INVESTIGATING THE RELATIONSHIP BETWEEN RETENTION FACTORS, WORK ENGAGEMENT, AND TURNOVER INTENTION AMONGST SOUTH AFRICAN NURSES.

by

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DECLARATION

I, **Mandy Ziyanda Mavuso**, student number **68048726,** declare that this study, **"Investigating the relationship between retention factors, work engagement, and turnover intention amongst South African nurses."**, is my own work and that all sources that were used were acknowledged and referenced accordingly. I further declare that ethical clearance to conduct the research has been obtained from the Department of Industrial and Organisational Psychology, University of South Africa (Unisa) as well as from the organisations where the research was conducted. I also declare that the study was carried out in strict accordance and in line with Unisa's Policy on Research Ethics and that I conducted the research with the highest integrity during all phases of the research process.

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LIST OF ACRONYMS AND ABBREVIATIONS

I-O	Industrial Organisational
IOP	Industrial Organisational Psychology
HTMT	Heterotrait-Monotrait Ratio
JD-R	Job Demand Resources
JET	Job Embeddedness Theory
PLS-SEM	Partial Least Squares Structural Equation Modelling
SDT	Self Determination Theory
UWES	Utrecht Work Engagement Scale
VIF	Variance Inflation Factor
WHO	World Health Organisation

SUMMARY

INVESTIGATING THE RELATIONSHIP BETWEEN RETENTION FACTORS, WORK ENGAGEMENT, AND TURNOVER INTENTION AMONGST SOUTH AFRICAN NURSES.

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The aim of this study was to examine the interrelationships between retention factors, work engagement, and turnover intention among nurses. A quantitative cross-sectional design was employed using a convenience sample of nurses (N = 121) from central Johannesburg in Gauteng. Correlational analyses showed the interrelationships between the study variables, indicating that retention factors were positively associated with work engagement, while both retention factors and work engagement were negatively related to turnover intention. Partial least squares SEM (PLS-SEM) results further showed that retention factors and work engagement significantly predicted turnover intention. Compensation, work-life balance, supervisor support, and training and development were associated with lower turnover intention, while work engagement showed a direct negative effect. However, career opportunities did not have a significant influence on turnover intention in the model. Mean difference analyses revealed that gender was the only biographical characteristic associated with significant differences in the study variables, with male nurses reporting higher levels of satisfaction with career opportunities and training and development. No significant differences were observed for age. The findings emphasise the

importance of strengthening retention practices and fostering work engagement to reduce turnover intention among nurses. The study provides practical recommendations for people practitioners and healthcare policymakers to enhance retention strategies through supportive work environments, fair compensation, and development opportunities. Furthermore, the study contributes to the understanding of retention dynamics within the healthcare context and offers insights relevant to I-O psychology research and practice.

Keywords: Retention factors, employee engagement, turnover intention, nurses, retention.

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This dissertation examined the relationship between retention factors, work engagement, and turnover intention within the South African nursing context. Chapter 1 provides the background and motivation for the study, the problem statement, and the overall research questions and aims. The study outlines the paradigm perspective and models that framed the research, followed by the chosen research design and method. It concludes with an outline of the chapters that follow in the study.

1.1. BACKGROUND AND MOTIVATION OF THE STUDY

Nurses play an important role in society, serving as the backbone of the healthcare sector (Gautam, 2024). The COVID=19 pandemic highlighted the important role of nurses as frontline caregivers leading to a greater demand for their services within the healthcare system (Lopez et al., 2022). Although there is a high demand for nurses, the ongoing loss of nursing staff puts additional pressure on an already strained healthcare system, which contributes to the nursing shortage (Brown et al., 2023). Globally, the shortage of nurses is a critical issue, that is driven by stressful working conditions, aging populations, and mass retirements, with over 150 countries facing shortages in nursing staff (Luoma-Aho et al., 2025; Mansour & Chênevert, 2024).

A 2022 survey by the National Council of State Boards of Nursing, a non-profit organisation that represents nursing regulatory bodies in the United States, found that the COVID-19 pandemic led to a decline in the nursing workforce, between 2020 and 2022 (Hodgson et al., 2024). During this period, the number of registered nurses decreased by 100,000, and the number of enrolled nurses and enrolled nursing assistants' nurses decreased by 34,000 (Hodgson et al., 2024). Additional factors contributing to the nurse shortage include limited career advancement, poor management, and low wages (Shah et al., 2021; Luoma-Aho et al., 2025; Mansour & Chênevert, 2024). Similar trends are observed in countries such as the Netherlands, where the shortage is partly driven by nurses leaving the profession to pursue careers in other fields (van Merode et al., 2024).

Research shows that the shortage of nurses in developing countries, including South Africa and across Africa, is a growing crisis driven by multiple challenges (Oleribe et al., 2019). In South

Africa, the healthcare system is strained by limited resources, a high disease prevalence, and unequal access to healthcare (Kau et al., 2024). Although there has been a slight increase in nurse training completions, the continuous recruitment of South African nurses by developed countries to fill their own workforce gaps further drains the country's healthcare capacity (Kau et al., 2024). Projections from the 2030 Human Resources for Health Strategy (2020) estimate a shortage of 34,000 professional nurses in South Africa by 2025. Additionally, South Africa's nursing workforce is aging, with 47% of professional nurses over the age of 50 and only 6% under the age of 30 (Rural Health Advocacy Project, 2023). Enrolled nurses face similar challenges, as 27% approach or exceed the retirement age (Rural Health Advocacy Project, 2023).

Nurse shortages increase workloads, resulting in higher patient to nurse ratios, reduced quality care, and negative impacts on nurses' well-being, including burnout, stress, absenteeism, job dissatisfaction, and turnover intention (Al-Yateem et al., 2022; Van Wyk & Naicker, 2020). Addressing these challenges requires retention strategies that includes improving working conditions, expanding training opportunities, and creating incentives to retain nursing professionals in South Africa (Nkgapele & Thusi, 2025). Research further indicates that nurses' decisions to remain in their roles are influenced by factors such as remuneration, job characteristics, access to training and development, supervisory support, career advancement opportunities, and the ability to maintain a healthy work-life balance (Dhanpat et al., 2018; Döckel et al., 2006).

Nurse retention is enhanced when organisations provide fair compensation and benefits, align employment practices with employees' economic conditions, and recognise performance, as these measures increase engagement and commitment (Christianson et al., 2024; Nikisi et al., 2024). However, investment in financial incentives alone is not sufficient, as effective retention requires a comprehensive and integrated approach (Bussin, 2018). For example, job characteristics, such as autonomy and task variety, influence employees' intentions to stay and enhance work engagement, reinforcing the link between job design and organisational commitment (Rahmah et al., 2022; Meynhardt et al., 2024; Kuribayashi et al., 2025).

Research indicates that opportunities for training and professional growth enhance employee engagement, productivity, and innovation, which in turn improve retention and reduce turnover

intention (Alamri & Al-Duhaim, 2017; Bhakuni & Saxena, 2023). When employees perceive that their organisation invests in their development, they are less likely to consider leaving the organisation. Supervisor support also plays an important role in employee retention, as supportive leadership fosters loyalty, engagement, and learning, while reducing turnover intention (AbuAlRub & Nasrallah, 2017; Lee & Shin, 2023).

Career development further supports nurse retention by fostering career progression, engagement, while reducing turnover intentions (Weer & Greenhaus, 2020). This is achieved through opportunities for skills development, continuous learning, and fair promotion practices, which strengthen employees' psychological attachment to the organisation (Wang et al., 2024). Work-life balance is a key factor in nurse retention, especially in high-pressure healthcare settings (Adella et al., 2024). Nurses who manage professional and personal responsibilities report lower likelihood of leaving, while work-life balance policies also enhance productivity, motivation, engagement, and overall organisational sustainability (Perrigino et al., 2018; Lee & Shin, 2023).

Fostering work engagement is essential for reducing employee turnover, as engaged employees demonstrate stronger commitment to their organisations (Snyman, 2022; Shuck et al., 2011). In healthcare, engagement is particularly important because many employees are intrinsically motivated to help others. (Moscelli et al., 2025). Consistent with this, research shows that higher work engagement is linked to improved retention, greater organisational productivity, and enhanced employee well-being (Poku et al., 2025). Research indicates that work engagement among nurses is associated with positive outcomes, including better physical and mental health, enhanced well-being, higher job satisfaction, improved performance, reduced turnover intentions, and better patient care (Kuribayashi et al., 2025; Al-Haziazi, 2024). Engaged nurses demonstrate strong commitment, positive work attitudes, emotional investment, and greater energy, pride, and optimism, making engagement a key strategy for retention and reducing their likelihood of leaving the organisation (Chikobvu & Harunavamwe, 2022; Mvana, 2023; Ntseke et al., 2022).

Turnover intention is an employee's consideration of leaving their job and reflects their psychological response to workplace conditions which influences their decision to stay or leave an organisation (Slåtten et al., 2022). Turnover intention among nurses is a key predictor of actual staff turnover and can have significant consequences for healthcare organisations, including operational challenges, increased workload for remaining staff, and disruptions to patient care. (Yi

et al., 2024; Stephenson & Marshall, 2020). Examining these intentions offers insights into employee expectations, helping organisations develop targeted retention strategies (Yi et al., 2024). Nurse turnover rates vary globally, with annual rates reported at 8.8% in Australia, 18% in the United States, 20% in the United Kingdom, 33% in South Africa, and 64.9% in Ethiopia, highlighting the widespread challenge of retaining nursing staff (Poku et al., 2025). Fostering work engagement is therefore a key strategy for managing turnover intention, as engaged employees are more likely to have positive perceptions of their roles, enhancing retention (Slåtten et al., 2022). Evidence from New Zealand also demonstrates a negative correlation between work engagement and turnover intention, indicating that improving engagement can effectively reduce nurse turnover (Moloney et al., 2018).

This section explores the role of biographical characteristics such as age, gender, and employment status, and their potential impact on nurses' retention, work engagement and turnover intention. Research shows that recognising generational differences enables organisations to tailor strategies that enhance retention and work engagement as employees across generations differ in their work values and expectations (Moloney et al., 2017; Singh, 2019). Older nurses tend to prioritise stability, loyalty, and opportunities for knowledge transfer (Govindaraju, 2018; Stimpfel & Dickson, 2020), while mid-career employees value work–life balance, flexibility, and autonomy (Weerarathne et al., 2023). In contrast, younger cohorts emphasise supportive leadership, continuous feedback, development opportunities, and financial security, which shape their engagement and long-term commitment (Keith et al., 2021; Cain et al., 2022; Nguyen et al., 2024).

Gender can shape nurses' retention, engagement, and turnover intentions, as men and women may experience workplace challenges differently (Govindaraju, 2018). While some research suggests engagement is gender-neutral (Banihani et al., 2013), studies indicate men often report higher work engagement than women, reflecting differences in perceptions of equality, meaningful work, and organisational commitment (Schaufeli & Bakker, 2004).

Employment status influences nurses' retention, engagement, and turnover intentions. Temporary or agency nurses are primarily motivated by pay and often place less value on supervisor support or development opportunities, which can lead to feelings of exclusion and lower engagement (Jiang & Wang, 2018). In contrast, permanent nurses, despite facing higher workloads and

emotional exhaustion, benefit from greater access to supervisor support, training, and professional development, which can foster stronger engagement and more positive work attitudes (Jiang & Wang, 2018; Burke et al., 2014).

This study uses the Self-Determination Theory (SDT) as the overarching theoretical framework, which explains how motivation and behaviour are shaped by the satisfaction of three basic psychological needs autonomy (need for choice and self-direction), competence (need to feel effective and capable), and relatedness (need to feel connected and valued) (Rigby & Ryan, 2018; McAnally & Hagger, 2024). SDT is used to show how the satisfaction of these needs enhances intrinsic motivation, work engagement, and retention, while their frustration contributes to increased turnover intention (Gagné & Deci, 2005; Olafsen et al., 2017). Within this study, SDT provides an integrative framework for understanding how workplace conditions influence nurses' psychological experiences and retention-related outcomes.

This study aimed to clarify the relationship between retention factors (independent variable), work engagement (independent variable), and turnover intention (dependent variable) among South African nurses. Understanding these relationships highlighted potential connections between the variables, which could benefit the healthcare sector, human resources professionals, industrial psychologists, and other relevant institutions within the public and private sectors.

While existing research explores the relationship between retention and the variables of this study (Greyling & Stanz, 2010; Dhanpat et al., 2018; Terera & Ngirande, 2014), there seems to be a gap in research specifically focusing on the relationship between retention, work engagement, and turnover intention among South African nurses. This study aimed to address this gap.

1.2. PROBLEM STATEMENT

Nurse retention is a growing global challenge, influenced by demanding working conditions, limited career opportunities and an aging workforce, which contribute to shortages and increased turnover (Horvath & Carter, 2022; Mansour & Chênevert, 2024). The COVID-19 pandemic further contributed to these challenges, negatively affecting nurses' mental, physical, and psychological

wellbeing, and increasing turnover intentions (Horvath & Carter, 2022; Lopez et al., 2022). In South Africa, these issues are influenced by staff shortages, an aging nursing workforce, and the migration of nurses to developed countries, placing additional pressure on the healthcare system and showing the need for effective retention strategies (Kau et al., 2024). Currently, there is a higher demand for qualified nurses which significantly outweighs the available supply within the healthcare sector (Kovner, 2022). This nurse shortage creates strain on healthcare systems, ultimately affecting patient care and service delivery due to high turnover rates (Forde-Johnston & Stoemer, 2022). Also reflected in global reports is that by 2030, there will be a global shortage of 18 million healthcare professionals, significantly affecting both developed and developing countries (World Health Organization, 2021; Kgapele & Thusi, 2025). Furthermore, projections from the 2030 Human Resources for Health Strategy (2020) estimate a shortage of 34,000 professional nurses in South Africa by 2025. The workforce is also aging, with 47% of professional nurses over 50 and only 6% under 30. Similar trends are evident among enrolled nurses, with 27% approaching or exceeding retirement age (Rural Health Advocacy Project, 2023).

In light of these concerning statistics, it is important for the healthcare sector to prioritise the development and implementation of effective retention strategies. Additionally, investigating factors that keep nurses engaged and addressing the challenges that contribute to turnover intention. Forde-Johnston and Stoemer (2022) provides suggestions such as evaluating nurses' experiences within organisations, career development plans, existing human resource practices, and current retention strategies.

While nursing retention is a recognised global issue, research specifically focused on South Africa remains limited. Existing studies by Greyling & Stanz (2010) and Dhanpat et al. (2019) highlight the need for further exploration of how retention factors impact nurses' work engagement and turnover intention within the South African context.

This study aimed to address an important gap in research by exploring the relationships between retention factors, work engagement, and turnover intention. Additionally, it considers the influence of biographical characteristics on these outcomes. Implementing effective retention strategies such as providing training and development opportunities, offering career opportunities, ensuring supportive supervision, promoting work-life balance, offering competitive compensation and

benefits, and fostering a positive work environment is essential for enhancing work engagement and reducing turnover intentions. This study contributed valuable insights into how retention factors can be leveraged to improve work engagement and decrease turnover intention among nurses in South Africa.

Below are the research questions formulated for this study.

1.2.1. Research questions in relation to the literature review:

Research question 1: How are the constructs of retention factors, work engagement, and turnover intention conceptualised in literature?

Research question 2: What is the nature of the theoretical relationship between retention factors, work engagement, and turnover intention, in relation to biographical characteristics (age, gender, and employment status)?

Research question 3: What are the implications of the theoretical relationship between retention factors, work engagement, and turnover intention, in relation to biographical characteristics for retention practices?

1.2.2. Research questions in relation to the empirical study:

Research question 1: Are there statistically significant interrelationships between the constructs of retention factors, work engagement and turnover intention

Research question 2: Do retention factors (an independent variable) and work engagement (an independent variable) significantly predict nurses' turnover intention (a dependent variable)?

Research question 3: Do nurses with differing biographical characteristics, such as age, gender, and employment status, show significant differences in the construct variables of this study?

Research question 4: What recommendations can be formulated for future research and retention practice?

Based on literature review and on the research questions stated above, the following research hypotheses were formulated:

H1: There is a statistically significant interrelationship between retention factors, work engagement and turnover intention

H2: Retention factors and work engagement significantly predict nurses' turnover intention.

H3: Nurses with differing biographical characteristics such as age, gender and employment status differ significantly with regard to the construct variables of this study.

1.3. AIM OF THE RESEARCH

Based on the research questions stated above, the following aims are formulated:

1.3.1. General aim of the study

The general aim of the study was to investigate the interrelationship between retention factors, work engagement, and turnover intention, and to determine how nurses' biographical characteristics differ in relation to these variables.

1.3.2. Specific aims of the study

The specific aims of the study were as follows:

Literature review:

The following aims guided the literature review of this study:

Research aim 1: To conceptualise the constructs of retention factors, work engagement, and turnover intention.

Research aim 2: To determine the nature of the theoretical relationship between retention factors, work engagement, turnover intention, and biographical characteristics (age, gender and employment status)

Research aim 3: To determine the implications of the theoretical relationship between retention factors, work engagement, turnover intention, and the biographical characteristics (age, gender and employment status) for retention practices.

Empirical study:

The following aims guided the empirical study:

Research aim 1: To explore the interrelationships between the constructs of retention factors, work engagement and turnover intention.

Research aim 2: To determine whether retention factors (an independent variable) and work engagement (an independent variable) significantly predict nurses' turnover intention (a dependent variable).

Research aim 3: To determine if nurses with biographical characteristics of age, gender and employment status differ significantly with regards to the construct variables of this study.

Research aim 4: To formulate recommendations for future research and retention practice.

1.4. PARADIGM PERSPECTIVE

A research paradigm can be understood as a framework of beliefs and assumptions that guides how researchers think about reality and how knowledge is generated (Rehman & Alharthi, 2016). It influences how a researcher understands the world, how research questions are formulated, and how studies are designed and interpreted (Rehman & Alharthi, 2016; Ponterotto, 2025). A paradigm shapes the way a researcher approaches a study and makes sense of the findings.

In this study, two paradigms were applied at different stages of the research. The literature review was guided by a humanistic paradigm, which focuses on understanding human experiences, personal meaning, and individual perspectives. The empirical phase of the study was informed by a post-positivist paradigm, which acknowledges that while complete objectivity is difficult to achieve, reality can still be examined through systematic and scientific methods.

1.4.1. The intellectual climate

The constructs considered relevant to this study were retention factors, work engagement and turnover intention.

1.4.1.1. Literature review

The literature review was approached from a humanistic research perspective, which places emphasis on individuals' subjective experiences and how people understand and find meaning in

their work environments (Castle & Buckler, 2021). This perspective recognises that employees' thoughts, emotions, and motivations play a key role in shaping workplace behaviour. The humanistic approach seeks to understand these experiences from the individual's point of view, with particular attention to personal growth, self-awareness, and motivation (Moschis, 2024).

In this study SDT was used as the main theoretical lens. SDT aligns well with a humanistic approach because it focuses on intrinsic motivation and the fulfilment of basic psychological needs. In this study, SDT was applied to explore how retention factors and work engagement related to turnover intention, highlighting the role of autonomy, competence, and relatedness in shaping the constructs of this study retention, engagement and turnover intention.

1.4.1.2. Empirical review

The empirical part of the study was conducted from a post-positivist perspective. Post-positivism recognises that human understanding is imperfect and that researchers cannot fully capture reality with complete certainty (Ponterotto, 2025). However, it also holds that reality exists independently of individual perceptions and can be studied through careful and systematic research methods (Ponterotto, 2025). This perspective acknowledges that researchers may influence the research process but still emphasises the importance of objectivity, reliability, and validity (Omodan, 2024).

In line with this approach, the study used quantitative research methods, using valid and reliable measurement instruments to examine retention factors, work engagement, and turnover intention. The use of these methods allowed the researcher to analyse relationships between variables in a structured and objective manner, while recognising the contextual nature of social and organisational behaviour.

1.4.2. The market of intellectual resources

Mouton and Marais (1988) describe the market of intellectual resources as the shared set of beliefs, assumptions, and ideas that influence what is considered valid and acceptable scientific knowledge within a research community.

One limitation of this concept is that scientific knowledge is not entirely objective, researchers' personal experiences, cognitive biases, and the influence of academic or professional groups can shape how ideas are developed, interpreted, and accepted (Smith & Noble, 2025; Sharot et al., 2023). This suggests that research findings are often influenced by human judgement.

Similarly, Flyvbjerg (2001) argues that strict reliance on rigid empirical methods in the social sciences can sometimes result in findings that lack practical relevance. This occurs because such approaches may overlook the complexity, context, and variability of human behaviour (Flyvbjerg, 2001).

Drawing on the concept of the market of intellectual resources, this study presents the meta-theoretical assumptions, theoretical models, and conceptual frameworks that underpin the key constructs of retention, work engagement, and turnover intention. In addition, the study outlines the central hypothesis, as well as the theoretical and methodological assumptions that guide the research process.

1.4.3. Meta-theoretical statements

A metatheoretical statement is like an overarching framework that guides how we think about and use theories in a field (Ramminger & Jacobs, 2024). It sets out the basic ideas and assumptions about what is important, meaningful, or acceptable in that area of study (Overton & Muller, 2013). These underlying assumptions reflect the philosophical beliefs of a discipline and influence how researchers decide what questions to ask and how to explore them (Babbie & Mouton, 2009). In this study, the metatheoretical framework will be applied within the broader field of Psychology, focusing on sub-disciplines such as Industrial and Organisational Psychology (I-O Psychology), Organisational Psychology, and Personnel Psychology.

1.4.3.1.Industrial and Organisational Psychology

This research project was conducted within the field of I-O psychology, which focuses on the science and practice of understanding workplace behaviour. I-O psychology is defined as the scientific study and application of psychological principles, theories, and research to understand and improve behaviour in work settings (Schreuder & Coetzee, 2010). I-O psychology focuses on understanding employee behaviour in the workplace and applying psychological principles to change work behaviours (Riggio & Johnson, 2022). It applies these principles and methods to address workplace issues, enhance employee performance, and promote organisational effectiveness (Bergh & Geldenhuys, 2014).

I-O Psychology has two main goals (Riggio & Johnson, 2022). The first goal is to conduct research to better understand how people behave at work. The second goal is to use that knowledge to improve employee behaviour, the work environment, and employees' psychological wellbeing. Industrial psychologists are therefore trained to be both researchers and practitioners, which is known as the scientist-practitioner model.

I-O Psychology focuses on several areas within the workplace. These include personnel functions such as recruitment and selection, training and development, and performance measurement. The field also focuses on psychological processes that influence work behaviour, such as employee motivation, job satisfaction, and workplace stress. In addition, Industrial-Organisational Psychology examines group processes in organisations, including leadership, teamwork, and relationships between supervisors and employees. Lastly, the field also looks at organisations as a whole, including organisational structure and how the physical, social, and psychological work environment influences employee behaviour (Coetzee et al., 2021; Riggio & Johnson, 2022).

In the context of this study, I-O Psychology provides frameworks and theories to examine the key variables retention factors, work engagement, and turnover intention using evidence-based, research-driven approaches. It helps to understand how these variables affect employees at the individual, team, and organisational levels, while offering practitioners and organisations practical, scientifically grounded strategies to manage and improve workplace behaviours.

1.4.3.2.Organisational psychology

Within I-O Psychology, a subfield called Organisational Psychology specifically focuses on how organisations influence the behaviours and attitudes of employees, both individually and in groups (Schreuder & Coetzee, 2010; Coetzee et al., 2021). This focus on organisational influence is particularly relevant to this study as it examines factors that influence nurses' decisions to stay or leave their jobs and factors that influence work engagement. Organisational psychology aims to study and understand interactions between individuals and organisations using psychological theories, knowledge and research to improve employee wellbeing and organisational effectiveness (Schreuder & Coetzee, 2010). Organisational psychology focuses on workplace systems, involving individual employees, teams, and the organisational structure and dynamics (Bergh & Geldenhuys,

2014). Key study areas include organisational theory, leadership and decision-making, organisational development and re-engineering, company culture, employment relations, cross-cultural issues in I-O Psychology, and the external environments of organisations (Coetzee et al., 2021).

1.4.3.3. Personnel psychology

Within the field of I-O Psychology, personnel psychology focuses on individual and personality differences within the workplace (Coetzee et al., 2021). It includes areas such as employee recruitment and selection, training and development, and creating an environment that supports performance and growth (Coetzee & Schreuder, 2010). In this study, Personnel Psychology was important because it provided a framework to understand how key retention factors and engagement affect and influence nurses' decisions to stay with or leave the organisation.

1.4.3.4. Theoretical models

Theoretical models are described as a perspective or framework that consist of conceptual systems, which assists the researcher understand, explain and interpret human behaviour, social phenomena and interactions (Mouton & Marais, 1996). They act as a conceptual framework or blueprint, giving the study direction and structure (Adom & Hussein, 2018). Theoretical models show how different theories connect to the research topic and provide a base for analysing and evaluating the study (Salawu et al., 2023; Ngulube et al., 2015). It is like a roadmap for the study, guiding the research process and reflecting the study's main ideas or hypotheses.

In this study, the literature review focused on the theoretical model supporting retention factors, engagement and turnover intention. The theoretical model that supports retention factors was developed by Döckel (2003). Work engagement was measured using the Utrecht Work Engagement Scale (UWES-17), developed by Schaufeli et al. (2002). Turnover intention was assessed with the Turnover Intention Scale (TIS-6), developed by Roodt (2004). The Self-determination theory by Deci and Ryan (1985) provided an overarching theoretical lens to explain the relationship dynamics between these variables.

1.4.3.5. Conceptual descriptions

Below is a brief description of the constructs studied in this research:

(a) Retention factors

Employee retention refers to the strategies organisations implement to cultivate a workplace culture that motivates employees to stay with the company for a longer period, thereby retaining valuable talent (Shibiti, 2020). Pertiwi and Supartha (2021) define employee retention as a range of strategies and practices designed to encourage employees to remain with the organisation for an extended period. This study adopted Döckel's (2003) model of retention as its framework, and retention measurement scale developed by Döckel (2003) was used to measure satisfaction with retention factors among nurses. This scale assesses various sub-factors that influence employee retention, including compensation, job characteristics, training and development opportunities, supervisor support, career advancement opportunities, and work-life balance.

(b) Work engagement

Work engagement is defined as a positive and satisfying state at work characterised by vigour, dedication, and absorption (Schaufeli et al., 2002). In this study the Utrecht work engagement scale Schaufeli et al. (2002) was adopted and used to measure nurses' work engagement. The scale measures three sub factors, vigour, dedication and absorption to measure work engagement amongst nurses.

(c) Turnover intention

Turnover intention is defined as an employee's potential to leave their job (Hussain & Asif, 2012; Selesho & Matjie, 2024). According to Hussain and Asif (2012) turnover intention involves making a mental decision to stay in the job, withdraw, or leave. Employees who have high intention of leave have low morale, lack work engagement or lack organisational commitment (Selesho & Matjie, 2024). Turnover intention involves intention or thoughts of leaving an organisation, looking for a new job and finally acting the thoughts by resigning (Rahman et al., 2025). In this study Roodt's (2004) turnover intention model was adopted, and the Turnover Intention Scale (TIS-6) developed by Roodt (2004), was utilised to measure turnover intention. The scale does not consist of sub-factors.

Table 1.1 provides a summary of this study's main constructs, sub-factors, theoretical models, and measuring instruments.

Table 1.1

Main Constructs of the Study, Sub-Factors, Theoretical Models, and Measuring Instruments

Main Construct	Sub-factors	Theoretical model	Measuring instrument
Retention factors	• Compensation • Job characteristics • Training and development, • Supervisor support, • Career opportunities • Work-life balance.	Döckel's (2003) model of retention	Measurement scale developed by Döckel (2013)
Work Engagement	• Vigour • Dedication • Absorption	Work engagement model by Schaufeli et al. (2002)	The Utrecht work engagement scale (Schaufeli et al., 2002).
Turnover intention	• No sub-factors	Roodt's (2004) turnover intention model	Turnover Intention Scale (TIS-6) developed by Roodt (2004)

Source: Author's own work

d) Self-determination theory

The SDT is a perspective based on human motivation and personality that emphasises the role of innate psychological resources in personal growth and self-regulation (Deci & Ryan, 2000). According to SDT there is three key psychological needs that are essential for individuals to function optimally, these include autonomy, competence and relatedness (Deci & Ryan, 2000). In

this study the SDT (Deci & Ryan, 1985) was used as an overarching lens to understand the relationship between retention, work engagement and turnover intention among nurses.

1.4.4. Central hypothesis

The central hypothesis of the research can be formulated as follows:

There is a significant relationship between retention factors, work engagement, and turnover intentions, along with the influence of biographical characteristics among South African nurses.

1.5. RESEARCH DESIGN

Research is the pursuit of new knowledge through observing, studying, exploring, and experimenting (Kothari, 2004). A research design is a conceptual framework that guides how research is conducted, while a research plan focuses on the practical steps for collecting, measuring, and analysing data (Khanday & Khanam, 2019). In other words, a research design is a strategic plan that directs the research process (Hunziker & Blankenagel, 2024) and provides solutions or guidance for addressing a research problem (Creswell & Creswell, 2017). In this study, the research design served as a plan to guide the entire research process. The next section will examine three types of research design, followed by a discussion on the study's validity and reliability.

1.5.1. Exploratory research design

The aim of exploratory research design is to study a research problem in a flexible and adaptable manner to weigh the different aspects of the research problem studied and allows researchers to modify their approach as they gain more knowledge and ideas (Hunziker & Blankenagel, 2024). Exploratory research is used as a starting point to gather initial insights, identify new questions, and clarify concepts (Hunziker & Blankenagel, 2024). Exploratory research served as the foundation for deeper investigation of various theoretical perspectives of retention, engagement and turnover intention to gain preliminary insights and identifying gaps in knowledge, guiding the development of the study's structure.

1.5.2. Explanatory research design

The aim of an explanatory research design is to explore, identify and explain why a phenomenon occurs. This type of design explores the causal relationships behind a phenomenon, involves hypothesis testing or constructing research questions to answer questions regarding the causality or relationships between constructs (Hunziker & Blankenagel, 2024). Explanatory research was used to explain the path and the degree of the association between the variables of retention, work engagement and turnover intention.

1.5.3. Descriptive research design

The goal of descriptive research is to observe and describe the characteristics of a population or phenomenon (Hunziker & Blankenagel, 2024). It requires the researcher to clearly define what will be measured, how it will be measured, and the population that will be studied (Hunziker & Blankenagel, 2024). In the literature review, descriptive research helped to explain the key variables being studied, namely retention, work engagement, and turnover intention. For the empirical part of the study, descriptive research was used to report the means, standard deviations, frequencies, and reliability (Cronbach's alpha) of these variables.

1.5.4. Methods to ensure reliability and validity

1.5.4.1. Validity

Validity is defined as a process aimed at determining the extent to which a study or research accurately measures what it is intended to measure (Rose & Johnson, 2020). Validity is concerned with validation of research methods, processes, procedures and analysis (Rose & Johnson, 2020).

Validity of the literature review:

In this study, validity of the literature review was ensured by:

1. Using reliable research tools, peer-reviewed articles, journals, and academic books to support the study's aim, research questions, and the relationships between retention factors, work engagement, and turnover intention.

2. Focusing on recent and well-established studies to provide relevant and trustworthy insights, ensuring that the literature review reflects the latest research on these variables.
3. Clearly outlining the research question to ensure that only relevant and applicable sources are included in the review, helping the researcher track the inclusion and alignment of sources with the study's objectives.
4. Determining if the models and theories consistently produce reliable results across different studies, settings, and populations, confirming generalisability and applicability.

Validity of empirical research:

The researcher ensured validity by considering the following:

1. External validity in the empirical study was ensured by using the correct sampling method that represents the target population, this may broaden the applicability of the research findings to a larger population. An adequate sample size in the study was selected, as this will provide more reliable data. A diverse group of participants (nurses) from two hospitals in central Johannesburg was included to ensure external validity by showing applicability across various contexts.
2. Internal validity in the empirical study was ensured through the study design and findings, providing reliable evidence of the relationships between the constructs. Selection bias was minimised by ensuring that the groups compared were not influenced by the independent variable. The target population for this study consisted of nurses working in South Africa.
3. Content, construct and face validity was ensured by selecting measuring instruments that represent the aspects of the constructs (retention, work engagement and turnover intention) being studied and are aligned with established scientific theories and previous research. Appropriate statistical techniques were used to analyse the collected data and investigate the relationships between the constructs being studied.
4. The study acknowledged its limitations and identified potential threats to validity. By transparently addressing these challenges, the research enhanced credibility and allowed for a more accurate interpretation of findings.

1.5.4.2. Reliability

Reliability is defined as the consistency and repeatability of research results, using the same measuring instrument on different occasions (Revelle & Condon, 2019). Reliability assesses if a measuring instrument and data collection procedure yield results that are consistent when applied numerous times under the same conditions (Chetwynd, 2022).

In this study, reliability was ensured by using measuring instruments that are reliable, which means the instrument produces consistent results over time and across different contexts. The instruments used were supported by previous research, meaning they had been tested and reported as reliable in other studies. Also, reliability was ensured by assessing evaluating measures such as using Cronbach's alpha and Composite Reliability to determine the reliability of the measurement scales and ensure that the items within them measure the same construct.

1.5.5. The unit of research

The unit of research refers to the main entity that a researcher chooses to examine statistically in a study. It is the level at which data are analysed and conclusions are made, such as individuals, groups, or organisations. A key consideration is that this should be clearly defined before data collection, based on the research questions and theory, rather than being determined only by the data available (Keller, 2010). In this study, the units of research included at the individual level, each nurse's responses to the measuring instruments were analysed to understand their personal experiences of retention, engagement and turnover intention. At the group level, the overall scores of all participating nurses were analysed to identify general trends within the sample. At the sub-group level, nurses were divided into smaller groups based on biographical characteristics such as age, gender, and employment status to determine whether these factors influenced the study variables.

1.5.6. The variables

According to Flannelly (2020), a variable is defined as features or factors that can be observed, manipulated, or controlled, and changes in value. Dependent variables are the outcomes or results that researchers are interested in measuring (Flannelly et al., 2020). They are influenced or affected

by other variables. Independent variables are the factors that are manipulated or controlled by researchers (Flannelly et al., 2020). This research investigated the interrelationship between retention factors, work engagement, turnover intention, and biographical characteristics of nurses.

The independent variables in the study are retention factors and work engagement, as these are the factors being examined for their influence. The dependent variable is turnover intention, which represents the outcome the study seeks to predict or explain based on retention factors and levels of work engagement.

1.5.7. Delimitations

The study was limited to researching retention factors, work engagement and turnover intention, focusing on specified biographical characteristics of age, gender and employment status. The aim of the study was to collect data from various South African hospitals but, the researcher was not able to collect data from all the planned hospitals as ethical clearance was not received timeously. This limitation resulted in a limited sample size, which could result in inadequate representation of nurses and hinder the ability to generalise the findings to hospitals in South Africa. An additional limitation of the study was getting nurses to participate in the study and getting access to nurses who worked night shift to distribute the questionnaires. Furthermore, the turnaround time was also a barrier to getting data timeously, given that nurses are always at the patient's bedside. Additionally, the data collection process took longer than expected this means that the data collected may become outdated or less relevant over time.

1.5.8. Ethical considerations

Ethical clearance was obtained from the ethics committee of the University of South Africa, reference number 2649, from the Department of Industrial and Organisational Psychology and College of Human Sciences. Participants recruited for the study were nurses from two hospitals in central Johannesburg. The researcher obtained permission from the various gatekeepers (participating hospitals, hospital managers and nursing managers) to collect data from nurses who are employed at these facilities. A formal email was sent to the head of department (Nursing Managers) requesting authorisation to collect data from nurses.

The following process was followed to collect data: participants were approached face-to-face and through relevant internal communication platforms to participate in the study. This request was accompanied by a detailed explanation of how the questionnaire has to be completed and the purpose of the study. The questionnaire accompanied information about participants' rights, ethical standards and confidentiality.

The following ethical standards and processes were upheld to ensure participants are treated with respect and dignity in accordance with the (South African Constitution: The Bill of rights, 1996). These are informed consent, confidentiality, voluntary participation, beneficence, privacy and transparency.

Furthermore, the following was taken into consideration when managing personal information of participants in accordance with The Protection of Personal Information (POPI):

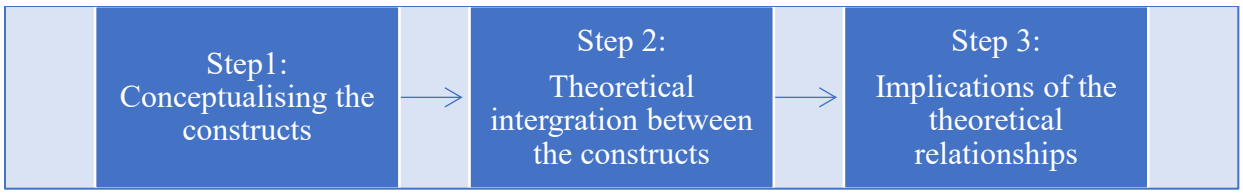
1. The researcher managed all personal information confidentially and secure records free from damage, unauthorised access, and misuse.
2. The researcher ensured that data is stored on a secure cloud platform, ensuring the data is secure, access controlled, encrypted and confidential.
3. The researcher will further ensure that research data is retained for 15 years, after this period the data will be permanently deleted.

1.6. RESEARCH METHOD

As illustrated in Figure 1.1 and Figure 1.2, the research methodology was presented in two phases. The first phase involves the literature review, while the second phase outlines the empirical study.

Figure 1.1

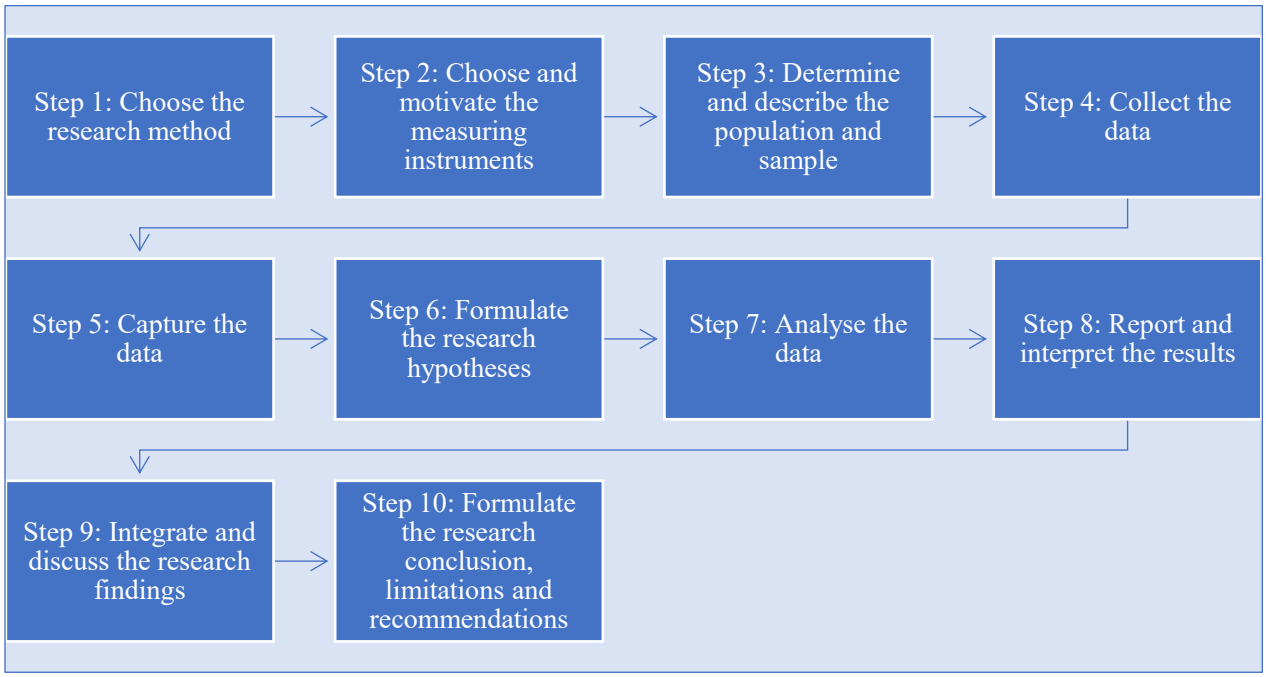
Phase 1: Literature Review



Note. Author's own work

Figure 1.2

Phase 2: Empirical Study



Note. Author's own work

1.6.1. Phase 1: The literature review

The literature review includes the review of literature on retention factors, work engagement and turnover intention. The study followed the following three (3) key steps in order to achieve the literature review and presenting a proposed theoretical framework based on the existing theory:

Step 1: This step addresses research aim 1, which is to conceptualise the constructs of retention factors, work engagement, and turnover intention.

Step 2: This step addresses research aim 2, to determine the nature of the theoretical relationship between retention factors, work engagement, turnover intention, and biographical characteristics (age, gender and employment status)

Step 3: This step addresses research aim 3, which is to determine the implications of the theoretical relationship between retention factors, work engagement, turnover intention, and the biographical characteristics (age, gender and employment status) for retention practices.

1.6.2. Phase 2: Empirical study

The empirical study was conducted at South African healthcare institutions that employ nurses in Gauteng.

Step 1: Choose the research method.

This study used a quantitative cross-sectional research approach, which is a method that observes and collects information from a group of participants at one specific point in time (Zuleika & Siswo, 2022). The main purpose of a cross-sectional design is to gather reliable information that can either support or challenge the research hypotheses (Zuleika & Siswo, 2022). This approach is often used because it is time-efficient and cost-effective, allowing researchers to study several variables at the same time and identify possible relationships between them (Wang & Cheng, 2020). However, cross-sectional studies have limitations. They cannot determine cause-and-effect relationships or measure changes over time, and the results may sometimes be influenced by factors such as participants choosing not to respond or having difficulty accurately remembering past experiences (Wang & Cheng, 2020).

The study employed a non-probability sampling method, specifically convenience sampling, which involves selecting participants who are most readily available until the required sample size is reached (Tansey, 2007, p. 16). This approach was considered practical and flexible for recruiting nurses due to accessibility and time constraints within hospital settings. The main advantages of convenience sampling are its cost-effectiveness, efficiency, and simplicity in data collection (Jager et al., 2017). However, a key limitation is that the sample may not be representative of the larger population, which restricts the generalisability of the findings (Jager et al., 2017).

Step 2: Choose and motivate the measuring instruments.

The following measuring instruments were used to measure the constructs:

Biographical questionnaire was used to collect background information from nurses regarding their age, gender and employment status.

Retention Factors Measurement Scale (RFMS), developed by Döckel (2003) was used to measure retention factors. This instrument allows for measurement of retention factors namely "compensation, job characteristics, training and development, supervisor support, career advancement and work-life balance" (Döckel, 2003). The RFMS consists of six subscales and 42 items and allows respondents to rate experiences on a 5-point scale. This scale offers options form (1) strongly dissatisfied to (5) strongly satisfied. Recent studies found Cronbach's alpha coefficients of $\alpha \geq .93$ for the RFMS, which indicates substantial reliability (Mvana, 2023). The RFMS has been confirmed to be valid and reliable and applicable to the South African context in previous studies (Potgieter & Ferreira, 2024; Van Dyk et al., 2013; Döckel et al., 2006).

The Utrecht Work Engagement Scale (UWES-17), developed by Schaufeli et al. (2002), was utilised to measure work engagement. This instrument allows for measurement of work engagement factors absorption, dedication and vigour (Schaufeli et al., 2002). The UWES allows respondents to rate experiences on a 7-point scale. This scale offers options from (0) "never" to (6) "always". Schaufeli et al. (2002) found the reliability coefficient for UWES-17 to be 0.93 across various contexts. In a South African sample reliability coefficient was .908 and .911 (Louw & Steyn, 2021; Mvana & Louw, 2020).

The Turnover Intention Scale (TIS-6) developed by (Roodt, 2004) was used to measure turnover intention. This instrument is a 6-item self-report that measures employee's turnover intention in their current organisation on a 5-point likert scale allows respondents to rate their experiences from "never" to "always". Study conducted by Jacobs and Roodt (2008) obtained a Cronbach Alpha of 0.913 indicating an acceptable reliability.

Step 3: Determine and describe the population and sample.

In this study, the sample consisted of nurses employed at two hospitals in Central Johannesburg, with a total population of nurses across both hospitals being $N = 600$. The sample for the study ($n = 121$) included both male and female nurses from the selected hospitals. To participate, individuals were required to be registered as a nurse. In addition, proficiency in English was necessary to ensure participants could comprehend and accurately respond to the questionnaire.

The relatively small sample size in this study is justified using PLS-SEM, which is appropriate for prediction-oriented research and is capable of producing reliable estimates even with smaller

samples (Hair et al., 2017; Hair et al., 2022). In addition, nursing research is often conducted within complex clinical environments where access to participants is constrained, making smaller, context-specific samples both common and acceptable (Polit & Beck, 2021; Grove et al., 2015). Recruiting nurses as research participants presents notable challenges, as factors such as high workload, limited time, organisational support, and varying levels of research knowledge can restrict participation (Jones et al., 2025; Kyei et al., 2023). These practical barriers, combined with demanding clinical responsibilities, frequently limit the feasibility of obtaining large samples in nursing studies. Furthermore, more advanced approaches to sample size estimation in PLS-SEM confirm that smaller samples can still be adequate when model complexity is taken into consideration (Kock & Hadaya, 2018).

Step 4: Collect the data.

In this study, the researcher received ethical clearance from the two hospitals that participated. A questionnaire was developed using Microsoft Forms, which included an informed consent section, biographical questions, and three instruments measuring retention, work engagement, and turnover intentions. Anonymity was maintained by not collecting any personal identifiers in the questionnaire. A research poster containing study details, the survey link, and a QR code was created and shared with unit managers, who distributed it through their WhatsApp groups. Additionally, the researcher visited both hospitals in person to explain the study and to distribute printed posters and QR codes to further encourage participation.

Step 5: Capture the data.

The data capturing process involved exporting participant responses directly from Microsoft Survey into Microsoft Excel. As the data was automatically captured by the survey platform, manual data entry was not required. The exported dataset was then prepared and cleaned to ensure accuracy and consistency. This included checking that variables were correctly labelled and identifying any missing data or potential errors. Once the dataset was prepared, appropriate statistical analyses were conducted using IBM SPSS Statistics Version 30 (2025) and SmartPLS 4.1.1.6.

Step 6: Formulate the research hypotheses.

The research hypotheses were formulated during this step. Table 1.2 outlines the research hypotheses that were formulated in order to achieve the empirical aims of this study.

Table 1.2

Research Aims, Hypotheses, and Statistical Procedures

RESEARCH AIM	HYPOTHESES	STATISTICAL PROCEDURE
Research aim 1: To explore the interrelationships between the constructs of retention factors, work engagement and turnover intention	**H1:** There is a statistically significant interrelationship between the constructs of retention factors, work engagement and turnover intention.	Correlation analyses
Research aim 2: To determine whether retention factors and work engagement significantly predict nurses' turnover intention.	**H2:** Retention factors and work engagement significantly predicts nurses' turnover intention.	Structural equation modelling
Research aim 3: To determine if nurses with biographical characteristics of age, gender and employment status differ significantly with regards to the construct variables of this study.	**H3:** Nurses with biographical characteristics such as age, gender and employment status differ significantly with regards to the construct variables of this study.	Tests for significant mean differences

Note. Author's own work

Step 7: Analyse the data.

The calculation of statistics will be performed using IBM SPSS Statistics Version 30 (2025) & SmartPLS 4.1.1.6

Table 1.3

Statistical Data Analysis Procedures

Stage 1:	**Descriptive statistical analyses**
	Mean, standard deviations, skewness and kurtosis, and frequency data
	Reliability and validity analyses
	Cronbach Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), Discriminant validity through Heterotrait-monotrait ratio.
Stage 2:	**Correlation Analyses**
	• Spearman's Rank Correlation Coefficient (to test H1)
Stage 3:	**Inferential and multivariate statistics analyses**
	• Structural equation modelling (to test H2) • Tests for significant mean differences (to test H3)

Note. Author's own work

Stage 1: Descriptive statistical analyses

Descriptive statistics are used for summarising and understanding quantitative data (Saunders et al., 2007; Omodan, 2024). Essentially, descriptive statistics assists researchers to objectively describe and present their data, laying the groundwork for more in-depth analysis and helping ensure reliable and valid research results (Omodan, 2024).

The descriptive statistics stage of statistical analysis will follow these steps:

Means, standard deviations, kurtosis, skewness, and frequency data

Mean is defined as an arithmetic average, and it is calculated by adding all the values in a dataset and dividing the sum by the number of values (George & Mallery, 2018). The mean refers to measure of central tendency that represents the average value in a set of numbers (Gravetter &

Wallnau, 2017). The mean is a fundamental statistic that serves as a baseline for more complex statistical methods (Gravetter & Wallnau, 2017).

Standard deviation is a number that tells us how spread out the values in a dataset are compared to the average (mean). The standard deviation is calculated as the square root of the variance. If there is a small spread in the dataset, the values will be closer to the mean and result in a smaller standard deviation (Tredoux & Durrheim, 2018). In contrast if there is a larger spread in the dataset the values will be further from the mean and result in a larger standard deviation (Tredoux & Durrheim, 2018).

Kurtosis is defined as measuring the distribution peakness of data (Cooper & Schindler, 2003). A positive kurtosis value greater than 0 indicates a heavy tail, the data is more concentrated to the mean and results in a shaper peak. A negative kurtosis value of less than 0 indicates a light tail, the data is less concentrated around the mean and results in a flat peak (Kaur et al., 2018). A kurtosis value of 0 indicates a level tail and normal distribution and concentration around the mean (Kaur et al., 2018).

Skewness refers to how evenly data is spread in a distribution and shows whether the data leans more toward one side (Cronk, 2020). A positively skewed distribution occurs when most of the data is grouped on the left side, with a longer tail extending to the right (Cronk, 2020). A negatively skewed distribution occurs when most of the data is grouped on the right side, with a longer tail extending to the left.

The frequency of distribution quantifies biographical data and represents the number of times a value occurs in a dataset or population (Salkind, 2012). A table will be used in the study to organise data for each biographical category with the corresponding value and frequencies.

Reliability and validity analyses

Reliability (Cronbach Alpha)

Reliability is the extent to which a measurement instrument produces consistent and stable results over time. (Riggio & Johnson, 2022). The internal consistency reliability of a scale is important as it assesses the extent to which items on an instrument measure the same underlying construct.

Cronbach alpha coefficient is used to measure internal consistency of a measuring instrument (Pallant, 2016). The researcher will assess internal consistency to determine whether the items on the measuring instrument are reliable before using it in the study. A commonly accepted social science threshold for acceptable internal consistency is Cronbach's alpha value of 0.70 or higher (Pallant, 2016).

The interpretation of Cronbach's alpha is as follows: (Ahmad et al., 2024)

- **Excellent (0.90 and above):** This indicates very high internal consistency, meaning that the items in the scale are highly related to each other and measure the same underlying construct very well.
- **Good (0.80 - 0.89):** This reflects strong internal consistency, suggesting that the items in the scale are quite related to each other and measure the same underlying construct well.
- **Acceptable (0.70 - 0.79):** This indicates acceptable internal consistency, meaning that the items in the scale are moderately related to each other and measure the same underlying construct reasonably well.
- **Questionable (0.60 - 0.69):** This reflects questionable internal consistency, suggesting that the items in the scale are somewhat related to each other but may not measure the same underlying construct very well.
- **Poor (Below 0.60):** This indicates poor internal consistency, meaning that the items in the scale are not very related to each other and do not measure the same underlying construct well.

Composite reliability (Jöreskog's rho)

Internal consistency reliability shows how closely related the indicators of a construct are to one another. In PLS-SEM, one of the main ways to test this is through composite reliability, also known as Jöreskog's rho (ρc) (Jöreskog, 1971). Higher reliability values mean that the indicators consistently measure the construct. Generally, values between 0.60 and 0.70 are seen as acceptable

for exploratory studies, while values between 0.70 and 0.90 are considered satisfactory to good (Hair et al., 2021).

However, reliability scores that exceed 0.90, and especially those above 0.95, may be a sign of redundancy meaning the indicators are too similar and may not be capturing different aspects of the construct (Hair et al., 2021). Extremely high reliability can also signal undesirable response patterns, such as participants choosing the same answer repeatedly, which can inflate correlations among error terms (Hair et al., 2021). Composite reliability is often preferred over Cronbach's alpha in structural equation modelling because it is based on indicator loadings (the strength of the relationship between each questionnaire item and the concept it is intended to measure) rather than correlations between items (Hair et al., 2021). This allows composite reliability to provide a more accurate measure of reliability in PLS-SEM models.

Stage 2: Correlational analyses

Correlation analyses is a statistical method that is used to examine the relationship between two or more variables in a study and to determine the strength and direction thereof (Abu EO, 2022). Spearman's coefficient of rank correlation will be used in the study to investigate the inter-relationship between the constructs of retention factors, work engagement and turnover intention this was done in order to test H1. Spearman's coefficient of rank correlation is a non-parametric measure of correlation to measure the magnitude and direction of the variables (Pallant, 2020).

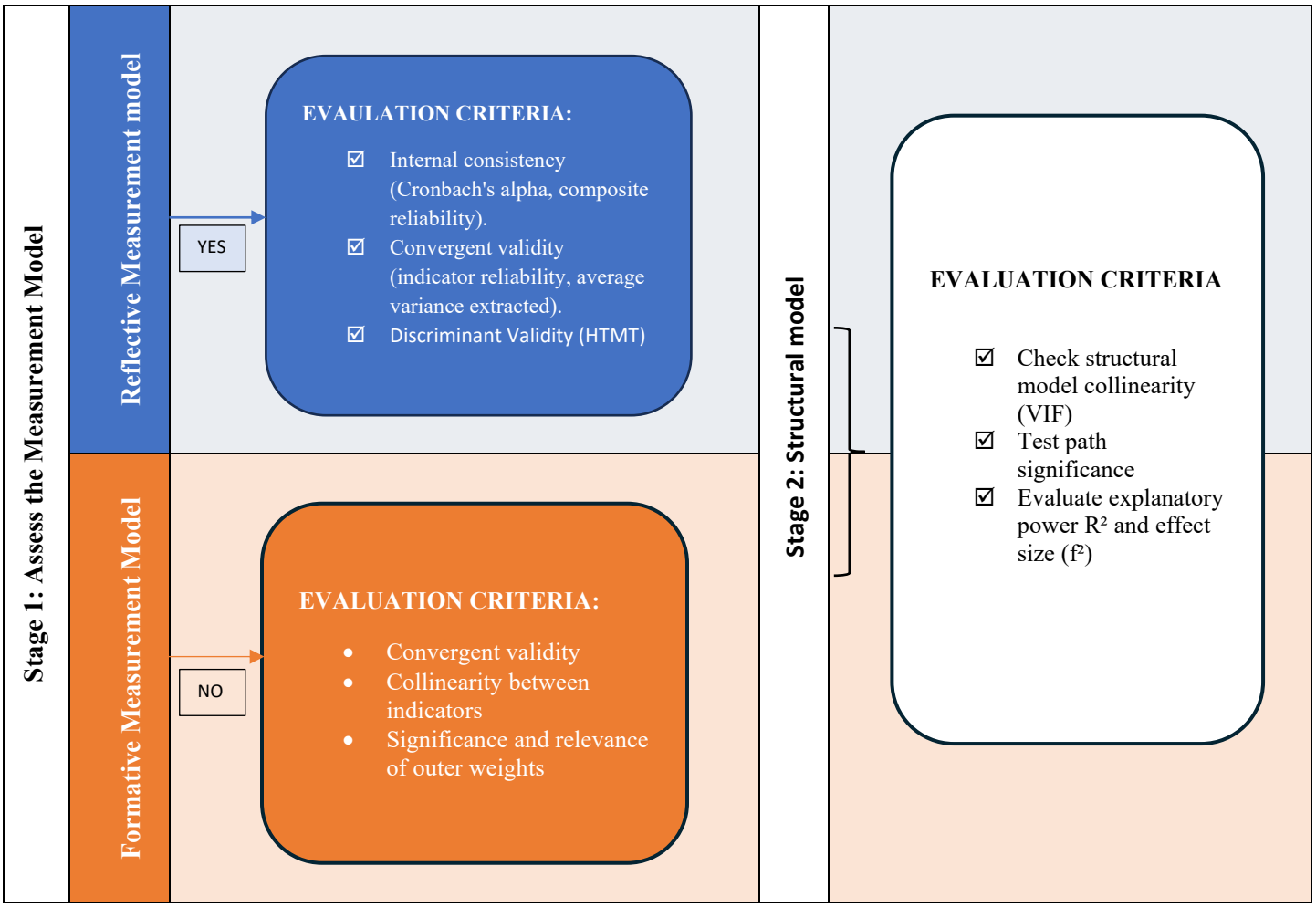
The correlation coefficient (r) represents the strength and direction of the relationship between two variables. A value of +1 indicates a perfect positive correlation, meaning that as one variable increases, the other also increases. Conversely, a value of -1 reflects a perfect negative correlation, where an increase in one variable corresponds to a decrease in the other. A value of 0 indicates no correlation, suggesting that the variables are unrelated (Abu EO, 2022).

Average Variance Extracted (AVE) and the discriminant validity which was done through Heterotrait-monotrait ratio are explained in the next section.

Stage 3: Inferential statistics

Figure 1.3

Steps of PLS-SEM analysis



Note. Adapted from Hair et al. (2022).

Structural equation modelling

Structural Equation Modelling (SEM) is a method used to study complex relationships between several independent and dependent variables at the same time (Hair et al., 2021). It also allows researchers to include latent constructs, which are concepts that cannot be directly measured but are represented through multiple indicators (Hair et al., 2021). By considering measurement error, SEM produces more accurate estimates of these theoretical ideas, which improves the overall reliability of research findings (Hair et al., 2021). In practice researchers use two methods for SEM. These are covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM).

PLS-SEM was selected as the most appropriate analysis method to test H2: Retention factors and work engagement significantly predict nurses' turnover intention. This method was suitable because the study used a relatively small sample and involved several underlying (latent) constructs (Hair et al., 2021). Researchers commonly use PLS-SEM as it follows a causal and predictive approach. Its main purpose is to explore the relationships between variables and assess how well the model predicts outcomes (Hair et al., 2017; Sarstedt et al., 2016). Advantages of PLS-SEM is that it works well with small samples, complex models, and both reflective and formative constructs, without assuming normal data distribution. PLS-SEM estimates parameters efficiently, making it more likely to detect true relationships than CB-SEM or traditional regression (Hair et al., 2021).

The PLS-SEM procedure follows two stages: (1) assessment of the measurement model, and (2) evaluation of the structural model.

Stage 1: Measurement Model Assessment

The measurement model explains how latent variables, also known as constructs, are measured using observed indicators (Hair et al., 2019). There are two main approaches used to measure constructs, namely reflective and formative measurement models.

In a reflective measurement model, the latent construct causes the observed indicators, meaning the indicators are reflections of the underlying construct. Reflective indicators are expected to be interchangeable, highly correlated, and share the same antecedents and consequences, as they all capture the same underlying phenomenon. Measurement error is also explicitly considered for each indicator, and items with low loadings may be dropped to improve reliability and validity (Hair et al., 2022; Jarvis et al., 2003).

In contrast, formative measurement models view the indicators as forming or causing the construct, with the direction of causality moving from the indicators to the construct. Formative indicators are not necessarily interchangeable, may not correlate, and can have different antecedents and consequences, as each indicator represents a distinct dimension of the construct (Hair et al., 2022; Jarvis et al., 2003).

This study adopted a reflective measurement model because the constructs of interest (retention factors, work engagement and turnover intention) are theorised to cause the observed indicators,

allowing for reliable and valid assessment of the latent variables in line with established theoretical frameworks (Hair et al., 2022; Javis et al., 2003).

The measurement model assessment stage focuses on assessing the validity and reliability of the constructs and their indicators to ensure that each construct is measured accurately and consistently:

Internal Consistency Reliability tests how consistently the indicators measure the construct. In PLS-SEM, this is usually done using composite reliability, introduced by Jöreskog (1971). It gives a more accurate view of reliability than Cronbach's alpha, especially for PLS data. Reliability values ranging from 0.60 to 0.70 are generally viewed as acceptable, between 0.70 and 0.90 are satisfactory to good reliability. However, values above 0.95 may suggest that the questions are too similar or redundant, meaning they could be measuring the same aspect of the concept rather than capturing different parts of it (Hair et al., 2022).

Convergent Validity checks whether the indicators of a construct share a high proportion of variance. It is measured using the AVE. AVE is calculated as the average of the squared loadings for all indicators of a construct. An AVE value of 0.50 or higher means the construct explains at least 50% of the variance in its indicators, which is acceptable (Hair & Alamer, 2022; Hair et al., 2022). Indicator loadings each indicator should strongly relate to its construct. Loadings above 0.708 show that the construct explains more than 50% of the indicator's variance, which means the indicator is reliable (Sarstedt et al., 2021).

Discriminant Validity ensures that constructs are distinct from one another. This is done using the Heterotrait-Monotrait Ratio (HTMT) of correlations (Henseler et al., 2015). HTMT examines whether each construct is truly unique compared to others. If the value is low, it means the construct is distinct and measures something different. A common guideline is to use a cut-off value of 0.85 for HTMT (Hair & Alamer, 2022). A construct is considered to have good discriminant validity when the square root of its AVE is higher than its correlations with all the other constructs in the model (Hair et al., 2022). This shows that the construct shares more variance with its own items than with items of other constructs. In this study discriminant validity was assessed using the HTMT.

Stage 2: Structural Model Assessment

Once the measurement model is sound, the next step is to assess the relationships between constructs.

Check structural model collinearity variance inflation factor (VIF) structural model coefficients are estimated using a series of regression equations. However, if predictor constructs are strongly correlated, the estimates and standard errors can be biased, so it is important to check for collinearity. This is done by calculating the VIF for each predictor. VIF values above 5 suggest a collinearity problem, though issues can also appear with values between 3 and 5 (Hair et al., 2022).

Test path significance and relevance according to Hair et al. (2022), PLS-SEM estimates path coefficients using a series of regression analyses, with the size and direction of these coefficients indicating the strength of relationships between constructs. Coefficients typically range from -1 to +1, where values closer to +1 indicate strong positive relationships and values near -1 indicate strong negative relationships. The significance of each path is assessed using bootstrapping, which provides t-values, p-values, and confidence intervals. A path coefficient is considered significant at the 5% level if zero is not included in the 95% confidence interval.

The explanatory power of a model can be assessed using the coefficient of determination (R^2), which indicates the proportion of variance in an outcome variable explained by the model. This reflects the model's ability to account for the observed data or its in-sample predictive strength. As a guideline, an R^2 of 0.75 is considered substantial, 0.50 moderate, and 0.25 weak. (Shmueli & Koppius, 2011; Rigdon, 2012; Hair et al., 2022).

The f^2 effect size indicates the relative importance of a predictor by showing how much the R^2 of an outcome decreases if that predictor is removed. Generally, predictors with larger path coefficients also have larger f^2 values, indicating greater influence on the endogenous construct (Hair et al., 2017). As a guideline, an f^2 of 0.02 represents a small effect, 0.15 a medium effect, and 0.35 a large effect (Hair et al., 2019)

Tests for significant mean differences

Mean differences are associated with assessing or measuring significant differences across groups (Pallant, 2020). Statistical techniques consist of parametric and non-parametric techniques that have different assumptions. The parametric technique assumes that the data is normally distributed, and the non-parametric statistic assumes that there is no specific distribution (Pallant, 2020). This research will use the Mann-Whitney U Test to test the differences between two independent groups (Pallant, 2020).

In instances where there are more than two independent groups, the Kruskal-Wallis H test will be used as the nonparametric statistic to determine whether there are statistically significant differences in the distribution of scores across the groups (Pallant, 2020).

Step 8: Report and interpret the results.

The statistical results were presented and discussed in the form of diagrams, graphs and table. These results are in Chapter 3.

Step 9: Integrate and discuss the research findings.

The results of the empirical research were integrated into the findings of the literature review. These are presented in Chapter 3.

Step 10: Formulate the research conclusions, limitations, and recommendations.

The conclusion encompassed the integration of all the results and findings. The limitations and recommendations were made regarding the relationship between the variables. This are discussed in Chapter 4.

1.7. CHAPTER DIVISION

The chapters were presented as follows:

Chapter 1: Scientific Overview of the Research

This chapter introduced the research topic and the constructs that were investigated. This chapter presented the background to the study, defined the research problem, and outlined the objectives, research questions and aims of the study.

Chapter 2: Literature Review

This chapter focused on conceptualising the constructs, integrating them through relevant theories to reveal interrelationships, and exploring the implications of these theoretical connections.

Chapter 3: Research Article

This chapter is organised in the format of a research article, containing the research design, research approach, sampling, measuring instruments, data collection and research methods. The chapter provided a research hypothesis, explained the statistical procedure, and outlined the ethical considerations.

Chapter 4: Conclusions, Limitations and Recommendations

This chapter presented the conclusions and limitations of the study, as well as recommendations for future research and approaches to improving retention.

1.8. CHAPTER SUMMARY

This chapter established the scientific foundation of the research. It explored the background and motivation for the study, clearly defined the research problem, outlined the research objectives, and described the chosen paradigm perspective. This chapter also included a review of relevant literature, detailed the chosen research design and methodology, and concluded by outlining the structure of the remaining chapters.

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the main concepts in this study: retention, work engagement, and turnover intention. It outlines how these concepts are defined in literature and explains their relevance within the healthcare context. The chapter also discusses the theories and models that will help understand the constructs. In addition, the possible effects of biographical characteristics are considered. SDT is used as the overarching theoretical lens to link these constructs, supported by complementary theoretical perspectives. The chapter ends by highlighting how the information from the literature can help improve retention practices in healthcare settings.

2.1. RETENTION

This section explores definitions of employee retention presented in the literature and examines retention within the healthcare sector. It also discusses relevant theories and models, providing explanations of each.

2.1.1. Conceptualisation of Retention Factors

Employee retention research originated from early studies on labour turnover. As early as 1916, Fisher highlighted the financial impact of losing valuable employees and the link between employee satisfaction and performance (Fisher, 1916; Van Zyl, 2019). Traditionally, research in this area focused more on understanding why employees leave organisations, rather than why they stay (Harman et al., 2007). The assumption was that identifying the drivers of turnover would automatically explain the drivers for employee retention (Theron et al., 2014). However, subsequent research challenged this view, arguing that retention should be studied as a distinct construct, as the factors that encourage employees to remain may differ from those that drive turnover (Steel et al., 2002).

Employee retention is defined as the deliberate and strategic actions organisations take to encourage employees to remain with the organisation for extended periods (Fitriani & Widhianto, 2024). Retention includes organisational factors aimed at fostering employee commitment, engagement, and long-term attachment to the organisation (Onyango et al., 2017). These factors include compensation, training opportunities, job security, work autonomy, performance recognition, and career growth (Das & Baruah, 2013).

Turnover is unavoidable, however excessively high turnover can impact the organisations effectiveness, productivity, and knowledge continuity (Mey et al., 2021). This is why effective retention practices enable organisations to create a motivated, committed, and skilled workforce, which results in organisational growth and long-term success (Kamalaveni et al., 2019). In increasingly competitive labour markets, retention has also become a strategic human resource lever, particularly in the context of competition for scarce and specialised skills (Haider et al., 2015).

However, despite the strategic importance, employee retention has some limitations. Much of the existing research and many organisational strategies focus primarily on internal organisational factors, often overlooking the influence of external factirs (Ghani et al., 2022). Factors such as globalisation, technological change, economic uncertainty, and increased workforce mobility affect employees' decisions to stay or leave, yet remain largely beyond organisational control (Ghani et al., 2022; Hynes et al., 2025). As a result, organisations are required to continuously adapt their retention strategies to respond to dynamic external factors.

2.1.1. Retention in the Healthcare Sector

Nurse retention is a concern within the healthcare sector, particularly given the global shortage of qualified nurses. Research consistently shows a direct relationship between positive nursing work environments, higher nurse retention, and improved quality of patient care (Aiken et al., 2011). Nurse retention refers to the efforts healthcare institutions make to retain qualified nursing staff, and in the context of increasing workforce shortages, it has become a priority for healthcare employers (Twigg & McCollough, 2013). Retaining nurses is regarded as a cost-effective strategy that not only stabilises the workforce but also leads to better patient health outcomes (Twigg & McCollough, 2013).

Despite its recognised importance, nurse retention is a complex and context specific. Research highlights different perspectives and identifies multiple factors influencing nurses' decisions to stay or leave. For example, a study by Anderson et al. (2024) highlights challenges such as undervaluation, pay inequities, and limited involvement in decision-making as key influences that impact nurse retention. While this study provides valuable insight into structural barriers, its focus

on nurses in general practice limits the extent to which the findings can be generalised across other nursing disciplines and healthcare systems.

Hynes et al. (2025) study looks at both individual and organisational influences on retention. The study shows the importance of intrinsic factors, such as psychological capital and resilience, alongside extrinsic conditions including staffing levels, leadership quality, and workplace culture, particularly during crisis periods that impact nursing retention. A key strength of this study is that is provides and integrates findings across multiple studies, offering a comprehensive understanding of nurse retention. However, its limited attention to local contextual differences reduces its applicability to specific settings, such as the South African healthcare environment. Aldhafeeri and Alanazi et al. (2024) identifies poor working conditions, leadership challenges, and inadequate support as major drivers of nurse turnover, although their focus on nurse educators may limit relevance to clinical nursing contexts.

Within the South African context, research highlights several key factors that influence nurse retention. These include fair compensation, opportunities for career development, access to adequate resources, supportive supervision, and favourable working conditions (Pillay et al., 2022). Additionally supportive work environments characterised by positive relationships, effective communication, supervisor appreciation, and mutual respect further enhance retention (De Vries et al., 2023). Work-life balance has also been identified as an important retention factor, with irregular working hours and on-call duties contributing to higher turnover intentions among nurses (De Vries et al., 2023).

The World Health Organization emphasises the importance of context-specific retention strategies, particularly in resource-constrained health systems such as South Africa's public healthcare sector (Abimbola et al., 2015). Recommended interventions include targeted education and training initiatives, appropriate financial and non-financial incentives, supportive and safe working environments, and recruitment strategies that prioritise students and healthcare workers from rural and underserved communities (Abimbola et al., 2015). Addressing these factors is essential for the development of aligned and relevant nurse retention strategies (Abimbola et al., 2015).

2.1.2. Theories and Models of Retention

This section focuses on the theories or models of retention as suggested by Döckel (2003) and Herzberg et al (1959).

2.1.2.1.Döckel's (2003) model of retention factors

Döckel's (2003) model of retention factors shows the importance of understanding factors that contribute to employee satisfaction and lead to the retention of valuable and talented individuals. The study was conducted to research high turnover levels in environments characterised by rapid technological advancement and a strong reliance on specialised skills and intellectual capital (Döckel, 2003). The model contributes to retention literature by shifting attention from reducing turnover to the identification of organisational practices that strengthen employee commitment. By highlighting the role of retention factors Döckel's model shows the importance of developing targeted, proactive retention strategies to sustain a stable and committed workforce in knowledge-intensive industries (Döckel, 2003).

A potential limitation of Döckel's (2003) framework is that it was developed based on a specific sample of high-technology employees within a single South African telecommunications company therefore, the findings may not be fully generalisable to other contexts or industries, including the nursing profession. Additionally, it focuses on addressing internal organisational factors (e.g., compensation, job characteristics, training and development opportunities, supervisor support, career opportunities and work/life balance) and gives limited attention to external influences like economic conditions, labour market dynamics, or societal factors that can impact retention.

2.1.2.2.Herzberg's two-factor theory

Frederick Herzberg developed the Two-Factor Theory in 1959 after surveying 200 engineers and accountants to understand employee attitudes toward work (Herzberg, 1959). This theory which is primarily a motivation theory, includes two sets of factors motivators and hygiene factors. Although Herzberg's framework does not directly explain employee retention, it provides useful insight into why employees stay or leave organisations (Alrawahi et al., 2024; Baumgartner et al., 2025).

Motivators such as recognition, meaningful work, and growth opportunities enhance engagement and commitment, which in turn increases retention (Alrawahi et al., 2024; Baumgartner et al., 2025). Motivators, also referred to as intrinsic factors, are linked to the work itself and include factors such as achievement, recognition, responsibility, personal development, and opportunities for advancement (Baumgartner et al., 2025; van der Hulst & Zwaal, 2024). These factors enhance job satisfaction and work engagement but generally do not lead to dissatisfaction when they are absent (Herzberg et al., 1959). In contrast, hygiene factors also known as extrinsic factors, are associated with the work context and include organisational policies, supervision, relationships in the workplace, physical working conditions, and remuneration (Baumgartner et al., 2025; van der Hulst & Zwaal, 2024). Properly addressing hygiene factors helps prevent dissatisfaction, though the presence of these factors alone does not actively promote satisfaction. Poorly managed hygiene factors can result in increased turnover intentions (Alrawahi et al., 2024).

Within the healthcare context, Alrawahi et al. (2024) found that turnover is influenced by factors such as inadequate workplace safety, heavy workloads, unfair promotion systems, low salaries, and a lack of recognition from colleagues. These findings highlight the importance of both motivators and hygiene factors in influencing retention within healthcare settings. However, they further suggest that Herzberg's theory may require adaptation to suit varying organisational and cultural environments.

Herzberg's theory provides organisations with a framework for identifying the causes of both satisfaction and dissatisfaction, which can inform retention strategies (Herzberg et al., 1959). Terera and Ngirande (2014) emphasise that management should assess which intrinsic and extrinsic factors align with employees' needs to create effective strategies that enhance both motivation and retention. Understanding what employees value most, as Dartey-Baah and Amoako (2011) note, is essential for designing successful retention strategies.

Limitations of the theory include that there is a need for testing applicability across different cultural and economic contexts, as variations between countries may influence how employees respond to motivators and hygiene factors (van der Hulst & Zwaal, 2024). Additionally, Herzberg's model focuses mainly on internal, job-related factors and largely overlooks external

influences, such as economic conditions, labour market trends, or organisational culture, all of which can strongly affect retention.

Figure 2.1 provides a depiction of retention factors as presented by Döckel's (2003).

Figure 2.1

Retention Factors

Note: Authors own compilation based on Döckel's (2003) retention factors

- **Compensation**

Employee compensation refers to the total rewards provided by an organisation in exchange for an employee's work and contributions, these include both financial remuneration and benefits (Döckel, 2003). Traditionally, compensation was viewed primarily in monetary terms, which only included salaries, overtime payments, and bonuses (Singh, 2019). However, there are different perspectives expanding on this definition to include a combination of monetary and non-monetary

rewards, recognising compensation as a broader total remuneration package that reflects the value of employees' contributions to the organisation (Naidu & Satyanarayana, 2018).

While compensation plays an important role in influencing employee behaviour, it is not regarded as the only solution for long-term employee retention. Bussin (2018) argues that reliance on compensation alone is insufficient to ensure sustained employee retention over time. Despite this limitation, evidence consistently shows that competitive compensation remains a critical factor in retaining employees, particularly in competitive labour markets (Dhanphat et al., 2018; van Dyk et al., 2013). Compensation not only serves as a retention lever but also reinforces employees' engagement to the organisation, thereby encouraging longer tenure (Mabe et al., 2024).

Recent research shows the importance of understanding compensation within its specific organisational and contextual setting. Hadebe et al. (2023) highlights that retention outcomes are influenced by the unique needs of organisations, employees, and individuals. In the healthcare sector, the WHO highlights that nurse retention requires addressing compensation within broader working and living conditions, rather than treating pay in isolation (WHO, 2020).

In the South African context, compensation challenges have been shown to influence nurse retention. Studies show that nurses working in urban areas report higher levels of engagement compared to those in rural settings, this is due to more competitive remuneration and better employment conditions in urban environments (Ruvimbo & Hlanganipai, 2016). Furthermore, South African nurses often consider migration, influenced by push factors such as limited career progression opportunities, inadequate salaries, high patient-to-nurse ratios, and poor working conditions and pull factors like better career prospects and higher salaries in developed countries (Ruvimbo & Hlanganipai, 2016; Al-Yateem et al., 2022).

- **Job Characteristics**

Job characteristics describe the fundamental aspects of a job that influence how employees experience their work and affect their levels of motivation, engagement, and performance. (Boonzaier et al., 2001). Five key job characteristics are described below namely autonomy, feedback, task significance, skill variety, and task identity.

Autonomy, which refers to the degree of independence employees have in scheduling their work and selecting the methods they use to complete tasks (Hackman & Oldham, 1975; Boonzaier et al., 2001). When employees perceive higher levels of autonomy, they are more likely to feel empowered and trusted, which positively influences their engagement and retention (Cotič et al., 2023).

Another important practice linked to job characteristics is feedback. When feedback is clear and regular, employees are more likely to experience their work as meaningful, feel a sense of responsibility for their performance, and have a clearer understanding of how well they are performing (Cotič et al., 2023). Research shows that supportive supervisory practices, including constructive feedback, are associated with higher levels of employee retention and lower turnover intention (Dhanpat et al., 2018).

Task significance is a job characteristic that reflects the degree to which a role positively affects the lives or work of other people (Hackman & Oldham, 1975). In occupations such as nursing, task significance is naturally high because nurses' duties have a direct impact on patients' health and overall well-being (Heidari et al., 2017). Experiencing high levels of task significance has been shown to positively influence retention in the nursing profession (Heidari et al., 2017).

Skill variety is a job characteristic that is beneficial for retention. Providing employees with opportunities to develop a variety of skills further enhances their ability to perform effectively, deliver quality outcomes, and manage their careers (Cotič et al., 2023). When organisations invest in developing employees' skills, employees are more likely to experience higher motivation and engagement, which contributes to increased productivity and a stronger sense of attachment to the organisation (Cotič et al., 2023).

Lastly task identity is the extent to which a job requires an employee to complete a whole and identifiable piece of work from beginning to end (Hackman & Oldham, 1975). When task identity is high, employees are able to see a clear connection between their efforts and the final outcome of their work, which enhances their sense of ownership and accomplishment (Cotič et al., 2023, Hackman & Oldham, 1975). These positive experiences increase work engagement and reduce withdrawal behaviours (Hackman & Oldham, 1975).

- **Training and Development opportunities**

Investing in learning and development initiatives, equips employees with the skills and knowledge they need to excel (Dhanphat et al., 2018). Employees who recognise the value of the training they receive may be more likely to stay with the company for a longer period of time, as they recognise this as an investment (Döckel et al., 2006). Research studies show that educational and career development opportunities are key factors in retaining employees and boosting motivation (Döckel et al., 2006; Hadebe et al., 2023). Limited access to training can lead to dissatisfaction and staff turnover amongst nurses (Chamanga et al., 2020). Chamanga et al. (2020) further supports this by showing that nurses nearing retirement welcomed early retirement due to a lack of further learning opportunities.

Although, training is often viewed as a tool for retention, some research suggests a potential for increased employee turnover following training initiatives (Jun & Eckardt, 2025). This perspective highlights that if employees acquire new skills and knowledge through training, their marketability in the labour market may also increase (Jun & Eckardt, 2025). This idea or misconception regarding the training employees for another employer was earlier highlighted in a study conducted by Bussin (2018). Suggesting that learning and development programs equip employees with valuable skills that ultimately benefit their future employers, not the organisation that provided the training.

- **Supervisor Support**

Supervisor support plays an important role in shaping employee experiences and promoting high performance. Through practices such as rewards, recognition, and continuous feedback, supervisors help create a sense of support and appreciation, which contributes to employees' perception of organisational support (Dhanphat et al., 2018). Over time, perceived supervisor support strengthens employees' emotional attachment to the organisation, which in turn reduces turnover intentions (Dhanphat et al., 2018). Effective supervision is therefore essential for building supportive and trusting relationships between managers and employees (Warwick et al., 2023).

In the healthcare context, the absence of adequate supervisory support can have negative consequences. Research shows that insufficient support for graduate nurses is associated with increased work-related errors and higher turnover rates (Jeffrey et al., 2023). These outcomes negatively affect the quality of patient care and place a financial burden on healthcare organisations due to the high costs of nurse turnover (Jeffrey et al., 2023).

Nursing managers play an important role in addressing these challenges by providing consistent guidance, feedback, and emotional support to newly qualified nurses (Jeffery et al., 2023). Furthermore, leadership support has been identified as a key factor in creating a positive and supportive work environment for nurses (Jeffery et al., 2023). Evidence suggests that nurses' perceptions of their immediate manager are more influential in retention decisions than their perceptions of the organisation as a whole (Twigg & McCullough, 2014).

- **Career opportunities**

According to van Dyk (2013) career opportunities include internal career paths (this includes promotions, lateral moves to different departments or taking on new responsibilities within the same role) and external career paths (involves obtaining a position at another organisation) for an employee's professional growth. Research shows that employees value opportunities for career progression within their organisations, and the absence of such opportunities is associated with higher turnover intentions (Mabaso et al., 2021). Organisations that place emphasis on career development are therefore more likely to retain skilled employees and strengthen their commitment to the organisation (Singh, 2019). Studies have also highlighted the role of career opportunities and professional development in retaining community nurses (Chamanga et al., 2020). This shows the importance of investing in development initiatives to support the retention of newly qualified nurses entering the workforce. These findings are further supported by Döckel et al. (2003), who reported that employees are more committed when they perceive their organisation as actively supporting career development practices.

- **Work/life balance**

Work-life balance is defined as a state of balance between managing work demands alongside family and social activities in a way that aligns with employees' unique priorities and needs (Kang et al., 2024; Shockley et al., 2017). Work-life balance policies are seen as a solution to the conflict between work and family, these include flexible work schedules, family leave for emergencies, and childcare assistance (Shockley et al., 2017). These policies benefit both employers, who can attract and retain a committed workforce, and employees, who can achieve a better work-life balance (Döckel, 2003).

Studies indicate that the COVID-19 pandemic significantly impacted the work-life balance of healthcare workers (Farber et al., 2023). Healthcare workers were faced with increased responsibilities at home and work maintaining a healthy balance between work and personal life became a major challenge (Farber et al., 2023). Nurses reported that they were unhappy with their work-life balance, as there are conflicting demands for family and meeting work responsibilities (Tourangeau et al., 2017).

2.2. WORK ENGAGEMENT

This section explores definitions of work engagement presented in the literature and examines key theories and models of work engagement, providing explanations of each.

2.2.1. Conceptualisation of work engagement

The concept of engagement was first introduced by Kahn (1990), who defined it as the extent to which organisational members bring their physical, cognitive, emotional, and mental selves into their work roles. Engagement is viewed as a dynamic process in which employees actively invest themselves in their roles, resulting in increased effort and a stronger identification with their work (Kahn, 1990; Schaufeli & Bakker, 2010). Kahn (1990) further proposed that engagement is shaped by three psychological conditions, (1) meaningfulness, which refers to experiencing value and purpose in one's role; (2) safety, which involves feeling able to express oneself without fear of negative consequences; and (3) availability, which relates to having the physical, emotional, and psychological resources required to perform work. This framework emphasises the role of employees' psychological presence in driving work performance (Kahn, 1990).

Building on this, Saks (2006) developed a model of employee engagement based on social exchange theory, which suggests that when employees feel supported and valued by their organisation, they are more likely to respond with positive attitudes and behaviours. Saks (2006) proposed that engagement operates at two levels. The first is job engagement, which refers to how involved and committed employees are in performing their daily work tasks and roles. The second is organisational engagement, which refers to how connected and committed employees feel toward the organisation as a whole. According to Saks (2006) engagement is understood as involving how employees think about their work (cognitive), how they feel about it (emotional), and how they act in their roles (behavioural) (Saks, 2006; Shuck et al., 2011). A limitation of Saks' (2006) model of engagement is that is has received limited empirical testing, partly because the distinction between job engagement and organisational engagement was not clearly defined (Shuck & Wollard, 2010; Shokunbi, 2025).

Another perspective is offered by Maslach (2001) who defined engagement as the positive opposite state to burnout, characterised by exhaustion, cynicism, and inefficacy. This suggests there is a negative correlation between engagement and burnout (Schaufeli & Bakker, 2004). Instead of only focusing on treating illness, researchers began to see engagement as a way to promote well-being and build human strengths (Shuck et al., 2011). In this view, engagement was measured as reverse scores on the Maslach Burnout Inventory (Maslach & Leiter, 1997), assuming that the absence of burnout resulted in engagement. Later, Maslach et al. (2001) refined the definition of engagement as being a positive and motivating psychological state where individuals feel energised, fulfilled, and experience enjoyment in their work

Schaufeli et al. (2002) expanded on the work of Maslach et al. (2001) by presenting engagement as a concept that is separate from burnout. They defined work engagement as "a positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Vigour refers to high levels of energy and mental resilience, enabling employees to persist in the face of difficulties and invest sustained effort in their work (Schaufeli et al., 2002; Bakker et al., 2008). Dedication relates to experiencing meaning and purpose at work, which supports feelings of enthusiasm, inspiration, and pride (Schaufeli et al., 2002; Bakker et al., 2008). Absorption describes a state in which employees are deeply involved in their tasks, becoming fully focused and finding enjoyment in their work activities (Schaufeli et al., 2002; Bakker et al., 2008).

Despite its contribution, some scholars argue that this perspective underplays the cognitive elements of engagement highlighted by Kahn (1990) and tends to frame engagement mainly as the opposite of burnout rather than as an independent psychological state (Shuck et al., 2011).

Rothbard's (2001) definition of engagement builds on Kahn's (1990) work, describing engagement as a two-dimensional construct that encompasses both the cognitive attention employees devote to their roles and the absorption they experience while performing their tasks. It seems, the definition and measure of engagement is continuously evolving, as there is different of perspectives scholars bring to the concept. Although research provides different definitions of engagement, many studies use work engagement and employee engagement interchangeably without clarifying distinctions, which causes conceptual confusion (Kosaka & Sato, 2020). For example, researchers use the term employee engagement but measure it with the UWES, which was designed to assess work engagement (Kosaka & Sato, 2020).

Despite the various definitions that exist for engagement there is a common thread in defining engagement from scholars such as Rothbard (2001), Schaufeli et al. (2002), Maslach et al. (2001) and Kahn (1990). It appears that work engagement is commonly described as a positive state at work in which employees demonstrate high levels of energy in their work. Employee engagement lacks a single agreed definition, some existing definitions are seen as reiterations of older ideas (Bakker et al., 2008). Additionally, employee engagement has been measured using various tools, each reflecting different definitions, which creates challenges such as lack of standardisation, cultural bias, and difficulties comparing results across contexts (Shokunbi, 2025). Despite these issues, measuring engagement is important as it directs attention to critical factors in the workplace and in the African context, reviewing commonly used tools helps identify the most relevant applicable tool for examining engagement (Shokunbi, 2025). While various scholars have explored the concept of employee engagement, this study will adopt the definition put forth by Schaufeli et al. (2002).

2.2.2. Theories and Models of Work Engagement

This section delves into theories and models of work engagement, such as the JD-R model (Bakker and Demerouti, 2007) and the Utrecht Work Engagement Model (Schaufeli et al., 2002) providing the origin, key concepts and limitations of each model.

2.2.2.1. Job Demands-Resources model

Research shows that the Job Demands-Resources (JD-R) model, was originally developed to explain burnout (a state of exhaustion, cynicism, and reduced effectiveness) resulting from chronic work stress (Demerouti et al., 2001). The model was later expanded to include work engagement (a positive, fulfilling state characterised by vigour, dedication, and absorption) (Schaufeli et al., 2002). In this revised model, burnout and engagement act as mediators, connecting job demands to health-related outcomes and job resources to employees' intentions to stay with or leave the organisation (Schaufeli & Taris, 2014). According to the JD-R model, increasing job resources can both prevent burnout and promote engagement, whereas reducing job demands mainly addresses burnout but does not necessarily enhance engagement (Demerouti et al., 2001).

The model is grounded in earlier research, including Lee and Ashforth's (1996) meta-analysis, which identified different job demands and job resources associated with burnout (Schaufeli & Taris, 2014). The JD-R model (Demerouti et al., 2001) aims to illustrate that all jobs contain both risks and opportunities that may negatively or positively influence employee well-being and performance. Furthermore, the model aligns with other theoretical frameworks, such as Hackman and Oldham's (1980) Job Characteristics Model, which highlights the motivational role of job resources, and Conservation of Resources theory (Hobfoll, 2001), which emphasises the importance of acquiring and protecting valued resources (Demerouti & Bakker, 2011).

The model breaks down job factors into two main categories: job demands and job resources. Job demands are elements of the job that require significant physical or mental effort, such as heavy workloads or challenging work conditions, which can lead to stress if not managed well (Bakker et al., 2004; Bakker & Demerouti, 2007). Job demands can lead to burnout, which is characterised by exhaustion and cynicism (Maslach et al., 2001). In the healthcare sector, particularly for nurse's job demands involves work pressure such as high workload, limited staffing, insufficient resources

and the demands of shift work (Broetje et al., 2020). Additionally, there is emotional demands related to caring for patients like exposure to death, managing patient families and the responsibility of providing quality care (Broetje et al., 2020).

On the other hand, job resources refer to aspects of the job that assist employees in accomplishing work goals, lessen the strain of job demands, or promote personal development, including fair remuneration, opportunities for career advancement, and support from colleagues (Bakker et al., 2004; Bakker & Demerouti, 2007). Job resources promote work engagement characterised by vigour, dedication, and absorption (Bakker & Schaufeli, 2008). Job resources exist at various levels including organisational (e.g. compensation, career progression), interpersonal (e.g. supervisor support), job position (e.g. clear roles, decision-making power) and task level (task variety, autonomy) (Mendes & Stander, 2011). For nurses key job resources include supervisor support, autonomy in decision-making, feedback, peer support and acknowledgement (Broetje et al., 2020).

According to Schaufeli and Taris (2014), the JD-R model has some limitations. It does not clearly distinguish that some job demands can be experienced as positive challenges, while some job resources may be perceived as threats by certain individuals. The model also does not fully account for individual differences, such as personality or coping styles, which influence how employees perceive and respond to demands and resources. Additionally, the JD-R model focuses primarily on individuals and does not inherently consider team or organisational level factors, where shared experiences, social interactions, and group dynamics can strongly shape engagement and burnout (Schaufeli & Taris, 2014; Broetje et al., 2020). Recognising these limitations is important, as both individual and collective factors affect employee outcomes in the workplace.

2.2.2.2. Utrecht Work Engagement Model

Psychology has shifted focus toward human strengths and optimal functioning, offering a new and opposing perspective to psychology's traditional emphasis on illness, disorder, and disabilities (Schaufeli et al., 2006). With the rise of positive psychology and its associated research, there has been a growing interest in defining and advancing the concept of work engagement (Sweetman & Luthans, 2010). Work engagement, seen as the opposite of burnout, describes employees who feel energetic, connected to their work, and capable of meeting job demands (Schaufeli et al., 2006). It

is defined as a positive and fulfilling state of mind related to work, marked by high levels of vigour, dedication, and absorption (Schaufeli et al., 2002).

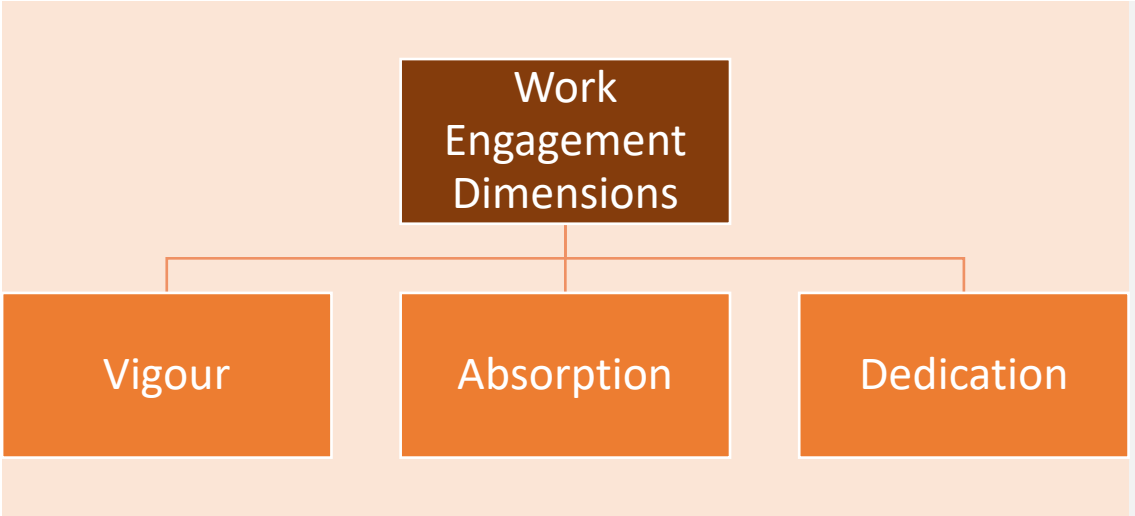
Scholars seem to agree that the concept of work engagement is made up of three main components that reflect how employees relate to their work (Schaufeli et al., 2002; Mitonga-Monga et al., 2016). The first component identified is vigour, which refers to the energy and mental resilience employees show as they go about their tasks (Schaufeli et al., 2002). The second is dedication, which describes the level of involvement, pride, enthusiasm, and inspiration employees feel toward their work (Schaufeli et al., 2002). The third is absorption, which captures how deeply employees become immersed in their work, often losing track of time because they are so focused on what they are doing (Schaufeli et al., 2002). Drawing on their definition of the concept of work engagement, Schaufeli et al. (2002) developed a self-report tool known as the UWES to measure work engagement, that include these three dimensions namely vigour, dedication and absorption.

Limitations of the model, that researchers argue exist are that UWES dimensions may overlap conceptually with constructs like job satisfaction or organisational commitment making it harder to separate these concepts in practice (Ladyshewsky & Taplin, 2017). Additionally, the UWES shows limited consistency across different countries and occupational groups, as its factor structure, coefficients, and relationships can vary, which restricts its comparability across cultures and professions (Schaufeli et al., 2006)

Figure 2.2 illustrates the three dimensions of work engagement, vigour, dedication, and absorption which are discussed in detail below.

Figure 2.2

Work Engagement Dimensions



Note: Authors own compilation based on Schaufeli et al. (2002)

- **Vigour**

Vigour refers to a state of high energy, mental resilience, and persistence while working (Schaufeli et al., 2002; Gürbüz et al., 2024). Within the nursing profession, which is inherently demanding both physically and emotionally, vigour is a psychological resource that enables nurses to sustain effort and remain effective in their roles (Kamari et al., 2025).

Research shows that psychological resilience plays a key role in strengthening vigour among nurses. For example, resilience-focused interventions enhance nurses' ability to cope with stress, recover from challenges, and maintain energy under pressure (Kamari et al., 2025). Nurses who show higher resilience tend to maintain greater energy and mental strength at work, even when faced with highly stressful conditions (Hamama-Raz et al., 2023).

Nurses who maintain high levels of vigour are better able to cope with continuous demands, stay mentally resilient, and sustain their effort in their work roles (Zhang et al., 2025). As a key aspect of work engagement, vigour represents the degree to which employees feel energized and are able to persist in their work tasks (Schaufeli et al., 2002).

- **Dedication**

Dedication is defined as the deep sense of enthusiasm and commitment to one's work, finding meaning and purpose in tasks (Gürbüz et al., 2024; Schaufeli et al., 2002). Dedication reflects an individual's strong involvement in their work, characterised by a belief in its significance, a sense of pride, and an optimistic outlook (de Waal & Pienaar, 2013; Yuan & Liu 2025). It also involves having the determination and resilience to persist through obstacles, maintaining focus and motivation even when one is faced with challenges (de Waal & Pienaar, 2013; Yuan & Liu 2025).

Nurses who are dedicated to their work tend to find greater satisfaction in their roles, develop a strong sense of belonging within their teams, and are more motivated to contribute to the organisation's success (Poku et al., 2025). Their deep commitment to their profession makes them less likely to leave, as they perceive resignation as both a personal and professional disruption (Poku et al., 2025).

- **Absorption**

Absorption is a core dimension of work engagement and refers to a state in which individuals are fully immersed in their work, experiencing intense concentration and may lose track of time and become less aware of their surroundings (Schaufeli et al., 2002). When employees are absorbed in their tasks, they become deeply involved in their work to the extent that disengaging becomes difficult, showing that they are mentally and emotionally invested in their work (Tanskanen, 2025).

Absorption is closely linked to psychological flow, which occurs when job demands match employees' skills, enabling deep focus on meaningful work and alignment with personal and role related goals (Bakker, 2005; Khusanova et al., 2021). Research shows that absorption in work is associated with lower levels of emotional exhaustion and depersonalisation, as deep involvement in tasks reduces emotional strain and supports sustained work engagement in demanding roles (Alkfare-Alkferi, 2024).

2.3. TURNOVER INTENTION

This section delves into the definitions of turnover intention available in the literature, it explores the theories and models of turnover intention, providing explanations of each.

2.3.1. Conceptualisation of turnover intention

Research shows that there are various definitions of turnover intention. Mobley and Price (1977) were among the first to test turnover intention models based on Theory of Organisational Equilibrium (Smokrovic´ et al, 2022). Turnover intention is defined as an employee's thought process in response to their perceptions of the work environment and broader economic conditions, which can lead them to seek better opportunities and voluntarily leave their organisation (Ahmad, 2018). Tett and Meyer (1993) define the concept of turnover intention as a withdrawal cognition process, this process involves the initial consideration of resignation and then the pursuit of alternative employment opportunities. Similarly, Bothma and Roodt (2012) conceptualised turnover intention as an employee's conscious and deliberate intent to terminate their employment relationship with the organisation. Bester et al. (2015) defines turnover intention as an employee's conscious and deliberate feeling to voluntarily leave their current organisation in pursuit of a more favourable or fulfilling position elsewhere. Turnover intention, as defined by Norizan et al. (2023), refers to an employee's desire to voluntarily leave their job within a specified period. Despite variations in definitions, the literature consistently highlights that turnover intention reflects an employee's conscious and deliberate decision to exit their organisation. It is important to note that understanding turnover intention enables organisations to anticipate and potentially predict actual employee turnover (Bester et al., 2015). Furthermore, it is important to recognise that turnover intention does not guarantee an employee's resignation, rather it reflects their consideration of leaving their organisation (Norizan et al., 2023).

2.3.2. Theories and Models of Turnover Intention

This section delves into the two theories and models of turnover intention such as Mobley's turnover decision process model (Mobley, 1977) and Job Embeddedness Theory (JET) developed by Mitchell et al. (2001) providing the origin, key concepts and limitations of each model.

2.3.2.1. Mobley's Turnover Decision Process Model

Mobley's (1977) turnover decision process model explains how employees gradually move from feeling unhappy at work to actually leaving their job. Rather than viewing turnover as a sudden decision, the model shows that resignation is the result of a series of psychological and behavioural steps that happen over time (Spencer et al., 1983; Lee, 1988). This approach helps clarify how and why employees reach the point of leaving, making it useful for understanding turnover behaviour.

According to the model, the process begins when an employee experiences job dissatisfaction. This dissatisfaction leads to thoughts about leaving the organisation, which then prompts the employee to weigh the possible benefits of alternative employment alongside the costs of quitting their current job (Lee, 1988; Wittmer et al., 2014). If dissatisfaction persists, the employee may develop an intention to search for new job opportunities and actively begin that search. Once alternatives are identified, they are compared to the current role, and if these options appear more attractive, the intention to leave strengthens, ultimately resulting in actual turnover (Lee, 1988).

Research in healthcare settings supports this staged process. Poor working conditions, excessive workloads, and insufficient support have been shown to reduce nurses' job satisfaction, triggering the first stage of Mobley's model (Yurumezoglu & Kocaman, 2016). As dissatisfaction grows, nurses begin to consider leaving their unit or organisation and may explore alternative options, including moving to different healthcare settings or leaving the profession entirely (Enea et al., 2024). Studies further show that nurses often progress through turnover in stages, first leaving their unit, then the organisation, and eventually the profession, aligning closely with Mobley's proposed sequence (Yurumezoglu & Kocaman, 2016).

Despite its contributions, Mobley's model has limitations. Wittmer et al. (2014) argue that differences in how turnover intentions could potentially lead to actual turnover across demographic and occupational groups indicate that the model does not fully consider contextual factors, such as labour market conditions, personal circumstances, or organisational influences.

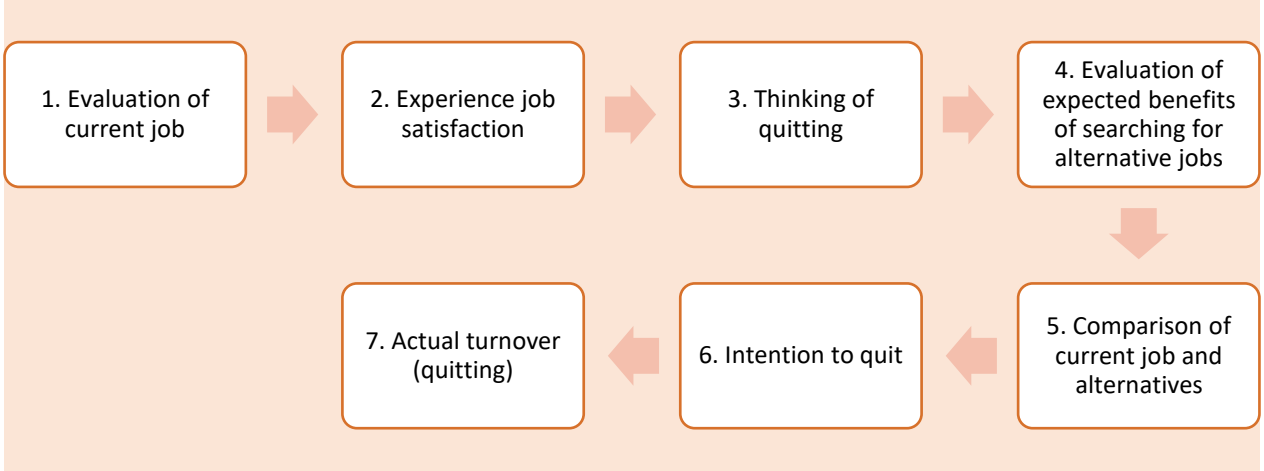
Turnover in healthcare has serious consequences, including workforce instability, increased organisational costs, and heavier workloads for remaining nurses (Aldhafeeri & Alanazi, 2024; Kiptulon et al., 2025). These pressures contribute to staff shortages, reduced quality of patient care,

increased medical errors, longer waiting times, and higher hospital readmission rates (Aldhafeeri & Alanazi, 2024; Kiptulon et al., 2025). Understanding turnover as a gradual process, as outlined in Mobley's model, highlights the importance of early intervention. By addressing dissatisfaction before it progresses to intentions and active job searching, organisations can disrupt the turnover cycle and improve nurse retention.

Figure 2.3 provides an illustration of Mobley's model of the turnover process.

Figure 2.3

Mobley's Model of the Turnover Process



Note. Author's own compilation based on Mobley's (1977) turnover decision process model

2.3.2.2. Job Embeddedness Theory

The Job Embeddedness Theory (JET), developed by Mitchell et al. (2001), examines the factors that connect employees to their jobs and make leaving the organisation more difficult, helping to explain why employees choose to stay with an organisation. While JET is not explicitly designed to predict turnover, it acts as a strong negative predictor of turnover intention, meaning that higher levels of embeddedness are associated with a reduced desire to leave (Mitchell et al., 2001; Takawira, 2024).

JET conceptualises embeddedness through three subcomponents namely links, fit, and sacrifice, which apply to both work and non-work contexts (Treuren & Fein, 2021; Yao et al., 2004). Links refer to the connections employees have with colleagues, teams, and the broader community when these connections are strong and meaningful, employees tend to feel more attached to their organisation, making the decision to leave more difficult (Yao et al., 2004). Fit describes the alignment between an employee's personal values, goals, and lifestyle with their job, organisation, and community (Yao et al., 2004). Greater compatibility increases the likelihood that employees will stay because they feel integrated and comfortable in their environment (Yao et al., 2004). Sacrifice refers to what employees believe they would lose if they left their job, such as relationships, benefits, or future career opportunities, when these potential losses feel significant, employees are less likely to want to resign (Yao et al., 2004).

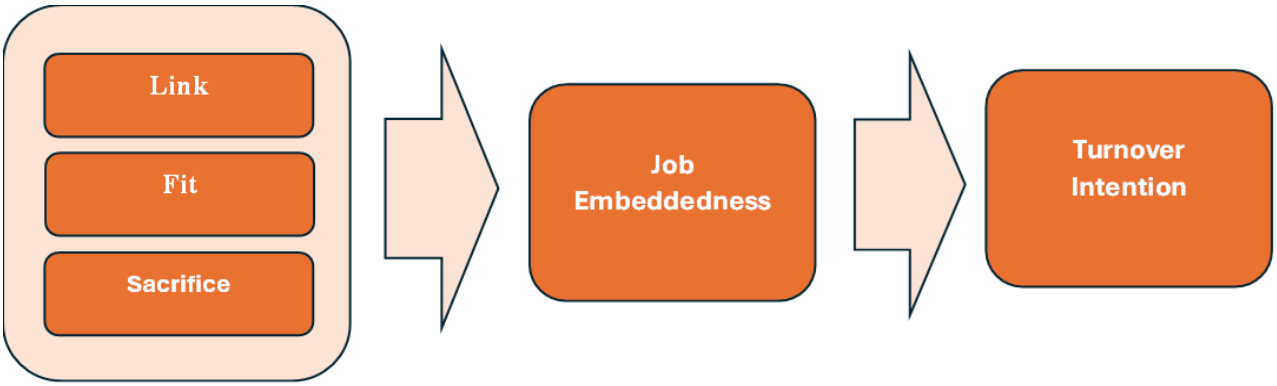
In the nursing context, JET is particularly useful for understanding turnover intention. Nurses who feel embedded in their roles are more likely to develop strong workplace relationships, higher engagement, and increased commitment to organisational goals reducing their desire to leave the organisation (Poku et al., 2025; Rahimnia et al., 2021). Research indicates that embeddedness is especially important within the first two years of employment, as this period strongly shapes long-term retention (Fan et al., 2024). Organisations can strengthen nurses' embeddedness by providing guidance, career planning, mentorship, and workplace support. On the opposite side factors such as high patient-to-nurse ratios, heavy workloads, irregular hours, and unpredictable hospital conditions can reduce embeddedness and increase the risk of turnover (Rahimnia et al., 2021).

While JET provides a valuable framework, it has limitations. The theory was primarily developed and tested in Western contexts, which may limit its applicability across different cultural and labour market settings (Zhang et al., 2012). Additionally, high embeddedness may sometimes constrain external mobility and career growth, as employees may remain in roles due to strong links, fit, or anticipated sacrifices rather than genuine engagement or development opportunities (Ng & Feldman, 2010; Takawira, 2024).

Figure 2.4 presents the conceptual model illustrating the relationship between job embeddedness and turnover intention.

Figure 2.4

Conceptual Model of the Relationship Between Job Embeddedness and Turnover Intention



Note. Author's own work

2.3.3. Consequences of high turnover intention

Research consistently shows that turnover intention is the strongest predictor of actual employee resignation (Bester et al., 2015), making it a concern for organisations to look out for. Importantly, turnover intention does not only signal a future decision to leave, but also has consequences while employees are still employed (Bester et al., 2015). Employees who intend to leave are more likely to engage in risky or counterproductive behaviours, which can negatively affect team functioning and organisational performance (Sreeja et al., 2025).

Turnover intentions also have significant organisational costs. Actual turnover results in financial losses related to recruitment, onboarding, and training of replacements, as well as reduced productivity during transition periods (Belete, 2018). In addition, the loss of employees with specialised skills or organisational knowledge can disrupt operations, reduce competitiveness, and weaken organisational performance (Belete, 2018).

At the individual level, employees experiencing turnover intention often display withdrawal behaviours as a response to dissatisfaction or ongoing challenges in the workplace (Bothma & Roodt, 2012). This withdrawal typically follows a progression from job dissatisfaction to thoughts of leaving, job-search behaviour, and the evaluation of alternative employment opportunities ultimately increasing the likelihood of turnover (Smokrović et al., 2022).

2.4. BIOGRAPHICAL CHARACTERISTICS AND THE KEY CONSTRUCTS

In this section the biographical variables that influence nurses' retention, work engagement and turnover intention are discussed. These variables include age, gender and employment status.

Age

Research shows that nurses of different ages have different priorities and expectations from their work (Perkins et al., 2023). Younger nurses, such as millennials (between 29-44 years old), often value flexibility, work-life balance, and supportive leadership, while older nurses value using their skills and experience effectively (Perkins et al., 2023). One key factor that helps retain younger nurses is supervisory support. When nurse managers provide guidance, recognition, clear communication, and constructive feedback, it helps younger nurses feel supported and valued. This increases their engagement with their work and decreases their intention to leave the organisation (Perkins et al., 2023).

Employees' motivations and work-related goals shift across their lifespan. Younger employees tend to prioritise extrinsic rewards, such as competitive remuneration and work-life balance, while older employees place greater value on opportunities to apply their skills, make meaningful contributions, and maintain professional relevance (Kollmann et al., 2020). Similarly, perceptions of pay fairness differ by age, with younger employees reporting dissatisfaction when they perceive underpayment, whereas older employees may experience dissatisfaction when they feel overcompensated relative to their contribution (Kollmann et al., 2020).

Generational differences are also evident in preferences for flexibility and career orientation. Younger generations increasingly seek flexible work arrangements and balance between personal and professional demands, whereas older employees may prioritise stability, career continuity, and role mastery (Tan & Chin, 2023). Despite these differences, certain retention factors remain consistent across age groups, including the need for certain job characteristics like recognition, autonomy and constructive feedback (Perkins et al., 2023; Tan & Chin, 2023). Research shows that generational differences exist in how retention factors are experienced, indicating that organisations should consider the unique needs and priorities of each age group when developing retention strategies.

Research indicates that work engagement may increase slightly with age, though the effect is low and may not be practically significant (Schaufeli et al., 2006). Generational differences in engagement are often shaped by the social and cultural contexts in which employees were raised, influencing their values and attitudes toward work (Tan & Chin, 2023). Some studies suggest that different age groups may experience or value meaningful work differently (Tan & Chin, 2023). Contrary to common stereotypes that older employees are resistant to change, research show that they can remain highly engaged and contribute significantly to organisational success (Douglas & Roberts, 2020). However, engagement may decline for older employees approaching retirement, especially when opportunities for career growth are limited or they experience stagnation (Douglas & Roberts, 2020).

Studies show a negative relationship between age and turnover, meaning that older employees are generally less likely to leave their jobs compared to younger employees (Du Plooy & Roodt, 2013). In fact, age is often negatively associated with employees' intentions to quit, with younger staff being more prone to consider leaving than their older colleagues (Ng & Feldman, 2010). For employees under 30, factors such as opportunities for skill development and performance-related pay play an important role in reducing their intention to leave, while these same factors appear less important for employees over 45 (Martin et al., 2021). Older workers also tend to manage their emotions more effectively and focus on positive experiences, which makes them more resilient to workplace challenges and less likely to leave (Martin et al., 2021). Age-related differences in work values further influence turnover intentions. Younger employees, particularly millennials, often prioritise growth, new experiences, and career advancement, making them more willing to change jobs if these needs are unmet. In comparison, older employees typically value stability, status, and meaningful social connections within the workplace, which contributes to their lower likelihood of leaving (Kanfer & Ackerman, 2004; Larasati & Wisesa, 2023).

Gender

Research shows that there is a relationship between gender and work engagement, with men and women often experiencing and expressing engagement differently across work contexts. Organisational structures and workplace cultures have been found to favour traditionally

masculine norms and behaviours, which can make it easier for men to feel engaged at work (Banihani et al., 2013). These structural biases may disadvantage women by limiting career progression opportunities and reducing their sense of feeling valued, thereby impacting the important drivers of engagement such as meaningful work and purpose (Banihani et al., 2013). Research further shows that women tend to place greater emphasis on the emotional and relational aspects of work, including meaningful tasks, positive relationships with colleagues, and a sense of connection to their work, all of which play a significant role in shaping their engagement (Mascarenhas et al., 2022). In comparison, men are more likely to engage actively in their work when they perceive strong organisational and supervisory support (Li et al., 2023). However, gender differences in engagement are not the same across occupations. Within the nursing profession, Hisel (2020) found that female nurses reported higher levels of work engagement than their male counterparts, particularly in the dimension of vigour, which reflects energy, resilience, and enthusiasm at work.

Research indicates that challenges or dissatisfaction with key retention factors across gender groups have significant implications for employee retention and turnover intentions. Studies suggest that women are not always valued equally in work environments, with challenges of career interruptions related to family responsibilities and experiences of unfair treatment contributing to perceptions of lower organisational value (Huang et al., 2006). Such perceptions may discourage women from investing in job-specific skills and long-term career development, increasing turnover risk, particularly among highly educated women (Huang et al., 2006). In contexts where traditional gender roles are dominant, childcare responsibilities further constrain women's ability to build stable and sustained careers (Huang et al., 2006).

Retention research also highlights the role of supportive organisational policies in addressing these challenges. Parental leave policies have been shown to reduce turnover for both men and women, while flexible work arrangements are especially effective in strengthening women's organisational commitment by supporting work-family balance (Shockley et al., 2017). Despite these interventions, women continue to exhibit higher turnover rates than men in certain sectors, particularly healthcare, where there is work-life conflict and pressures (Nasir et al., 2019). When these pressures are combined with limited advancement opportunities and unsupportive organisational cultures, women's intentions to leave are further increased (Nasir et al., 2019).

Research shows that women are more likely than men to leave certain sectors, largely as a result of work-family conflict, which is closely associated with increased burnout and stronger turnover intentions (Lawson et al., 2024). These challenges increase in male-dominated work environments, where limited access to female role models and mentorship makes it more difficult for women to balance career progression with family responsibilities (Lawson et al., 2024). Conversely, men face different gender-related challenges in professions traditionally perceived as feminine, such as nursing. Although nursing continues to grow as a profession, men remain significantly underrepresented, this pattern is a result of persistent societal perceptions of nursing being a female career (Zafra, 2015). Male nurses may experience tension between societal expectations and their professional identity, which can increase stress, reduce job satisfaction, and heighten turnover intentions (Deng et al., 2024). As a minority group, they may also encounter discrimination, limited peer support, and restricted career development opportunities, all of which contribute to occupational strain and an increased likelihood of leaving their roles (Deng et al., 2024).

Employment Status

Research shows the relationship between employment status and work engagement. Part-time and temporary employees often have narrower job scopes, limiting their opportunities to use a variety of skills (Hackman & Oldham, 1976). This matters because job characteristics like task variety, autonomy, and development opportunities increase motivation, engagement, and productivity (Albrecht et al., 2021; Cotič et al., 2023). On the other hand, engagement is also influenced by the reasons employees take temporary roles, which is for personal satisfaction, flexibility, or alignment with career goals these employees tend to show higher energy, enthusiasm, and deeper involvement in their tasks (Lopes & Chambel, 2014). Offering a different perspective Lopes and Chambel (2014) argue that temporary workers who accept positions mainly due to external pressures, such as financial necessity or avoiding unemployment, often experience lower engagement and weaker attachment to their work.

Employment status can influence turnover intentions and employee retention (Al & Anil, 2016). Part-time employees typically work fewer hours than full-time staff, which provides greater flexibility and helps them manage responsibilities outside of work (Al & Anil, 2016). This

improved work-life balance can support retention, as employees are better able to meet both personal and professional demands (Al & Anil, 2016). Research also indicates that part-time employment is associated with lower turnover intentions among nurses, suggesting that flexible work arrangements may decrease the likelihood of leaving the profession (Zeytinoglu et al., 2011).

Temporary and agency work arrangements can lead to higher turnover because the lack of job security, social support, and advancement opportunities reduces commitment and signals organisational instability to both temporary and permanent staff (Cropanzano et al., 2022). While temporary nurses may experience lower levels of emotional strain due to fewer organisational expectations, permanent or full-time nursing employees often report higher levels of emotional exhaustion and turnover intention compared to temporary nurses, largely due to higher workload pressures and role demands (Burke et al., 2014). Despite this, temporary employees' reduced access to organisational resources and support continues to undermine long-term engagement and retention, showing the complex relationship between employment status, motivation, and turnover behaviour (Jiang & Wang, 2018).

Additionally temporary or agency workers are primarily motivated by compensation and tend to be less concerned with organisational support or training and development opportunities (Jiang & Wang, 2018). This transactional employment relationship can result in feelings of exclusion, which may contribute to lower engagement and increased turnover intentions among temporary staff (Jiang & Wang, 2018).

2.5. SELF-DETERMINATION THEORY AS AN OVERARCHING LENS

SDT explains human motivation and behaviour, focusing on people's natural desire to grow and develop (Ryan & Deci, 1985, 2002). According to the theory, motivation is influenced by the satisfaction of three basic psychological needs: competence, relatedness, and autonomy (Ryan & Deci, 2000). Competence refers to an individual's confidence in their ability to effectively perform tasks and achieve goals (Deci & Ryan, 1985). Relatedness reflects the need to feel connected, valued, and supported by others, as well as a sense of belonging within a group (Deci et al., 2017). Autonomy refers to an individual's desire for control and freedom in making decisions about their

work (Deci & Ryan, 1985). In the context of this study, retention factors can be understood as job resources that fulfil employees' basic psychological needs. Work engagement is viewed as the psychological outcome of these needs being satisfied. Conversely, when these needs are not met, employees may experience reduced motivation and increased turnover intention. Therefore, SDT provides a useful theoretical basis for understanding how retention factors and work engagement influence nurses' intentions to remain in or leave their organisations.

Competence is important for engagement. Leaders who provide opportunities for skill development, assign challenging tasks, and offer supportive feedback help employees build confidence and self-esteem, boosting engagement and involvement in their work (Forner et al., 2020). Feeling competent allows employees to invest more effort in their roles, take on responsibilities, and engage fully in their tasks (Forner et al., 2020).

From a retention perspective, competence is closely linked to factors such as training and development and career opportunities. Employees who perceive that their skills are recognised and their growth is supported are more likely to feel valued, satisfied, and committed to the organisation (Forner et al., 2020). Conversely, when opportunities for growth and skill development are limited, employees are more likely to consider leaving (Bento & Palma-Moreira, 2025). Supporting research further shows that access to development opportunities and career growth plays a significant role in reducing turnover (Mabaso et al., 2021; Chamanga et al., 2020; Döckel et al., 2006).

Relatedness also strongly influences engagement. Employees who feel connected, included, and supported show higher energy, enthusiasm, and involvement in their roles, which strengthens their commitment, improves performance, and enhances engagement (Schaufeli & Bakker, 2004; Forner et al., 2020). This sense of belonging is important for retention, as employees who experience authentic interactions and strong workplace relationships feel valued and included, which encourages long-term commitment (Forner et al., 2020).

Leaders play a key role in supporting relatedness by promoting team building, effective onboarding, socialisation opportunities, and inclusive work environments, all of which contribute to higher engagement and improved retention (Forner et al., 2020). According to SDT, when people feel socially excluded or disconnected from others, their need for relatedness is not met (Haung & Bartels, 2025). This lack of connection can reduce their motivation to engage fully in

the situation they are in. As a consequence of this, to cope with this unmet need, individuals may try to distance themselves or remove themselves from the environment in order to protect their sense of belonging and psychological well-being (Haung & Bartels, 2025).

Autonomy plays a key role in fostering employee engagement. When employees feel they have control over their work and can make choices aligned with their values and interests, they experience greater intrinsic motivation, which drives engagement (McAnally et al., 2024; Ryan & Deci, 2000, 2019).

Autonomy, as a key job characteristic and retention factor, plays an important role in fostering employee engagement. When employees feel they have control over their work and are able to make decisions aligned with their values and interests, they experience greater intrinsic motivation, which in turn enhances engagement (McAnally et al., 2024; Ryan & Deci, 2000, 2019). This sense of self-direction allows employees to be proactive, emotionally invested, and satisfied with their tasks, leading to higher performance and overall workplace commitment (Ryan & Deci, 2000). Conversely, environments that restrict autonomy through micromanagement or lack of control reduce intrinsic motivation and engagement (Kohnen et al., 2024).

Autonomy also strengthens retention by making work feel meaningful and fulfilling. When employees are trusted to manage their tasks and make decisions, their motivation becomes more self-driven, enhancing their emotional attachment to both their work and the organisation (Wandycz-Mejias et al., 2025). Environments that support autonomy, along with competence and relatedness, promote daily engagement and psychological well-being, which further encourages employees' commitment to stay (Kohnen et al., 2024; McAnally et al., 2024). Studies in healthcare show that supporting employees' autonomy and development increases retention and job satisfaction, as seen in research on nurses (Fernet et al., 2020; Rahmah et al., 2022).

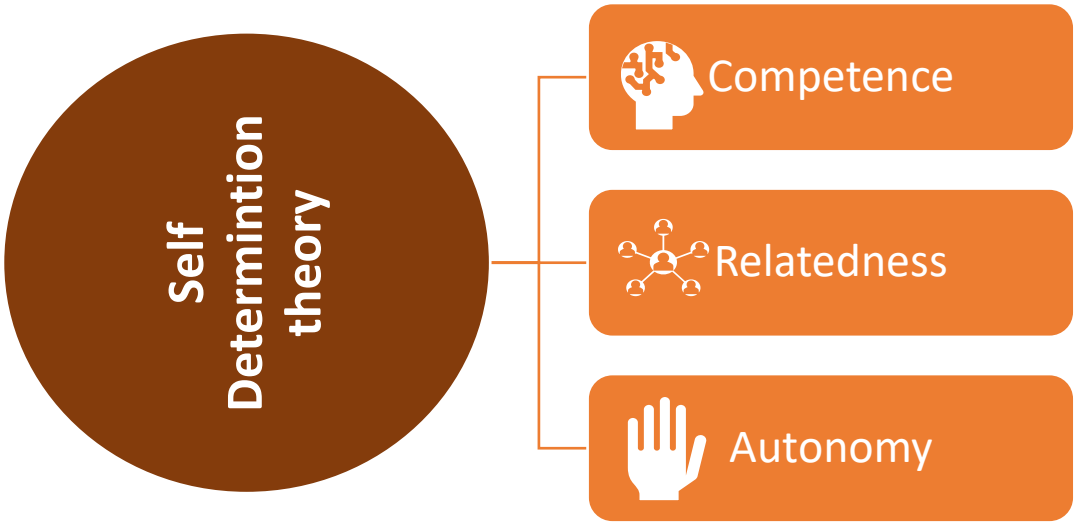
Finally, autonomy reduces turnover intention by shaping positive work attitudes and intrinsic motivation. Employees who feel empowered and able to make meaningful choices at work experience higher job satisfaction and are less likely to consider leaving, whereas restricted autonomy leads to disengagement and a stronger desire to exit (Wan & Duffy, 2022; Van den Broeck et al., 2021). The SDT also emphasises the important role of employers and leaders adopting autonomy supportive behaviours such as encouraging employee input, offering meaningful choices, and fostering a sense of ownership cultivates a work environment that

enhances engagement, reduces turnover, and improves overall employee well-being (McAnally & Hagger, 2024).

Figure 2.5 outlines the three fundamental psychological needs of SDT.

Figure 2.5

Three Fundamental Psychological Needs of SDT



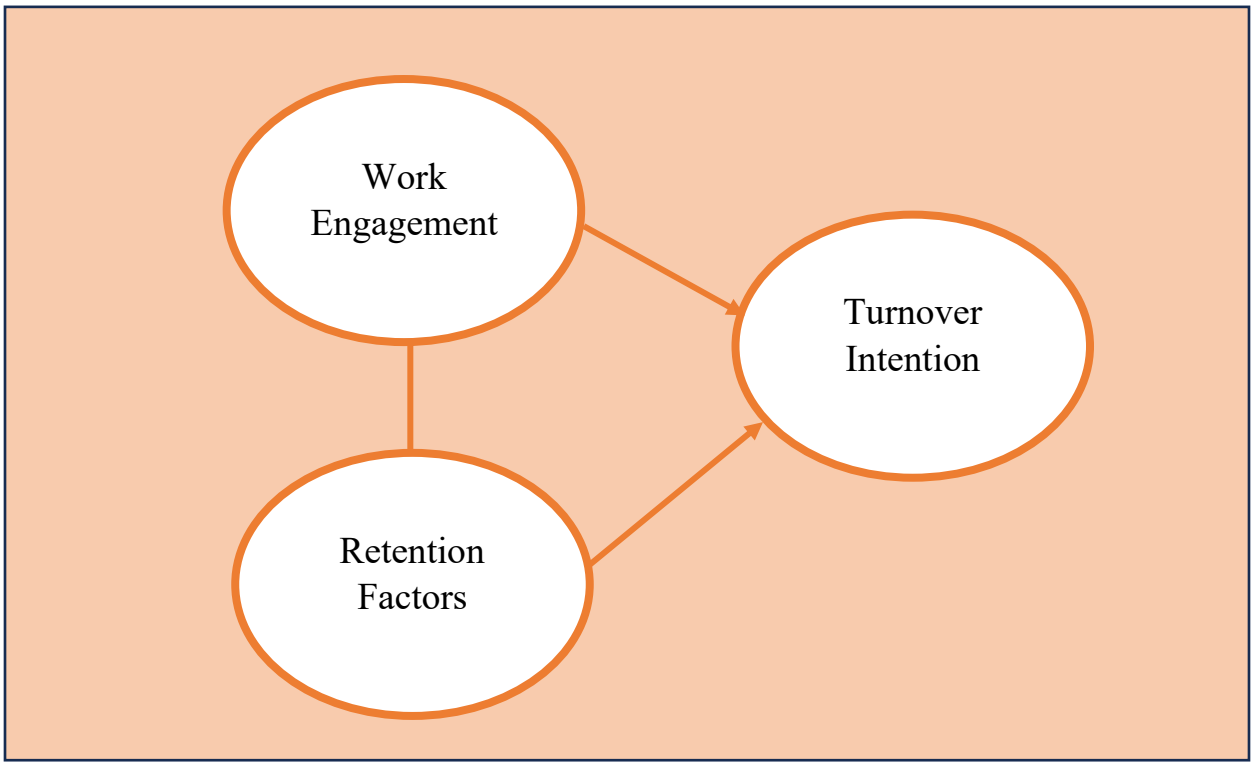
Note. Author's own compilation based on Ryan and Deci (2000).

2.6.THEORETICAL MODEL

Figure 2.6 provides the theoretical model of this study that illustrates links between retention factors, work engagement, and turnover intention.

Figure 2.6

Proposed Model Depicting the Relationships Between Retention Factors, Work Engagement, and Turnover Intention



Source: Author's own work

2.6. THEORETICAL INTEGRATION OF THE CONSTRUCTS

Retention factors, work engagement, and turnover intention can be seen as constructs that form part of a dynamic resource-motivation-attachment system that explains why nurses remain in or leave their jobs. Rather than a simple linear relationship, we could look at turnover intention from the interaction between workplace resources, psychological need fulfilment, and the degree to which employees are embedded within their organisational context.

This discussion will integrate the JD-R model, JET and SDT as the overarching theory to provide explanation of how retention factors and work engagement jointly shape turnover intention. Specifically, the JD-R model is used to explain how retention factors function as job resources that

foster work engagement, SDT is drawn on to explain the psychological mechanisms through which these resources influence motivation, and JET is used to explain the structural forces that anchor employees within organisations. Together, these perspectives provide a comprehensive framework for understanding how retention factors and work engagement jointly shape turnover intention.

From a JD-R perspective, retention factors function as job resources that shape the motivational climate of the workplace. Job resources refer to aspects of work that facilitate goal attainment, reduce the strain associated with job demands, and promote personal growth, for example fair remuneration, career advancement opportunities, and social support (Bakker et al., 2004; Bakker & Demerouti, 2007). Importantly, these resources do not operate in isolation but interact and accumulate to form a broader resource reservoir that sustains employee energy, resilience, and involvement over time Within this process, work engagement emerges as a key psychological state characterised by vigour, dedication, and absorption, enabling professionals to maintain performance and reducing withdrawal tendencies (Schaufeli et al., 2002; Bakker et al., 2008). Research indicates that work engagement explains differences in turnover intention, suggesting that insufficient resources increase the likelihood of withdrawal (Halbesleben & Wheeler, 2008). However, a limitation of the JD-R model is that it provides a largely descriptive account of the relationship between job resources and outcomes, without fully explaining the psychological mechanisms through which these resources influence employees. As such, the impact of resources may vary depending on how they are perceived and experienced by employees (Schaufeli & Taris, 2014).

SDT addresses this limitation by emphasising that the effectiveness of job resources depends on their ability to satisfy employees' basic psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000; Van den Broeck et al., 2008). This suggests that basic psychological need satisfaction represents a central mechanism through which job resources are translated into motivational outcomes (Van den Broeck et al., 2008). When organisational practices support these needs through empowering leadership, opportunities for mastery, and meaningful interpersonal connections, employees are more likely to internalise motivation and engage in their work in a self-determined manner. This results in more sustainable and meaningful engagement behaviour (Gajenderan et al., 2023; Forner et al., 2021). Additionally, the satisfaction of competence, relatedness, and autonomy reduces turnover intention. Lack of development

opportunities increases turnover intention, whereas social disconnection and restricted autonomy undermine motivation and further heighten the likelihood of employees intending to leave (Bento & Palma-Moreira, 2025; Haung & Bartels, 2025; Wan & Duffy, 2022; Van den Broeck et al., 2021).

While JD-R and SDT explain the development of motivation, JET provides insight into the structural mechanisms that keep employees in organisations. Embeddedness is reflected in three dimensions: links (interpersonal connections), fit (compatibility with the organisation), and sacrifice (the perceived cost of leaving) (Mitchell et al., 2001; Yao et al., 2004). Highly engaged employees accumulate valuable resources such as skills, flexibility, and supportive relationships, which increases the perceived cost of leaving, as these resources would need to be re-established in a new environment. In this way, engagement reduces turnover intention by strengthening both psychological attachment and perceived sacrifice (Halbesleben & Wheeler, 2008). When job demands exceed available resources or when resources fail to meet psychological needs, this process may reverse, leading to disengagement, weakened relational ties, and reduced alignment with the organisation ultimately contributing to increased turnover intention (Ryan & Deci, 2000; Broetje et al., 2020; Dhoopar et al., 2026).

Job resources such as compensation, supervisor support, and growth opportunities strengthen employees' fit, relational ties, and perceived sacrifice, thereby enhancing job embeddedness. However, these factors operate through distinct mechanisms: compensation primarily increases perceived sacrifice, supervisor support strengthens links and fit, and growth opportunities enhance alignment and future attachment. Training and development may have mixed effects, as increased employability can weaken embeddedness despite improving capability. This suggests that retention factors may simultaneously strengthen and weaken retention, depending on how they shape both motivation and attachment (Atan & Purba, 2018; Bergiel et al., 2009). Consistent with this, job embeddedness has been shown to mediate the relationship between job resources and turnover intention, indicating that resources reduce turnover not only through engagement but also by anchoring employees within the organisation (Bergiel et al., 2009; Mitchell et al., 2001).

2.7. IMPLICATIONS FOR RETENTION PRACTICES

South Africa's health workforce faces ongoing challenges rooted in historical inequalities and a changing healthcare landscape (Paul & Ravinder, 2025). Effective retention strategies must be context-specific, offering tailored support like mentorship and career development to build resilience and sustain the talent pipeline (Lerotholi & Bezuidenhout, 2023). Dockel (2003) investigated the factors influencing the retention of valuable professional employees within South African organisations, identifying key elements such as compensation, job characteristics, training and development opportunities, supervisor support, career advancement prospects, and work-life balance. As the workplace continues to evolve, it is important to examine whether these factors remain effective or if retention practices have changed for organisations and HR departments.

Pay and benefits are key factors in retaining employees (Baporikar, 2024). While financial rewards are significant, they alone are not enough to ensure long-term retention (Bussin, 2018). Research highlights that improving nurses' retention could be achieved through measures such as offering competitive salaries with annual reviews, revising retirement benefits and rewards for exceptional service, subsidising medical aid, and providing long-service bonuses (Mokoka et al., 2011). To strengthen retention in the public health sector, the South African government introduced the occupation-specific dispensation, designed to attract, motivate, and keep health professionals (Ditlopo et al., 2013). However, implementation has faced challenges, including poor planning, budget overspending, and unintended negative effects (Ditlopo et al., 2013).

The government's attempts to reduce the wage bill have mainly focused on national and provincial departments, especially in key areas like education, healthcare, and criminal justice (Sachs et al., 2024). To address this, a more effective strategy would be to expand wage bill policies to include the entire public sector, while simultaneously protecting these crucial sectors from budget cuts (Sachs et al., 2024).

Nurses play a key role in driving innovation within hospitals, contributing not only to the advancement of nursing as a profession but also to the broader development of healthcare institutions (Lu et al., 2025). However, the demanding and high-pressure environment of nursing can restrict nurses' ability and motivation to engage in innovative activities. To address these challenges, managers need to actively encourage and support nurses' innovation, an effective approach is empowerment, a leadership style where managers delegate decision-making authority

and responsibilities to employees (Lu et al., 2025). Additionally, nurses often struggle with understaffing, excessive workloads, limited equipment, and poor infrastructure (van Rensburg, 2014). Solutions to improve this include the use of artificial intelligence (AI) to strengthen both patient care and administrative efficiency (Faiyazuddin et al., 2025). In addition, AI processes large volumes of data and streamline workflows allow healthcare facilities to function more efficiently, ensuring that resources are allocated efficiently (Faiyazuddin et al., 2025).

Nurses play an important role in delivering safe and effective patient care. To meet modern healthcare demands, nurses must continuously adapt to emerging challenges, technological advancements, and the rising expectations of healthcare consumers (Singh & Mathuray, 2018). Training initiatives are essential in helping nurses enhance their skills and build confidence to take on expanded responsibilities, which not only improves retention but also strengthens the organisation's competitive edge (Manenzhe & Ngirande, 2021). In South Africa, there is a clear need to prioritise ongoing education and training for nurses to equip them to tackle global health challenges, address the persistent nursing shortage, and reduce the migration of nurses seeking better pay in other countries (Poto-Rapudi, 2025). Additionally expanding the pool of qualified nursing professionals is key to meeting the rising demand for healthcare services and mitigating workforce gaps (Poto-Rapudi, 2025). Many managers are unprepared for the complexities of health systems, making mentorship a vital tool for building strong leadership skills and supportive relationships that enhance organisational performance (Msiza & Lumadi, 2024). Additionally, mentorship provides a valuable opportunity for experienced nurses to transfer their knowledge to others, supporting succession planning especially important as the nursing workforce ages (Msiza & Lumadi, 2024).

The relationship between employees and their supervisors is an important factor in retention, as supportive and positive supervisory relationships encourage employees to stay with the organisation (Rajani, 2023). Perceived supervisor support also strengthens the impact of HR practices on retention by fostering employee commitment through constructive and supportive interactions with managers (Syah et al., 2023). Effective leadership and management are linked to better facility performance and a more motivated workforce. In South Africa's health sector, a shortage of management skills and training among managers is frequently highlighted as a key

contributor to poor service delivery and operational challenges within health facilities (Pillay, 2009).

Career advancement is valued by nurses as it enhances their sense of self-worth, increases their commitment and responsibility, and boosts their competence and effectiveness, leading to improved patient care (Van Biljoen-Mokhotla & Makhene, 2023). Nurses perceive their work environment as playing a key role in facilitating career progression, with managerial support, leadership development initiatives and structured role transitions being key enablers (Van Biljoen-Mokhotla & Makhene, 2023). Furthermore, research by Lerotholi and Bezuidenhout (2023) highlights that talent management practices influence nurses' dedication and engagement. For example, learning and development opportunities such as coaching and mentoring promote professional growth by fulfilling nurses' need for continuous development and career advancement. Career advancement boosts nurses' motivation and serves as a capacity-building strategy to develop experienced, high-performing leaders within the health system (Bellerose et al., 2022). Implementing structured career ladder systems offering ongoing education, certification, and promotion enhances clinical competence, improves collaboration across care levels, and helps reduce healthcare costs (Bellerose et al., 2022). As such, prioritising career progression is an important policy objective.

Progressive human resource policies that support work-life balance are essential, especially in professions like nursing where remote work is not a viable option due to the need for in-person care (Widayana et al., 2025). With the growing demand for quality healthcare, nurses in South Africa are under increasing pressure to provide care despite limited resources conditions that often lead to burnout and exhaustion (Van Zyl-Cillié et al., 2024). This makes it critical for organisations to prioritise employee well-being. IOPs play a key role in this space by implementing people-centred strategies such as mental health support, wellness initiatives, and work-life integration programmes (Coetzee & Veldsman, 2022). To be effective, mental health interventions must be evidence-based and included in daily organisational operation. Examples include psychoeducation, psychotherapy, physical activity, and resilience-building programs (Mahanjana et al., 2025). Mental health support also requires interventions at both the organisational and individual levels. In healthcare at the organisational level, efforts should address workload management, workplace culture, and support structures, although these may be hindered by cost

and resource constraints (Mahanjana et al., 2025). At the individual level, interventions must be aligned to employees' needs, however barriers include stigma, reluctance to participate, and self-selection bias (Mahanjana et al., 2025). With regard to work life balance both individual strategies (e.g., seeking support, taking breaks, task prioritisation) and organisational practices (e.g., fostering supportive environments, enhancing autonomy, and equipping supervisors) are important to sustaining work-life balance (Kashyap & Ahmad, 2025). A key challenge in healthcare is that long hours, overtime, and tight deadlines make it difficult for nurses to maintain clear boundaries between work and personal life (Zagaria, 2020). Technological advancements further blur these boundaries, as nurses are often expected to remain accessible outside normal working hours (Zagaria, 2020).

2.8. CHAPTER SUMMARY

This chapter reviewed the main concepts examined in this study which are retention, work engagement, and turnover intention. It outlined how these concepts are understood in current research and their importance in the healthcare environment. Theories and models relevant to understanding these constructs were discussed, along with the possible effects of biographical characteristics. The SDT was presented as the overarching theoretical lens. The chapter concludes by highlighting how insights from the literature can inform the improvement of retention practices in healthcare settings.

CHAPTER 3: RESEARCH ARTICLE

(This chapter is prepared in accordance with the South African Journal of Industrial Psychology (SAJIP) requirements for journal articles and will be submitted for publication upon acceptance of this dissertation.)

Investigating the relationship between retention factors, work engagement, and turnover intention amongst South African nurses

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ABSTRACT

Orientation: The South African healthcare sector faces ongoing challenges in retaining skilled nurses due to factors such as workforce shortages, increased workloads, and limited development opportunities. Addressing these issues through effective retention strategies is essential to ensure stable staffing and maintain quality healthcare delivery.

Research Purpose: The purpose of this study is to examine the relationship between retention factors, work engagement, and turnover intention among nurses in South Africa, while also assessing the role of biographical factors such as age, gender, and employment status.

Motivation for the study: South Africa faces a critical shortage of nurses, worsened by poor working conditions, limited growth opportunities, and burnout, leading many to leave the profession. Understanding the factors that influence retention, work engagement, and turnover intention is essential for developing strategies to retain nursing talent and support the healthcare system.

Research approach/design and method: This study followed a quantitative research approach and made use of a cross-sectional design. A total of 121 nurses took part in the study. Data was collected through an online questionnaire. The analysis involved the use of descriptive statistics,

correlation analysis, as well as multivariate statistical techniques. All data was analysed using the Statistical Package for Social Sciences (SPSS), version 30.0 and SmartPLS 4.1.1.6.

Main findings: Significant interrelationships were found between retention factors, work engagement, and turnover intention. Retention factors and work engagement were also significant predictors of turnover intention. Additionally, mean differences based on gender were observed, with female nurses reporting lower satisfaction with training and career opportunities.

Practical/managerial implications: Management and people practitioners should assess nurses' work engagement and satisfaction with key retention factors, important retention factors include competitive compensation, opportunities for career development, positive working conditions, recognition, and supportive leadership. By regularly evaluating how well these factors meet nurses' needs, organisations can identify areas requiring improvement. Enhancing these retention factors and improving engagement fosters higher levels of work engagement, which in turn reduces nurses' turnover intentions.

Contribution/value-add: This study contributes to the existing body of knowledge by offering insights into how retention factors and work engagement influence turnover intention among nurses in South Africa. The findings may assist people practitioners, healthcare leaders, and policymakers in developing targeted strategies to improve nurse retention, enhance engagement, and reduce turnover ultimately supporting a more stable and effective healthcare system.

Keywords: Retention factors, employee engagement, turnover intention, nurses, retention.

INTRODUCTION

Nurses are an important part of the healthcare system, and the COVID-19 pandemic highlighted their critical frontline role (Lopez et al., 2022). Despite growing demand, global nurse shortages affecting over 150 countries are worsening due to poor working conditions, aging workforces, and limited career advancements (Luoma-aho et al., 2025; Mansour & Chênevert, 2024). In the U.S., the nursing workforce declined significantly between 2020 and 2022 (Hodgson et al., 2024). Similarly, countries like the Netherlands face rising shortages as nurses are deciding to leave the profession (van Merode et al., 2024).

The World Health Organization (2021) projects a global shortage of 18 million healthcare professionals by 2030, with both developed and developing countries expected to be impacted. In response, it is essential for healthcare organisations to develop and implement effective nurse retention strategies. This includes investigating the factors that influence nurses' engagement, satisfaction, and decisions to remain in the profession. As suggested by Forde-Johnston and Stoemer (2022), retention strategies should include evaluating nurses' experiences within healthcare organisations, career development opportunities, human resource policies, and the effectiveness of current retention initiatives.

South Africa expects a shortage of 34,000 nurses by 2025, with nearly half of professional nurses aged over 50 who are nearing retirement age (Rural Health Advocacy Project, 2023). Although nurse retention is a globally recognised issue, research focused specifically on the South African healthcare context remains limited. Existing studies (e.g., Greyling & Stanz, 2010; Dhanpat et al., 2019) emphasise the importance of exploring how retention factors influence work engagement and turnover intentions among nurses in South Africa. Addressing this gap is essential to developing contextually relevant and sustainable solutions to the nursing shortage.

Fostering work engagement has been identified as key for reducing employee turnover, as engaged employees exhibit greater commitment to their organisations (Snyman, 2022). For employers, particularly in healthcare, ensuring staff remain engaged at work is crucial for retention (Moscelli et al., 2025). This is especially important given the strong sense of altruism and intrinsic motivation that often defines roles within the healthcare sector (Moscelli et al., 2025).

Turnover intention among nurses is a key indicator of actual staff turnover and can have both beneficial and detrimental effects on healthcare organisations (Yi et al., 2024; Marshall & Stephenson, 2020). Examining these intentions offers critical insights into employee expectations, helping organisations develop targeted retention strategies (Yi et al., 2024).

This study applies Self-Determination Theory (SDT) as an overarching lens, which emphasises that motivation and retention are driven by the satisfaction of three basic psychological needs: autonomy, competence and relatedness (Rigby & Ryan, 2018). When these needs are supported, employees are more likely to internalise motivation and remain engaged in their work. In addition, the Job Demands-Resources (JD-R) model is used to explain how workplace characteristics influence engagement and withdrawal behaviour. It proposes that job resources such as supervisor support, career development and working conditions foster work engagement, while a lack of resources contributes to strain and increased turnover intention (Bakker & Demerouti, 2007; Schaufeli et al., 2002). Job Embeddedness Theory (JET) further explains retention by focusing on the extent to which employees are connected to their organisation through links, fit and sacrifice. Strong embeddedness increases the perceived cost of leaving and reduces the likelihood of turnover intention (Mitchell et al., 2001). Together, SDT, JD-R and JET provide a comprehensive framework for understanding turnover intention by linking psychological need fulfilment, motivational processes and organisational attachment.

Main research aim

The general aim of the study was to investigate the interrelationship between retention factors, work engagement, and turnover intention, and to determine how nurses' biographical characteristics differ in relation to these variables.

DETERMINANTS OF NURSE RETENTION ESTABLISHED IN LITERATURE

Research by Döckel (2003) identified six factors that contribute to the retention of employees. These factors include compensation, job characteristics, training opportunities, supervisor support, career development, and work/life balance.

According to Döckel (2003), employee compensation includes both financial rewards and benefit packages offered by an organisation in exchange for an employee's work. Traditionally, compensation has been defined primarily by monetary components such as salaries, overtime payment and bonuses (Singh, 2019). Bussin (2018) argued that solely using compensation to improve retention is not a sustainable solution for retaining employees in the long run. In spite of this argument, research shows that competitive compensations is a critical component of retention and a factor that is not only use to incentivise employees but also contributes to their retention (Dhanphat et al., 2018)

Job characteristics are the key elements of a job that shape employees' experiences and influence their motivation, engagement, and retention (Boonzaier et al., 2001; Modau et al., 2018). Greater autonomy and consistent feedback contribute to feelings of empowerment and engagement, while task significance is especially crucial in nursing because of its direct effect on patient outcomes (Heidari et al., 2017; Cotič et al., 2023). When these job characteristics are present, employees are more likely to be engaged and committed to the organisation (Cotič et al., 2023)

Training and development opportunities provide employees with the skills and knowledge needed to perform effectively (Dhanphat et al., 2018). Employees often view access to development opportunities as an organisational investment, which strengthens commitment and retention (Döckel et al., 2006; Hadebe et al., 2023).

Supervisor support shapes employee experiences through recognition, feedback, and guidance, contributing to perceived organisational support (Dhanphat et al., 2018). Over time, strong supervisory relationships create emotional attachment to the organisation and reduce turnover intentions (Warwick et al., 2023). In healthcare settings, poor supervisor support has been shown to be related with lower job satisfaction, increased errors, and higher turnover among nurses (Jeffery et al., 2023). Evidence further suggests that employees' perceptions of their immediate supervisors have a stronger influence on retention decisions than perceptions of the organisation as a whole (Twigg & McCullough, 2014).

With regards to career opportunities, research by van Dyk et al. (2014) revealed that career opportunities include internal career paths (this includes promotions, lateral moves to different departments or taking on new responsibilities within the same role) and external career paths (involves obtaining a position at another organisation) for an employee's professional growth.

Research shows that employees seek opportunities for career growth and advancement within their organisations, and a lack of such opportunities can lead to increased turnover (Mabaso et al., 2021). Therefore, organisations that prioritise career development opportunities for their employees are more likely to retain their talent and foster commitment to the organisation (Singh, 2019).

Work-life balance refers to a personal state in which employees are able to manage work responsibilities alongside family and social activities in a manner that reflects their individual priorities and needs (Kang et al., 2024). Policies supporting work-life balance, such as flexible working hours, family emergency leave, and childcare support, are designed to reduce conflicts between work and personal life (Shockley et al., 2017). These policies benefit both employers, by helping to attract and retain dedicated staff, and employees, by enabling them to maintain a healthier balance between work and personal life (Döckel, 2003).

RELATIONS BETWEEN RETENTION FACTORS, WORK ENGAGEMENT AND TURNOVER INTENTION

Retention factors, work engagement and turnover intention can be understood as interrelated constructs that explain employees' decisions to remain in or leave an organisation. From a Job Demands-Resources (JD-R) perspective, retention factors such as compensation, supervisor support, career development, job characteristics, career opportunities and training function as job resources that shape the motivational environment of the workplace. These resources reduce strain while promoting employee growth and sustained motivation (Bakker et al., 2004; Bakker & Demerouti, 2007).

Within this process, work engagement emerges as a key psychological outcome, characterised by vigour, dedication and absorption (Schaufeli et al., 2002). Employees who have access to adequate job resources are more likely to experience higher levels of engagement, as these resources stimulate energy, involvement and commitment to work tasks (Bakker et al., 2008). In contrast, insufficient resources may reduce engagement, increasing the likelihood of withdrawal behaviours and turnover intention (Halbesleben & Wheeler, 2008).

SDT further explains this relationship by highlighting that job resources are most effective when they satisfy employees' basic psychological needs for autonomy, competence and relatedness

(Ryan & Deci, 2000; Van den Broeck et al., 2008). When these needs are supported, employees are more likely to internalise motivation and display sustained engagement. However, when these needs are frustrated, disengagement and increased turnover intention are more likely to occur (Deci & Ryan, 2008; Van den Broeck et al., 2021).

Job Embeddedness Theory (JET) provides additional insight into why employees remain within organisations. Embeddedness reflects the extent to which employees are connected to their organisation through links, fit and perceived sacrifice (Mitchell et al., 2001). Retention factors strengthen these dimensions by improving organisational fit, enhancing workplace relationships and increasing the perceived cost of leaving. At the same time, work engagement contributes to embeddedness by strengthening employees' psychological attachment and investment in their roles (Halbesleben & Wheeler, 2008).

Overall, turnover intention is best understood as the outcome of interacting motivational and structural processes. Retention factors influence turnover intention both directly and indirectly through work engagement, while job embeddedness further explains how organisational ties and perceived sacrifices anchor employees within the organisation (Mitchell et al., 2001; Bakker & Demerouti, 2007).

TURNOVER INTENTION AMONG SOUTH AFRICAN NURSES

The intention to leave is an indicator of actual turnover behaviour, providing employers with an early warning sign to address. High turnover is a concern for the nursing profession (Hu et al, 2022). Work overload, poor economic conditions, limited promotion opportunities, lack of recognition, and inadequate rewards have been identified as key contributors to nurses' turnover intentions, particularly in low- and middle-income countries (Ditlopo et al., 2024). The COVID-19 pandemic further increased turnover intentions among nurses, as studies showed increased stress, fear of infection, loss of colleagues, inadequate protective equipment, burnout, and physical exhaustion (Ditlopo et al., 2024; Enea et al., 2024).

In South Africa, nurses reported job dissatisfaction linked to inadequate pay, excessive workloads, and scarce resources (Gohentsemang et al., 2024). They also rated their work environments poorly, experienced burnout, and expressed intentions to leave the profession (Gohentsemang et al., 2024).

Research in South Africa highlights multiple factors influencing registered nurses' turnover intentions, particularly those in rural and public sector hospitals, were more likely to plan to leave within five years (Pillay, 2009). A lack of praise and recognition from nurse managers was strongly associated with intentions to leave (Sojane et al., 2016). While many registered nurses reported satisfaction with aspects such as autonomy, flexible schedules, professional status, and leave benefits. However, dissatisfaction was high regarding wages, career advancement, and study leave opportunities (Sojane et al., 2016). In particular, low pay not only encouraged nurses to leave their hospitals but also motivated some to seek work abroad (Sojane et al., 2016).

BIOGRAPHICAL CHARACTERISTICS AND THE KEY CONSTRUCTS

Various studies revealed links between the biographical characteristics (age, gender, and employment status) in relation to retention factors, work engagement and turnover intention.

Age

Age is an important demographic variable influencing how employees experience retention factors, engagement, and turnover intentions. Research shows that younger nurses tend to prioritise retention factors such as work-life balance, flexibility, supportive supervision, and competitive remuneration, whereas older nurses place greater value on meaningful work, role mastery, and opportunities to apply accumulated skills (Perkins et al., 2023; Kollmann et al., 2020).

Work engagement shows a partial positive relationship with age, with older employees often reporting slightly higher engagement due to stronger emotional regulation, resilience, and a focus on meaningful contributions (Schaufeli et al., 2006; Douglas & Roberts, 2020). However, engagement may decline as employees approach retirement, particularly when career development opportunities are limited (Douglas & Roberts, 2020).

Age is consistently negatively associated with turnover intention, indicating that older employees are less likely to consider leaving their organisations than younger employees (Du Plooy & Roodt, 2013; Ng & Feldman, 2010). Younger employees demonstrate higher turnover intentions when

growth, learning, and advancement opportunities are limited, while older employees tend to value stability and social connections, which reduces their likelihood of leaving (Kanfer & Ackerman, 2004; Martin et al., 2021).

Gender

Gender influences how employees experience key retention factors and engage with their work. Organisational structures often reflect traditionally masculine norms, which may disadvantage women by limiting access to advancement opportunities and weakening perceptions of organisational value, thereby undermining engagement (Banihani et al., 2013). Women tend to place greater emphasis on meaningful work, relational support, and a sense of purpose, while men's engagement is more strongly influenced by supervisory and organisational support (Li et al., 2023).

Gender-related challenges in accessing retention factors have significant implications for turnover intention. Women are more likely to experience work-family conflict, which is strongly associated with burnout and increased turnover intentions (Nasir et al., 2019; Lawson et al., 2024). Supportive organisational practices such as flexible work arrangements and parental leave have been shown to reduce turnover intentions, especially among women, by enhancing work-life balance and organisational commitment (Shockley et al., 2017). Men in traditionally female dominated professions such as nursing face different retention challenges. As a minority group, male nurses may experience role strain, limited peer support, and identity conflict, which can reduce job satisfaction and increase turnover intention (Deng et al., 2024).

Employment Status

Full-time employees generally have increased access to key job characteristics, including autonomy, task variety, and opportunities for development, all of which are positively linked to higher levels of work engagement (Hackman & Oldham, 1976; Albrecht et al., 2021). In contrast, part-time and temporary employees often have narrower job scopes, which may limit engagement unless flexibility and voluntary choice are key motivators for their employment arrangement (Lopes & Chambel, 2014).

Employees who choose flexible or temporary work for personal or career-related reasons tend to display higher engagement, whereas those in such roles due to economic pressure or lack of alternatives often report lower engagement and weaker organisational attachment (Lopes & Chambel, 2014). This suggests that individuals' choice plays an important role in shaping engagement outcomes.

Employment status is also closely linked to turnover intention. Part-time work has been associated with lower turnover intentions among nurses due to improved work-life balance and reduced role strain (Zeytinoglu et al., 2011). Conversely, temporary and agency employment is often associated with higher turnover intentions due to limited job security, social support, and career progression opportunities, which weaken organisational commitment (Cropanzano et al., 2022).

Hypotheses

H1: There is a statistically significant interrelationship between the constructs of retention factors, work engagement and turnover intention.

H2: Retention factors and work engagement significantly predicts nurses' turnover intention.

H3: Nurses with differing biographical characteristics such as age, gender and employment status differ significantly with regard to the construct variables of this study

Research Aims

Research aim 1: To explore the interrelationships between the constructs of retention factors, work engagement and turnover intention,

Research aim 2: To determine whether retention factors (an independent variable) and work engagement (an independent variable) significantly predict nurses' turnover intention (a dependent variable).

Research aim 3: To determine if nurses with biographical characteristics of age, gender and employment status differ significantly with regards to the construct variables of this study.

RESEARCH DESIGN

Research approach

This study used a quantitative research approach, which allows for the structured collection of numerical data and the objective analysis of relationships between variables. A cross-sectional design was employed, where data were collected from a sample at a single point in time to examine these relationships (Zuleika & Siswo, 2022). This design was chosen because it is time-efficient, cost-effective, and enables the simultaneous analysis of multiple factors to test the research hypotheses (Wang & Cheng, 2020).

Research method

Research Participants

The study sample consisted of nursing staff from two hospitals in central Johannesburg. A convenience sampling method was used, selecting participants based on availability, willingness to participate, and practical constraints. A total of 121 nurses completed the questionnaire, though the number of individuals who received the electronic link and QR code is unknown.

The relatively small sample size is appropriate given the use of PLS-SEM, which is suitable for prediction-focused research and can generate reliable estimates even with smaller samples (Hair et al., 2017; Hair et al., 2022). Nursing research is often conducted in complex clinical settings where access to participants is limited, making smaller, context-specific samples common and acceptable (Polit & Beck, 2021; Grove et al., 2015). Recruiting nurses poses challenges, as high workloads, limited time, varying levels of organisational support, and differing research experience can restrict participation (Jones et al., 2025; Kyei et al., 2023). These practical barriers, along with demanding clinical responsibilities, often make it difficult to obtain large samples. Moreover, advanced methods for determining sample size in PLS-SEM indicate that smaller samples can still be sufficient when model complexity is considered (Kock & Hadaya, 2018).

The data presented in Table 3.1 shows nurses between the ages of 36 and 45 years made up the largest group within the sample, while the smallest group was those aged 18-25 years. Most of the nurses surveyed were female 82.6%, with male nurses accounting for 17.4% of the sample.

Table 3.1

Biographical Characteristics of Research Participants

Variable	Categories	Frequency	%
Gender	Male	21	17.4
	Female	100	82.6
Total		**121**	**100**
Age	18-25	6	5.0
	26-35	40	33.1
	36-45	52	43.0
	46-55	15	12.4
	>55	8	6.6
Total		**121**	**100**
Years of working	Less than one year	4	3.3
	1-2 years	10	8.3
	3-5 years	21	17.4
	More than 6 years	86	71.1
Total		**121**	**100**
Employment Status	Permanent employee	121	100.0
Total		**121**	**100.0**
Nursing category	Enrolled Nurse	22	18.2
	Enrolled Nursing Assistant	21	17.4
	Other	2	1.7
	Registered Nurse	76	62.8
Total		**121**	**100.0**

Furthermore, the table indicates that all the participants were employed on a permanent basis, and most had been working for more than six years. In terms of nursing category, most of the participants were registered nurses, who comprised 62.8% of the sample. This was followed by enrolled nurses at 18.2%, and enrolled nurse assistants, who made up 17.4% of the sample.

Measuring Instruments

The following measuring instruments were used to measure the constructs:

Biographical questionnaire was used to collect background information from nurses regarding their age, gender and employment status.

Retention Factors Measurement Scale (RFMS), developed by Döckel (2003) was used to measure retention factors. This instrument allows for measurement of retention factors namely "compensation, job characteristics, training and development, supervisor support, career advancement and work-life balance" (Döckel, 2003). The RFMS consists of six subscales and 42 items and allows respondents to rate experiences on a 5-point scale. This scale offers options from (1) strongly dissatisfied to (5) strongly satisfied. Example items include "on my present job this is how I feel about my benefits package" and "on my present job I feel undervalued by my supervisor". Recent studies found Cronbach's alpha coefficients of $\alpha \geq .93$ for the RFMS, which indicates substantial reliability (Mvana, 2023). The RFMS has been confirmed to be valid and reliable and applicable to the South African context in previous studies (Potgieter & Ferreira, 2024; Van Dyk et al., 2013 & Dockel et al, 2006).

The Utrecht Work Engagement Scale (UWES-17), developed by Schaufeli et al. (2002), was utilised to measure work engagement. This instrument captures three core dimensions of engagement: absorption, dedication, and vigour. Example items include: *"I am immersed in my work"* (absorption), *"I am enthusiastic about my job"* (dedication), and *"At my work, I feel bursting with energy"* (vigour). Responses were measured on a five-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. The UWES has demonstrated strong psychometric properties, with Schaufeli et al. (2002) reporting a reliability coefficient of 0.93 across diverse contexts. In South African samples, similar reliability levels have been reported, with coefficients of 0.908 and 0.911 respectively (Louw & Steyn, 2021; Mvana & Louw, 2020). The scale was chosen for this study because of its robust reliability and validity, as well as its established use in both international and South African contexts.

The Turnover Intention Scale (TIS-6), developed by (Roodt, 2004) was used to measure turnover intention. This instrument is a 6-item self-report that measures employee's turnover intention in their current organisation on a 5-point likert scale allows respondents to rate their experiences from "never" to "always". Example items include: "How often have you considered leaving your job?" and "How satisfying is your job in fulfilling your personal needs?". A study conducted by Jacobs

and Roodt (2008) obtained a Cronbach Alpha of 0.913 indicating an acceptable reliability. Two items of the Turnover Intention Scale were reverse scored.

Research procedure

Ethical clearance for this study was obtained from the Ethics Committee of the University of South Africa (reference number 2649), through the Department of Industrial and Organisational Psychology and the College of Human Sciences, as well as from the two participating hospitals. A questionnaire was developed using Microsoft Forms, which included an informed consent section, biographical questions, and three instruments measuring retention, work engagement, and turnover intentions. Anonymity was maintained by not collecting any personal identifiers in the questionnaire. A research poster was created with all the necessary details about the study, including the survey link and a QR code for accessing the questionnaire. This poster was shared through one of the hospitals' internal communication platforms. Additionally, the researcher visited both hospitals in person to explain the study and to distribute printed posters and QR codes to further encourage participation.

Statistical analysis

Statistical analyses were conducted using IBM SPSS Statistics Version 30 (2025) and SmartPLS 4.1.1.6. In SPSS, descriptive statistics, including frequencies, percentages, means, standard deviations, skewness, and kurtosis were calculated to examine sample characteristics and assess the normality of the data distribution. Bivariate correlations were analysed using Spearman's rank-order correlation to investigate the interrelationships between retention factors, work engagement, and turnover intention, and to test H1. Correlation analysis examines the strength and direction of relationships between variables (Abu EO, 2022), and Spearman's coefficient is a non-parametric measure suitable for variables that are not normally distributed (Pallant, 2020).

PLS-SEM in SmartPLS was used to test the relationships between independentb (retention factors and work engagement) and dependent (turnover intention) variables. SEM is widely used in social sciences because it can analyse complex relationships among multiple variables simultaneously

and account for measurement error, improving the accuracy of latent construct estimates (Hair et al., 2021).

To examine differences between groups, mean differences were assessed using the Mann-Whitney U Test for two independent groups (gender) and the Kruskal-Wallis H Test for more than two groups (age categories). These non-parametric tests are appropriate when parametric assumptions, such as normality, are not met, and they determine whether differences in scores are statistically significant (Pallant, 2020).

RESULTS

Stage 1: Descriptive statistical analyses

This section reports on the mean, standard deviations, skewness and kurtosis. Descriptive statistics was analysed and was performed using IBM SPSS Statistics Version 30 (2025).

Table 3.2 presents the descriptive statistics for all study variables, including mean, standard deviation, skewness, and kurtosis.

Table 3.2

Means Standard Deviation Skewness and Kurtosis for Retention Factors Work Engagement Turnover Intention and the Biographical Variables

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Overall Retention	3,50	1.00	-,095	-,50
Compensation	3,35	1,36	,012	-1,14
Training Opportunities	3,79	1,47	-,231	-1,00
Supervisor Support	3,74	1,39	-,420	-,51
Career Opportunities	3,32	1,53	,020	-1,15
W/L Balance	3,34	1,70	,080	-1,36
Work Engagement	4,16	1,15	-,691	,50
Turnover Intention	2,91	1,06	,309	-,74
Gender	1.83	.38	-1.75	1.07
Age	2,82	.94	.48	.13

Among the variables, work engagement showed the highest mean score (M = 4.16, SD = 1.15), indicating that participants generally experienced high levels of engagement in their work. Conversely, turnover intention recorded the lowest mean (M = 2.91, SD = 1.06).

Using a cut-off value of ±1 for skewness and kurtosis, several variables specifically compensation (kurtosis = -1.14), career opportunities (kurtosis = -1.15), and work-life balance (kurtosis = -1.36) fell outside the acceptable range (Howell, 2017). This indicates that the data are not normally distributed. This suggests that the data for these variables deviate from a normal distribution, meaning the responses are more clustered or unevenly spread than expected under normality. As a result, non-parametric or robust statistical techniques may be more appropriate for analysing these variables to ensure valid and reliable findings.

Table 3.3 summarises the results of the bivariate correlation analysis conducted to examine the relationships between the study variables, namely retention factors, work engagement, and turnover intention.

Table 3.3

Bivariate Correlations Between Retention Factors, Work Engagement, and Turnover Intention

Variables	Compensation	Career Opportunity	Supervisor Support	T & D Opportunities	W/L Balance	Work Engagement	Turnover Intention
Compensation	**1**						
Career Opportunity	.358**	**1**					
Supervisor Support	.268**	.352**	**1**				
T & D Opportunities	.362**	.645**	.512**	**1**			
W/L Balance	.124	.181*	.130	0.005	**1**		
Work Engagement	.379**	.181*	0.158	.257**	.328**	**1**	

Turnover Intention	-.450**	-.392**	-.482**	-.526**	-.303**	-.373**	**1**

Note. N = 121. *p ≤ 0.05; **p ≤ 0.01

Table 3.3 indicates that there is a positive significant correlation between compensation and work engagement (r = .38; medium practical effect; p ≤ .01), and a negative significant correlation between compensation and turnover intention (r = -.45; medium practical effect; p ≤ .01).

Furthermore, a positive significant correlation was found between career opportunity and work engagement (r = .18; small practical effect; p ≤ .05), while a negative significant correlation was found between career opportunity and turnover intention (r = -.39; medium practical effect; p ≤ .01).

The results also show a negative significant correlation between supervisor support and turnover intention (r = -.48; medium practical effect; p ≤ .01), although the relationship between supervisor support and work engagement was not statistically significant.

In addition, training and development showed a positive significant correlation with work engagement (r = .26; small to medium practical effect; p ≤ .01) and a negative significant correlation with turnover intention (r = -.53; large practical effect; p ≤ .01).

Work-life balance showed a positive significant correlation with work engagement (r = .33; medium practical effect; p ≤ .01) and a positive significant correlation with turnover intention (r = -.30; medium practical effect; p ≤ .01).

Finally, a negative significant correlation was found between work engagement and turnover intention (r = -.37; medium practical effect; p ≤ .01).

In summary, the results of the correlations provided evidence that partially accepted hypothesis H1

Measurement Model

Table 3.4 summarises internal consistency reliability which was evaluated using Cronbach's Alpha and composite reliability, while convergent validity was assessed through indicator loadings and average variance extracted.

Table 3.4

Assessment of Internal Consistency Reliability and Convergent Validity

Item	Indicator Reliability (Outer Loadings)	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
C1	0.853	0.965	0.969	0.708
C2	0.830			
C3	0.811			
C4	0.900			
C5	0.855			
C6	0.718			
C7	0.881			
C8	0.874			
C9	0.859			
C10	0.910			
C11	0.815			
C12	0.843			
C13	0.775			
TD18	0.850	0.914	0.918	0.699
TD19	0.863			
TD20	0.819			
TD21	0.807			
TD22	0.834			
TD23	0.841			
SS24	0.859	0.815	0.876	0.654
SS27	0.890			
SS28	0.523			
SS29	0.902			
CO30	0.847	0.800	0.802	0.714
CO31	0.885			
CO35	0.801			
WLB37	0.895	0.893	0.932	0.821
WLB38	0.899			
WLB39	0.924			
DE2	0.619	0.881	0.894	0.513
DE5	0.782			
DE7	0.796			

DE10	0.742				
AB9	0.703				
AB11	0.729				
VI12	0.660				
VI4	0.771				
VI8	0.729				
TI1	0.816				
TI2	0.709				
TI4	0.705	0.757	0.772	0.502	
TI5	0.694				
TI6	0.615				

Note. C, compensation; TD, training and development opportunities; SS, supervisor support; CO, career opportunities; WLB, work-life balance; DE, dedication; AB, absorption; VI, vigour; TI, turnover intention.

As shown in Table 3.4, all retained items demonstrated factor loadings above 0.5, eleven items were removed due to low loadings, which could have negatively affected the AVE and CR values. After these adjustments, the AVE values ranged between 0.502 and 0.821, above the minimum requirement of 0.50. Similarly, CR values ranged from 0.772 to 0.969, indicating strong internal consistency across the constructs. Overall, these findings confirm that the measurement model meets the criteria for convergent validity and reliability, and the constructs are suitable for further structural model analysis.

It should be noted that the individual dimensions of the work engagement construct were not assessed separately due to low AVE values; instead, work engagement was treated as a combined construct to improve overall measurement quality.

Table 3.5 summarises the results of the discriminant validity assessment using the Heterotrait-Monotrait ratio.

Table 3.5

Heterotrait-Monotrait Ratio

Variables	Career Opportunities	Compensation	Supervisor Support	T&D Opportunities	Turnover Intention	Work Engagement	W/L Balance

Career Opportunities						
Compensation	0.416					
Supervisor Support	0.448	0.297				
T&D Opportunities	0.759	0.387	0.579			
Turnover Intention	0.525	0.549	0.596	0.619		
Work Engagement	0.227	0.393	0.162	0.264	0.482	
W/L Balance	0.210	0.150	0.166	0.072	0.327	0.294

As shown in Table 3.5, all HTMT values were below the conservative threshold of 0.85, indicating adequate discriminant validity among the constructs (Henseler et al., 2015). The HTMT values ranged from 0.072 to 0.759, with the highest correlation observed between training and development opportunities and career opportunities (HTMT = 0.759). Moderate associations were found between turnover intention and supervisor support (HTMT = 0.596) and between turnover intention and compensation (HTMT = 0.549). The lowest correlation was between training and development and work-life balance (HTMT = 0.072), confirming that each construct is distinct. These results confirm that discriminant validity was achieved, supporting the adequacy of the measurement model and allowing the study to proceed to the structural model assessment.

Structural Model

Collinearity

Following the recommendations of Hair et al. (2022) Variance Inflation Factor (VIF) values were examined to assess multicollinearity among the exogenous variables predicting Turnover Intention. The predictors included Career Opportunities, Compensation, Supervisor Support, Training & Development Opportunities, W/L Balance, and Work Engagement. VIF values ranged from 1.130 to 2.148 across all predictor outcome combinations, below the commonly accepted threshold of 3.3. These results indicate that the predictors are not highly correlated and that multicollinearity is not a concern, providing confidence in the reliability of the structural model estimates and we can continue next steps.

Table 3.6 presents the results of the path coefficients, t-statistics, p-values, and f^2 effect sizes for the hypothesized relationships in the structural model. It shows which paths were statistically significant and supported versus those that were not, along with the relative effect sizes of each predictor on the endogenous constructs.

Table 3.6

Structural Model Results: Path Coefficients, Significance, and Effect Sizes

Relationship	Pathway Coefficients (β)	T statistics (|O/STDEV|)	*P* values	f^2 Effect Sizes	Result
CAREER OPPORTUNITIES →TURNOVER INTENTION	-0.109	1.379	0.168	0.013 (small)	Not supported
CAREER OPPORTUNITIES →WORK ENGAGEMENT	0.068	0.572	0.567	0.003 (small)	Not supported
COMPENSATION → TURNOVER INTENTION	-0.212	3.013	0.003	0.071 (small)	Supported
COMPENSATION → WORK ENGAGEMENT	0.300	3.193	0.001	0.092 (small)	Supported
SUPERVISOR SUPPORT → TURNOVER INTENTION	-0.241	2.751	0.006	0.086 (small)	Supported
SUPERVISOR SUPPORT → WORK ENGAGEMENT	-0.083	0.756	0.450	0.006 (small)	Not supported
TD OPPORTUNITIES → TURNOVER INTENTION	-0.197	2.094	0.036	0.039 (small)	Supported
TD OPPORTUNITIES → WORK ENGAGEMENT	0.142	1.155	0.248	0.012 (small)	Not supported
W/L BALANCE → TURNOVER INTENTION	-0.262	3.683	0.000	0.082 (small)	Supported
W/L BALANCE → WORK ENGAGEMENT	0.252	2.674	0.008	0.074 (small)	Supported
WORK ENGAGAMENT → TURNOVER INTENTION	-0.214	2.844	0.004	0.077 (small)	Supported

Note. ($p < 0.05$)

To assess the model, path coefficients were examined (Hair et al., 2012). As shown in the table, several of the hypothesised relationships were statistically significant ($p < 0.05$). Path coefficients in PLS-SEM represent the size and direction of the relationships between constructs, with values ranging from -1 (strong negative) to +1 (strong positive) (Hair et al., 2022). These coefficients are estimated using regression analyses, and their significance is assessed via bootstrapping, which provides *t*-values, *p*-values, and standard deviation (Hair et al., 2017). A path is considered statistically significant at the 5% level if the 95% confidence interval does not include zero.

Tabel 3.6 results indicate that several retention factors significantly influence turnover intention and work engagement.

Compensation emerged as a significant predictor of both outcomes, showing a negative relationship with turnover intention ($\beta = -0.212$, $p = 0.003$; $f^2 = 0.071$) and a positive relationship with work engagement ($\beta = 0.300$, $p = 0.001$; $f^2 = 0.092$), suggesting that improved compensation reduces nurses' intentions to leave while enhancing engagement. Similarly, work–life balance significantly reduced turnover intention ($\beta = -0.262$, $p < 0.001$; $f^2 = 0.082$) and increased work engagement ($\beta = 0.252$, $p = 0.008$; $f^2 = 0.074$), highlighting its dual importance.

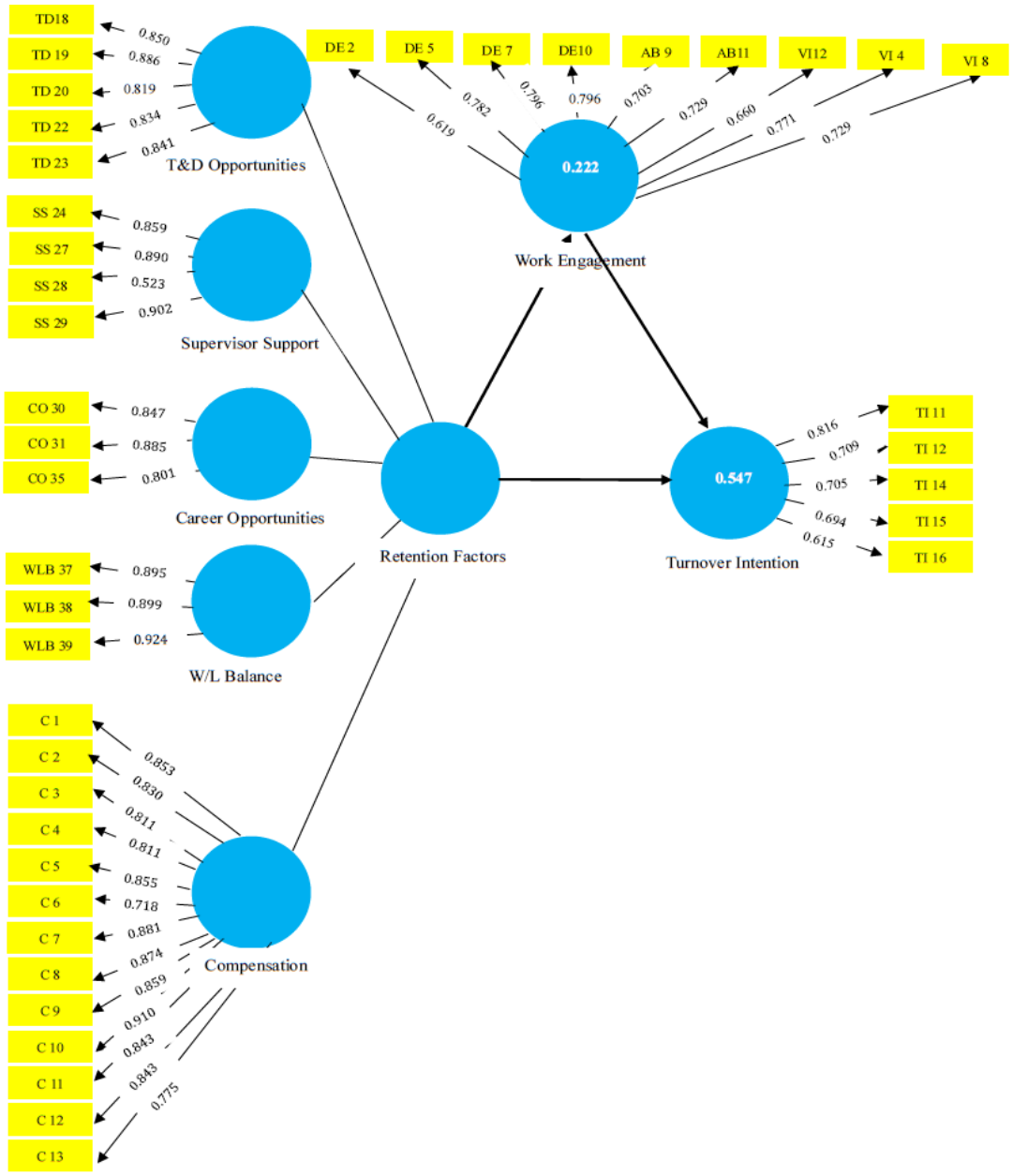
Supervisor support and training and development opportunities were significant only in relation to turnover intention, with both demonstrating negative relationships ($\beta = -0.241$, $p = 0.006$; $f^2 = 0.086$ and $\beta = -0.197$, $p = 0.036$; $f^2 = 0.039$, respectively), indicating that these factors contribute to reducing nurses' intentions to leave, although their effects on work engagement were not significant. In contrast, career opportunities did not significantly predict either turnover intention or work engagement, suggesting a limited direct role within this model.

Work engagement itself was a significant negative predictor of turnover intention ($\beta = -0.214$, $p = 0.004$; $f^2 = 0.077$), confirming that higher engagement is associated with lower intentions to leave. Across the model, all effect sizes were small, although relatively stronger contributions to turnover intention were observed for supervisor support, work-life balance, work engagement, and compensation.

Figure 3.1 shows the PLS-Path diagram

Figure 3.1

PLS-Path diagram



The coefficient of determination, R^2, reflects how well a model accounts for the variation in the dependent variable (Hair et al., 2011). It simply shows how well the independent variable (retention factors and engagement) explains or predicts the variations in the dependent variable (turnover intention). Values closer to 1 indicate that the model explains a larger portion of the variance, while values nearer to 0 suggest limited explanatory ability (Hair et al. 2011). In many social science contexts, an R^2 around 0.75 is considered strong or substantial, 0.50 is moderate, and 0.25 is weak in terms of how much the model clarifies the outcome (Hair et al., 2011). As shown in Figure 3.1 the R^2 value for turnover intention was 0.547, indicating that 54.7% of the

variance in turnover intention is explained by its predictors. This suggests a moderate to strong level of explanatory power.

For work engagement, the R^2 value was 0.222, meaning that 22.2% of the variance in engagement is explained by the model. This indicates a weaker, but still meaningful, level of explanation.

In summary, the results of the structural modelling provided evidence that partially accepted hypothesis H2

Tests for significant mean differences

Table 3.7 shows the Mann-Whitney U test results, comparing male and female groups. The variables with mean differences that are statistically significant at $p \leq .05$. The results indicate that statistically significant differences were present for two variables: career opportunity (p = .006) and training and development opportunities (p = .025).

Table 3.7

Results of Tests for Significant Mean Differences: Gender

Variable	Gender	N	Mean	SD	Mean Rank	U	Z	p (Sig.)
Compensation	Male	21	3.351	1.360	65.14	963.000	-0.596	0.551
	Woman	100	3.349	1.360	60.13			
Career Opportunities	Male	21	3.223	1.526	79.95	652.000	-2.733	0.006
	Woman	100	3.223	1.526	57.02			
Supervisor Support	Man	21	3.740	1.389	64.57	975.000	-0.514	0.607
	Woman	100	3.737	1.389	60.25			
T&D Opportunities	Male	21	3.787	1.469	76.57	723.000	-2.241	0.025
	Woman	100	3.786	1.469	57.73			
W/L Balance	Man	21	3.336	1.703	66.50	934.500	-0.795	0.427
	Woman	100	3.336	1.703	59.85			
Work Engagement	Male	21	4.164	1.149	51.10	842.000	-1.425	0.154
	Woman	100	4.164	1.149	63.08			
Turnover Intention	Male	21	2.909	0.976	50.60	831.500	-1.499	0.134
	Woman	100	2.909	0.976	63.19			

In both cases, the male group had a significantly higher mean rank (M = 79.95 and M = 76.57, respectively) than the female group (mean rank = 57.02 and = 57.73, respectively), indicating that

men tended to rate their access to and satisfaction with career and training and development opportunities more favourably than women. No significant differences were observed between the groups for compensation (p = .551), supervisor support (p = .607), work-life balance (p = .427), work engagement (p = .154), or turnover intention (p = .134), suggesting that perceptions in these areas were largely similar across genders.

Table 3.8 summarises the results of a Kruskal-Wallis H test that was conducted to examine whether there were statistically significant differences across the three age groups (18-35 years, 36-45 years, and 46-55 years) in relation to the study variables.

Table 3.8

Results of Tests for Significant Mean Differences: Age

Variable	Age	N	Mean Rank	Kruskal-Wallis H	df	p-value
Overall Retention	18 - 35	46	59,46	0,752	2	0,687
	36 - 45	52	59,85			
	46 - 55	23	66,7			
Compensation	18 - 35	46	59,3	1,24	2	0,538
	36 - 45	52	59,26			
	46 - 55	23	68,33			
Training and Development opportunities	18 - 35	46	56,84	1,075	2	0,584
	36 - 45	52	63,12			
	46 - 55	23	64,54			
Supervisor Support	18 - 35	46	64,14	0,656	2	0,720
	36 - 45	52	59,72			
	46 - 55	23	57,61			
Career Opportunities	18 - 35	46	56,96	1,099	2	0,577
	36 - 45	52	62,61			
	46 - 55	23	65,46			
W/L Balance	18 - 35	46	66,76	4,157	2	0,125
	36 - 45	52	53,56			
	46 - 55	23	66,3			
Work Engagement	18 - 35	46	61,53	0,018	2	0,991
	36 - 45	52	60,76			
	46 - 55	23	60,48			
Turnover Intention	18 - 35	46	64,55	2,814	2	0,245

36 - 45	52	62,66
46 - 55	23	50,13

Table 3.8 shows that there were no statistically significant differences across age groups for any of the constructs measured, as all p-values were greater than .05.

In summary, the results of the statistical mean differences provided evidence that partially accept hypothesis H3

DISCUSSION

The general aim of the study was to investigate the interrelationship between retention factors, work engagement, turnover intention, and to determine how nurses' biographical characteristics differ in relation to these variables. Understanding these relationships is important for the healthcare sector and organisations, given the ongoing nurse shortage in South Africa and the critical need to retain skilled nurses.

The first aim of this study was to explore the interrelationships between retention factors, work engagement, and turnover intention. The correlation results revealed that retention factors were positively associated with work engagement, indicating that nurses who are satisfied with organisational retention practices are more likely to experience higher levels of engagement. Specifically, compensation, training and development, career opportunities, and work-life balance were positively related to work engagement. These findings are supported by previous research, which highlights that both financial and professional support play a critical role in fostering engagement in demanding healthcare environments (Vimonvattana & Benjakul, 2025; Mabe et al., 2024; Lerotholi, 2024; Zweni, 2023).

In this regard, fair remuneration and opportunities for professional growth not only enhance motivation but also strengthen positive work attitudes, resulting in increased commitment and energy. Similarly, access to training and development equips nurses with the necessary skills and resources to perform effectively, thereby enhancing their sense of competence and engagement (Zweni, 2023). Work-life balance was also positively associated with engagement, suggesting that

nurses who are able to effectively manage personal and professional demands are more likely to be involved, dedicated, and absorbed in their roles. This finding is supported by Widayana et al. (2025), who emphasise the importance of balance in sustaining employee engagement in high-demand professions.

The results further indicated that retention factors were negatively associated with turnover intention, suggesting that nurses who are satisfied with compensation, training and development, career opportunities, supervisor support, and work-life balance are less likely to consider leaving their positions. These findings are supported by existing literature, which consistently identifies these factors as key drivers of retention (Vimonvattana & Benjakul, 2025; Mabe et al., 2024). Notably, supervisor support was significantly associated with lower turnover intention, highlighting the importance of relational and supportive leadership in retaining employees. This finding can be explained through the principle of reciprocity, which suggests that when employees perceive genuine support and recognition from their supervisors, they feel a sense of obligation to reciprocate through positive attitudes and behaviours, including a reduced intention to leave (Jameel & Ul Haq, 2025).

However, an unexpected finding was that supervisor support did not show a significant relationship with work engagement. This contrasts with prior research, which suggests that supportive leadership enhances engagement by providing psychological and emotional resources (Imam et al., 2023). A possible explanation for this finding is that, within this context, structural factors such as compensation and workload may play a more dominant role in influencing engagement than relational factors.

Furthermore, a negative association was found between work engagement and turnover intention, confirming the protective role of engagement in reducing employees' intention to leave. This finding is supported by existing research, which indicates that engaged employees are more likely to experience a sense of belonging, purpose, and commitment to their work and organisation (Poku et al., 2025). As a result, they are less likely to withdraw or consider alternative employment opportunities.

The second objective of this study was to determine whether retention factors and work engagement significantly predict turnover intention. The PLS-SEM results indicate that several retention factors have a statistically significant impact on turnover intention. Compensation

emerged as a significant negative predictor, suggesting that nurses who perceive their remuneration as fair and adequate are less likely to consider leaving. This finding is supported by research, which identifies inadequate compensation as a key driver of turnover intention, particularly in public healthcare settings (Gohentsemang et al., 2024; Sojane et al., 2016; Pillay, 2009). Beyond meeting financial needs, fair remuneration also serves as a form of recognition, reinforcing employees' sense of value and organisational attachment (Vimonvattana & Benjakul, 2025; Mabe et al., 2024).

Work-life balance also significantly predicted turnover intention, demonstrating a negative relationship. This suggests that nurses who are able to maintain a healthier balance between their work and personal lives are less likely to leave their organisations. This finding is supported by Widayana et al. (2025), who link poor work-life balance to increased stress, burnout, and turnover. In demanding healthcare contexts, the ability to manage competing demands is therefore critical for retention.

Supervisor support and training and development were also significant negative predictors of turnover intention. These findings are supported by previous research, which indicates that supportive leadership and opportunities for growth enhance employee commitment and reduce turnover intentions (Alluhaybi et al., 2024; Imam et al., 2023; Zweni, 2023). Training and development, in particular, play a key role in enhancing employees' sense of competence and career progression, thereby strengthening their attachment to the organisation (Zweni, 2023).

In contrast, career opportunities did not significantly predict turnover intention, which contradicts existing literature that emphasises the importance of career advancement in retention (Chamanga et al., 2020; Rahmah et al., 2022). This highlights the importance of contextual factors in shaping retention dynamics and suggests that retention strategies should be tailored to the specific needs and realities of the workforce.

Finally, work engagement emerged as a significant negative predictor of turnover intention, reinforcing its role as a key psychological mechanism in retention. This finding is supported by prior research, which indicates that engaged employees experience higher levels of vigour, dedication, and absorption, reducing their likelihood of leaving (Vimonvattana & Benjakul, 2025; Mabe et al., 2024; Jameel & Ul Haq, 2025).

The third aim of this study was to determine whether nurses with different biographical characteristics (age, gender and employment status) differ significantly with regard to the construct variables of this study. However, employment status could not be analysed, as all participants were permanently employed, making comparisons across employment categories impossible. The findings revealed significant gender differences in career and training opportunities, partially supporting Hypothesis H3, with male nurses reporting slightly higher levels of satisfaction than female nurses. This finding aligns with research suggesting that men often place greater emphasis on career advancement due to societal gender role expectations, which may result in increased access to education, experience, and promotion opportunities (Yang et al., 2004). It is important to note that there were fewer male participants in the study compared to female participants. In contrast, other studies indicate that female nurses may achieve higher levels of professional development, including career progression, participation in training, and leadership opportunities, potentially due to longer tenure in the profession and a more strategic approach to pursuing development opportunities (Masibo et al., 2024; Zafra, 2015). No significant differences were found for age, suggesting that age does not influence perceptions of retention factors, work engagement, or turnover intention within this sample.

PRACTICAL IMPLICATIONS

In light of the findings of this research below are practical implications for retention practices in the healthcare sector. These recommendations will shed light on issues pertaining to retention practices and provide recommendations for HR practitioners, IOPs, policymakers in the healthcare sector on how to navigate these challenges.

Financial rewards emerged as a key driver of retention. Given the strong influence of compensation on turnover intention, people practitioners should ensure that nurses receive competitive salaries, benefits, and recognition for their contributions. Implementing structured reward programs and recognition can reduce turnover intention.

Maintaining work-life balance, organisations should implement policies addressing workload management, shift flexibility, and wellness initiatives. Both individual strategies (e.g., prioritisation, breaks, seeking support) and organisational interventions (e.g., fostering supportive

environments, enhancing autonomy, equipping supervisors) are key for sustaining nurse well-being and preventing burnout (Coetzee & Veldsman, 2022; Kashyap & Ahmad, 2025; Van Zyl-Cillié et al., 2024).

Supportive relationships with supervisors reduce turnover intention. Managers should receive training in leadership, mentorship, and empowerment to encourage innovation, decision-making, and professional growth among nurses (Rajani, 2023; Lu et al., 2025; Syah et al., 2023). Effective leadership also addresses operational challenges in healthcare facilities and strengthens organisational performance (Pillay, 2009).

Retention strategies should be inclusive, addressing gender inequalities and applicable across gender, age groups and employment categories. Equitable HR policies will ensure all nurses have fair access to opportunities, recognition, and development.

LIMITATIONS AND RECOMMENDATIONS

This study was subject to several limitations that should be considered when interpreting the findings.

A limitation of this study was the relatively small sample size, which may have affected the statistical power of the analysis. However, appropriate statistical techniques were used to accommodate the sample size. In addition, the sample was skewed, with a higher proportion of female participants (87%) compared to male participants (17%), and only permanent staff were included, excluding fixed-term and contract employees. This limited the ability to compare how employment status may influence retention, work engagement, and turnover intention. Research shows that employment status and demographic characteristics are important in understanding these relationships (Deng et al., 2024; Lopes & Chambel, 2014; Cropanzano et al., 2022).

Another limitation is that the study was conducted in only two private hospitals in central Johannesburg. This means that organisational and contextual factors specific to these hospitals may have influenced the findings. Therefore, the results may not fully represent nurses working in other provinces, public hospitals, or different healthcare settings. Caution is therefore needed when applying these findings to other contexts.

The study also relied on self-report questionnaires, which may introduce response bias, as participants may provide socially desirable answers rather than fully accurate responses, particularly regarding sensitive aspects such as turnover intention. Although confidentiality was assured, this may still have influenced responses. In addition, practical challenges affected participation. Many nurses were working shifts or at bedside, which limited their availability. The online questionnaire format also created accessibility challenges, as nurses often could not use phones during working hours. Some participants also reported that the questionnaire was too long or difficult to understand, which further reduced response rates.

Longitudinal research designs are also recommended, as they would enable researchers to examine how retention factors and engagement influence on turnover intention develops and changes over time. Such designs would provide deeper insight into the dynamic nature of nurses' work experiences across different career stages and organisational contexts.

In addition, future studies could benefit from incorporating alternative data collection methods, such as interviews or focus groups. These qualitative approaches would allow for richer insights into nurses lived experiences and challenges, offering a deeper understanding of the factors influencing retention and engagement. Combining multiple data collection strategies may help produce more accurate and comprehensive findings, thereby strengthening the practical relevance and applicability of future research.

Finally, the cross-sectional design of the study limits the ability to draw causal conclusions, as data was collected at a single point in time and does not capture changes over time. Future research using longitudinal designs would help provide a deeper understanding of how retention, engagement, and turnover intention develop over time.

CONCLUSION

In conclusion, this study explored how retention factors and work engagement influence turnover intention, as well as the role of biographical characteristics (age and gender). The findings showed that retention factors were positively correlated with work engagement and negatively correlated with turnover intention, while work engagement was negatively correlated with turnover intention. This indicates that nurses who are satisfied with retention practices tend to be more engaged and,

in turn, are less likely to consider leaving. In terms of prediction, retention factors and work engagement significantly influenced turnover intention, with compensation and work-life balance showing the strongest effect in reducing nurses' intention to leave. Supervisor support and access to training and development also contributed to lower turnover intention, whereas career opportunities were less influential in this context. Differences were observed across gender, with male nurses reporting higher satisfaction with career and training opportunities, despite being a minority in the sample, suggesting that gender role expectations may shape how development opportunities are experienced.

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CHAPTER 4: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

4.1.INTRODUCTION

This chapter presents the study's conclusions, limitations, and recommendations. It begins by outlining the conclusions drawn from the research aims (both the literature review and empirical findings), followed by a discussion of the study's limitations, and concludes with recommendations for future research, the participating organisation, and the wider field of IOP.

4.2.CONCLUSIONS OF THE STUDY

4.2.1. Theoretical conclusions

The specific aims of the study were as follows:

Literature review:

The following aims guided the literature review of this study:

Research aim 1: To conceptualise the constructs of retention factors, work engagement, and turnover intention.

Research aim 2: To determine the nature of the theoretical relationship between retention factors, work engagement, turnover intention, and biographical characteristics (age, gender and employment status)

Research aim 3: To determine the implications of the theoretical relationship between retention factors, work engagement, turnover intention, and the biographical characteristics (age, gender and employment status) for retention practices.

4.2.1.1. Theoretical aim 1: To conceptualise the constructs of retention factors, work engagement, and turnover intention (achieved in Chapter 2 of this study).

Employee retention has long been identified as an organisational priority, with early scholars such as Fisher (1916) highlighting the financial implications of losing valuable talent and the connection between employee satisfaction and job performance. Retention research has been dominated by turnover studies, placing greater emphasis on why employees leave rather than why they choose to stay (Harman et al., 2007). Retention is defined as a set of intentional organisational actions aimed at encouraging employees to remain for longer periods (Fitriani & Widhianto, 2024). However, a key limitation in existing retention strategies is the focus on internal factors, despite increasing external influences such as globalisation, technological disruption, economic instability, and heightened workforce mobility reducing organisational control over retention outcomes (Ghani et al., 2022; Hynes et al., 2025). Theoretical models such as Döckel's (2003) model of retention factors and Herzberg's (1959) Two-Factor Theory were used to understand what influences employee's decision to stay in their organisations. Döckel (2003) highlights six factors that enhance retention through improved satisfaction these are compensation, job characteristics, training and development, supervisor support, career opportunities, and work-life balance.

Work engagement has become an important concept in organisational research over time. Early work by Kahn (1990) described engagement as the full expression of oneself at work, involving physical, cognitive, emotional, and mental investment in one's role. Building on this foundation,

Saks (2006) extended the concept of engagement by differentiating between job engagement and organisational engagement, and by emphasising the cognitive, emotional, and behavioural elements that shape employees' involvement in their work and influence performance outcomes (Shuck et al., 2011).

Other scholars have defined engagement from a different perspective. For example, Maslach et al. (2001) viewed engagement as the positive opposite of burnout, focusing on energy and involvement rather than exhaustion. A widely accepted definition by Schaufeli et al. (2002), defines work engagement as a positive and fulfilling work-related state characterised by vigour, dedication, and absorption. These three dimensions form the basis of the Utrecht Work Engagement Model. The JD-R Model (Bakker & Demerouti, 2007) further explains how engagement develops within organisational settings, proposing that access to job resources such as supervisory support, autonomy, and opportunities for growth plays a key role in promoting engagement, particularly when job demands are high. However, defining and measuring engagement remains challenging due to the variety of definitions and measurement tools available, which can affect consistency, cultural relevance, and the comparability of research findings (Shokunbi, 2025).

Early work by Mobley and Price (1977), grounded in the Theory of Organisational Equilibrium, introduced turnover intention as a cognitive evaluation driven by dissatisfaction and consideration of job alternatives (Smokrović et al., 2022). Turnover intention definitions consistently emphasise the mental and deliberate withdrawal process employees undergo when contemplating leaving their organisation (Ahmad, 2018; Tett & Meyer, 1993; Bothma & Roodt, 2012). Withdrawal behaviours often emerge as coping responses to workplace challenges and can signal an elevated risk of turnover (Bothma & Roodt, 2012). Several theoretical frameworks explain how turnover intentions develop and why some employees ultimately leave while others remain. Mobley's (1977) turnover decision process model explains employee turnover as a step-by-step psychological process that begins with job dissatisfaction and gradually leads to the decision to leave an organisation. In contrast, JET (Mitchell et al., 2001) focuses on the factors that keep employees attached to their jobs rather than on why they leave. This theory emphasises three key elements (fit, links, and sacrifice) which influence an individual's decision to remain with an organisation (Yao et al., 2004; Treuren & Fein, 2021).

4.2.1.2. Theoretical aim 2: To determine the nature of the theoretical relationship between retention factors, work engagement, turnover intention, and biographical characteristics (age, gender and employment status) (achieved in Chapter 2 of this study)

Biographical characteristics also influence retention, engagement, and turnover intention outcomes. Age affects how different generations prioritise retention, with younger nurses needing support for work-life balance and older nurses valuing autonomy and flexibility. Gender highlights unique challenges, as male nurses are underrepresented and may experience career development differently, while women may have challenges with work-life conflict. Employment status also plays a role, with permanent and part-time employees experiencing retention factors differently, and fixed-term staff often feeling excluded and less committed. Using the SDT as a framework, evidence shows that nurses' motivation and engagement increase when their basic psychological needs autonomy, competence, and relatedness are met, which in turn supports retention, enhances engagement, and reduces turnover intentions. In South Africa, the nursing workforce faces staff shortages, burnout, and emigration, making targeted and supportive retention strategies important.

4.2.1.3. Theoretical aim 3: To determine the implications of the theoretical relationship between retention factors, work engagement, turnover intention, and the biographical characteristics (age, gender and employment status) for retention practices (achieved in Chapter 2 of this study).

Compensating nurses fairly through regular salary reviews, benefits, and rewards for long service is essential for retention however, financial incentives alone are not sufficient to ensure long-term commitment. Nursing is often a high stress profession due to staff shortages, heavy workloads, and limited resources, which can reduce motivation and hinder innovation. Supportive leadership and the use of technology, such as AI, can improve working conditions, increase efficiency, and enhance retention. Continuous training and professional development enable nurses to stay up to date with changes in healthcare, build their skills, and gain confidence in their roles, while limited learning opportunities can increase turnover, highlighting the need to expand education and increase the number of qualified nurses in South Africa. Mentoring relationships, coaching, and

effective leadership further help nurses feel valued, motivated, and committed to their organisations, while clear career growth pathways encourage engagement. Finally, addressing long working hours, high job demands, and limited resources through mental health support, well-being initiatives, and coping strategies is important for preventing burnout and retaining nursing staff.

4.2.2. Empirical conclusions

The following aims guided the empirical study:

Research aim 1: To explore the interrelationships between the constructs of retention factors, work engagement and turnover intention.

Research aim 2: To determine whether retention factors (an independent variable) and work engagement (an independent variable) significantly predict nurses' turnover intention (a dependent variable).

Research aim 3: To determine if nurses with biographical characteristics of age, gender and employment status differ significantly with regards to the construct variables of this study.

Research aim 4: To formulate recommendations for future research and retention practice.

The following aims guided the empirical study:

1.2.2.1. Empirical aim 1: To explore the interrelationships between the constructs of retention factors, work engagement and turnover intention.

The first empirical aim examined the interrelationships between retention factors, work engagement, and turnover intention. The results indicate that key retention factors compensation, career opportunities, training and development, and work-life balance are positively related with work engagement and negatively related to turnover intention. This suggests that nurses who satisfied with their retention factors are more engaged and less likely to consider leaving. Supervisor support, while not significantly related to work engagement, was negatively associated

with turnover intention, indicating its role in reducing nurses' intentions to leave. Furthermore, work engagement showed a significant negative relationship with turnover intention.

1.2.2.2. Empirical aim 2: To determine whether retention factors (an independent variable) and work engagement (an independent variable) significantly predict nurses' turnover intention (a dependent variable).

The results indicate that selected retention factors have a significant effect on nurses' turnover intention. Specifically, higher satisfaction with compensation, supervisor support, training and development opportunities, and work-life balance was associated with lower turnover intention, highlighting their importance in retaining nurses. In contrast, career opportunities did not show a significant effect on turnover intention in this model. Furthermore, work engagement was negatively related to turnover intention, confirming that more engaged nurses are less likely to consider leaving.

1.2.2.3. Empirical aim 3: To determine if nurses with biographical characteristics of age, gender and employment status differ significantly with regards to the construct variables of this study.

The results of the mean difference tests of the present study's findings showed that gender was the only biographical characteristic associated with significant differences in the construct variables. Male nurses reported higher satisfaction with career opportunities and training and development, suggesting unequal access or differing experiences across genders. This aligns with previous research indicating that female employees often encounter structural barriers that limit professional growth (Huang et al., 2006). No significant differences were found for age, indicating that age did not meaningfully influence perceptions of retention factors, work engagement, or turnover intention in this sample. As the study included only permanent employees, differences based on employment status could not be examined.

1.2.2.4. Empirical aim 4: To formulate recommendations for future research and retention practice.

This aim was achieved by developing recommendations grounded in the study's findings, including biographical difference specifically that male nurses reported higher satisfaction of career opportunities and training and development than female nurses. Findings of the study informed practical retention recommendations focused on strengthening leadership support, ensuring equitable access to development opportunities, improving compensation, and enhancing work-life balance. Further research is needed with diverse samples, longitudinal designs, and qualitative techniques to more insight to factors that impact nurses' retention, engagement, and turnover intentions. Overall, the recommendations contribute to improving retention practices while guiding future research in the healthcare sector.

4.3. LIMITATIONS

This section presents the limitations related to the literature review and empirical study

4.3.1. Limitations of the literature review

The focus on Döckel's retention factors may overlook other important dimensions that influence employee retention across different healthcare contexts. In addition, there is a limited body of research on the relationship between retention, work engagement, and turnover intention within the South African healthcare sector, which restricts the generalisability of existing findings to this context. Evidence on biographical factors, particularly gender and employment status (temporary employees), is also limited in relation to the variables under study. Furthermore, many of the reviewed studies were conducted in other developing country contexts, which may limit the transferability of their findings to the South African healthcare environment.

4.3.2. Limitations of the empirical study

The study could not assess the work engagement subscales (vigour, dedication, and absorption) individually because the AVE was below the recommended threshold which is 0.50 (Hair et al., 2019). Similarly, the job characteristics retention factor had to be removed due to low AVE and Composite Reliability (CR), meaning it did not meet the required measurement thresholds. These issues indicate that the items did not reliably capture the underlying concepts they were intended to measure. As a result, this may have limited the depth and completeness of the findings.

This study used a cross-sectional design, meaning data was collected at a single point in time. As a result, the findings cannot establish cause-and-effect relationships, since changes in variables were not observed over time. While associations between variables were identified, it is not possible to confirm that one variable led directly to changes in another.

Data was collected from nurses working in only two hospitals within the Gauteng province. This limited geographic and organisational scope restricts the extent to which the findings can be generalised to other hospitals, provinces, or healthcare contexts. As healthcare environments may differ across regions in terms of resources, management practices, and working conditions, the results of this study should therefore be interpreted with caution when considering broader application.

The study used a convenience sampling approach, where participants were selected based on their availability. While this method was practical, it increases the risk of sampling bias, as certain groups of nurses may be overrepresented or underrepresented in the sample. Consequently, the sample may not fully reflect the diversity of the broader nursing workforce, which may limit the representativeness and generalisability of the findings.

The data was collected through self-report questionnaires only, which introduces the possibility of response related biases. Participants may have provided socially desirable responses or answered in ways they believed were expected, rather than reflecting their true experiences or perceptions. This reliance on self-reported data may therefore have influenced the accuracy of the results.

4.4. RECOMMENDATIONS

This section outlines practical recommendations for the organisation, identifies areas for future research, and discusses contributions to the field of IOP.

4.4.1. Recommendations for the organisation

Based on the findings, the participating organisations may consider the following recommendations:

People practitioners can facilitate focus groups and analyse internal data, such as exit interviews and employee surveys, to identify additional factors influencing retention, work engagement, and

turnover intention. This helps to confirm trends found in the study and gain deeper insights. Based on these findings, hospitals can address key factors such as compensation, work-life balance, career opportunities, supervisor support, training and development, and work engagement by implementing evidence-based interventions that respond to nurses' needs and improve workplace conditions. Organisations should review training and career advancement processes to ensure fair access across demographic groups, addressing observed gender disparities and strengthening overall inclusivity. IOPs can be engaged to support leadership development, enhance supportive supervision, design wellness and work-life balance initiatives, and guide the implementation of retention-focused organisational practices.

4.4.2. Recommendations for future research

The following suggestions are proposed for future research:

Future research should include a larger sample size to improve statistical power and enhance the generalisability of findings. Studies should also extend across multiple provinces and a wider range of healthcare settings to better capture contextual differences in retention, work engagement, and turnover intention. In addition, qualitative methods such as interviews are recommended to gain deeper insight into nurses' experiences, motivations, and the challenges influencing retention and engagement. Longitudinal designs would also be valuable, as they would allow for the examination of how retention, engagement, and turnover intention change over time. Furthermore, future studies should further explore job characteristics as key factors influencing engagement and turnover intention, given their strong support in the literature. Finally, it would be useful to assess differences in employment status, particularly between permanent and temporary staff, as this may influence retention outcomes.

4.4.3. Recommendations for the field of Industrial and Organisational Psychology

The following suggestions are proposed for the field of IOP:

Nurses should actively identify their career goals and seek development opportunities, mentorship, and skill-building programs. Proactively discussing career aspirations with supervisors can help ensure visibility and access to training or advancement opportunities. Experienced nurses can mentor colleagues, provide guidance and share knowledge to support professional development and reduce disparities caused by biographical factors.

Organisations should implement policies and programs that ensure all nurses, regardless of gender or other biographical characteristics, have fair access to career development and training opportunities. IOPs and HR professionals can review and audit training opportunities, design career pathways, implement and monitor these programs, ensuring transparency in promotions and professional growth opportunities for all genders.

Financial rewards are a key driver of retention. HR professionals should design and administer competitive salary structures, benefits, and recognition programs, while IOPs provide insights into the motivational impact of these interventions, ensuring they effectively reduce turnover intentions.

Policies that support flexible scheduling, manageable workloads, wellness programs, and leave provisions are essential. IOPs can advise on well-being programs and evaluate their effectiveness, and ensure resources are allocated to reduce burnout and improve engagement especially in the healthcare sector where factors such as work from home is not a viable option.

Supervisor support reduces turnover intention. IOPs and HR professional can provide leadership training programs, coaching, and feedback tools, and facilitate ongoing professional development for managers. Line managers play a critical role by modelling supportive behaviour and mentoring their teams.

4.5.CHAPTER SUMMARY

This chapter presented the study's key conclusions, including both theoretical and empirical study, discussed the limitations of the literature review and empirical study, and provided practical recommendations, suggestions for future research, and implications for the field of IOP. The research confirmed that retention factors and work engagement significantly influence and turnover intention, highlighting the importance of work-life balance, supportive leadership,

training and development opportunities, supervisor support and fair compensation. By addressing these areas, healthcare organisations can enhance retention, improve engagement, reduce turnover intention and strengthen the quality of patient care. The chapter concludes that a holistic, inclusive approach to nurse retention is important to ensure we retain nursing talent within the South African healthcare system.

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ANNEXURE A: ETHICAL CLEARANCE CERTIFCATE

UNISA university of south africa

College of Human Sciences_CREC

NHREC Registration # : (Rec-240816-052)
Ref #: 2649
Name: Mrs Mandy Ziyanda Mavuso-Meza
Student #: 68048726

Date: 06/09/2024

Dear: Mrs Mandy Ziyanda Mavuso-Meza

Decision: Ethics Approval from 06 September 2024 to 05 September 2025

Researcher: Mrs Mandy Ziyanda Mavuso-Meza

116 Oxford Rd, Melrose Estate, Johannesburg, 2196

Johannesburg

68048726@mylife.unisa.ac.za 0626415822

Supervisor: Dr Siyamthanda Mvana dyosisw@unisa.ac.za

Investigating the Relationship Between Retention Factors, Work Engagement, and Turnover Intention Amongst South African Nurses.

Qualification: MCom Industrial Psychology

Thank you for the application for research ethics clearance by the College of Human Sciences_CREC for the above-mentioned research study. Ethics approval is granted for one year.

The **low-risk application** was **reviewed** by the College of Human Sciences_CREC on **06 September 2024** in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions 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 College of Human Sciences_CREC.
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 September 2025**). Submission of a completed research ethics progress report will constitute an application for renewal, for Ethics Research Committee approval.

Additional Conditions

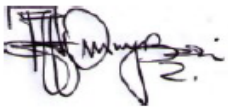
1. Disclosure of data to third parties is prohibited without explicit consent from Unisa.
2. De-identified data must be safely stored on password protected PCs.
3. Care should be taken by the researcher when publishing the results to protect the confidentiality and privacy of the university.
4. Adherence to the National Statement on Ethical Research and Publication practices, principle 7 referring to Social awareness, must be ensured: "Researchers and institutions must be sensitive to the potential impact of their research on society, marginal groups or individuals, and must consider these when weighing the benefits of the research against any harmful effects, with a view to minimising or avoiding the latter where possible." Unisa will not be liable for any failure to comply with this principle.

Note

The reference number 2649 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Kind regards,

Prof Khatija Khan
Chair of College of Human Sciences_CREC
E-mail: khankb@unisa.ac.za



Professor Omwoyo Bosire Onyancha
Executive Dean / By delegation from the Executive Dean of College of Human Sciences_CREC
E-mail: onyanob@unisa.ac.za

ANNEXURE B: CONSENT FORM AND QUESTINNAIRE

Title of research project:	**Investigating the relationship between retention factors, work engagement, and turnover intention amongst South African nurses**
Researcher:	**Mandy Ziyanda Mavuso-Meza**
Email Address:	**68048726@mylife.unisa.ac.za**
Contact Number:	**0626415822**
Ethics clearance reference number:	**2649**

Dear Prospective Participant

My name is Mandy Mavuso-Meza kindly note I am studying towards a master's in industrial & Organisational Psychology at the University of South Africa, and I am doing research with Dr Siyamthanda Mvana, my supervisor a Lecturer at the University of South Africa in the Department of Industrial & Organisational Psychology. We are inviting you to participate in a study entitled Investigating the relationship between retention factors, work engagement, and turnover intention amongst South African nurses.

Kindly take some time to read through the information, which will explain the details of this research project and contact me if you require further explanation or clarification of any aspect of the project. This study has been approved by the college of Human Sciences and will be conducted according to accepted and applicable ethical guidelines and principles.

1. **WHAT IS THE PURPOSE OF THE STUDY?** The purpose of the study is to explore the relationship between retention factors, work engagement, and turnover intention amongst South African nurses. The information gathered from the survey will assist with providing the healthcare sector with recommendations to assist with the retention, engagement and turnover intention of nurses.
2. **WHY AM I BEING INVITED TO PARTICIPATE?** You have been selected to participate in this research study because of your experience as a nurse in a hospital environment. Your insights are integral to understanding of the relationship between retention factors, work engagement, and turnover intention amongst South African nurses. The approximate number of participants expected to participate in the proposed study is 200-300.
3. **WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?** You are asked to complete a questionnaire that consists of four separate sections; (1) biographical information section and sections that measures your level of (2) satisfaction of retention factors, (3) engagement and (4) turnover intention this questionnaire will take approximately 10-15 minutes to complete.
4. **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**
   By sharing your insights, you will be contributing to advancing knowledge in the field of retention factors, work engagement, and turnover intention amongst South African nurses. Engaging in the study may provide you with an opportunity for reflection and contribute to your professional development.
5. **ARE THEIR ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?** To the best of the researchers knowledge, there are no foreseeable risks or negative consequences associated with participating in the research study.

Measures to mitigate any risks, the following measures will be implemented:

- Participants will be provided with a detailed informed consent document outlining the study's purpose, procedures, potential risks, and benefits. They will be assured of their right to withdraw from the study at any time without penalty.
- All participant data will be treated with the utmost confidentiality. Data will be anonymized to protect participants' identities.

Should you require further information or have any concerns please feel free to contact the researcher.

6. **WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?** Maintaining confidentiality and privacy of all participants is a priority of the research study. Responses will be kept confidential to ensure that individual identities are protected. Access to any personally identifiable information will be restricted and only authorized research team members will have access. Confidentiality measures are in place to safeguard your privacy throughout the study. All confidentiality agreements will be signed by the parties who will have access to the date, and these will be submitted the Research Ethics Review Committee for consideration. If information is published, individual participants will not be identifiable in such a report.

7. **HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?**
   Data will be collected electronically, the stored data and information will be stored on a password protected computed only accessible to the researcher. The researcher will make use of encrypted cloud services to store the research data ensuring that these platforms comply with the relevant data protection standards. The handling of the information and data will be aligned with ethical guidelines, regulatory requirements and institutional policies.

8. **WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?** No incentive will be rewarded for participating in this study, the participation in this study is voluntary.

9. **HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?** Data will be collected electronically; the stored data and information will be stored on a password protected computed only accessible to the researcher. The researcher will make use of encrypted cloud services to store the research data ensuring that these platforms comply with the relevant data protection standards. The handling of the information and data will be aligned with ethical guidelines, regulatory requirements and institutional policies. The data will be stored by the researcher for a minimum period of five years for future research or academic purposes, thereafter these will be permanently deleted. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Mandy Mavuso-Meza on email address mandymavuso22@gmail.com.

Should you have concerns about the way in which the research has been conducted, you may contact Dr Siyamthanda Mvana on email address dyosisq@unisa.ac.za. If you have any ethical concerns, please contact the research ethics chairperson of the Department of Industrial-and Organisational Psychology; Dr Tebele at Tebelc@unisa.ac.za.

Thank you for taking time to read this information sheet and for participating in this study.

Best Regards,
Mandy Mavuso-Meza