in a South African sample. They found that there is a strong relationship of wage satisfaction at a low level, while fewer people were satisfied with their jobs at a high level of wage satisfaction. Employees who earn more were not found to be satisfied with their jobs. In the low wage

category, De Coning et al. (2019) found that dissatisfaction was high when wages were low. This finding correlates with that of Lawler's model (1968) stating that a low wage relates to low wage dissatisfaction, but a high wage does not guarantee high wage satisfaction. A significant number of researchers assert that wages are the central predictor of job satisfaction (Mabaso, 2020). Jobs are increasing in complexity creating a situation where pay becomes tied to performance or promotion opportunities (Mabaso, 2020).

2.1.3.2.6.2 *Quality of work life*

Quality of work life has been described as the strengths and weaknesses in the total work environment (Jabeen et al., 2018). This constitutes specific aspects such as the suitability and sufficiency of facilities within the organisation. This details policies and procedures, leadership style employed, operations and general factors within the organisation (Mafini, 2016). Employers who are interested in improving job satisfaction amongst their employees need to examine quality of work life as an important aspect because the perception by employees plays a decisive role in employees entering, staying or leaving an organisation (Lambert et al., 2016; Alserhan et al., 2021).

2.1.3.2.6.3 *Nature of job*

De Beer et al. (2016) postulates that the primary factor in job satisfaction is due to the kind of work employees perform including autonomy. Essentially, the nature of work satisfaction refers to the employees' satisfaction with the type of work done (De Gieter & Hofmans, 2015; De Gieter et al., 2018).

According to Ratia and Tuzlukaya (2019), the nature of the job as a dimension of job satisfaction focuses on how the job is structured. This dimension also refers to the extent to which job tasks are considered interesting and provide opportunities for learning and accepting responsibility. Staff perceptions about their work is a critical consideration for employers who are interested in improving job satisfaction as these perceptions play a significant role in employees' decision to enter, stay with or leave an organisation (De Sousa Sabbagha et al., 2018). Employees prefer jobs that are interesting, challenging and that create opportunities for self-actualisation and recognition (De Villiers & Taylor, 2019). Herzberg (1959) posits that when job content is intrinsically challenging, it might prove highly satisfying. A satisfying job allows an employee the opportunity to experience a need for achievement. A well-structured job affects job satisfaction in that the job facets are enriched and enhance the level of employee empowerment in terms of responsibility and authority (Osabiya, 2015). Where a job

is routine and mundane, providing less of a mental challenge and low to no decision-making authority, it may prove unchallenging and therefore dissatisfying (Kuranchie-Mensah & Amponsah-Tawiah, 2016).

Langfred and Rockmann (2016) assert that jobs that allow employees the ability to accept responsibility and accountability enhance job satisfaction. Employees being afforded the opportunity to define the destiny of their actions enhances their confidence in their jobs which in turn increases job satisfaction (Beloor & Nanjundeswaraswamy, 2017). Work that tests employees' skills and abilities and allows them to set their own working pace is usually perceived as personally involving and important and provides the worker with clear feedback on performance (Langfred & Rockmann, 2016). The inverse is when work is too challenging and results in feelings of failure and reduced satisfaction (Mackett, 2020). Some employees prefer repetitive, unchallenging work that is not demanding, argues Weallens (2003).

2.1.3.2.6.4   Promotion

Promotion as a dimension of job satisfaction refers to the availability of opportunities for career advancement (Seteni et al., 2019). Ting (1997) and Ellickson and Logsdon (2002) postulate that self-actualisation in the workplace can only be accomplished through the creation of opportunities for employee promotion. When employees perceive that there are opportunities for promotion, this often leads them to be motivated to work harder in order to achieve organisational goals with the view of attaining elevated job designations and higher ranks (De Coning et al., 2019). Where less opportunities for promotion are perceived, employees demonstrate a greater intention to quit the organisation (Munyaka et al. 2017). Promotion provides opportunities for personal growth, increased responsibility and increased social status (Thabane et al., 2017). Locke (1976) posits that the wish to be promoted comes from the desire for psychological growth and the desire for justice and the desire for social status. Opportunities for promotion are a vital contributor to job satisfaction because promotions contain several valued signals about a person's self-worth (Mabaso, 2020). When promotional opportunities are considered fair, they are likely to enhance job satisfaction (Lumley et al., 2011). Considering the discussion, a positive association between promotion and job satisfaction can be gleaned.

2.1.3.2.6.5   Supervision

Research has found that a positive relationship exists between job satisfaction and supervision (Mafini & Dlodlo, 2014; Mawardi, 2022). Given the number of hours employees spend in the

workplace, the supervisor has a direct impact on and is an important determinant of job satisfaction. An immediate supervisor's behaviour is a pivotal determinant of job satisfaction (Khamisa et al., 2017; Richter, 2022). Individuals are more likely to have high levels of job satisfaction if their supervisors are supportive and provide emotional and technical support and guidance on work-related tasks (Paterson et al., 2013; White et al., 2021). The perception of a supervisor being fair, competent and sincere is likely to lead to higher levels of job satisfaction (Baron & Greenberg, 2003; Serfraz, 2022). This implies that supervisors contribute to low or high morale in the workplace (Paterson et al., 2013; Serfraz, 2022). In addition, studies have shown that dissatisfaction with supervision is a predictor of job dissatisfaction (Alegre et al., 2016; Moussa, 2022). The supervisor dimension not only refers to the supervisor's ability to demonstrate concern over employees (Sun et al., 2021), but also the ability of the supervisor to provide emotional and technical support and guidance on work-related tasks (Darvishmotevali, 2020). Given the responsibilities that a supervisor carries out on behalf of the organisation; such as interviews, disciplinary hearing, performance discussions and the likes; supervisors are often associated with being the organisation (Srivastava & Dhar, 2016). An employee's supervisor can be an important determinant to the career trajectory of that employee. This increases the likelihood that employees who are dissatisfied with their supervisors are likely to be dissatisfied with the organisation itself as well (Srivastava & Dhar, 2016). Peters et al. (2018) state that insensitive, incompetent and uncaring supervisors seem to have the most negative impact on employee job satisfaction. The behaviours linked to this includes failure to listen and adequately respond to employees' problems and unfair or biased treatment by supervisors (Huang et al., 2015; Van Jaarsveld et al., 2021; Serapelwane & Manyedi, 2022). When a supervisor is perceived as helpful, fair, competent and effective it greatly improves job satisfaction (Huang et al., 2015). Supervisors who allow their employees to contribute to decisions that affect their own jobs will stimulate higher levels of employee satisfaction according to Kim and Beehr (2021).

2.1.3.2.6.6 Co-workers

Co-workers are another extrinsic dimension that impacts job satisfaction. Co-workers being friendly, helpful and whether they take a personal interest in the individual has an impact on job satisfaction. Working in a team is associated with learning new things as well as job enlargement which both contribute positively to job satisfaction (Acuña et al., 2015). Mafini and Dlodlo (2014) suggest that individuals have a need to affiliate with others which works well when co-workers are comfortable company. In his theory, Herzberg (1959) suggests that if co-workers create a supporting environment and allow individuals to unleash their full potential, the job might be satisfying. Where co-workers are able to depend on each other for

assistance in attainment of job outcomes that they value; such as doing their work better, receiving a raise or a promotion. This leads to more satisfying relationships at work. Therefore, where co-workers can create a supportive environment and allow each other to thrive, it may lead to job satisfaction (Zhang, et al., 2014).

When employees perceive the core dimensions (pay, quality of work, job, promotion, supervisor and co-workers) favourably it appears to enhance their job satisfaction (Moloantoa & Dorasamy, 2017). Moreover, the demographical factors of age, gender, race, and job level either positively or negatively impact the perception of the job as it relates to each of the core dimensions (Harrison, 2020). Therefore, depending on an individual engineers' age, gender, race or job level they may perceive a job to be satisfactory on factors such as pay, quality of work, promotional opportunities, supervision or co-workers or dissatisfactory based on the same factors.

2.1.4 Demographical variables influencing job satisfaction
2.1.4.1 Age

The true nature of the relationship between age and job satisfaction remains unresolved despite many investigations that have been conducted. A positive linear relationship has been identified between employee age and job satisfaction and the further the employees became more satisfied with their jobs as they progressed in chronological age (Ingersoll et al., 2002; Mmako, 2018; Shields & Ward, 2001). Sampson (2012) wrote that a statistically significant relationship was reported between age and job satisfaction amongst call centre agents in a call centre in the Western Cape, South Africa. Bull (2005) asserts that job satisfaction increases with age and work experience. Older employees, late forties up to retirement age (which is usually sixty-five), while they have lower expectations of their jobs are said to be more confident and tolerant of authority (Bull, 2005). It was further found that older employees occupy jobs that use their skills better, work under better conditions and appreciate fringe benefits from advancement in their careers (Gopinath, 2020). Younger employees (below forty years) may be more satisfied because of inexperience while older employees have reduced ambitions as they face fewer alternative choices with age (Martin & Roodt 2008).

2.1.4.2 Gender

There is a plethora of research on demographic characteristics on job satisfaction and other organisational outcomes. Sharma (2017) found males to be more satisfied than their female counterparts. Salary, promotion and attitude are some of the areas where men draw

satisfaction whereas their female counterparts derive satisfaction from co-workers and working conditions (Okpara et al., 2005; Okpara, 2006). Janssen and Backes-Gellner (2015) state that there is no significant difference in women's overall satisfaction while working stereotypically male jobs versus working in stereotypically female jobs. Where women work in traditionally male jobs, they are significantly less satisfied with their work climate and with task contents, but they are significantly more satisfied with their income than working in stereotypically female jobs (Janssen & Backes-Gellner, 2015; Ling et al., 2020). Their male counterparts are more satisfied with their work climate, task contents and their income in stereotypically male jobs (Janssen & Backes-Gellner, 2015; Meeussen et al., 2020). In their study, Janssen and Backes-Gellner (2016) found that men report higher levels of job satisfaction with contents of tasks, work climate and income in stereotypically male jobs whereas women in stereotypical male jobs trade off the negative effects of gender stereotyping against higher income.

2.1.4.3 Race

Stoermer at al. (2019) found that white males and black females are more negatively affected by job satisfaction than black males and white females. This can be attributed to the fact that black females are more sought after than black males and white females and this negatively drives their intentions to quit (Martin & Roodt, 2008). South Africa's Broad-based Black Economic Empowerment (BBBEE) is an Act passed in 2003 under the custodianship of the department of Trade and Industry. It is an integration programme launched by the South African government to reconcile the South African populace and address the inequalities of the historic system of apartheid by attempting to compensate for land and other injustices perpetuated against Africans. The BBBEE holds a ranking per demographic and gender which sees black women being the most sought after due to their high ranking on the BBBEE scorecard. The BBBEE programme requires employers to have a workforce that is representative of the demographics of the country. This requirement results in employers actively seeking out the skills of black people (defined thus: Black African, Indian, Coloured) in order to comply with legislation, failing which they can be penalised. The ripple effect is a higher turnover amongst people of colour in organisations.

2.1.4.4 Job level

As far back as 1998, Robie et al. found that as job level increased so did job satisfaction. People with different job levels have different levels of job satisfaction, Kim et al (2017) noted. Other studies (IBM, 2014; SHRM, 2012) have shown that individuals with higher job rankings

tend to be more engaged. A longitudinal study of job satisfaction during the Netherlands recession of 2008 and 2013 by Pilipiec et al., (2020) found that the more employees' job levels increased over time, the greater their job satisfaction was found to be.

2.2   INTENTION TO QUIT

2.2.1   Conceptualisation

Sager et al. (1998) defined turnover cognitions as the thought intervention between an individual's attitude regarding the job, and decision to leave or stay. Langenhoven (2015) suggests that the authentic turnover of an organisation refers to the individual actually ending their employment with the company, whereas intention to quit can be described as a conscious and deliberate consideration by an employee to leave his or her employer. Intention to quit is a key predictor because it enquires why employees stay and aids the employees in valuing why the organisation is suitable for them (Engelbrecht & Samuel, 2019). Employee turnover has significant costs and negative consequences for any organisation (Grobler & Grobler, 2019). Bothma and Roodt (2013) add that the loss of highly skilled employees is likely to carry increased costs of rehiring and retraining employees. Intention to quit is the psychological process that an employee is considering leaving the organisation and bears in mind other employment options due to the dissatisfaction he or she is experiencing in the organisation (Engelbrecht & Samuel, 2019). Intention to quit is a critical risk within an organisation because of the competition for skills and competence created by the proverbial war on talent. Organisations and researchers benefit from proactively identifying the key determinants of turnover and develop and manage strategies to decrease intention to quit (Munro, 2015; Mitchell et al., 2001; Pienaar et al., 2007).

2.2.2   Definition of intention to quit

Intention to quit is defined as "the conscious and deliberate wilfulness to leave the organisation" (Tett & Meyer, 1993, p. 262). Tett and Meyer (1993) describe intention to quit as the final steps in a series of withdrawal cognitions leading to actual turnover. Takawira et al., (2014) noted that intention to leave is the idea of leaving the organisation and seeking employment elsewhere.

2.2.3 Theoretical models of intention to quit

The theory of organisational equilibrium (March & Simon, 1958); The met expectations model (Porter & Steers, 1973); The linkage model (Mobley, 1977; Mobley et al., 1978); and the unfolding model of turnover (Lee & Mitchell, 1994; Lee et al., 1999).

2.2.3.1   The Theory of Organisational Equilibrium (March & Simon, 1958)

One of the most influential theories of intention to quit is that of March & Simon (1958). They argue that turnover occurs when individuals perceive their contribution to an organisation to exceed the inducements they receive from that organisation (Huang et al., 2017). The perceived inducements are influenced by two factors: (1) one's desire to move, which is generally a function of one's satisfaction with the work environment, and (2) one's ease of movement, which is influenced by macro- and individual-level factors that determine employability. The consequent turnover theories were built on March and Simon's model (Weick, 2019).

2.2.3.2   The Met Expectations Model (Porter & Steers, 1973)

Steer and Porter (1973) view met expectations as the discrepancy between what an individual encounters in their job in relation to positive or negative experience versus what they expected to encounter. From this definition it should be clear that different people will have differing expectations with respects to aspects of their jobs such as pay or reward and relationships with colleagues. Steer and Porter's prediction was that when a person's expectations are not met – whatever they may be – his propensity to quit would be increased. This is the model most pertinent to this study. They cite the work of Weitz (1956) and Macedonia (1969) which found that people who were provided with a realistic picture of their job environment not limited to its difficulties, prior to employment, were likely to adjust to their job expectations.

2.2.3.3   The Linkage Model (Mobley, 1977)

Soon after the Porter and Steers, met expectations model of 1973 (which was limited to one antecedent to turnover), Mobley developed the intermediate linkages model (1977). Mobley's model is more comprehensive and relies on the alternative jobs' availability as predictor of intention to quit and employee turnover (Tubay, 2019). Mobley uses a ten-step process which begins with job dissatisfaction and resulting in turnover post-evaluating alternative opportunities (Sarkar, 2018) as depicted below in Figure 2.3.

Figure 2.3.

Mobley's Employee Turnover Decision Process Model

| Employee evaluates satisfaction with current job |
| Employee considers quitting as a result of evaluation |
| Employee motivated to look at other employment opportunities |
| Employee evaluates considering alternative opportunities |
| Comparison of current job to alternatives |
| Employee considers staying or quitting |
| Where option to quit is favourable, employee quits current employment |

Source: *Mobley (1977, p.123)*

2.2.3.4 Unfolding Model of Turnover (Lee & Mitchell, 1994)

Lee and Mitchell's (1994) model focuses on "shocks to the system" as triggers to decision making. A "shock to the system" is defined as "a very distinguishable event that jars employees toward deliberate judgments about their jobs and, perhaps, to voluntarily quit their job" (Lee & Mitchell, 1994, p. 60). Three types of shocks exist according to Lee and Mitchell (1994), personal events unrelated to work, personal events related to work and organisation specific events (Shi & Gordon, 2021).

2.2.4 Implications for intention to quit

Researchers have attempted to predict intention to quit by measuring variables such as perceived support, stressors, job satisfaction, organisational commitment and job characteristics (Haque et al., 2019; Munyaka et al., 2017; Siwela, 2018). Intention to quit is the strength of an individual's perception that they do not want to remain with their current employer (Munyaka et al., 2017). Intention to quit is a precise indicator of ensuing behaviour.

2.2.5 Demographical variables influencing intention to quit

Various demographical variables have been identified as possible antecedents for intention to quit. These variables will be discussed below. The variables of importance to this research include age, gender, race and job level.

2.2.5.1 Age

Martin and Roodt's (2008) reported that age is a contributing factor to intention to quit with younger employees being more open to leaving organisations (Engelbrecht & Samuel, 2019). Du Plooy and Roodt (2013) attribute this to older employees being more cautious of exiting since they may find it more challenging to secure alternative work opportunities. Similarly, Proost et al. (2015) have found a negative relationship between intention to quit and age. More specifically, older employees seem to have lower intentions to leave and tend to be more satisfied with their work as opposed to younger individuals. In their study, Benson and Brown (2011) found that a lack of supervisory support can lead to higher intention to quit amongst Baby Boomers (born between 1946 and 1964), while a lack of co-worker support can predict a higher intention to quit amongst Gen Xers (born between 1965 to 1980). Research continually indicates that the younger the age of the applicant, the higher the turnover association (Siahaan, 2020; Sneed, 2018).

2.2.5.2 Gender

Martin and Roodt (2008) found that white males and black females scored higher than the black males and white females in terms of their intention to quit. Jacobs (2005) had similar findings in their study of nurses. Jacobs (2005) found that black females are very sought after in the workplace above black males and white females owing to government legislation around transformation. Makhathini and Van Dyk (2018) found that extrinsic factors tend to influence men's intention to quit the public sector while intrinsic factors influence women's intention to

quit. However, Du Plooy and Roodt (2013) identified no significant differences between individual intention to quit and gender. Therefore, this remains an inconsistent variable.

2.2.5.3   Race

Oosthuizen et al. (2016) found that their study corroborated with the findings of previous studies indicating that white participants tend to report higher levels of job satisfaction than black participants (Munro, 2015). Jacobs (2005) conducted a study on intention to quit amongst nursing professionals and reported that black nurses are significantly more inclined to quit than their coloured or white counterparts (Oosthuizen et al., 2016), which could be a result of demand for black nurses due to diversity targets imposed on employers by the Employment Equity Act (1995).

2.2.5.4   Job level

There is a paucity of research in relation to intention to quit as it relates to job level or seniority within an organisation. Raza, St-Onge and Ali (2021) found seniority played little to no significant role in intention to quit but they attribute this to the participants in their study being young and not senior in their roles. In a recent study Cole et al (2021) studied frontline nurses stress and intention to quit during the COVID-19 pandemic. A significant correlation was found between seniority ($p= 0.5$) on intention to quit.

2.3   RELATIONSHIP BETWEEN JOB SATISFACTION AND INTENTION TO QUIT

Job satisfaction refers to the subjective notion as well as positive emotional response of the individual and presents the best measure of the value in individuals' perception that they derive from a job, in consideration of what they desire and where they place value (Oosthuizen et al., 2016). While job satisfaction has been found to be an important direct predictor of employees' intention to quit the organisation, this may be mitigated when the individual perceives that their supervisor is supportive (Alessandri et al., 2017; Roberts et al., 2020). Individuals place more value on a supportive supervisor over supportive colleagues which has been theorised to be because a supervisor can alter the individual's working conditions (De Beer et al., 2016).

According to Salas-Vallina et al. (2020) employee wellbeing is the overall quality of an employee's experience and functioning at work. This is closely related to job satisfaction. Wellbeing is a critical factor in individual and organisational performance. Job satisfaction also relates to motivation (Musinguzi et al., 2018). Job satisfaction is associated with social

belonging, self-esteem and self-actualisation (Maslow, 1954). Expectancies are based on the worker's belief that effort will lead to a strong performance, which will, in turn, lead to reward. Additionally, organisational commitment can be defined as an attachment to the organisation, characterised by an intention to remain (Douglas & Leite, 2017).

Intention to quit or remain with an employer starts with the individual evaluating their current work conditions and then moving through several further stages until a firm intention to quit is reached (Munyaka et al., 2017).

Intention to quit is often studied because it represents the probability of an employee leaving the organisation, consequently providing leaders and managers with critical data (Özer, 2020). Further, when employees withdraw from organisations it could have a substantial negative impact on the organisation's processes and outcomes (Engelbrecht & Samuel, 2019). The information gathered from studies on intention to quit can assist organisations in preventing turnover by improving the conditions identified as influencers (Gao, et al., 2020). Employees voluntarily leaving organisations has a high rate of turnover which has a negative outcome for the level of organisational productivity, customer service and the organisational profitability (Engelbrecht & Samuel, 2019). Further to that institutional memory is lost when employees vacate organisations.

2.4   CHAPTER SUMMARY

In this chapter, job satisfaction and intention to quit were conceptualised as variables underpinning the study. The theoretical relationship between job satisfaction and intention to quit was theorised in detail. Further to that, the demographical factors influencing the variables were also discussed. Job satisfaction was interrogated using the theories of Maslow's hierarchy of needs, McClelland, Alderfer's (1969) ERG Theory and Herzberg's two factor theory. Intention to quit as an independent variable driving the study was drawn out including the met expectations model (Porter & Steers, 1973), the linkage model (Mobley, 1977) and the unfolding model of turnover (Lee & Mitchell, 1994).

The proceeding chapter will present the data collection that aims to answer the empirical research questions.

CHAPTER 3: RESEARCH ARTICLE

ABSTRACT

Job satisfaction as a predictor of intention to quit amongst engineering professionals within a petrochemical organisation

Orientation: The researcher explored job satisfaction as one of the major predictors of intention to quit amongst engineering professionals within a petrochemical organisation situated in Mpumalanga, South Africa.

Research Purpose: The aim of this study is to investigate the relationship of job satisfaction as a predictor of intention to quit amongst engineering professionals at a petrochemical organisation in South Africa as well as explore age, gender, race and job level as potential contributors to job satisfaction and intention to quit.

Motivation for the study: The study, therefore, aims to benefit not only Industrial and Organisational Psychologists and Human Resources Practitioners, but organisations within the engineering fields in understanding why these professionals leave organisations of their employ. It is anticipated that the findings from this study may inform interventions for retention strategies and continued organisational citizenship of engineering professionals in engineering and related companies.

Research design, approach, and method: A cross-sectional survey using quantitative research design was applied to a systematic random sampling of 157 employees at a global petrochemical organisation. A Standard Multiple-linear regression analysis was conducted. The purpose of Standard Multiple-linear regression analysis is to evaluate if there is a statistically significant relationship between the variables as presented in the proposed models

Main findings: Job satisfaction has a negative and significant effect on intention to quit meaning that job satisfaction negatively influences employee's intention to quit. The results of the research also indicated that intrinsic and extrinsic job satisfaction has a significant impact on employee's intention to quit meaning that employee's decision to stay or leave their jobs is influenced by their satisfaction with their jobs.

Practical Implications: Engineering firms, engineers and other stakeholders can use this as a basis of reviewing their retention strategies as well as a measure to improve the working conditions of engineers and increase discretionary effort.

Contribution or value add: The findings from this study may inform interventions for retention strategies and continued organisational citizenship of engineering professionals in engineering and related companies.

Key words: Job satisfaction, intention to quit, engineering professionals, retention, engineering firms.

3.1 INTRODUCTION

"Globally, 37% of privately held businesses in 34 countries rank a shortage of skills as their greatest constraint to business growth…this is the first time in the history of the IBR survey that workforce issues top the chart as a global concern for growth." (Rowe 2009, pg 1). Allianz published its global risk barometer for 2022 which surveyed 2, 650 risk experts in 89 countries about the biggest risk facing their business in the coming year. South Africa reported skills shortage as the eighth highest risk warning that it is becoming increasingly more difficult for businesses to attract and retain employees (BusinessTech. 2022). Allianz stated that COVID-19 has been a consequential contributor to the disruption in the labour market exacerbating issues such as older employees retiring and the continuously changing needs of potential employees while bringing forth new challenges such as skilled workers who desire flexibility over when and where they work and who are willing to leave existing jobs in order to achieve this desire (BusinessTech, 2022).

As of 2021, six out of ten employees in South Africa are unsatisfied in various fields across the country Lameez (2021). Engineers are not exempt from the list therefore understanding the triggers leading to an engineer's intention to quit is critical to any organisation. Ada (2014) discovered that the need for engineers rose between 2000 and 2008 since population growth escalated above the rate of engineering supply. Economic growth in South Africa depends on engineering capacity to provide state-of the-art, safe infrastructure for service delivery (Du Toit & Roodt, 2009). South Africa is currently in a stagnated economic phase where job seekers are struggling to find employment and organisations are finding it challenging to find suitable skills (Stats South Africa, 2020). As at December 2020, the global talent shortage reached 40 million skilled workers worldwide (BusinessTech). Korn Ferry estimate that this number will rise to 85 million workers resulting in the loss of trillions of dollars in economic opportunity for

organisations (BusinessTech, 2022). Engineering is included in the top five risk industries (BusinessTech. 2022).

Organisations are continually placing greater demands for productivity on engineers, key performance indicators are set according to business needs (Loosemore et al., 2021). Engineers enter the workplace with great expectations and often these expectations do not meet their needs for development. Far reaching are the consequences, not only for the engineers themselves but for the organisations who employ them. Garland (2002) stated that the high cost of hiring and training engineers to fill vacant positions takes a direct toll on budgets (Rothmann & Malan, 2006). Other than that direct cost, indirect costs can be identified in low morale, low job satisfaction, faulty decision making, aggression and even violence amongst workers (Johnson et al., 2005; Naved et al., 2021; Zhang et al., 2022). The burden of coming to the realisation that one's career expectations may have been over-inflated can be disheartening to a new recruit. Engineering plays a crucial role in development lending itself to technological capabilities, industrial actitivies and economic growth (Sheikheldin & Nyichomba, 2019; Vargas 2022). For an economy to be described as developed or developing requires a significant presence of engineers (Chipunza et al., 2016; Du Toit & Roodt, 2009). Stagnation is invited where there are insufficient engineers. China has one engineer per 200 people, United Kingdom one to 311 while Sub-Saharan Africa have one engineer per 6000 people (Sheikheldin & Nyichomba, 2019). In only one sector, namely Water and Sanitation, it is estimated that 2.5 million new engineers and technicians are required in Sub-Saharan Africa in order to meet the development goals of clean access to water and sanitation (Sheikheldin & Nyichomba, 2019). Additionally, the degree to which municipal service delivery can be provided depends upon the availability of specialised and technical skills (Bel & Gradus, 2018). It is therefore strategically beneficial for organisations to attract and retain engineers in their employ.

It is important for engineering firms to understand that if they do not retain their skillsets they may not survive in their current form. Knowledge of the relationship between job satisfaction and intention to quit will allow managers to manipulate the variables that increase job satisfaction, which in turn can minimise organisation's employee turnover rate hence increasing the company's productivity in the long run. According to Wu et al., (2017) researchers postulate that if employees are well satisfied with their job's performance will increase. It is important to note that an employee's intention to quit is regarded as a strong predictor for actual staff turnover (Adebiyi et al., 2020). It has become increasingly important to understand the attributing factors which affects an employee's intention to leave (Modau, et al., 2018). Also, Mendes and Stander (2011) claim that creating a healthy organisation is a

useful strategy to address employees' intentions to quit. In the context of organisational psychology, the role of job satisfaction within healthy organisations is a possible construct through which intention to quit can be explained, predicted and managed.

As such the purpose of this study, is to investigate the relationship of job satisfaction as a predictor of intention to quit amongst engineering professionals at a petrochemical organisation in South Africa as well as explore age, gender, race and job level as potential contributors to job satisfaction and intention to quit.

3.2   AIMS OF THE STUDY

The aim of this study is to investigate the relationship of job satisfaction as predictor of intention to quit amongst engineering professionals at a petrochemical organisation in South Africa. Often retention is managed in a reactive manner where employees are asked questions to understand their motivation for exiting only at resignation stage (Kotze et al., 2020). In light of the shortage of engineering professionals in South Africa as a result of various factors including brain drain by foreign countries, this study is aimed at contributing to the knowledge base on staff retention in the engineering sector and to inform staff retention strategies for engineers by ensuring that they receive adequate job satisfaction.

3.2.1   Specific aims of the Study

The theoretical aims underpinning the current study are as follows:

Determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation.

Specific aim 1:	To conceptualise job satisfaction from a theoretical perspective.
Specific aim 2:	To conceptualise intention to quit from a theoretical perspective; and
Specific aim 3:	To explain the theoretical relationship between job satisfaction and intention to quit with specific reference to engineers in a petrochemical organisation.
Specific aim 4:	To explain the theoretical relationship between age, gender, race, and job level, across job satisfaction and intention to quit.

The empirical aims underpinning the current study are as follows:

Specific aim 1:   To investigate the relationship between job satisfaction and intention to quit.

Specific aim 2:   To determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation.

Specific aim 3:   Ascertain whether engineering professionals from different age, gender, race and job level groups differ significantly with regard to job satisfaction and intention to quit.

Specific aim 4:   Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit.

3.3   JOB SATISFACTION

Job satisfaction is a multidimensional concept that consist of attitudes such as personal feeling of achievement. The concept is more associated with motivation (Zhang & Wang, 2021). It can be defined as a sense of well-being by an employee whilst working for a particular organisation. In the words of (Locke & Schattke, 2019), it can be defined as how much one likes or dislikes their job. It is important to note that job satisfaction occurs when the internal needs of employees are met and have positive implications for enhancing wellbeing and reducing employee turnover (Martins & Coetzee, 2007).

Job satisfaction reflects an individual's feelings and beliefs which develop because of cognitive and emotional processes (Rayton, et al., 2019). Job satisfaction is thus an emotional state based upon how individuals feel about their job and what they think about various aspects of their job (Luz, et al., 2018; Rayton, et al., 2019). Job satisfaction is widely recognised as a predictor of employee productivity, and performance as well as organisational financial and market performance (Soomro & Shah, 2019). Job satisfaction is influenced by a variety of factors such as employee rewards, recognition, communication, co-worker relations, working conditions, job characteristics, the nature of the organisation, systems, policies and procedures, compensation, security and supervisory practices (Liu et al., 2012; Locke, 1969; Mafini & Pooe, 2013; Rogelberg et al., 2010). Meeting employees' needs in relation to the above factors is viewed as the primary strategy for enhancing job satisfaction of employees (Mafini & Pooe, 2013; Roos & van Eeden, 2008). Employees with higher levels of job satisfaction experience greater well-being and are less likely to leave organisations (Mafini & Pooe, 2013; Robyn & du Preez, 2013; Sempane et al., 2002). When an individual's needs are unmet or the expectancy and valence of the attainment of a need is high in relation to the

relative achievement of the need – job dissatisfaction is likely to occur (Locke, 1969). It is thus important for organisations to enhance employee job satisfaction to enhance organisational outcomes such as quality of outputs and performance levels (Robyn & du Preez, 2013).

3.4   INTENTION TO QUIT

According to Mendes and Stander (2011) intention to stay refers to employees' conscious and deliberate willingness to stay with the organisation (Cho et al., 2009; Tett & Meyer, 1993). Intention to quit is defined as the conscious and deliberate wilfulness of an employee to leave or plan to leave an organisation in the near future (Bothma & Roodt, 2013; Du Plooy & Roodt, 2010; Takawira et al., 2014; Vandenberg & Nelson, 1999). It is important to note that, intention to leave consists of both thoughts and statements Intention to quit understood to be the final stage in an employee's decision making short of actually leaving the organisation and can be viewed as a coping strategy used by employees to escape a perceived undesirable employment condition (Bothma & Roodt, 2013; Mendes & Stander, 2011). The intention to leave and organisation is influenced by a wide variety of motives and factors which can be lowered if sources of dissatisfaction are dealt with. Individual differences (psychological factors and resources) influence an individual's control of their context and may influence intention to quit (Putri & Setianan, 2019). Vandenberg and Nelson (1999) and other researchers (Alarcon & Edwards, 2011; Brunetto et al., 2012; Simpson, 2009 & Yalabik et al., 2013) found correlations between job satisfaction, work engagement and the employees' intention to quit. Reasons for intention to quit vary however it is important to note that a lack of job satisfaction is one of those reasons.

3.5   RESEARCH
3.5.1   Research approach

A cross-sectional quantitative survey research design was deemed appropriate for this study. The research was based on the analysis of primary data in the form of electronic questionnaires. Data was analysed using the Statistical Package for the Social Sciences (SPSS, 2021). Statistical analysis included a descriptive, correlational, and inferential statistics to determine the direction and strength of the relationship between the two constructs and to examine the differences between different groups.

3.5.1 Research Method

The following section provided an overview on the research methods adopted in this study, specifically in terms of the research participants, measuring instruments, research procedure and statistical analysis in this study.

3.5.2 Research participants

Purposive sampling technique also known as judgment sampling was used in this study which involved the researcher's judgment in selecting participants who would be of use to the research (Tailor, 2009).

This type of technique was selected mainly based on the qualities the participants attained such as that they are all engineers and all work within the elected engineering company which accommodates the main purpose of the study. The initial sample size was N = 290, however, the final sample size of N = 157 was used, yielding a response rate of 54%.

The final sample of N = 157 consisted of participants between the ages of 25 - 45 years (80%), followed by 17% of the participants 45 years and above. Only 3% of the research participants represented the age group 17-25 years. The majority of the sample were males representing 68.8% of the study sample and 31.2% of females represented the final sample.

In terms of race, White respondents represented the majority of the sample at 47.1%, followed by African respondents at 35.7%, and the Coloured respondents at 1.9%, Indians 11.5%, Other 0.6% and lastly 3.2% prefer not to say of the final study sample. Table 3.1 below summarises the demographical characteristics of the study sample.

Table 3.1

Biographical Profile of the Sample

Variable	N	Percentage of sample
Age		
17-25 years	5	3
25-45 years	125	80
45 years+	27	17
Gender		
Female	49	31.2
Male	108	68.8
Race		
African	56	35.7
Coloured	3	1.9
White	74	47.1
Indian	18	11.5
Other	1	0.6
Prefer not to say	5	3.2
Job level		
Execution	34	22
Leadership	3	2
Optimisation	90	58
Process optimisation	14	9
Specialisation	14	9

3.5.3   Measuring instruments

A biographical questionnaire was used to obtain data on gender, age, job, race and job level of the participants.

Job satisfaction questionnaire (MSQ)

The MSQ (Weiss et al., 1967) was used to measure job satisfaction. The MSQ measures both intrinsic and extrinsic dimensions of job satisfaction (Foxcroft & Roodt, 2010). This study used the short form of the MSQ, namely the MSQ20. The MSQ20 consists of 20 items and uses a five-point Likert-type response format. Intrinsic job satisfaction items measure feelings about the nature of the job task (e.g., *"The freedom to use my own judgement."*). Extrinsic job satisfaction items measure feelings about situational job aspects, external to the job (e.g. "My pay, and the amount of work I do."). Reliabilities in the South African context have been reported with alphas ranging from .79 to .85 (Buitendach & Rothmann, 2009). For the present

study, Cronbach alpha coefficients for the MSQ20 and its sub-dimensions were greater or equal to .89.

Short MSQ as a reliable tool was widely used by various research, with reliabilities between .70 and .80 and an alpha coefficient of .96 in many studies,30-32 including Iranian studies. The reliability coefficient of the MSQ, according Hadizadeh's et al., study (2014), was .81. 33 In addition, in this study, the Cronbach alpha coefficient for intrinsic satisfaction, extrinsic satisfaction and overall satisfaction were .78, .80 and .83, respectively (Bagheri et al., 2019).

Mahmoud (2008) showed that MSQ had a Cronbach's alpha of .91, which is greater than the benchmark figure .70.

Chen (2005) have used the 20-item short form of the Minnesota Satisfaction Questionnaire (MSQ) (Weiss 1967) to measure job satisfaction and have obtained a Cronbach alpha of .96. In a South African study Visser and Coetzee (2005), using the short form of Weiss 's (1967) MSQ to measure job satisfaction, have obtained a satisfactory Cronbach alpha (α = .88). In another South African study, Maharaj and Schlechter (2007) have obtained a satisfactory Cronbach alpha of .79 using the short form of the MSQ (Kahumuza & Schlechter, 2008).

In a South African study Visser and Coetzee (2005), using the short form of Weiss's (1967) MSQ to measure job satisfaction, have obtained a satisfactory Cronbach alpha (α = 0.88). In another South African study, Maharaj and Schlechter (2007) have obtained a satisfactory Cronbach alpha of .79 using the short form of the MSQ (Kahumuza & Schlechter, 2008).

Intention to quit (ITQ)
Intention to quit Scale (TIS-6) Intention to quit were measured with a six-item scale adapted from Roodt's (2004) fifteen-item scale (Bothma & Roodt, 2013). The response scale was scored on a five-item Likert scale varying between poles of intensity with 1 (never) to 5 (always) (Du Plooy & Roodt, 2010). A Cronbach alpha reliability coefficient of 0.80 has been reported for the TIS-6 (Bothma & Roodt, 2013).

The internal reliability of the three items of Cohen's (1993) intention to quit scale was calculated. The Cronbach alpha for Cohen's (1993) intention to quit scale was found to be .90, which is well above the recommended value of .7 (Kahumuza & Schlechter 2008; Pallant, 2001). In the present study, Cronbach alpha was found to be 0.87.

To measure workers' intention to quit, the 3-item Intention to Quit Scale developed by Cammann et al. (1983) and translated into Turkish by Mimaroğlu (2008) was used. The scale is of five-point Likert type (5 = "Strongly Agree"; 1= "Strongly Disagree") and the alpha coefficients for the 3 items was .71 (Anafarta, 2015).

3.5.4 Research procedure Ethical considerations

A cross-sectional survey research design will be employed for this study as it aims to provide a quantitative description of trends, attitudes or even opinions of a population by investigating a sample of engineering professionals (Babbie & Mouton, 2009; Creswell, 2014; Retrouvey, et al., 2020). A survey link was created which was shared to all the participants through their work email to ensure that they do in fact work for the organisation in study.

The population consisted of engineering professionals within a petrochemical organisation based in Mpumalanga, South Africa. An email was sent to the petrochemical organisation to explain the purpose of the study and ethical concerns such as confidentiality, anonymity and freedom of choice to participate in the study were emphasised, permission was sought and granted. The completed questionnaire responses were downloaded and kept in a secure locked folder for future use and references. Only the researcher administrator and statistician had the necessary access to send view the number of competed questionnaires.

The researcher was granted the ethical clearance from the University of South Africa to conduct the study. The researcher assured confidentiality and anonymity to the respondents throughout the research study. The fact that the surveys were answered online, the respondents were asked to click on a link to indicate their consent in partaking in the research. Only the researcher had the necessary access to send reminders and view the number of competed questionnaires.

3.5.5 Statistical analysis

The SPSS Version 27 (2021) was used to analyse the data of the empirical study. Before any statistical analysis was conducted, the raw data were cleaned to establish whether there were any incomplete questionnaires. Of the 290 responses received, only 157 were complete and could be used to perform statistical analyses. Two main statistical tests were conducted to test the study objective, namely: (1) standard multiple linear regression, and (2) A Mann-Whitney (Non-parametric test). Standard-linear regression was conducted to investigate (1) the relationship between job satisfaction and intention to quit, and (2) to determine if job

satisfaction predict intention to quit. According to Pallant (2010), two main assumptions need to be considered prior to running a multiple regression test; these are multicollinearity and normality. Each of these assumptions were checked and discussed. The Mann-Whitney and Kruskall Wallis (Non-parametric tests) were conducted to investigate if there is a significant difference on demographic characteristics (age, gender, race, and job level) across job satisfaction and intention to quit. The significant difference is determined by the p value below .05 (p<.05)

Rasch analysis was conducted using Winstep, customised by Bond and FoxSteps (2006), in order to determine the instrument's internal consistency, reliability, and construct validity (Boone & Rogan, 2005). Using the Rasch model, we calculated the internal consistency, reliability, and construct validity of the measuring instruments (Boone & Rogan, 2005). We used the Winstep software customised by Bond and FoxSteps (2006).

The rating scale's reliability is determined both by the item (item separation index and item reliability index) and the person (person separation index and person reliability index) according to Brand-Labuschagne et al., (2012). Rasch's reliability estimates have the advantage that neither the sample size nor sample specifics affect the accuracy of the reliability estimations. It is comparable to Cronbach's alpha coefficient, which estimates the true person variance. Therefore, these estimates evaluate a person's abilities based on responses on a specific test, regardless of the sample to which they belong (Boone & Rogan, 2005). The two constructs (job satisfaction and intention to quit) investigated in this study indicated high reliability of above .70, respectively.

The correlation test was conducted to ascertain the relationships between the constructs. The inter-correlation between variables were computed using the non parametric method the Spearman's rho product moment correlation because the data was not normally distributed. Tredoux and Durrheim (2002) states that correlations between variables allows the researcher to identify the direction and strength of the relationship between each variable, in this instance it will be between job satisfaction and intention to quit. The correlation results were used to address the research objective 1 to investigate the relationship between job satisfaction and intention to quit.

3.5.5.1   Standard multiple linear regression

The standard multiple linear regression test was conducted to determine whether job satisfaction significantly and positively predicts intention to quit. The aim of this statistical

analysis is to assess the significance of the amount of variance explained in the dependent variable which is in this case is intention to quit by independent variable which is job satisfaction.

3.5.5.2 Group difference test

A Mann-Whitney Test which is non-parametric was conducted to compare mean rank scores of job satisfaction, and intention to quit, to address objective 3: People from different demographical groups, namely, age, gender, race, and job level, differ significantly with regard to their levels of job satisfaction and intention to quit. The Descriptive statistics provides the mean score of the dependent variable for each separate group. The significant difference is determined by the P-value that is expected to be below .05 ($p < 0.05$).

3.6 RESULTS
3.6.1 Reliability

3.6.1.1 Reliability of the constructs: job satisfaction and intention to quit

It is important for any research to include an element of reliability statistics to validate the instruments used to collect data, and reliability of constructs. Reliability can be defined as the ability of a measurement instrument to pertain to its stability and consistency of measurement (Feng, et al., 2021). The implication hereof is that if the same variable is measured under different similar conditions, a reliable measurement procedure will reveal nearly indistinguishable results (Feng, et al., 2021). The measurement instrument should consequently be able to yield consistent results each time it is applied, only fluctuating when there are variations in the variable being measured as perpetuated by (Welman, et al., 2005). The reliability analysis was conducted on two constructs namely job satisfaction, and intention to quit to measure their internal consistency. According to Pallant (2010) for the scale to be considered reliable and internally consistent in its measurement the Cronbach Alpha Coefficient should be above 0.7.

3.6.1.2 Job satisfaction

Table 3.2 below shows the descriptive statistics, item, and person separation of job satisfaction variable. As per Brand-Labuschagne et.al (2012) guidelines, items separation reliability statistics of scale is expected to be above 2.00 (>2.00). The reliability analysis gave a raw person separation score of 2.83 in tandem with an item reliability score of 0.9. this is a

positive indicator of the reliability of the scale used. Table 3.2 below demonstrates that all items used to measure job satisfaction correlate well together. The low indices indicate that respondents might have not interpreted the question well or they might have provided different views. Looking at the results below (Table 3.2) job satisfaction is internally consistent in its measurement because of the Cronbach's Alpha value above .70 (.87).

Table 3.2

Reliability statistics: Internal Consistency Reliability (MSQ) (N = 157)

Scale dimension	Average measure	Infit (SD)	Outfit (SD)	Separation	Reliability	Alpha
Job satisfaction						
Persons	96 (.00)	1.5	1.5 (.59)	2.83	.89	
		(.61)				
Items	.43 (.00)	2.0	1.9 (2.6)	4.5	.95	.87
		(.25)				

3.6.1.3   Intention to quit

Table 3.3 below indicates the overall descriptive statistics, item and person separation for intention to quit. According to the results, all items are above 2.00 (>2.00) as per Brand-Labuschagne et.al (2012) guidelines, which indicate that all these items are converging well together into the same direction. Meaning that respondents were able to understand all the questions in the same way.

Table 3.3

Reliability statistics: Internal Consistency Reliability (ITQ) (N = 157)

Scale dimension	Average measure (SD)	Infit (SD)	Outfit (SD)	Separation	Reliability	Alpha
Job satisfaction						
Persons	1.58 (0.0)	1.5	1.4	2.84	.89	
		(1.89)	(.91)			
Items	.88 (.00)	2.0	2.4	8.99	.99	.87
		(.22)	(.28)			

3.6.2 Descriptive statistics

3.6.2.1   Mean and standard deviation

Descriptive statistics involved calculating the means to identify the central tendency of the scores, and the standard deviations were then calculated to identify the dispersion of scores as displayed in Table 3.4 below. All the constructs (job satisfaction, and intention to quit) explored in this study were measured on five-point Likert scale.

Table 3.4

Descriptive Statistics: Means and Standard Deviations (N =157)

	Minimum	**Maximum**	**Mean**	**Std deviation**	**Skewness**	**Kurtosis**
People	.89	5.00	3.4	.87	-.82	.39
Task	.71	5.00	3.6	.83	-.95	1.10
Leadership	**.83**	**5.00**	**3.5**	**.79**	**-.92**	**.94**
Extrinsic Job Satisfaction	2.10	5.00	3.8	.61	-.39	.21
Intrinsic job satisfaction	1.50	4.88	3.5	.61	-.39	.21
Job satisfaction	**2.0**	**4.94**	**3.67**	**0.59**	**-.43**	**.25**
Intention to quit	.17	5.00	2.81	1.05	-.23	-.58

3.6.2.2   Descriptive statistics: Job satisfaction

All the mean scores above on Table 3.4 reflect that most respondents tend to either agree or strongly agree with the statements, respectively. In terms of mean and standard deviation, Table 3.4 indicate the average mean score of job satisfaction (M=3.7:SD=.59), which shows high level of job satisfaction. The skewness value of -.43 and kurtosis (.25) fall within the recommended threshold (+3 and +10) using Kolmogrov Smrinov Test and Kline (2015), the results of both these values indicate the data was not normally distributed.

3.6.2.3   Descriptive statistics: Intention to quit

The results in Table 3.4 indicate the average mean score and standard deviation (M=2.8:SD=1.05) of intention to quit. The results indicate the lower mean score results and

high standard deviation. These results demonstrate that most employees tend to disagree with intention to quit, however, high standard deviation indicates that within the same mean score they are some respondents who tend to agree with intention to quit. The skewness (-.23) and kurtosis (-.58) ranged within the acceptable threshold of +3 and +10 recommended by Kline (2015) indicate the normal distribution of data.

3.6.3   Correlation statistics

This section of discussion reports on the Pearson's product-moment correlations.

3.6.3.1   Specific aim 1: To investigate the relationship between job satisfaction and intention to quit

To investigate the relationship between job satisfaction and intention to quit, descriptive statistic was transformed into correlational statistics to determine the relationship between these variables. The data was computed using Spearmans' rho product correlations. The correlations results indicate the direction and the strength of the relationship between job satisfaction and intention to quit. In terms of statistical significance, the value was set at 95% confidence interval level which indicate the p value below .05 (P<.05) and the practical size at *r* >.30 >.50 (medium to large effect) (Tredoux and Durrheim, 2002). According to the results in Table 3.4, the results indicate that job satisfaction is negatively correlated with intention to quit (r = -.71; large effect; p ≤ .05),*).* The significant relationship was evident between job satisfaction and intention.

The results also indicate that there is a significant negative relationship between TI and People (*r* = -.308; medium effect; *p* ≤ .05), Task (r=-.163, small effect, *p* ≤ .05), Leadership (r=-.243, small effect, ; *p* ≤ .05), Intrinsic(r=-.624,small effect, *p* ≤ .05) and Extrinsic (r=-.628,large effect, *p* ≤ .05).

Table 3.5

Significant Spearmans' rho Product-moment Correlations for MSQ and ITQ (N = 157)

	People	Task	Leadership	Intrinsic Job Satisfaction	Extrinsic Job Satisfaction	Job Satisfaction
Task	.720**					
Leadership	.935**	.907**				
Intrinsic Job Satisfaction	.365**	.233**	.317**			
Extrinsic Job Satisfaction	.429**	.226**	.351**	.520**		
Job Satisfaction	.455**	.263**	.385**	.861**	.863**	
TI	-.308**	-.163*	-.243**	-.624**	-.628**	-.705**+++

***p ≤.001 **p≤.01 *p≤.05. + r ≥ .29 (small effect); ++ r ≥ .30 ≥ r ≤ .49 (medium effect); +++ r ≥ .50 (large effect)

3.6.4 Inferential statistics

The following section of discussion reports on the results of standard simple linear regression to determine whether job satisfaction predicts intention to quit. Table 3.6 summarises the results of the simple linear regression analyses performed on the Job satisfaction and TI. The regression model is significant (F(1; 155) = 154.983; $p ≤ .001$), accounting for ($R^2 = .500$) 50% (large practical effect. Job satisfaction is a significant predictor of intention to quit ($β$= -0.71: $p<.001$). There is an inverse relationship between JS and TI.

Table 3.6

Linear Regression Statistics: ITQ (Dependent Variable) and MSQ (Independent Variable) Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients						
		B	St Error	Beta	t	Sig.	F	Sig.	R	Adjusted R Square
1	(Constant)	7,499	0,380		19,740	0,000	154,983	.000[b]	.707[a]	0,497
	Job Satisfaction	-1,275	0,102	-0,707	-12,449	0,000				

*** p ≤ .001; ** p ≤ .01; * p ≤ .05*

Table 3.7 summarises the results of the multiple regression analyses performed on the Job satisfaction subdimensions, Task, People and TI. The regression model is significant (F(4;

150) = 36.55; p ≤ .001), accounting for (R^2 = .494) 49.5% (medium practical effect). Intrinsic and Extrinsic Job satisfaction are significant predictors of intention to quit (β= -.647: p<.001) and (β= -.593: p<.001) respectively both variables have an inverse relationship with the TI. The following constructs Task (β= .049: p>.05) and People (β= -.048: p>.05) are not significant predictors of TI.

Regarding the collinearity statistics, the variance inflation factor (VIF) values were lower than the cut-off of > 10 for multicollinearity concerns. Multicollinearity is not a concern in interpreting the results.

The standard simple linear regression provided supported evidence for research objective 2: To determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation. Meaning that job satisfaction is a predictor of intention to quit.

Table 3.7

Multiple Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Model summary			
		B	Std. Error	Beta			Tolerance	VIF	F	Sig.	R	R Square
1	(Constant)	7.342	0.427		17.201	0.000			36.555	.000[b]	.703[a]	0.494
	People	-0.048	0.117	-0.040	-0.415	0.679	0.360	2.781				
	Task	0.049	0.117	0.038	0.420	0.675	0.402	2.489				
	Intrinsic Job Satisfaction	-0.647	0.121	-0.376	-5.344	0.000***	0.683	1.464				
	Extrinsic Job Satisfaction	-0.593	0.102	-0.419	-5.811	0.000***	0.648	1.542				

*** p ≤ .001; ** p ≤ .01; * p ≤ .05

3.6.5   Group difference test. Job satisfaction and intention to quit

3.6.5.1   Mean difference: Age group non-parametric

A non-parametric test, known as Mann-Whitney Test and Kruskall were conducted to ascertain whether engineering professionals from different age, gender, race and job level differ significantly with job satisfaction and intention to quit.

The results in Table 3.8 below indicate that there is no statistically significant difference was found between age groups because of p value above .05 (p>.05), respectively. Meaning that

employees from different age group perceived intention to quit (p=.245) and job satisfaction (p=171) same.

Table 3.8

Significant Mean Differences Age: MSQ

	Age	N	Mean Rank	df	Kruskall-Wallis H	P
People	17-25 years	5	88.10	2	.13	.935
	25-45 years	123	77.65			
	45 years+	27	78.28			
Task	17-25 years	5	75.30	2	1.40	.499
	25-45 years	123	80.10			
	45 years +	27	68.94			
Leadership	17-25 years	5	80.80	2	.29	.864
	25-45 years	123	78.80			
	45 years+	27	73.83			
Intrinsic job satisfaction	17-25 years	5	64.80	2	1.221	.543
	25-45 years	123	78.02			
	45 years +	27	86.17			
Extrinsic job satisfaction	17-25 years	5	118.60	2	9.518**	.009
	25-45 years	123	73.65			
	45 years +	27	96.43			
Job satisfaction	17-25 years	5	91.20	2	3.529	.171
	25-45 years	123	75.56			
	45 years +	27	92.69			
Intention to quit	17-25 years	5	88.20	2	2.817	.245
	25-45 years	125	81.46			
	45 years +	27	65.91			

***p ≤ .001; ** p ≤ .01; * p ≤ .05

3.6.5.2   Gender

According to the results presented in Table 3.9 there is no statistically significant difference between mean score of genders because of the p value above .05, respectively. Meaning that both males and females perceived job satisfaction and intention to quit the same.

Table 3.9

Significant Mean Differences Gender: MSQ

Variable	Gender	N	Mean Rank	Z	Mann-Whitney	P
People	Male	107	77.47		2511.000	.827
	Female	48	79.18	-.211		
Task	Male	107	74.60		2204.000	.158
	Female	48	85.58	-1.41		
Leadership	Male	107	76.18		2375.500	.451
	Female	48	82.05	-.753		
Intrinsic job satisfaction	Male	107	78.71		2614.500	.905
				-.120		
	Female	48	79.64			
Extrinsic job satisfaction	Male		78.98		2644.000	.994
				-008		
	Female		79.04			
TI	Female	49	82.03	4019.50		
	Male	108	77.63	8383.50		
	Total	157				

*** p≤ .001; ** p ≤ .01; * p ≤ .05

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3.6.5.3   Racial group

According to Table 3.10 there is no statistically significant difference in mean scores across racial groups because of p values above .05(p>.001), respectively. Meaning that employees from different racial group perceived job satisfaction and intention to quit the same.

Table 3.10

Significant Mean Difference: Race Group Non-parametric

	Race	N	Mean Rank	df	Kruskal-Wallis	P
Job satisfaction						
People	African	54	80.80	4	2.286	.683
	Coloured	3	106.67			
	Indian	18	78.33			
	White	74	73.97			
	Other	6	87.17			
Task	African	54	89.54	4	6.358	.174
	Coloured	3	79.17			
	Indian	18	94.06			
	White	74	69.84			
	Other	6	86.00			
Leadership	African	54	85.03	4	4.023	.403
	Coloured	3	99.33			
	Indian	18	77.67			
	White	74	71.23			
	Other	6	88.58			
Intrinsic job satisfaction	African	54	72.59	4	4.113	.391
	Coloured	3	77.00			
	Indian	18	95.42			
	White	74	80.99			
	Other	6	66.00			
Extrinsic job satisfaction	African	54	92.52	4	4.245	.374
	Coloured	3	94.67			
	Indian	18	67.72			
	White	74	85.43			
	Other	6	86.17			

	Race	N	Mean Rank	df	Kruskal-Wallis	P
Job satisfaction						
Job satisfaction	African	56	70.22	4	3.519	.475
	Coloured	3	87.67			
	Indian	18	86.81			
	White	74	83.62			
	Prefer not to say	6	76.17			
	Other	0	0			
Intention to quit	African	56	70.22	4	4.351	.361
	Coloured	3	52.33			
	Indian	18	75.44			
	White	74	74.28			
	Prefer not to say	6	74.42			

*** p ≤ .001; ** p ≤ .01; * p ≤ .05*

3.6.5.4 Job level

The results in Table 3.10 show that there is statistically significant difference in mean scores across different job levels. The significant difference was evident between job levels and intention to quit, given the p value that is below .05 (p<.001) indicating that employees from different job level have different perception in terms of intention to quit. With job satisfaction on the other hand there is no statistically significant difference because of p values above .05.

Table 3.11

Significant Mean Difference: Job Level

	Job level	N	Mean Rank	df	Kruskall Wallis	P
People	Execution	35	76.00	4	2.173	.704
	Leadership	3	71.33			
	Optimisation	91	77.51			
	Process optimisation	14	71.61			
	Specialisation	14	93.82			
Task	Execution	35	70.44	4	1.725	.786
	Leadership	3	96.17			
	Optimisation	91	80.24			
	Process optimisation	14	79.71			
	Specialisation	14	76.32			
Leadership	Execution	35	73.63	4	.871	.929.
	Leadership	3	73.67			
	Optimisation	91	79.56			
	Process optimisation	14	73.36			
	Specialisation	14	84.14			
Intrinsic job satisfaction	Execution	35	67.11	4	5,942	.203
	Leadership	3	68.33			
	Optimisation	91	82.26			
	Process optimisation	14	70.82			
	Specialisation	14	98.00			

	Job level	N	Mean Rank	df	Kruskall Wallis	P
Extrinsic job satisfaction	Execution	35	74.97	4	7.330	.119
	Leadership	3	93.67			
	Optimisation	91	73.85			
	Process optimisation	14	98.11			
	Specialisation	14	100.32			

*** p ≤ 0.001; ** p ≤ 0.01; * p ≤ 0.05

3.7   DISCUSSION

The purpose of this study was to investigate job satisfaction as a predictor of intention to quit amongst engineering professionals within a petrochemical organisation based in South Africa, and whether age, gender, racial group, and job level significantly differ in terms of job satisfaction and intention to quit.

3.7.1   Demographic profile of the respondents

The investigated sample of the study entailed of 92.4% of engineering employees who have completed their engineering degree. The sample was predominantly represented by 79.6% employees who are between the age of 25 to 45 years, who are white (47.1%) males (68.8%) obtaining optimisation (58%) as their job level. The results indicated that the overall sample tend to show a level of agreement with   job satisfaction (M= 3.67). Some indicated a low level of intention to quit (M= 2.81). The study findings indicate that job satisfaction is likely to negatively impact employee's intention to quit.

3.7.2   Specific aim 1: To investigate the relationship between job satisfaction and intention to quit

The results showed that job satisfaction does correlate with intention to quit. The findings confirm those of Lee and Mitchell (1994). Through their model, Lee and Mitchell proposed that job dissatisfaction is the cause for turnover, the reasons for turnover being associated with events identified as shocks. Hoy and Miskel (1991) defined job satisfaction as a multidimensional concept that comprises a present and past oriented pleasurable feeling that results when an individual evaluates their work role (Park & Min, 2020). Herzberg et al. (1959) as cited in Alshmemri et al. (2017) describe job satisfaction as the physical working conditions that are seen to be or experienced as frustrating and unpleasant. These physical working

conditions can be regarded as "dissatisfiers". job satisfaction has been found to be an important direct predictor of employees' intention to quit the organisation, this may be mitigated when the individual perceives that their supervisor is supportive (Alessandri et al., 2017 & Roberts, et al., 2020). The results conclude that respondents who were surveyed in this study are more likely to quit their job if they are not satisfied with it. Furthermore, research has proven the link between job satisfaction, as an essential component to turnover due to the construct's empirical relationship, with intention to quit has been established through various studies where a negative relationship with intention to quit was established continuously (Lee et al., 2000; Martin & Roodt, 2008; Mathieu & Zajac, 1990; Meyer et al., 2002; Steel & Ovalle, 1984; Sungu et al., 2019; Tett & Meyer, 1993).

The results of the current study relating to Job satisfaction and intention to quit can be explained in terms of the study conducted Martins and Roodt (2008) who found out that when individuals are satisfied with their jobs, they are less likely to have intention to quit. Martin (2007) posits that the more employees are satisfied with their jobs, the more they are committed to the goals of the organisation and unlikely to leave. Martin (2007, p. 24) identified various independent variables of job satisfaction, such as opportunity which refers to the availability of other jobs within the organisation; routinisation which is the level to which the job is repetitive in terms of routine; participation is the level to which employees have power concerning their job and performance; instrumental communication – this is the level to which employees have access to information from their managers; integration – the level to which an employee relates to co-workers and friends within the working environment; salary. Promotion, professionalism, training, growth, (Martin, 2007) will motivate employees to engage in their work and stay due to satisfaction (Bakker & Demerouti, 2018).

3.7.3 Specific aim 2: To determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation

Job satisfaction is not a stand-alone concept but a concept with many aspects. Aspects such as policies and procedures, work group affiliation, working conditions and fringe benefits fall within the five core dimensions. Work group affiliation dynamics fall under co-workers, fringe benefits fall within pay and working conditions are concerned with the job (Belwalkar et al., 2018). Each of the various areas including pay, quality of work life, job, supervisors, promotional opportunities, co-workers will be studied. Including consensus of five core dimensions that determine job satisfaction, namely pay, quality of work, job, promotion, supervisor and co-workers (Van Der Hoven, 2016). Some dimensions that were investigated in the study includes people, task, intrinsic job satisfaction, and extrinsic job satisfaction.

3.7.3.1 People

The results showed that people have negative and non-significant impact on employee intention to quit, which means that the choice of employees to quit their job is not driven by their co-workers. Several authors have elucidated the importance of co-workers within the organisation. Herzberg's (1966) theory states that if co-workers create a supporting environment and allow individuals to unleash their full potential, the job might be satisfying. Working in a team is associated with learning new things as well as job enlargement which contribute positively to job satisfaction (Acuña et al., 2015). Mafini and Dlodlo (2014) suggest that individuals have a need to affiliate with others which works well when co-workers are comfortable company. Co-workers are classified as another extrinsic dimension that impacts job satisfaction. Co-workers being friendly, helpful and whether they take a personal interest in the individual has a determination on job satisfaction. It's evident that having the support of fellow workers contribute positively to job satisfaction as the results employees are not likely to quite their job. However, the results show the opposite, in this focus population the corporation of co-workers do not influence their decision to stay or leave their jobs.

3.7.3.2 Task

The results indicated that task has non-significant impact on employee intention to quit, this result illuminates that task performed within the organisation has no influence in employee's choice to leave their organisation. De Beer et al. (2016) postulate that the primary factor in job satisfaction is the kind of work employees perform including the autonomy. Essentially, the nature of work satisfaction refers to the employees' satisfaction with the type of work done (De Gieter & Hofmans, 2015; De Gieter et al., 2018). Staff perceptions about their work is a critical consideration for employers who are interested in improving job satisfaction as these perceptions play a significant role in employee decisions to enter, stay with or leave and organisation (De Sousa Sabbagha et al., 2018). Furthermore, A well-structured job affects job satisfaction in that the job facets are enriched and enhance the level of employee empowerment in terms of authority and responsibility (Osabiya, 2015). Nevertheless, sampled employees in this study are not being influenced by the work they do to leave or stay in the organisation.

3.7.3.3   *Intrinsic job satisfaction*

According to the results intrinsic job satisfaction has a significant impact on employee's intention to quit, which means that employees are more likely to change their jobs or organisation due to intrinsic job satisfaction. Meaning that sampled employees in this study are would be encouraged to leave their job if is not self-motivated. Intrinsic employees are self-driven, they focus more on building a career than staying in a non-desired job or organisation due to monetary. The conclusion of the results is supported by authors such as Schultz. Schultz (2015) stated that some employees are willing to accept less physically demanding work, less responsibility, or fewer working hours for less pay. Pelders and Nelson (2019) further stated that there are employees who are eager to earn money through overtime while there are those who will actively avoid it.

3.7.3.4   *Extrinsic job satisfaction*

The results indicated that extrinsic job satisfaction has a significant impact on employee's intention to quit. Meaning that employee's decision to stay or leave their jobs is influenced by their rewards. A higher salary leads to more economical and psychological advantages, therefore more wealth, more buying power and more job security with the added vote of confidence and a sign of objective recognition (Locke et al., 1980; Srivastava et al., 2001; Mabaso & Dlamini, 2021). Extrinsic rewards such as money can damage intrinsic motivation. Seemingly, low, uncompetitive pay is often one of the factors that detracts employees from overall job satisfaction (Pillai et al., 2017; Mabaso, 2019; Baker, 2022). Heneman and Judge (2000) referred to pay as not only the most important but also argued that is one of the easiest rewards to manipulate (Luna-Arocas et al., 2020). However, Lawler (1971) noted that people's satisfaction with their pay is not only dependent on how much they earn but also by how much they think they ought to earn.

3.7.4   Specific aim 3: Ascertain whether engineering professionals from different age, gender, race and job level groups differ significantly with regard to job satisfaction and intention to quit

3.7.4.1   *Job satisfaction: Age*

The true nature of the relationship between age and job satisfaction remains unresolved despite many investigations that have been conducted. A positive linear relationship has been identified between employee age and job satisfaction and further the employees became more

satisfied with their jobs as they progressed in chronological age (Jung & Takeuchi, 2018). Sampson (2012) a statistically significant relationship was reported between age and job satisfaction amongst call centre agents in a call centre in the Western Cape. Bull (2005) asserts that job satisfaction increases with age and work experience. Older employees, late forties up to retirement age, which is usually sixty-five, while they have lower expectations of their jobs are said to be more confident and tolerant of authority (Bull, 2005). Bull (2005) further found that older employees occupy jobs that use their skills better, work under better conditions and appreciate fringe benefits from advancement in their careers (Gopinath, 2020). Younger employees (below forty years) may be more satisfied because of inexperience while older employees have reduced ambitions as they face fewer alternative choices with age (Martin & Roodt 2008).

3.7.4.2   Job satisfaction: Gender

The results indicated that there is no significant difference between respondents from different gender. The results are not supported in literature. Sharma (2017) found males to be more satisfied than their female counterparts. Salary, promotion and attitude are some of the areas where men draw satisfaction whereas their female counterparts derive satisfaction from co-workers and working conditions (Okpara et al., 2005; Okpara, 2006). These results confirm Janssen and Backes-Gellner (2016) state that there is no significant difference in women's overall satisfaction while working stereotypically male jobs versus working in stereotypically female jobs. Where women work in traditionally male jobs, they are significantly less satisfied with their work climate and with task contents, but they are significantly more satisfied with their income than working in stereotypically female jobs (Janssen & Backes-Gellner, 2016; Ling at al., 2020). Their male counterparts are more satisfied with their work climate, the contents of tasks and their income in stereotypically male jobs (Janssen & Backes-Gellner, 2016; Meeussen, 2020). In their 2016 study, Janssen and Backes-Gellner found that men report higher levels of job satisfaction with contents of tasks, work climate and income in stereotypically male jobs whereas women in stereotypical male jobs trade off the negative effects of gender stereotyping against higher income.

3.7.4.3   Job satisfaction: Race

The results of this study are contrary to Stoermer (2019) who found that white males and black females are more negatively affected by job satisfaction than black males and white females. This can be attributed to the fact that black females are more sought after than black males and white females which acts to drive their intention to quit negatively (Martin & Roodt, 2008).

3.7.4.4 Job satisfaction: Job level

Robie et al. (1998) found that job satisfaction increases with an increased job level (i.e. junior to mid-management to senior management) while Ronen (1978) concluded that the relationship between job satisfaction and seniority resembles a U-shaped curve (Lian & Ling, 2018). However subsequent research dispelled this with negative or no relationships being reported in several studies (Gordon & Johnson, 1982). Oshagbem (1999) using a statistical test of differences, found that academics and their managers differ significantly on the levels of satisfaction. This is derived from most features of their jobs such as the general deduction that management positions are characterised by seniority in age, rank, and length of service which has a positive effect on university teachers' level of job satisfaction. Other studies found a higher level of job satisfaction where there was job seniority (Kalinowska & Marcinowicz, 2020; Yavuzkurt, & Kiral, 2020). This study found that an employee's job level has a significant impact on their job satisfaction levels. Employees in the more senior role categories of Optimisation and Specialisation tended to be more satisfied that employees in the lower role category of Execution.

3.7.4.5 Intention to quit: Age

The results indicate that intention to quit is not perceived differently across different age group. From the results it is evident that young or old their intention to quit remains the same. The findings contradict that of Martin and Roodt's (2008) which stated that age is a contributing factor to intention to quit with younger employees being more open to leaving organisations (Engelbrecht & Samuel, 2019). Du Plooy and Roodt (2013) attribute this to older employees being more cautious of exiting since they may find it more challenging to secure alternative work opportunities. Similarly, Proost et al. (2015) have found a negative relationship between intention to quit and age. More specifically, older employees seem to have lower intentions to leave and tend to be more satisfied with their work as opposed to younger individuals.

3.7.4.6 Intention to quit: Gender

No significant difference was identified between men and women. Van Dyk (2016) found that extrinsic factors tend to influence men's intention to quit the public sector while intrinsic factors influence women's intention to quit. With Martin and Roodt (2008) findings white males and black females scored higher than the black males and white females in terms of their intention to quit. Jacobs (2005) had similar findings in their study of nurses. Jacobs (2005) found that

black females are very sought after in the workplace above black males and white females owing to government legislation around transformation.

Intention to quit: Racial group

Previous research conducted amongst nursing professionals indicated that intentions to quit amongst nursing professionals and reported that black nurses are significantly more inclined to quit than their coloured or white counterparts (Oosthuizen et al., 2016) which could be a result of demand for black nurses due to diversity targets imposed on employers by the Employment Equity Act (1995). Other research found that white participants tend to report higher levels of job satisfaction than black participants (Munro, 2015). However, findings from this research indicated that there is no significant difference between different racial groups indicating that respondents from different racial group experience same or similar levels of intention to quit.

3.7.4.7   Intention to quit: Job level

Baron and Greenberg (1990, p 174) state that "older employees those with tenure or seniority, and those who are satisfied with their own levels of work performance tend to report high levels of organisational commitment than others". This implies that, the older people are seen to be more commitment to the organisation than other age groups. Tanius et al, (2017) found seniority did not have any effect on the employees' retention. It stands to reason that the higher the job level, the likelier that the age and pay in the same field is also higher, therefore an employee who has been hired as an engineer for a longer period is likely to be older and paid more than a new entrant which may lead to intention to continue as pay positively impacts intention to quit. This study found that an engineer's job level impacts their intention to quit with lower ranking employees more likely to have intention to quit ideas than more senior employees.

3.7.5 Specific aim 4: Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit

Future research would benefit from broadening the research to engineers in general and not just those in the petrochemical industry as this would allow for generalisability of results.

3.8   CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

In this chapter the main aims of the research as well as the research objectives were revisited, and conclusions based on the results of the literature and empirical study in terms of these objectives were made. The implications and recommendations brought forward by the researcher were discussed. The primary objective of this study was to investigate job satisfaction as a predictor of intention to quit amongst engineering professionals within a petrochemical organisation. Overall, it can be concluded that to reduce intention to quit employees should be satisfied with their job. Hence organisations have the opportunity to improve satisfaction of engineers with the intention to retain them. The findings of this study have contributed valuable information to the relationship between job satisfaction and turnover (intention to stay) in the context of a petrochemical organisation in South Africa.

The conclusions drawn focus on the practical implications of retention strategies and will be discussed in greater detail in Chapter 4.

3.9   LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH
3.9.1   Limitations

This study only catered for engineers and individuals that were within the geographical reach of the researcher. Individuals in other regions, countries and areas were not reached. The research was limited to only a few individuals and this might affect the true picture of the research findings at hand and potentially in the long run. It is undeniable that the objective of the study was only to determine if there was correlating relationships between the variables and to find out what the strength of these relationships was. Primarily, to investigate the relationship between job satisfaction and intention to quit. Several other factors that might have an influence on job satisfaction and intentions to quit were not analysed and discussed in this study. There are several which were briefly cited in this chapter.

3.9.2   Recommendations for future research

It is undeniable that the engineering industry is one of the most important industries in the South African economy. However, it has clearly failed to offer job security to the majority of engineers who are not satisfied by the role they are playing. In the long run the engineering sector loses engineers to other countries, in companies that offer competitive earnings and enhance job satisfaction. Legoabe (2021, pg 7) states that "The scarcity of requisite qualified and experienced municipal engineers is indirectly linked with the challenges relating to poor

infrastructure asset management, collapsing infrastructure and its related public health and safety problems as well as service delivery community protests that infrastructure collapses typically elicits." Hence, the researcher suggests the following:

- That more work should be conducted into developing strategies where the country and local companies can work towards ensuring that engineers receive the necessary job satisfaction to ensure that they do not leave for greener pastures.
- It is also recommended that longitudinal studies are done to determine how factors that influence job satisfaction and intention to quit vary over a long period of time. It is important to note that this research should be conducted using similar constructs to those used in non-longitudinal studies to be able to compare the research findings effectively. It is paramount to note that, longitudinal studies can be difficult to conduct since participants may relocate or decide to pursue greener pastures elsewhere.
- Various interview techniques and strategies in a way could enhance the understanding of the connection between the constructs of this study and its variables. Also, for an even deeper understanding in future research the connection between the intrinsic and extrinsic factors of job satisfaction and intention to quit should be investigated individually.
- Provided that the economic climate in South Africa progresses positively, employment opportunities, set ups and situations should change and hence the engineering sector should move towards employing more local and international engineers. Therefore, to see if results differ, studies should be conducted frequently. In a nutshell, the variables used in this study, the level of performance and willingness of participants to participate should also be measured. This could provide clear reasons on why high performing employees and engineers may leave an organisation.

3.10   CHAPTER SUMMARY

In this chapter, the literature underpinning this study was discussed with the emphasis on the core aspects of the discussion at hand. The results were explained, recommendations made, the limitations of the study highlighted with suggestions made for areas of possible future research.

CHAPTER 4: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This final chapter focuses on the conclusions that can be deduced from this research study. This chapter will also highlight the limitations of the literature review and the empirical results of the study conducted. Further to that it will make recommendations for the practical application of the findings for future studies.

4.1   CONCLUSIONS

This section discusses the conclusions relating to the literature review and the empirical study.

4.1.1   Conclusions relating to the literature review

Three main objectives underpin this study, namely: (1) determine whether job satisfaction significantly predicts intention to quit; (2) determine whether people from different age, gender, race and job level groups differ significantly regarding their job satisfaction and intention to quit and (3) accentuate the implications for retention practices in the South African petrochemical context. In order to achieve the objects of the research, the following specific aims were employed.

4.1.1.1   Specific aim 1: To conceptualise job satisfaction from a theoretical perspective

Job satisfaction is a well-studied concept in the field of Industrial and Organisational Psychology. Job satisfaction is an individual's assessment of the working environment in terms of how well it meets their needs (Weiss et al., 1965).

Various theories influence job satisfaction namely Maslow's (1943) needs theory, Alderfer's (1969) ERG Theory, McClelland's (1961) learned needs theory and Herzberg's (1959) two-factor theory which will be discussed below.

Maslow's (1943), known as the Maslow "the father of humanistic psychology" (Bridgman et al., 2019), developed a human hierarchy of needs arranged between physical, social, and psychological needs (Sanusi, et al., 2020). Maslow chose a linear expression of his theory starting with survival, then personal development followed by quality of life (Nwagwu, 2018). Maslow's (1943) theory posits that people have needs and they are driven to achieve them which ties to motivation (Nwagwu, 2018).

Alderfer's ERG (1969) is grouped into three namely, (1) Existence needs which include all physiological and material human needs such as food, water, air, safety, physical love and affection which encompass the first three Maslow needs (Grigorov, 2020); (2) Relatedness include the social element of humans – relationships with family, friends, colleagues, employers, social communication and respect from others. Relatedness refers to a sense of belonging and security. (3) Alderfer's (1969) includes self-actualisation and self-esteem needs and they correspond with Maslow's fourth and fifth level needs.

McClelland's (1961) needs theory is closely associated with learning theory as he believed that needs are learned through events that people experience within their environments. McClelland (1961) found that people who acquire certain needs behave differently from those who don't have the same needs. McClelland's theory too is arranged in a trifactor: Need for power which explains the behaviour of making others do what they had not intended to do. The need for power is driven by the desire to make an impact on others, to influence others, to change power and the desire to make a different life (Osemeke & Adegboyega, 2017). Need for Achievement is driven by competition with excellence (Osemeke & Adegboyega, 2017). McClelland (1961) found these people perform better than others. He identified six characteristics of high need achievers (1) prefer leadership roles where they can assume personal responsibility for performing tasks or finding solutions to problems, (2) they tend to be risk takers who set difficult goals, (3) have a high need for performance feedback, (4) need to attain personal accomplishments, (5) seek out challenging tasks (6) they do not shirk off responsibility (Osemeke & Adegboyega, 2017). McClelland's Need for Affiliation is the need for friendly and interpersonal relationships. People driven by the need for Affiliation have the desire to create and maintain social relationships. Such people have the characteristics of desire for acceptance and approval from others, tend to conform to the wishes of others whose relationship they value and they value the feelings of others (Osemeke & Adegboyega, 2017).

Herzberg's (1959) two-factor theory is binary – Motivators and Hygiene factors. Herzberg (1959) sees motivators as intrinsic factors that will increase employee's job satisfaction while hygiene factors are extrinsic in nature and act to prevent employee's dissatisfaction. The latter do not lead to improved motivation but in their absence dissatisfaction prevails. Motivation factors encourage employees to work hard and enjoy their jobs as well. Motivators include personal growth, social responsibility, passion for the job, respect, opportunities for advancement, recognition and the overall feeling of achievement (Osemeke & Adegboyega, 2017). Specific examples of hygiene factors are job conditions, career stability, organisational policies, interpersonal relationships with colleagues and supervisors.

4.1.1.2   Specific aim 2: To conceptualise intention to quit from a theoretical perspective

Siwela and Van der Bank (2021) posit that what makes studying employee turnover challenging is that generally people have exited organisations are not available for research therefore researchers address this by studying intention to quit. Intention to quit does not guarantee a decision to quit, however, it is usually the next logical step when employees express the intention to quit an organisation (Siwela & Van der Bank, 2021). Therefore, investigating intention to quit provides a useful method to study turnover. Intention to quit is defined as "the conscious and deliberate wilfulness to leave the organisation" (Tett & Meyer, 1993, p. 262). Tett and Meyer (1993) describe intention to quit as the final steps in a series of withdrawal cognitions leading to actual turnover. Takawira et al., (2014) noted that intention to leave is the idea of leaving the organisation and seeking employment elsewhere.

4.1.1.3   Specific aim 3: To explain the theoretical relationship in job satisfaction predicting intention to quit with specific reference to engineers in a petrochemical organisation

The third aim of the literature was to theorise the relationship between job satisfaction and intention to quit with specific reference to engineers in a petrochemical organisation. Siwela and Van der Bank (2021) studied the facilitating role of commitment in reducing intention to quite amongst artisans and engineers. Their findings suggest that psychological meaningfulness, pay, job fit, perceived organisation support all had a strong negative relationship with intention to quit.

Job satisfaction is subjective and refers to the perceived emotional response of the individual and is the best measure in predicting an individuals' perception of the pleasure or value they derive from their jobs (Oosthuizen, et al., 2016). The impact of job satisfaction on intention to quit is undeniable (Alessandri et al., 2017; Roberts et al., 2020), however, mitigating factors such as one's relationship with their supervisor and colleagues can alter an individual's working conditions (De Beer et al., 2016). Intention to quit or remain with an employer starts with the individual evaluating their current work conditions and then moving through several further stages until a firm intention to quit is reached (Munyaka et al., 2017).

There are various theories designed to measure intention to quit, The Theory of Organisational Equilibrium (March & Simon, 1958); The Met Expectations Model (Porter & Steers, 1973); The Linkage Model (Mobley, 1977; Mobley et al., 1978); and The Unfolding Model of Turnover (Lee & Mitchell, 1994; Lee et al., 1999).

The Theory of Organisational Equilibrium (March & Simon, 1958)

March and Simon (1958) propagated the Organisational Equilibrium Theory that stresses the need to balance between employees' and organisations' contributions and inducements (Kamau, et al., 2021). The perceived inducements are influenced by two factors: (1) one's desire to move, which is generally a function of one's satisfaction with the work environment, and (2) one's ease of movement, which is influenced by macro- and individual-level factors that determine employability. The consequent turnover theories were built on March and Simon's model (Weick, 2019). Factors that influence employees' loyalty are also perceived desirability and ease of leaving an organisation. Perceived desirability relates to the perceived ease of leaving a job relating to the perceived alternatives in the market (Dei Mensah, 2014). This means organisations need to remain competitive in order to increase intention to remain in an organisation.

The Met Expectations Model (Porter & Steers, 1973)

The Met Expectations model refers to what one perceived prior to entering the organisation (person factor) in comparison to the experience of being in the organisation (situation factor) at any given time (Ok & Park, 2018). Steer and Porter's prediction was that when a person's expectations are not met – whatever they may be – his propensity to quit would be increased. This is the model most pertinent to this study (Steer & Porter, 1973). Steer and Porter (1973) cite the work of Weitz (1956) and Macedonia (1969) which found that people who provided with a realistic picture of their job environment not limited to its difficulties, prior to employment, were likely to adjust to their job expectations. The main aim of Ok and Park's (2018) study was to analyse how and when new entrants' tenure is associated with low satisfaction when the age effect is controlled in a longitudinal research setting. Their findings were that new entrants' job satisfaction declines as their tenure increases when age in a controlled variable (Ok & Park's (2018). The researchers (Ok & Park, 2018) also found that when new entrants perceived beliefs about their own expectations are perceived as mismatched with post-entry actual experience, their psychological contract with the organisation is violated. As these new entrants' tenure increases, their psychological contracts are majorly violated by undesirable information regarding the organisation and become more dissatisfied with their job and organisation (Ok & Park, 2018).

The Linkage Model (Mobley, 1977)

Mobley (1977) highlighted variables that link job attitudes to actual turnover behaviour. An important contribution by Mobley was to suggest that job attitudes are most directly related to withdrawal cognitions associated with the decision to leave and only indirectly related to actual turnover behaviour. Mobley's model is more comprehensive and relies on the alternative jobs'

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availability as predictor of intention to quit and employee turnover (Tubay, 2019). Mobley uses a ten-step process which begins with job dissatisfaction and resulting in turnover post evaluating alternative opportunities (Sarkar, 2018).

4.1.1.4 Specific aim 4: Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit

Various demographic variables influence intention to quit, this literature explored age, gender, race and job level. Kamau et al., (2021) investigated the association between age, gender and intention to quit amongst teachers in public service in Murang'a in Kenya. Kamau et al., (2021) found that age has a significant association with intention to quit while tenure, gender and educational level had no significance on intention to quit. Martin and Roodt's (2008) reported that age is a contributing factor to intention to quit with younger employees being more open to leaving organisations (Engelbrecht & Samuel, 2019). Du Plooy and Roodt (2013) attribute this to older employees being more cautious of exiting since they may find it more challenging to secure alternative work opportunities. On the gender influence, Martin and Roodt (2008) found that white males and black females scored higher than the black males and white females in terms of their intention to quit. Van Dyk (2016) found that extrinsic factors tend to influence men's intention to quit the public sector while intrinsic factors influence women's intention to quit. However, Du Plooy and Roodt (2013) identified no significant differences between individual intention to quit and gender. Therefore, this remains an inconsistent variable.

Regarding race, Oosthuizen et al. (2016) found that their study corroborated with the findings of previous studies indicating that white participants tend to report higher levels of job satisfaction than black participants (Munro, 2015). Jacobs (2005) conducted a study on intention to quit amongst nursing professionals and reported that black nurses are significantly more inclined to quit than their coloured or white counterparts (Oosthuizen et al., 2016).

The demographic areas of age, gender, race require further study as there is inconclusive research on these constructs. Further research would also be beneficial from understanding levels of educational qualification and their potential influence on job satisfaction and intention to quit.

4.1.2 Conclusions relating to the empirical study

There were four main aims relating to the empirical study of this research:

Research aim 1:   Investigate the relationship between job satisfaction and intention to quit;

Research aim 2:   Determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation;

Research aim 3:   Ascertain whether engineering professionals from different age, gender, race, and job levels differ significantly with the regard to job satisfaction in predicting intention to quit;

Research aim 4:   Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit.

The empirical results provided supportive evidence for the following two research hypotheses:

H1:   Job satisfaction significantly and positively predicts intention to quit.

H2:   There is a significant relationship between the demographic variables (age, gender, race and educational qualification) and intention to quit at a petrochemical organisation.

4.1.2.1   First aim: Investigate the relationship between job satisfaction and intention to quit

Table 4.1

Model Summary

	Model Summary							
	Standardized Coefficients	**Std. Error**	**t**	**Sig.**	**R**	**R square**	**F**	**p**
(Constant)		0.380	19.740	0.000	0.707	0.500	154.98	0.000
Job Satisfaction	-0.707	0.102	-12.449	0.000				

Job satisfaction has a negative and significant effect on intention to quit as its P value (0.000) is lower than .05. Meaning that job satisfaction negatively influences employees turn over intention. Therefore, H1 is accepted.

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- The findings state that engineers who are satisfied with their jobs will tend to remain in the organisation.
- The higher an employee's job satisfaction, the more likely they are to remain in the organisation
- The results of the current study show that job satisfaction has a positive impact on intention to quit. Engineers who are dissatisfied with their pay, quality of work life, job, opportunities for promotion, supervision and co-workers may begin to consider quitting the organisation.
- Job satisfaction and intention to quit have an empirical relationship in that job satisfaction contributes significantly to an engineer's decision to remain in the employ of the organisation.

4.1.2.2   Second aim: Determine whether job satisfaction predicts intention to quit amongst engineers in a petrochemical organisation

H2: There is a significant relationship between the demographic variables (age, gender, race and educational qualification) and intention to quit at a petrochemical organisation.

4.1.2.3   Third aim: Ascertain whether engineering professionals from different age, gender, race, and job level groups differ significantly with the regard to job satisfaction in predicting intention to quit

The results indicated that there is no significant difference between respondents from different age, gender and race. This study found that an employee's job level has a significant impact on their job satisfaction levels. Employees in the more senior role categories of Optimisation and Specialisation tended to be more satisfied that employees in the lower role category of Execution.

4.1.2.4   Fourth aim: Highlight areas for further research for the field of Industrial and Organisational Psychology regarding intention to quit

Future research would benefit from broadening the research to engineers in general and not just those in the petrochemical industry as this would allow for generalisation of results. Additionally, given that engineers work with other trades such as artisans, it would be beneficial to study that cohort of skills.

4.1.3 Conclusions relating to the central hypothesis

The central hypothesis of the research was formulated as follows:

Job satisfaction significantly predicts intention to quit amongst engineers in a petrochemical organisation.

4.1.4 Conclusions relating to the retention of engineers

The research reveals that organisations should target retention strategies to engineers at lower job levels as they were revealed to be more likely to consider leaving the organisation.

4.1.4.1 Conclusions relating to contributions to the field of Industrial and Organisational psychology.

4.2 LIMITATIONS

Several limitations were identified in the literature review and empirical study.

4.2.1 Limitations of the literature review

The following limitations were noted in the literature review:

4.2.1.1 Limitations of the empirical study

The fact that the research was conducted during the COVID-19 pandemic restrictions is noteworthy in that the organisation was experiencing major changes to its structure directly impacting the cohort in study. This may have had an impact on the number of participants who chose to take part in the study.

The research was intended to study job satisfaction as well as transformational leadership as they predict intention to quit, however, transformational leadership had to be removed from the study. The addition of leadership to the study would have made a welcome contribution to the field of Industrial and Organisational Psychology.

Another limitation of quantitative research is that this study only focused on one organisation in a specific industry. Due to their unique contexts, it cannot be generalised to all engineers in

South Africa. However, there is likely transferability to engineers in similar industries working for different organisations.

Despite the limitations identified, the results of the current study highlight the relationship between job satisfaction and intention to quit amongst engineers in the petrochemical industry as well as the difference in relation to demographics. The study can therefore be used to understand the reasons why engineers consider leaving organisations aiding and aiding with their attrition.

4.3   RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made about retention of engineers in organisations and possible future studies.

4.2.2   Future research

The following recommendations apply for possible future research:
The research attracted 157 participants, a larger sample size may reveal further learnings in relation to job satisfaction and intention to quit.

The current study was a quantitative study which limits the narrative that would accompany these findings. It may be useful to perform a cross-sectional study in future.

A longitudinal study on intention to quit amongst engineers would benefit research as reported intentions to quit can be reported over a longer period to determine if engineers do in fact choose to leave the organisation and their reasons for leaving.

Future research may consider studying demographics such as age, gender, race and job levels in closer detail as that may reveal that organisations need to take a directed approach in an effort to retain certain groups.

Engineers although critical to the organisation do not work alone, future study may consider researching artisans who work closely with engineers.

4.4   CHAPTER SUMMARY

In the final chapter, the researcher discussed conclusions, hypothesis, limitations and recommendations of the study in line with the literature review and empirical aims states in the first chapter. The recommendations were described to indicate how insight into intention to quit can be studied further to determine retention strategies.

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APPENDIX A: ORGANISATION PERMISSION LETTER

sasol

To: Gontse Madumo
E-mail: Gontse.Madumo@sasol.com

30 August 2019

To whom it may concern

Dear Sir / Madam

Subject: Approval of Master's Research for student Gontse Madumo, 35157038

The student is hereby granted approval to conduct research at Sasol specifically in the Secunda Synfuels Operations (SSO) area on the topic of "Job satisfaction and transformational leadership as predictors of intention to quit amongst engineering professionals within a petrochemical organisation." We will provide the student with the required information as requested namely; email addresses of employees in the Sasol Synfuels Operations (SSO), confidential reports detailing education qualifications, age, gender and race and assistance with identification of participants. The organisation will expect feedback or a report on the research before submission.

Should any additional information be required, kindly contact Deirdre Botha on Dierdre.Botha@sasol.com.

Yours Sincerely

Mr. Jacques Gouws
Vice President Human Resources

Secunda Synfuels Operations
PdP Kruger Street, Secunda, 2302
Private Bag X1000, Secunda, 2302
www.sasol.com

APPENDIX B: ETHICS REVIEW COMMITTEE APPROVAL

UNISA | university of south africa

UNISA CEMS/IOP RESEARCH ETHICS REVIEW COMMITTEE

05 March 2020

Dear Ms., Gontse Mpipo Madumo,

| NHREC Registration # : (if applicable) |
| ERC Reference # : **2019_CEMS/IOP_026** |
| Name : Ms., Gontse Mpipo Madumo |
| Student #: 35157038 |
| Staff #: N/a |

**Decision: Ethics approval from
05 March 2020 to 05 March 2023**

Researcher(s): Name: Gontse Mpipo Madumo
Address: P O Box 803, Naturena, 2064
E-mail address, telephone: gmadumo@gmail.com, 0730354487

Supervisor (s): Name: Ms. Cebile Tebele
E-mail address, telephone: Tebelc@unisa.ac.za, 012 429 8809

Job satisfaction and transformational leadership as predictors of intention to quit amongst engineering professionals within a petrochemical organisation.

Qualification: Masters (MCom)- Post graduate degree

Thank you for the application for research ethics clearance by the Unisa CEMS/IOP Research Ethics Review Committee for the above-mentioned research. Ethics approval is granted for **Three** years.

The **low risk application** was **reviewed** by the CEMS/IOP Research Ethics Review Committee on the 25th February 2020 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment. The decision was approved on 5th March 2020.

The proposed research may only commence with the provision that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the Unisa CEMS/IOP Research Ethics Review Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

7. No field work activities may continue after the expiry date (05 March 2023). Submission of a complete research ethics progress report will constitute an application for the renewal of Ethics Research Committee approval.

Note:

*The reference number **2019_CEMS/IOP_026** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature
Chair of IOP ERC
E-mail: vnieka2@unisa.ac.za

Tel: (012) 429-8231

Signature
Executive Dean : CEMS
E-mail: mogalmt@unisa.ac.za

Tel: (012) 429-4805

INFORMED CONSENT FORM

Name of researcher: **Gontse Madumo**

Address of researcher: **Olivedale**

Contact details: **076 953 5338**

Title of the research: Job satisfaction and transformational leadership as predictors of intention to quit amongst engineering professionals within a chemicals and energy organisation.

Purpose of the research: This research aims to benefit not only Industrial and Organisational Psychologists and Human Resources Practitioners, but organisations within the engineering fields in understanding why engineering professionals leave engineering and related companies. It is anticipated that the findings from this study may inform interventions for retention strategies and continued organisational citizenship of engineering professionals in engineering and related companies.

Expected duration of participation: 30 minutes

Your participation: The study focuses on job satisfaction, transformational leadership and intention to quit. Your input would contribute to the representativeness of the sample, which increases the generalisability of the study. This study would be valuable to you as an individual because the results from this study will provide you with meaningful insights into how the leadership at Sasol could develop strategies to increase job satisfaction and employee retention. It would be greatly appreciated if you could participate in the study.

Procedures: The study will involve the completion of 3 short questionnaires:

Section A: Demographical Information
Section B: Career Orientations Inventory
Section C: Job Satisfaction Survey
Section D: Transformational Leadership Survey

You are required to fill out the questionnaires electronically and return it to the researcher.

Risks involved: It is not anticipated that participating in the study will harm you in any way. However, should you require further information or have any concerns please feel free to contact the researcher.

Participants' rights: Consent has been obtained from Sasol and the Department of Industrial and Organisational psychology. Your participation is however voluntary and you are free, at any point in the process, to withdraw from the study without offering any explanation. You do not need to share any information that you feel uncomfortable disclosing.

Confidentiality: Information provided and the results of the study will be completely confidential and anonymous. The information about any participant will be respected as private. Personal information of participants will only be known by the researchers, who will ensure that each participant will be unrecognisable in the reporting of the study results. In instances where demographical groups are small enough for individual respondents to be identified, they will be merged into larger groups to maintain confidentiality. The study is for research purposes only. The results of this study will be utilised for research purposes and may be included in a scientific journal, where only the general patterns found in the results will be discussed. Individual results will not be reported on.

Questions: If you have any questions concerning the study, these should be directed to Gontse Madumo, telephonically on 076 953 5338 or email: Gontse.Madumo@sasol.com

Willingness to participate: By participating in this study, you will not only contribute to the research, but may also assist in positively influencing employee retention as well as productivity within your business area. Kindly indicate your willingness to participate by reading and agreeing the Informed Consent Form, by clicking on the Agree button on commencement of the survey. By clicking "Agree", you acknowledge that you understand the forms contents and the nature of the study and agree to take part in the study.

Kind regards,
Gontse Madumo
Tel: 076 953 5338
Email:
Gontse.Madumo@sasol.com

APPENDIX D: CERTIFICATE OF ORIGINALITY

UNISA | university of south africa

MEMORANDUM

TO WHOM IT MAY CONCERN

28 January 20221

PLAGIARISM/ORIGINALITY CHECK: MASTERS THESIS – Gontse M Madumo (35157038)

I hereby confirm that the Masters thesis has been subjected to plagiarism/originality software and that the similarity index and overlapping content are within acceptable and logical parameters for originality. The similarity index and report were reviewed by me.

Tebele

Ms Cebile Tebele (90172795)
Supervisor
Department of Industrial and Organisational Psychology
Tebelc@unisa.ac.za