

TITLE: Factors influencing nursing students' persistence at a higher education institution in the Western Cape

NAME: Eggesta Mapfuranewe
Student number: 3914949

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Supervisor: Prof. M. Bimerew

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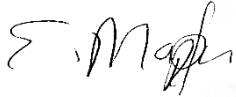
DECLARATION

I, Eggesta Mapfuranewe, declare that this research study titled “**Factors influencing nursing students’ persistence at a higher education institution in the Western Cape**”, is my own work, that it has not been submitted for any degree or examination at any other university, and all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name: Eggesta Mapfuranewe

Student number: 3914949

Signed:



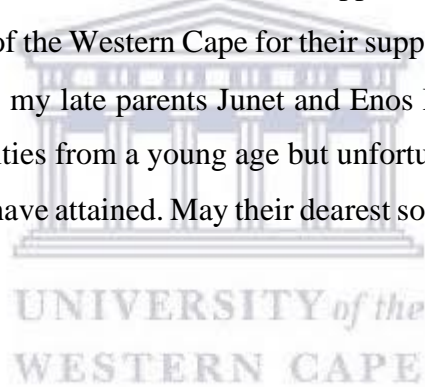
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ABSTRACT

Background: Persistence of undergraduate nursing students at institutions of higher learning is mainly hampered by high attrition rates. High attrition rates are a global problem, attributed to a myriad of challenges that students experience during their years of study. This eventually leads to poor persistence which cascades down to a reduced number of nurses graduating and contributes to the global nursing shortage.

Aim: The study aimed to investigate factors influencing the undergraduate nursing students' persistence at a selected higher education institution in the Western Cape.

Methodology: A quantitative method with a descriptive survey research design was employed to conduct the study. An all-inclusive sampling technique was used to include the study population of 317; 149 responses were obtained. Data was collected using both online and face-to-face self-administered questionnaires. Data was analysed using the Statistical Package for Social Sciences version 28.

Results: The study showed that respondents were committed to obtaining their nursing degree and their commitment to the institution was robust. The respondents took their academic work seriously and were academically conscientious. The respondents were satisfied with their academic progress, although some had reservations about their relationship with the lecturers. Social coherence among the respondents, institution and campus community was lacking. The respondents did not find the institution convincingly supportive, and they did not have an overall sense of inclusion in the implementation of support services.

Conclusion and recommendations: Students' commitment to obtain their degrees and institutional commitment were the two most highly rated factors. Social engagement and campus support were the least rated factors. It is recommended that the institution should devise supportive academic programmes that make effective use of mentors for first-year students. The lecturers at the institution should attempt to make their presentations more interactive. The institution should also assist in setting up activities that encourage engagement and socialisation for students.

KEYWORDS

Academic and social integration

Higher education

Nursing

Persistence

Student support services



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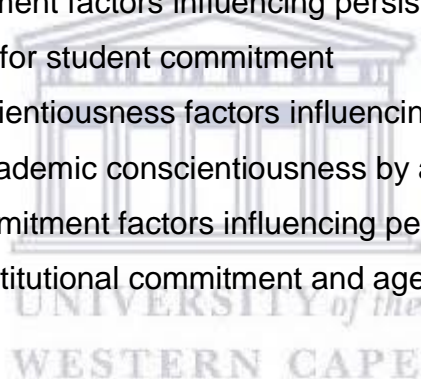
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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 Introduction

This chapter provides the background to this study on factors that influence nursing students' persistence at institutions of higher education and training and highlights the problems of the study. The aims and objectives of the study are outlined, and the chapter also provides an overview of the research question and the significance of the study. Operational definitions of key concepts, the background to the study, problem statement, research objectives and outline are presented.

1.2 Background to the study

Internationally, lack of persistence is reported as contributing towards attrition and poor retention rates among undergraduate students (Fagan & Coffey, 2019;). Persistence is defined as the ability to keep doing something difficult (Cambridge Dictionary, 2020). Persistence among students is when retention is viewed from the student's perspective and the university is viewed through the students' eyes (Tinto, 2017b). Experiences which students encounter in a Higher Education Institution (HEI) setting can affect their persistence or their desire to persist either positively or negatively, and this is reliant on the existing circumstances (Tinto, 2017b). Lack of persistence and poor retention among undergraduate nursing students lead to fewer nurses graduating, resulting in nurse shortages with overworking and fatigue among the available nurses owing to their demanding workload in service provision. All of this can result in poor patient care, more errors and increased poor outcomes (Henderson et al., 2020).

Globally, the endeavour to consistently produce adequate professional nurses is hampered by a lack of persistence among undergraduate nursing students (Kukkonen et al., 2016). Schwartz and Tinto (1987) argue that undergraduate students enrol in a university with a goal to attain their degree, which is a necessary condition for completion- but that condition only, however is inadequate . Persistence is regarded as a trait that is peculiar to students in higher education settings (Kennel & Ward-Smith, 2017). In South Africa, few students are reported to graduate on time, while others delay or drop out (Roos et al., 2016; Statistics South Africa, 2017). In a study conducted in Belgium the difference between nursing students who dropped out and those who persisted was reported to be greatly influenced by the resilience of those that persisted (van Hoek et al., 2019).

Attrition rates are reported to be between 10% and 50% in Australian, Canadian, British, and American nursing programmes, and can be as high as 85% for minority students (Mitchell et al., 2019).

In South Africa there are three categories of nurses: professional (registered) nurses, who are trained over four years; enrolled nurses, who are trained over two years; and auxiliary nurses, with one year of training (Armstrong & Rispel, 2015). The universities train the professional nurses, the majority of whom are also midwives. Nursing education is going through some major changes, one of which is that a Baccalaureate degree is a precondition to register as a professional nurse (Armstrong & Rispel, 2015). On graduation, they attain a Bachelor of Nursing Sciences, National Qualification Framework level 8, leading to registration as a professional nurse with the South African Nursing Council (SANC) as published in Government Notice No. R174 of 8 March 2013 on meeting the requirements of the Nursing Act (No. 33 of

2005) (SANC, 2005). South Africa is faced with a precarious shortage of nurses due to the high dropout of nursing students (Langtree et al., 2018).

The status of nursing in South Africa signifies an expanding gap between the demand for professional nurses and midwives and their supply into the health sector (SANC, 2014). This has been attributed to a decrease in learners entering the nursing profession and the ageing population of professional nurses and midwives, which has become a matter of great concern to the SANC and the Department of Health (SANC, 2014). This is further exacerbated by a lack of persistence and reduced retention of nursing students, which is why there is a need for interventions to improve persistence in undergraduate nursing programmes. Without adequate nurses, many of the public health outcomes will barely be achieved (Nkutu et al., 2018).

In South Africa, available statistics on attrition rates among undergraduate nursing students are reported to range from 39.28% to 58.69% for the intakes which occurred from 2007 to 2009 (Roos et al., 2016). There is a considerable financial burden on the training of students caused by those who leave the programme and fail to become practising nurses, without getting return on investment (Bakker et al., 2019). When students discontinue their training, this wastes resources and staff time (Fagan & Coffey, 2019; Farahani et al., 2017).

The highest number of nursing students to leave the programme do so in their first year of study (Zembrodt, 2021). According to Roos et al. (2016), a study done at the Cape Peninsula University of Technology in South Africa reported that 70% of the undergraduate nursing students' intake in 2005 left nursing in the first and second year of training. Although more students leave in the first year of nursing programmes, the cost of losing students later on is substantially higher and this has an impact on the

education and health systems of a country (Farahani et al., 2017). One of the solutions that was identified as being able to assist in alleviating the shortages that the nursing profession face was to increase the number of undergraduate nursing students who graduate from nursing schools (Henderson et al., 2020).

No single factor can be singled out as being responsible for diminished retention and poor persistence rates among students (Mitchell et al., 2019; Mooring, 2016). Various academic and non-academic factors have been associated with nursing student persistence. Factors that have been reported to influence nursing students' retention and persistence include support structures such as family support, faculty support through its engagement with the students before starting the course, providing structure and continuity, peer support, academic and social integration, as well as determination to become a nurse (Hill, 2019; Tinto, 2017a; ten Hoeve et al., 2017).

Faculty support is reported to have an impact on nursing students' persistence (Arifin, 2018; Summers, 2020). Nursing students' perception of their educators' caring behaviour has been reported to be influential in motivating them to stay in the programme (Henderson et al., 2020; Summers, 2020). When students do not receive enough support, especially in the initial stages of their time at university, they are at a higher risk of leaving, whereas students who struggle during this period stay motivated in their studies if they receive faculty support (Roland et al., 2016). By way of caring, nurse educators may help with regard to obstacles that students who are at risk of leaving the programme may be facing (Daniels & MacNeela, 2021). The faculty should show its caring by providing support services such as counselling and providing the student nurses with any assistance they might need. This promotes retention and success among the students, and hence improved persistence.

Student persistence is considered one of the main performance indicators of a HEI (Chrysikos et al., 2017). Students require support through supportive programmes in the HEIs that support them both academically and socially, for retention and persistence to be achieved (Mudaly & Mtshali, 2018). According to Chrysikos et al. (2017), when students enrol into universities they have clearly laid-out plans that they intend to commit to, to persist in their studies and to achieve set goals; the university ought to assist them to attain these goals.

Other factors have been reported to contribute to students' persistence, and these include students' commitment to the institution, their commitment to attaining their degree with that specific institution, the students' relationship with the faculty, the social support, and their satisfaction with the support services both on and off campus, as well as the individual characteristics and academic resilience of the individual students (Beck & Milligan, 2014; Davidson et al., 2009; Zembrodt, 2021).

Nursing students' placement experiences have been reported to have either a positive or negative impact on their desire to stay in the programme (Weurlander et al., 2018). According to Ashktorab et al. (2017), clinical placement is a major component of undergraduate nurse training, and it plays a vital role in providing nursing students with a sense of belonging to the profession. In South Africa, practical hours during training should be not less than 60% of the total duration of the course (SANC, 2005). In a study done in the Netherlands, students alluded to positive experiences during their clinical placement as one of the many reasons why they decided to stay, and those who had fewer positive experiences during clinical placement left (ten Hoeve et al., 2017). Some major factors reported in the study as contributing to why students chose to leave were the attitude of the placement staff as well as their lack of support (Atakro et al., 2019). Healthcare facilities are responsible for nursing students'

placement, and they can impact their completion rates. Support and positive attitudes in clinical areas play a pivotal role in students' attitudes towards the clinical setting, and consequently their persistence in staying in the course (Albloushi et al., 2019 ; Fagan & Coffey, 2019).

Demographic characteristics such as age and sex, are reported to have an impact on persistence. In a systematic review conducted by Mthimunye and Daniels (2019), it was noted that female and older students were more likely to stay in the programme in contrast to male and younger students, who were more likely to leave. Chung et al. (2017) reported similar findings in another study where older nursing students were resilient and more likely to complete their programme.

In South Africa initiatives have previously been attempted to improve retention in some universities, but with no success (Moodley & Singh, 2015). Initiatives such as targeted personal support, campus-based support structures, and managing expectations and experiences of clinical placement have not been shown to significantly improve student persistence and retention, making attrition and retention a dynamic and complex issue (Hamshire et al., 2019).

Tinto's (1993) theory of integration states that social and academic integration factors are influential in improving student retention and persistence (Mitchell et al., 2019;). The theory states that persistence is improved when the student is thriving socially and academically, and that there has to be a functional interconnection between the two aspects for success and persistence to be attained (Mitchell et al., 2019). Academic and social integration is manifested when students integrate their social and academic experiences, thereby altering their perceptions and behaviour through their association with the campus environment (Davidson et al., 2009; Roland et al., 2016).

Academic integration involves aspects such as students conducting research in the library, attending lectures, going to laboratories, and interacting with faculty members. Social integration includes interaction with peers and involvement in extracurricular activities (Chrysikos et al., 2017).

Student commitment deals with the degree to which students are motivated to enter the university, and institutional commitment deals with the degree to which the student is motivated to graduate from the specific institution (Chrysikos et al., 2017). The students' commitment can be determined by their experiences when they enter the institution, as well as their degree of social and academic integration (Tinto, 2017b). This commitment, their level of success in the institution and the extent of integration will determine the student's intention to persist or their overall persistence at the institution (Chrysikos et al., 2017; Savage et al., 2019).

Conscientiousness is one of the five personality traits of the five-factor model and is described as tendency to follow rules and being diligent and obedient in the interest of long-term goal attainment (Liu & Campbell, 2017). Conscientiousness is associated with characteristics such as efficiency, organisation, reliability, responsibility, and thoroughness (Sorić et al., 2017). Of the traits in the five-factor model, conscientiousness was reported to be a consistent factor in improved academic performance and student retention (Adams, 2017). This is because students who possess this characteristic have high levels of mastery and hence a greater chance of persisting in their efforts (Sorić et al., 2017).

1.3 Problem statement

Poor persistence among undergraduate students poses a challenge to HEIs and subsequently, diminished supply of nurses in South Africa (Langtree et al., 2018). According to Langtree et al.,(2018), high academic failure rate was reported amongst first nursing students at some HEIs in South Africa with 22% of them consequently leaving the programme after their first year of study.

Reduced retention rates and lack of persistence affect higher education in various ways. Unsuccessful students that leave the programme waste the time and effort put in by the faculty, and the student's time as well as resources (Nikolaidou et al., 2019). Institutions depend largely on sustained full-time enrolments for financial survival, and therefore an increase in dropouts negatively affects their funding and long-term planning (Fagan & Coffey, 2019; Styger et al., 2016). South Africa University funding relies on student places and ratio of full-time equivalent enrolments to the number of graduates they produce (Styger et al., 2016).

Historically and currently, nurse training is reported to be intense in nature, which may have a negative impact on nursing students' success and persistence (Betts et al., 2017). The first and second years of nursing school have been shown to be the most difficult, where involuntary academic dropout, mostly associated with poor transition into nursing school occurs (Nkutu et al., 2018). In a study done in South African HEIs, 64% of undergraduate nursing students that discontinued their training did so in their first year, with two other institutions indicating that year two was when most nursing students discontinued their training (Roos et al., 2016). In the United Kingdom(UK), half of the students that had contemplated leaving in the early years of their training cited dissatisfaction with high academic workload together with poor academic support

and difficulties with clinical placements as the main reasons for it (Hamshire et al., 2019). Students have been made to feel isolated during clinical placements in hospitals due to lack of support (Atakro et al., 2019).

Studies conducted in some universities indicated various factors which influence persistence and retention, and faculty support was one of those which was reported to improve student retention and persistence (Summers, 2020). However, inadequate theoretical and clinical support, peer, and family support, as well as poor social integration, inappropriate study skills, frequent absenteeism from class or clinical settings by students, and lack of empathy by the faculty, were some of the factors reported as contributing to poor persistence and retention of students (Chrysikos et al., 2017; Henderson et al., 2020; Mthimunye & Daniels, 2020; Nkutu et al., 2018).

In South Africa the currently available studies on nursing students discontinuing their studies focused on former students who had already left; limited data on current students was collected to identify characteristics of those at risk of discontinuing the programme (Roos et al., 2016). Although some studies have been conducted on student persistence and retention in South Africa, there is scant information on factors influencing persistence from the existing nursing students' perspective. Given this background, this study aims to ascertain factors influencing the persistence of existing undergraduate second-year nursing students as a group at high risk of discontinuing their studies, in the context of the selected HEI setting, from the students perspective, consequently facilitating recommendations for the enhancement of customised retention strategies.

1.4 Aim of the study

The study aims to investigate factors influencing undergraduate nursing students' persistence at a selected higher education institution.

1.5 Objectives of the study

The objectives of this study are therefore the following:

- To determine the levels of undergraduate nursing students' academic integration.
- To determine the levels of social integration among undergraduate nursing students.
- To describe the use of student support services by undergraduate nursing students.
- To describe the undergraduate nursing students' commitment to obtain a nursing degree.
- To describe the academic contentions of undergraduate nursing students towards their academic success.
- To determine the degree of institutional commitment that undergraduate nursing students have towards their education institution.
- To determine the degree of institutional commitment that undergraduate nursing students have towards their education institution.

1.6 Significance of the study

This study is significant in that it adds to a body of existing knowledge by determining how a myriad of factors contribute to student persistence in an HEI in the South African context. The results obtained from this study will provide information about what can be done to improve existing support structures in the faculty, what support systems

can be added, and which approaches can be implemented to make the support systems effective.

1.7 Operational definitions of key concepts

Support services: Services such as academic support centres for speaking, writing, and mathematics that help to ensure that students succeed in higher education (Roberts & Styron, 2010). For this study, it refers to academic structures that serve to support undergraduate nursing students during their training, to enhance their retention, leading to completion of the undergraduate nursing programme preceding graduation.

Academic integration: This is an optimistic view of the training, the trainers and intellectual progress of the students, as well as their recognition of links between academics and career (Chrysikos et al., 2017). For this study, it refers to the integration of the nursing students with their academic career, training, course materials and educators, and their intellectual progress.

Social integration: The conditions in which undergraduate nursing students get a sense of belonging in the institution and interact with people who share similar characteristics and values as them (Chrysikos et al., 2017). In this study, it refers to the extent to which the undergraduate nursing students have a sense of belonging to the selected HEI.

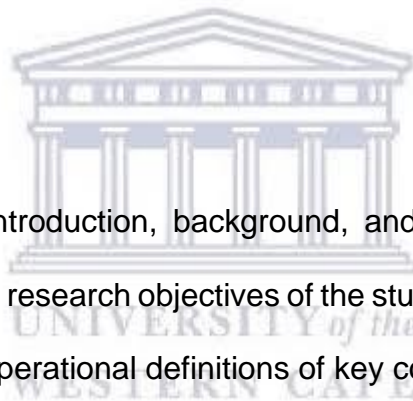
Student's commitment: In this study, it refers to the commitments which nursing students make to complete the four-year full-time course to obtain a nursing degree.

Academic conscientiousness: This refers to the responsibility, persistence, trustworthiness, purposefulness, and greater engagement of students in academic work, which is the predictor of student success (Kertechian, 2018). In this study, it

refers to the sense of responsibility and persistence of nursing students and their degree of engagement with their academic work, and the way it determines the level of their academic success.

Institutional commitment: The degree of commitment which students feel towards their educational institution, associated with the students' persistence and academic success (Davidson et al, 2009). In this study, it refers to the commitment that nursing students have towards their educational institution and their academic success.

Persistence: Is the ability to keep doing something difficult (*Cambridge Dictionary*, 2020). In this study, it refers to nursing students' continued enrolment at the HEI in spite of challenges.



1.8 Chapter Outline

Chapter 1: Provides the introduction, background, and problem statement of the study. It outlines the aim and research objectives of the study, explains the significance of the study, and provides operational definitions of key concepts.

Chapter 2: The Literature review gives insight into the factors that influence persistence, which are classified as academic and non-academic, and integration factors and their influence on persistence, according to existing literature.

Chapter 3: The methodology outlines the methods used in the study, including the research design, study setting, population, sampling and sample size, instrument, pretesting, data collection process, reliability and validity, ethical considerations, and data analysis.

Chapter 4: Presents the results of the study.

Chapter 5: Discussion of the results

Chapter 6: Conclusion and recommendations

1.9 Conclusion

This chapter set out the introduction to the study, its background, problem statement and the significance of the study. The next chapter focuses on the existing literature in the area under study.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails a review of the literature on studies that have been carried out on aspects associated with nursing students' persistence. The review focuses on an overview of persistence and the academic factors that influence nursing students' persistence, which includes clinical learning support, and academic support structures which can be available to nursing students, such as the faculty and peers. The review further discusses academic factors influencing persistence, which are the nursing students' academic integration in the institution, their commitment to obtaining a degree and to their institution, their academic conscientiousness, and the marks attained in high school. The review also scrutinises how non-academic factors influence persistence, and factors such as the social integration of students, the emotional and family support they receive, financial problems, the age of the students and their lack of knowledge about nursing prior to being admitted are also discussed.

2.2 Overview of persistence

An adequate supply of nurses is vital in healthcare provision because nurses play a pivotal role in the provision of public health services (World Health Organization, 2020). In South Africa, HEIs contribute significantly to the supply of professional nurses. In 2019, universities in South Africa produced 1371 graduate registered nurses, 36.6% of the total number of registered nurses who graduated (SANC, 2020). The retention and persistence of these nursing students in the universities are vital to maintaining a consistent supply of nursing graduates. The retention and persistence

of undergraduate nursing students are multifaceted and influenced by various factors (Ryan & Greig, 2017). When an undergraduate nursing student leaves the programme, no single factor can be determined as being the cause for their departure. Similarly, when undergraduate nursing students persist in the programme until their graduation, no single factor can be pointed out as being solely influential on their persistence, but rather an array of factors which can be academic or non-academic. This chapter explores the literature on various factors that have been reported in various studies as influential in nursing students' persisting. These factors include academic factors and non-academic factors, which include social, personal and student integration aspects.

2.3 Academic factors influencing student persistence.

Academic factors play a pivotal role in nursing students' persistence (Henderson et al., 2020). When a student enters an institution, their main concern is to persist and attain their academic degree against all odds (Tinto, 2017b). The academic demands of higher education life apply pressure on nursing students' cognitive resources (Marôco et al., 2020). This pressure may eventually lead to mental exhaustion, which in combination with other factors leads to poor performance and lack of desire to persist (Marôco et al., 2020).

Nursing students are reported to experience high levels of academic stress, and studies have revealed that their academic experiences and the learning environment created by the institution play a substantive role in whether or not the student decides to continue with their programme (Henderson et al., 2020). To be discussed here are academic factors such as support in the clinical area, existence of support structures,

the students' academic integration, their commitment to their institution and to attaining their degree, their academic success, and their academic conscientiousness, all of which have been reported to play a crucial part in the persistence of nursing students (Chrysikos et al., 2017; Sorić et al., 2017; Summers, 2020).

2.3.1 Clinical learning support

In South Africa, the SANC is responsible for creating nursing education outcomes as well as training programmes and clinical programmes, registration of all nursing cadres, and ensuring that professional nurse programmes meet the Nursing Act (No. 33 of 2005) requirements (SANC, 2005). Graduates are awarded a professional qualification after achieving the predetermined outcomes and prescribed minimum duration of training (SANC, 2005). There are three categories of nurses in South Africa: professional registered nurses with four years of training; enrolled nurses who are trained over two years; and nursing assistants, also called auxiliaries, who are trained over one year (Armstrong & Rispel, 2015). Registered nurse training in South Africa happens in a complex environment that includes public universities and public nursing colleges with various satellite training campuses, overseen by the provincial health departments (Armstrong & Rispel, 2015).

The institution under study trains professional nurses. During professional nurse training, the practical hours of the training should not be less than 60% of the total duration of the programme (SANC, 2005). As the practical training hours consume a significant part of the nurse training, insufficient support in clinical areas has been reported to contribute to diminished student retention (Chan et al., 2019). The HEI under study produces among the highest numbers of professional nursing graduates in the country annually (SANC, 2020).

For the nursing students to be able to complete their degree programme, institutions of higher education must have retention models in place, because nurses form the core of public health service provision (Nkutu et al., 2018).

2.3.2 Academic support structures

Academic support structures are systems that are in place to support students academically, and the efficiency of these have been reported as contributing towards success and persistence among undergraduate students ((Ndlela & Brysiewicz, 2018; Summers, 2020). Various support structures can be utilised in aiding student persistence. Academic support structures such as tutoring and mentoring were reported to improve academic deficiencies among students, thereby improving persistence in the first year of higher education (Adams, 2017; Stewart et al., 2017).

When nursing students encounter academic difficulties, there are support structures that have been reported to be vital in their persistence. Support from the faculty in both the academic and clinical setting improves nursing students' success and student persistence (Hamshire et al., 2019). Support from the institution for non-traditional students is also vital for their academic success and consequently their persistence (Chung et al., 2017). When students receive support from their peers, it has been shown to be another driver of nursing students' desire to persist (Hill, 2019) In some instances, nursing students succeeded academically and persisted in the midst of support challenges; their success compelled the faculty to pursue an understanding of effective ways to support students academically, thereby improving persistence (Fagan & Coffey, 2019).

2.3.2.1 Support from the faculty

Faculty support structures are vital in curtailing challenges which may lead to students discontinuing with their training and improving retention among undergraduate nursing students (Hamshire et al., 2019; Summers, 2020). In a study conducted in South Africa on students' perception of student support services, majority of the students indicated that the availability of both academic and non-academic support from the faculty was vital for their success (Ndlela& Brysiewicz, 2018). A study among nursing students in the United States of America (USA) showed that poor persistence was driven by factors such as a lack of support from the faculty and teaching staff; however, persistence was improved by support in the clinical area and by acquiring positive experiences during the training (Henderson et al., 2020). The results of this study were based on the students' perceptions, with no input from the faculty. Shelton (2020) reiterated that students with higher perceived faculty support were more likely to be successful academically and had a greater chance of persisting than those with perceptions of lower faculty support. Perceptions that students have regarding the caring behaviour of their lecturers have an impact on their inspiration to continue learning (Henderson et al., 2020). The notion of the students' interaction with the institution being significantly influential in students' decision to stay in the programme was, however, disputed by Crombie et al. (2013), who found that institutions played a minimal role in students' decision to stay in the programme, with clinical placement experiences indicated as being significantly influential.

2.3.2.2 Academic support for non-traditional students

Non-traditional students are those entering higher education and whose population characteristics are regarded as not conforming to the typical university entrants, are a minority and considered historically underprivileged (Chung et al, 2017; Brändle

& Ordemann, 2020). These students are reported to require extra support in the university setting for them to succeed academically, as they are reported to be more likely to leave the programme (Chung et al, 2017; Tower et al., 2015). These students include the mature, first-generation undergraduates, male students, students from ethnic minorities and students from poor economic backgrounds (Brändle & Ordemann, 2020 ; Howard, 2021). First-generation university students – those who are the first generation in their family to attend an HEI – are one of the common groups of non-traditional students in South Africa (Motsabi et al., 2020). In South Africa it is reported of students entering university, in 70% of cases none of their parents had attended university and 45% had no family member who graduated from an HEI (Universities South Africa, 2018). These types of students were reported to experience a high failure rate (Universities South Africa, 2018), reducing their chance of persisting. In a study conducted in the USA, some students indicated that their parents could not support them academically because some of their parents had only attained primary school education and some had poor command of the English language as it was their second language (Tsang, 2018). For these students enhanced support from the faculty was crucial, compared to those students whose parents had tertiary qualifications (Tsang, 2018). More than 75% of respondents of a study in the UK among minority undergraduate nursing students at two universities indicated that various faculty support services, such as library support, module teachers, programme leaders and counselling, helped them to build their confidence and be successful students (Ooms et al., 2013). Student success is reported to be associated with improved throughput and retention (Mthimunye & Daniels, 2019). The two universities studied had a high uptake of support services because of their student demography, which mainly comprised

non-traditional students who use English as a second language, which may be generalisable to the South African context (Roos et al., 2016).

2.3.2.3 Peer mentoring and support

Academically, peer support is provided in the form of peer mentoring and tutoring, whereby students get formal support from senior students in the programme (Hill, 2019; Ndlela & Brysiewicz, 2018). Academic support of students through mentoring by peers from the same cohort has been shown to contribute to better academic performance, and influenced student persistence (Hill, 2019; Thalluri, 2016). Students have interactions outside the classroom, and these help them to make sense of the subjects as well as the programme (Davidson et al., 2009; Tsang, 2018). Tsang (2018) cites that students share common experiences and hardships, thereby providing psychological support for each other, consequently leading to motivation to continue with the programme. Comprehensive support of students during their integration period into the institution through peer mentorship programmes helps them to transition into higher education easily (Mudaly & Mtshali, 2018). Peer mentorship can also be used to help students to become socialised into the clinical environment, as this is reported to be challenging for some first-year students, leading to them leaving the programme (Mudaly & Mtshali, 2018). When students join a peer group it becomes a vital part of their support network and helps them persist (Destin et al., 2018). Areas where students meet their peers are regarded as safe spaces which promote their feeling of worthiness and acceptance (Zambas et al., 2020). The accessibility of a peer support group for the students in the academic and clinical environments nurtures increased levels of resilience (Thalluri, 2016).

2.3.3 Academic integration

Student interaction with the faculty and staff has been reported to have a positive impact on student retention (Chrysikos et al., 2017). Academic integration is a phenomenon related to the students' apparent connections to the institution's intellectual spheres (Mitchell et al., 2019). Academic integration among students is measured initially concerning the students' academic performance and development, and then by their interconnection with the academic programme's norms (Roland et al., 2016). Formal academic integration comprises various academic activities which students engage with, which are associated with and contribute to their academic success (Chrysikos et al., 2017). Academic integration has been reported to precede institutional commitment among students (Browning et al., 2018). In a study carried out in the UK to test the integration theory, it was proven that academic integration had an impact on the students' later commitments and retention (Chrysikos et al., 2017). In a systematic review study on retention, 40% of the studies reviewed indicated that well-organised academic mentoring programmes increased undergraduate nursing students' success and enhanced their desire to continue with their studies (Nkutu et al., 2018).

Mentoring is defined as a progressive relationship between a more experienced person, who is referred to as a mentor, and a less experienced person, who is called a protégé or mentee, where the objective is to support the protégé's professional development and socialisation into the profession (Hernandez et al., 2017). Mentors in the academic setting provide additional support which students could access during times of enquiry (Fitzpatrick et al., 2021). Mentoring programmes can be formed either through formal or informal programmes, and undergraduate mentorship typically involves effective functions such as counselling, guidance, and encouragement

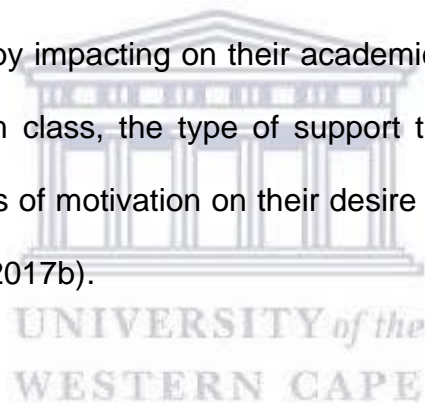
(Fitzpatrick et al., 2021). Lecturers and mentors seem instrumental in protecting and guiding students through their programme and placements (ten Hoeve et al., 2017). Mentoring support from faculty members is reported to strengthen motivation and persistence among students (Hernandez et al., 2017). Frustrations and perceived lack of support from mentors during clinical placement were expressed by students who considered stopping their programme (ten Hoeve et al., 2017). However, in another institution, a mentoring programme that was in place showed no effect on students' likelihood of good academic status or improved persistence (Fitzpatrick et al., 2021). These conclusions were deduced from settings in developed countries, and generalisability to poor-resource settings in South Africa may need to be established.

2.3.4 Students' commitment to obtaining a degree.

The significance and value that an individual student and their supportive network set upon achieving the degree are vital in their persistence at the institution of higher learning (Chrysikos et al., 2017). In a systemic review conducted on dropout of undergraduate nursing students, it was shown that students who were reported to have inappropriate study skills and frequent absenteeism from class or clinical settings had a greater chance of dropping out, whereas academic preparedness and commitment led to improved persistence of the students (Nkutu et al., 2018). Lack of interest in the discipline was reported to have made persistence by undergraduate nursing students difficult (Daniels & MacNeela, 2021). Students that get into the nursing programme as their second-choice struggle to remain committed and eventually drop out (Manokore et al., 2019). This study was done in a single geographical setting and therefore the generalisability is limited. Factors such as a student's commitment to attaining their degree and to their institution are reported to

play a crucial role in student persistence (Beck & Milligan, 2014). Tinto's (1993) theory of integration states that successful retention programmes should offer some level of academic and social integration (McEnroe-Petitte, 2011).

Even though a lot has been done in South Africa to assist students towards graduation, scant research has been done regarding student withdrawal and models of retention of undergraduate nursing students (Nkutu et al., 2018). Some of the factors shown to influence the undergraduate nursing students' continuation in the nursing institution are their determination to become a nurse as well as support from family, faculty, and peers, which made them remain committed (Salamanson et al, 2014; Zambas et al., 2020). There are other factors reported to influence nursing students' commitment to obtain a degree, and thereby impacting on their academic success and persistence, including absenteeism from class, the type of support the students receive in the clinical area, and the effects of motivation on their desire to persist (Kukkonen et al., 2016; Randa, 2020; Tinto, 2017b).



2.3.4.1 Students' absenteeism from class

Absenteeism, which refers to being away from scheduled classes and learning experiences, regardless of the reasons, is a challenge among students in universities as it impacts on the learning process in various ways (Randa, 2020). Student nurse attendance during training is obligatory and the SANC requires that students attend at least 80% of hours for both theory and practice during their training (Magobolo & Dube, 2019). Students absent themselves from class for various reasons. In a study carried out at an institution in South Africa by Randa (2020), the main factors that were reported to contribute towards absenteeism were the lecturer's behaviour and practices, and a poor relationship here discouraged students from attending class.

Social factors such as family responsibilities, ill health, alcohol, and substance abuse are also reported to lead to absenteeism, mainly among poorly motivated students (Okechukwu Chukwu, 2017; Singh, 2015). Absenteeism may have negative consequences on the learning process. Absenteeism from class often leads to insufficient learning, poor academic performance, and academic setbacks such as repeating and carry-over of modules, and it also interrupts the way classes are organised (Okechukwu Chukwu, 2017; Randa, 2020). One of the major consequences of absenteeism is the involuntary termination of training. According to Singh (2015), one study in South Africa showed that there were terminations of training in institutions due to frequent absenteeism.

2.3.4.2 Support in the clinical area

According to a systematic review by Chan et al., (2019), clinical placement experiences are one of the factors that surfaced as being contributory in determining whether a student decides to stay in or leave a programme. In a study carried out in Iran, improper supervision in the clinical area, as well as poor management of clinical settings, were some of the factors reported to contribute immensely to attrition (Farahani et al., 2017). When nursing students enter the clinical area they encounter difficulties, which lead to the inability to cope – and this inability to cope in the clinical area was reported to be one of the greatest contributors to attrition in a study carried out in South Africa (Roos et al., 2016). A systematic review by Nkutu et al. (2018) cited that 40.7% of the studies conducted found that mentorship programmes were inclined to be enablers of success among nursing students. Researchers believe that a well-organised mentorship programme can reduce dropout, therefore enhancing persistence (Nkutu et al., 2018). In a systematic review conducted by Chan et al.

(2019), students who experienced unpleasant experiences and arrangements during clinical placement were more likely to leave the programme. In this review however, the students were not likely to leave because of clinical placement experiences only, but they played a significant role in conjunction with other non-academic factors such as financial and family problems.

2.3.4.3 Effects of student motivation on persistence

Persistence is regarded as another way of speaking of motivation, which is a quality that permits someone to pursue their goal amid challenges; motivation is an important factor in understanding persistence (Roland et al., 2016; Tinto, 2017b). Upon entering the programme, nursing students have various factors that provide them with the desire to persist and complete their degree, as manifested by the effort they put into doing so (Tinto, 2017a). Inherent factors that have been cited to motivate students include their interests, values, and beliefs, such as the satisfaction of looking after patients, the desire to gain more knowledge, and interest in the nursing profession (Rafii et al., 2019). When students lack interest in the profession, they are less likely to persist (Farahani et al., 2017). Regardless of a student being interested in the profession, extrinsic factors such as family and educational environments, educator characteristics and available facilities in the learning environment may have an impact on their desire to persist (Rafii et al., 2019). According to Sogunro (2017) motivation is regarded as one of the facilitators of learning which leads to enhanced learning and high academic achievement among students. Off-campus extrinsic factors, such as financial problems, family, and relationship issues, may lead to withdrawal from the institution – but in the presence of motivation there is enhanced persistence, even in

the presence of a limited sense of belonging or an unfavourable view of the curriculum (Tinto, 2017b).

2.3.5 Academic conscientiousness

Academic conscientiousness is defined as a personality trait that is associated with responsibility, persistence, trustworthiness, and being purposeful (Liu & Campbell, 2017). Prior research has reported a robust correlation between the trait of conscientiousness and academic achievement, which has been upheld by current research (Sorić et al., 2017; Wang et al., 2019). Conscientiousness was predicted to have an indirect effect on social integration and also predicted the departure of students, as the postulation is that more conscientious students felt more committed to their institution (Adams, 2017). Bandura (1977, as cited in Tinto, 2017a) defines self-efficacy as a person's belief in their potential to succeed at a specific task. When a student has a robust sense of self-efficacy, their desire to attain goals and persist is enhanced, whereas a weak sense of self-efficacy detracts from this (Tinto, 2017b). With responsibility being a characteristic of conscientiousness, a systematic review conducted by Nkutu et al. (2018) reports that responsible students who had more than 80% class and clinical attendance fared better academically and were more likely to succeed in the programme compared to those who did not attend.

2.3.5.1 Effects of self-efficacy on persistence

Nursing students need to acquire specific knowledge and skills and the pertinent confidence to apply these in context, and this pertinent confidence is encapsulated in the concept of self-efficacy (Croy et al., 2020). Bandura (1977, as cited in Tinto, 2017a) defines self-efficacy as a person's belief in their potential to succeed at a specific task; this differs in various situations, depending on the current specific task or situation, as

a person might feel that they can succeed in one task, but if they fail, they cannot succeed in another (Tinto, 2017a). Self-efficacious students perform well academically because they utilise cognitive processing strategies and put in heightened levels of effort that lead to profound comprehension during the learning experience, consequentially leading to academic success (Honicke & Broadbent, 2016). Students have to believe they can do well in their studies if they are to continue putting in effort (Tinto, 2017a). Self-efficacy can be influenced by the student's experience, mainly during the critical first year, as they strive to adjust to the increased pressures of university life (Tinto, 2017a). It is therefore vital at this point that institutions have support systems in place to support students during this stage, before their motivation to persist is undermined (Tinto, 2017a).

2.3.5.2 Effects of test anxiety on self-efficacy

Students' self-efficacy may become threatened by anxiety, as this can reduce self-efficacy (Croy et al., 2020). Test anxiety is regarded as one of the direct consequences of a lack of academic self-efficacy (Kaur, 2019). Test anxiety was defined by Akca (2011, as cited in Holic, 2018) as a strong emotional reaction that an individual experiences before and during an examination. A study conducted among university students in India found no correlation between test anxiety and self-efficacy; however, the study used a small sample of 200 students and hence might not be generalisable to other settings (Kaur, 2019). In another study conducted in Romania, a negative correlation between test anxiety and self-efficacy was observed, where test anxiety was high in students with low self-efficacy (Holic, 2018). However, the participants in this study were not nursing students, but another study conducted on nursing students reported similar results (Noh & Lee, 2016). In this study self-efficacy was reported to negatively correlate with test anxiety, with the findings from the study suggesting that

improving self-efficacy and family support would be helpful for nursing students to relieve their test anxiety (Noh & Lee, 2016).

2.3.6 Institutional commitment

Institutional commitment is the student's confidence of choice, loyalty, and intention to re-enrol in the institution (Beck & Milligan, 2014). The degree of commitment which students have towards their HEI is a critical determinant of academic success and understanding the role of specific aspects influencing institutional commitment is vital for college and university students (Beck & Milligan, 2014; Davidson et al., 2009). Students have different goals upon entering institutions of higher education, and this can influence their commitment to the institution; some enter to complete their degree, but not at the initial institution and plan to transfer to another institution (Tinto, 2017b). Students who enrol in an institution, are loyal to it and are committed to achieving their goal of completing their degree at this institution of initial enrolment, are students with a greater probability of persisting at this institution (Tinto, 2017b). According to the findings of a study conducted by Savage et al. (2019), students with intent to persist consequently had a stronger commitment to graduate at their initial institution of enrolment than students with no intention to persist. Davidson et al.,(2009) argued that to increase institutional commitment, it is essential to institute a system that will efficiently measure significant components of institutional commitment and identify students in the academic programmes with relatively little commitment.

2.3.7 Academic success

Student success plays a vital role in institutions, as it is used to measure an institution's performance (Alyahyan & Düştegör, 2020). Academic success is a notion that is inclusive of core factors which are students' engagement in educationally focused

activities, their academic achievement, career success, attainment of learning outcomes, satisfaction, acquisition of skills and competencies, and persistence (Alyahyan & Düştegör, 2020; York et al., 2015). Academic failure is reported as one of the main factors contributing to diminished retention and poor persistence (Langtree et al., 2018). A systematic review representing five countries that was carried out to identify predictors of academic performance among undergraduate nursing students, indicated factors such as proficiency in English, majority ethnic status, prior educational qualifications, and competitive pre-admission qualifications as being predictors of academic success (Mthimunye & Daniels, 2019). Academic success was reported to subsequently lead to improved persistence (Mthimunye & Daniels, 2019). There were 17 articles in this systematic review, but none of these studies was carried out in the South African context, but rather in developed countries.

2.3.8 High school qualification at entry

Qualifications on entry to an HEI are reported to have an impact on persistence (Chan et al., 2019; Stewart et al., 2015). Some researchers have suggested that institutions need to have higher entry requirements in the recruitment of nursing students, to enhance persistence and minimise the number of students who come unprepared to study at the required level (Dube & Mlotshwa, 2018; Knight et al., 2012). This was a suggestion that emanated from various studies that proved that high school grades are good predictors of academic performance and persistence. Students with higher entry qualifications were reported to have a greater probability of getting better marks and succeeding in their studies than those with lower qualifications (Nkutu et al., 2018). This was reiterated by Stewart et al. (2015), who conducted a study in the USA on college persistence; the results indicated that students entering the university with

high academic marks from high school had a greater chance of persisting in their second year than those with low marks. However, the results were derived from a study conducted in a single institution. This conclusion may still be generalisable in the South African context, where studies conducted in nursing HEIs indicated that matric results were predictors of academic performance (Dube & Mlotshwa, 2018; Mthimunye, 2015). High academic performance subsequently leads to improved success and persistence. However, in developing countries such as South Africa, institutions end up admitting students with low marks and they need enhanced support to avoid the risk of unsatisfactory academic performance (Mthimunye et al., 2017).

2.4 Non-academic factors influencing persistence.

Jeffreys (2012) cites that non-academic external factors can interact with academic factors and can have a significant impact – either positively or negatively – on student persistence and retention. Hill (2019) reports that previously, HEIs relied mostly on academic criteria to assess aspiring nursing school applicants, but still struggled with below-average completion rates. Adding non-academic factors to their admission criteria could help enhance the effectiveness thereof, raise persistence and increase the production of nurses (Hill, 2019). There are non-academic factors, also known as environmental factors, which have been associated with students' decision to discontinue with their studies (Nkutu et al., 2018; Roos et al., 2016). Some studies reported that non-academic factors like self-confidence, self-efficacy, and motivation to achieve were compelling factors in academic success (Hill, 2019; Ibrahim et al., 2019). However, academic success might be achieved not only due to only these factors, but also other non-academic factors which have been associated with persistence. These include social integration, financial factors, age, emotional family

support and lack of knowledge about nursing (Adusei-Asante & Doh, 2016; Farahani et al., 2017).

2.4.1 Social integration

Social integration is linked to relations and connections that students have outside of the classroom (Mitchell et al., 2019). The informal interaction between the student and their peers as well as the support from peers and family, faculty interaction and support, as well as formal extracurricular activities in the institution, influence improved student persistence and graduation (Chrysikos et al., 2017; Hamshire et al., 2019). Support structures enhance students' feeling of a sense of belonging; hence integrating socially prompts them to scrutinise their commitment goals and intentions, enhancing their chances of committing and persisting (Chrysikos et al., 2017). Engagement among students during their training reduces the chances of them becoming socially isolated, thereby improving their chances of persisting in the programme (Au et al., 2019). In South Africa, lack of social integration into the university was indicated to be a challenge among undergraduate nursing students (Roos et al., 2016). Students are reported to be more likely to persist when they possess a sense of social integration (Mitchell et al., 2019). However, in another study carried out in the UK, guided by Tinto's (1993) theory of integration, there was no difference concerning social and academic integration between undergraduate students who showed persistence and those who dropped out (Chrysikos et al., 2017). Social integration as an explanation of student withdrawal has been criticised, as its generalisability is not reliable regarding its application to minority and non-traditional students, such as distance learning, mature and international students (Adams, 2017; Schreiber et al., 2014).

2.4.1.1 Students' sense of belonging

Even though a student's belief that they can succeed in university is crucial for their persistence to complete, it is not a guarantee that it will happen when there is no sense of belonging (Tinto, 2017a). A sense of belonging occurs when students are involved in and view themselves as being part of the institution's community; this sense of belonging may be influenced by their experiences in the institution and interaction with the campus community (Tinto, 2017b). A sense of belonging among nursing students was reported as having a positive influence on learning, motivation, and confidence among them (Grobeck, 2016; Zambas et al., 2020). In a study conducted on attrition and retention of nursing students, those who felt disconnected and lacked a sense of belonging felt that their only option was to withdraw from the programme (Adusei-Asante & Doh, 2016). When a student has no sense of belonging, it eventually leads to their disengagement from the group, learning activities and the campus community in general, thereby undermining motivation to persist (Grobeck, 2016; Tinto, 2017a). Some of the factors that students perceived as being influential regarding their sense of belonging were a welcoming environment in the clinical area, taking part in patient care, and their acceptance by nursing and other staff in the clinical environment (Albloushi et al., 2019).

2.4.1.2 Student engagement

Those HEIs that have created effective engagement and systems promoting the sense of belonging of students were better able to retain the students in the programmes (Adusei-Asante & Doh, 2016). When students enter an HEI, they encounter various social, academic as well as emotional challenges during the process of transition into the institution, which leads to some students deciding to withdraw (Vinson, 2019).

Mudaly and Mtshali (2018) state that students require specific support during the phase in the institution when they start to engage in their studies, and this is vital in building their self-confidence. Activities such as significant interaction between staff and students, peer mentoring relationships, orientation week and learning experiences which are customised to their interests have been shown to promote engagement among students, contributing to their persistence (Adusei-Asante & Doh, 2016; Vinson, 2019). When students become engaged in the initial stages of their first year, they develop a sense of academic and social belonging which promotes other forms of engagement-enhanced learning and persistence in the subsequent years to completion (Roland et al., 2016; Tinto, 2017a). Continued academic and psychosocial support enhances the engagement process and helps improve student persistence (Mudaly & Mtshali, 2018).

2.4.2 Emotional support from family

Family support enables completion of the programme by undergraduate nursing students, as they can express their feelings at home in a safe environment, with friends and peers also helping them to cope (Knight et al., 2012; Wray et al., 2017). Students reiterated that for them to survive in the institution, support is needed from their family and active encouragement from their parents, partners for them to remain focused to completion (Kennel & Ward-Smith ;Pearson, 2019) In a study done in the UK, a significant number of nursing students had considered leaving, but emotional support from their families encouraged them to remain in the programme (Wray et al., 2014). In the Netherlands, some nursing students reported that when they were experiencing problems in the clinical area, they did not receive support from the faculty and were more likely to discuss the problems with their family, partner, or peers for emotional support (Bakker et al., 2019). However, the family does not always assist emotionally

to support persistence; pressure from the family, such as family responsibilities, marital problems, or illness, have been reported to negatively influence student persistence (Nikolaidou et al., 2019; Ryan & Greig, 2017).

2.4.3 Financial problems

Financial status has been reported to be a contributory factor in nursing students' retention and persistence (Cipher & Urban, 2022). Access to financial aid or lack of such access can influence a student's decision to re-enrol and complete the programme (Nikolaidou et al., 2019). Some nursing students have reportedly failed to continue with their studies because they had gone through life crises such as divorce, which left them in a financially difficult situation and unable to study (Kukkonen et al., 2016). Roos et al. (2016) states that in South Africa financial difficulties were reported to be one of the contributors to nursing students leaving the programme, because of the costs associated with tertiary education. According to Ryan and Greig (2017), some of the students fail to persist due to financial pressures and are mainly those who do not have access to loans or financial aid, such as international or non-citizen students. Access to financial aid was reported to be supportive of students completing their programme (Nikolaidou et al., 2019).

2.4.4 Age of students

There have been different sentiments by researchers on how age influences retention. Pearson (2019) reported that one of the factors indicated as being influential in student retention was advanced age of students on starting training, which puts them at risk of leaving the programme, which eventually leads to a reduction in the pool of nurses

that will go for further specialised training, and resource wastage. In the UK it was reported that attrition rates for full-time mature students for the 2013/14 period were higher than for younger students after the first year of training (Adusei-Asante & Doh, 2016). In one study mature students were reported to have struggled academically due to a lack of study skills and unpreparedness for what the nursing curriculum entails; they also struggled to combine studying and family responsibilities (Kukkonen et al., 2016). This was reported to be a contributor to lack of persistence among these mature students, in comparison to the younger generation (Kukkonen et al., 2016). However, this study was done on a small sample (N=25), and it therefore may not be generalisable to other contexts. Other studies share different sentiments, reporting that mature students were more likely to persist in the programme than younger students (Burns, 2017; Mthimunye & Daniels, 2020; Wray et al., 2014).

2.4.5 Lack of knowledge about nursing

Entering nursing with limited knowledge of what the profession entails can affect a student's decision to stay or leave (Kukkonen et al., 2016). The discrepancy between expectations and experiences was reported to be contributory towards students leaving the programme because some students chose nursing with a lack of information about the profession, and others chose it because that is what their families wanted (Bakker et al., 2019; Farahani et al., 2017). In Iran, incorrect career choices, which led to clinical difficulties were reported as contributing to poor persistence; it seemed that some of the students were not fully informed as to what the nursing profession entailed and found themselves unable to cope in the clinical area (Farahani et al., 2017). Other students found the programme to be difficult in

general, and eventually decided that the training and profession did not fit with them (Bakker et al., 2019).

2.5 Conclusion

Student persistence is a multidimensional aspect of nurse training. Globally, various aspects affect nursing students' persistence in different ways, depending on the context. Some factors that have been attributed to being influential in the persistence of nursing students, and are classified into academic factors and non-academic factors, were reviewed in this chapter. After having discussed these various academic and non-academic aspects and their impact on persistence in various contexts, some gaps in knowledge remain. Factors that influence dropout among nursing students – meaning reasons for dropping out have been widely researched in the research context.

Factors that significantly influence persistence – which is mainly what makes students stay – from the students' viewpoint in the specific context in South Africa remain under researched, hence the relevance of this study. The next chapter will discuss the methodology used to conduct the study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research methods used to conduct the study. The research design used is described, as well as the study setting and population, with a description of the instrument and its pretesting, the data collection process, the reliability and validity, data analysis and ethical considerations. The purpose of the study was to identify factors influencing undergraduate nursing students' persistence at a selected HEI, and quantitative study was the research method of choice. Quantitative research has been described as significant in nursing because it helps recognise the deep nature of realities of variables under study, how they are associated and the strength of association between variables (Esperón, 2017). In this study it was used to determine how nursing student academic integration, social integration, academic support, commitment, and academic conscientiousness affect their persistence in the HEI.

3.2 Quantitative research methods

Quantitative research is where researchers recognise and define their variables and then collect applicable data from study participants, which is in numerical form (Polit & Beck, 2017). Esperón (2017) states that quantitative research is vital in nursing, because its research trend is anchored on the interaction between people and their environment, the education of nurses and the creation and confirmation of theories in the clinical area, resulting in evidence-based practice. The data collected using quantitative research methods is then analysed using statistical procedures, and the resultant report is written up using a set structure (Creswell & Creswell, 2018).

3.3 Research design

This is an approach chosen within the categories of research enquiry that provides a course to follow on the research study's plan of action (Creswell & Creswell, 2018). The research design also includes the specifications that will augment the study's integrity (Polit & Beck, 2017). The approach utilised to conduct the study was quantitative, descriptive and survey design, which enabled the researcher to determine and describe the factors influencing nursing students' persistence.

3.3.1 Descriptive research design

According to Polit and Beck (2017), descriptive research usually has as its main goals to precisely depict people's traits or situations and how frequently specific phenomena happen. A descriptive study is limited to the description of the occurrence of phenomena and is usually the initial step in research investigations. A descriptive design is normally used when not much is known about the problem, and it identifies characteristics, trends, and categories as well as frequencies of variables (McCombes, 2019). This design is suitable for this study because the participants provided answers to closed-ended questions through the use of questionnaires with no need to explain themselves, and the phenomenon is described and analysed in numerical terms, based on their responses.

3.3.2 Survey research design

A quantitative descriptive survey design was employed to conduct the study. The survey is one of the basic research methods used in social sciences and health services. A survey refers to the selection of relatively larger samples of people from a predetermined population of interest (Brink et al., 2012). In a survey study, the attributes of the phenomena are measurable and there is no manipulation of variables

required, only a description of the respondents' responses (Polit & Beck, 2017). Survey studies provide much of the data that monitor trends in our society and test societal understandings. A survey study is a systematic and standardised approach to the collection of information on individuals, households, or organisations through systematically questioning identified samples of individuals. A survey study is therefore an appropriate method to investigate factors influencing undergraduate nursing students' persistence (Polit & Beck, 2017).

3.4 Study setting

A research setting is the physical setting in which data collection occurs in a study (Polit & Beck, 2017). The study setting is in a culturally diverse public university situated in the Northern suburbs of the Cape Town Metropolitan area in South Africa. The HEI of choice is one of the three HEIs in the province that offer undergraduate nursing programmes. The School of Nursing in the Faculty of Community and Health Sciences offers both undergraduate and postgraduate nursing programmes. The nursing faculty offers registered undergraduate students training through the extended curriculum programme and the mainstream Bachelor of Nursing programme that prepares them to register as a general nurse, community health nurse, midwifery, and psychiatry nurse, according to Regulation R425. The institution is chosen because it has the largest number of undergraduate nursing students among the three HEIs in the province.

3.5 Population, sampling, and sample size

A study population is defined as the aggregate of cases that conform to designated criteria and that are accessible for a study (Grove et al., 2017). The study population in this study was second-year undergraduate nursing students registered for the

current academic year. Statistically, first-, and second-year students have a greater chance of dropping out than the third- and fourth-year levels (Roos et al., 2016). The second-year nursing students have a huge course load due to the science modules on top of nursing modules, such as human biology, anatomy, and physiology, pharmacy, physics, and chemistry, which might be a contributory factor to reduced persistence among second-year nursing students. First-year nursing students are new in the programme, and they have had a limited time on campus due to COVID-19; therefore, they do not have enough experience of campus life. Hence, the focus of this study is on second-year nursing students. The target population comprises 259 second-year nursing students, and 58 second-year extended curriculum programme nursing students(N=317).

A sampling technique is a process that is used to select a portion of the population to represent the entire population (Polit & Beck, 2017). An all-inclusive sampling technique was used to include all the second year and second-year extended curriculum programme nursing students. The sample size is the number of people who participate in a study (Grove et al., 2017). The sample size in this case was n=149.

Inclusion criteria: All of the second-year undergraduate nursing students in the mainstream and extended curriculum programme who were registered for the academic year and willing to participate in the study.

Exclusion criterion: Second-year undergraduate nursing students not registered for the 2021 academic year.

3.6 Instrument

A self-administered structured College Persistence Questionnaire (CPQ) created by Davidson et al. (2009) was used, with permission from the authors. The CPQ was designed to determine variables that best distinguish undergraduates who persist from those who do not persist at their institutions (Davidson et al., 2009). The instrument was designed with 6 subscales, namely academic integration, social integration, supportive service satisfaction, degree commitment, institution commitment, and academic conscientiousness, with a total of 36 items which are measured using a five-point Likert-type scale with responses as follows: strongly agree --5, agree - 4, neutral- 3, disagree-2, and strongly disagree -1. The questionnaire was adapted to suit the research context and a shortened version of the instrument was used.

The factor of institutional commitment on the CPQ is used to determine the students at risk of dropout, through the identification of students' intention to re-enrol and earn a degree from that institution, through calculation of the mean Institutional Commitment score. The academic integration and social integration variables reflect how students change based on their relationship with the campus environment, integrating academic and social experiences into their perceptions and involvement behaviours. Support services satisfaction variables address the attitudes that students develop towards the university and how well it meets their out-of-classroom academic needs (Davidson et al., 2009). Institutional commitment is used to determine the students at risk of dropping out through identification of their intention to re-enrol. Academic conscientiousness looks at the timely performance of academic responsibilities (Davidson et al., 2009).

3.7 Pre-testing

A pre-test is a smaller version of the trial study, which is designed to assess the feasibility of a study, improve its study design, methods, and procedures to be used in the main study (Polit & Beck, 2017). It is also done to establish the reliability of the tool, how long the study takes, and to identify potential fatigue among respondents (Creswell & Creswell, 2018). A pre-testing of the questionnaire was conducted on five respondents before the main study, to identify any concerns that may arise from the tool. Convenience sampling was used to select the students. Through the assistance of the institution, invitations to participate were sent by email to conveniently selected participants inviting them to take part in the pilot study and outlining its purpose. The returned responses were checked for completeness and whether the responses indicated that the participants understood the questions. The responses were complete, and the questions seemed to be understood. The pre-testing was conducted online, and the pre-testing responses were included in the main study.

3.8 Data collection process

Data was collected through the administration of a self-administered structured questionnaire (Creswell & Creswell, 2018). Ethics approval was obtained from the ethics committee of the university and access to the students was sought through the registrar and the head of the nursing school. Online and face-to-face questionnaires were used for data collection. Respondents were expected to follow a Google Docs link which led them to the online questionnaire. Face-to-face respondents were presented with printed questionnaires. The researcher provided all of the relevant information regarding the research to the potential respondents and obtained informed consent using the online platform before proceeding to the online questionnaire and

signed consent for the face-to-face respondents. Participants proceeded with the questionnaire only after providing informed consent through the same platform. To submit their responses, the online participants had to click the submit option in the Google Docs link at the end of the questionnaire. The face-to-face respondents returned the filled-out questionnaires to the researcher. An email reminder was sent out to increase the response rate. The data was collected in 2021 and the questionnaire took approximately 20 minutes to complete.

The response rate to the online question was very low, hence ethics amendment to conduct face-to-face data collection was required. During the face-to-face data collection access to the students was obtained from the School of Nursing and the lecturers. Data was collected during the students' free time. Participant information sheets were provided to the potential participants and those with questions were provided with the opportunity to raise them. Those who were willing to participate provided informed written consent. They were then expected to fill in the questionnaire provided by ticking one appropriate response for each question that best described their experiences or opinions. The filled-in questionnaires were returned directly to the researcher, who then captured the questionnaires into an Excel spreadsheet, and then exported the data into the Statistical Package for Social Sciences (SPSS) version 28 program for analysis.

3.9 Reliability and validity

Validity is a quality that describes the extent to which inferences made in a study are accurate and well-founded in their measurement (Grove et al., 2017). Face validity refers to researchers' subjective assessments of the presentation and relevance of the measuring instrument regarding whether the items in the instrument appear to be

relevant, reasonable, unambiguous, and clear (Oluwatayo, 2012). The face validity of the instrument was assessed by the research supervisor of the study. Content validity is the extent to which the instrument captures the desired elements and is addressed in Table 3.1. The tool has established validity and reliability.

Table 3.1: Content validity

No.	Objectives	Questions
1	Nursing student's academic integration	Q1–8
2	Nursing student's social integration	Q9–16
3	Use of support services to persist at institution	Q17–22
4	Student's commitment to obtain a degree	Q23–29
5	Academic conscientiousness	Q30–32
6	Institutional commitment	Q33–36

Reliability is the degree to which a measurement is free from error (Polit & Beck, 2017). The tool has established reliability and was developed from the responses of 2022 students at four different institutions. The Cronbach's alpha scores for the six factors on the CPQ were as follows: institutional commitment $\alpha=0.78$, commitment to obtaining a degree $\alpha=0.70$, academic integration $\alpha=0.81$, social integration $\alpha=0.82$, support services satisfaction $\alpha=0.74$, and academic contentiousness $\alpha=0.63$ (Adams, 2017).

Internal consistency is the degree to which all of the items in a test measure the same concept, and therefore is connected to the interrelatedness of the items within the test (Tavakol & Dennick, 2011). The Cronbach's alpha, which is also known as coefficient alpha, was determined to ensure the instrument's internal consistency (Polit & Beck, 2017), and is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011).

The normal values range between 0.00 and +1.00, and the higher the value, the better the internal consistency. Coefficients of 0.80 or higher are regarded as particularly desirable, and statistical software such as SPSS can be used to calculate the alpha (Polit & Beck, 2017).

3.10 Data analysis

Quantitative data collected from the study was captured and analysed using SPSS version 28. Descriptive analysis includes the frequency, percentages, mean, standard deviation, and scores of variables related to the individual items for each of the six factors of the CPQ, which are: academic integration, social integration, support services, academic conscientiousness, institutional commitment, and commitment to obtain a degree. Average summary scores were calculated for each factor. The Kruskal Wallis test was conducted to determine the relationship between independent variables, such as age and dependent variables in terms of the six factors related to student persistence. A p-value of $p < 0.05$ was considered statistically significant.

3.11 Ethical considerations

Ethics is defined as a system of morals that is concerned with the extent to which the research process conforms to what is professionally, legally, and morally acceptable and responsible to the participants (Polit & Beck, 2017). Ethics are also regarded as moral principles and norms governing an individual's behaviour as to what is acceptable and unacceptable behaviour (Parveen & Showkat, 2017). The conduct of this research was anchored on the ethical principles of beneficence, justice, and respect for human dignity, with all institutional rules and regulations being taken into consideration.

3.11.1 Permission

The research proposal was approved by the Community and Health Sciences Higher Degree Committee. Ethical clearance was obtained from the university's Humanities and Social Science Research Ethics Committee. Access to the potential participants, who are nursing students, was obtained from the registrar of the university, the director of the School of Nursing, and the year coordinators.

3.11.2 Informed consent

The tenets of the Declaration of Helsinki were observed, and informed written and signed consent was obtained from potential respondents (Polit & Beck, 2017). The researcher provided the participants with participant information outlining all the information about the research in a language that they understood. The potential respondents were not hurried into providing consent to participate, but were given ample time to do so, as they needed time to understand what the participation entailed (Polit & Beck, 2017). According to Polit and Beck (2017), respondents should provide a documented and signed informed consent. The researcher explained that consent is voluntary, and that they would not suffer any prejudice for refusing to participate and could withdraw from the study at any stage should they wish to do so. The researcher informed the respondents of all the potential harms and benefits that might arise from participating in the research.

3.11.3 Beneficence

The researcher should not harm the respondents and should provide more benefit (Polit & Beck, 2017). The respondents were informed that non-participation would not impact their semester marks and that they had the right to withhold any sensitive information that they were not willing to provide, without any prejudice (Polit & Beck,

2017). The researcher assured the respondents that the information they provided would not be used against them. The respondents were informed that they could terminate their participation immediately should they suffer undue stress at any point in the study and were provided with the details of who to contact should this occur.

3.11.4 Respect for human dignity

The respondents were given the right to self-determination and to make a fully informed decision (Polit & Beck, 2017). The researcher ensured that all of the necessary information about the study was fully disclosed to the respondents, that their participation was voluntary, and that they were informed that they had the right to refuse to participate without suffering any prejudice. They were also informed of their right to ask questions for clarification.

3.11.5 Justice

There was no discrimination in the selection of respondents. Respondents were informed that the confidentiality of information would be maintained during the communication or publication of the findings. All respondents who qualified to participate were included in the study. Details of the contact person were provided to respondents for any questions or concerns that might arise.

3.11.6 Anonymity and confidentiality

Anonymity is when the researcher cannot link the collected data to the participant (Polit & Beck, 2017). The respondents were assured that confidentiality and anonymity of the information would be maintained at all times during and beyond the study. Respondents were reassured that in order to ensure anonymity, no identifying factors about the participants were to appear on the questionnaire so that their responses were strictly anonymous. The respondents were informed that the captured data will

be stored electronically in a password-protected device, questionnaires stored in a lockable cabinet, with only the researcher and supervisor having access to it for five years, after which the data will be destroyed by deleting it and by shredding.

3.12 Conclusion

In this chapter, the research design, research protocol and study respondents were described. The selected research design and methods were identified as being appropriate to describe the factors influencing the persistence of nursing students. Descriptive statistics were applied in this study to describe the demographic characteristics of the participants and the factors influencing their persistence.



CHAPTER FOUR

RESULTS

4.1 Introduction

This study aimed to identify factors influencing nursing students' persistence in an HEI in the Western Cape province in South Africa. A sample of 317 students was invited to participate in the study through an online questionnaire, which yielded a low response rate, and later on a face-to-face invitation to participate in the study was extended to increase the response, with 149 agreeing to participate in total, yielding a 47% response rate. The following are the six objectives of the study:

- Objective 1 was to determine the levels of undergraduate nursing students' academic integration.
- Objective 2 was to determine the levels of social integration among undergraduate nursing students.
- Objective 3 was to describe the use of student support services by undergraduate nursing students.
- Objective 4 was to describe the undergraduate nursing students' commitment to obtain a nursing degree.
- Objective 5 was to describe the academic conscientiousness of undergraduate nursing students towards their academic success.
- Objective 6 was to determine the degree of institutional commitment that undergraduate nursing students have towards their educational institution.

4.2 Demographic information of the respondents

Of the respondents, 117 (78.5%) were female and 32 (21.5%) were male (Table 4.1). The respondents comprised two groups of nursing students: the majority (119; 79.9%) were in the second-year mainstream group, and 30 (20.1%) were in the second-year extended curriculum group (Table 4.1). In terms of age of respondents, there were 30 (20.3%) in the 18–20 years group, with those in the 21–25 years age group being in the majority (98; 66.2%), with 10 (6.8%) in the 26–30 years age group and 10 (6.8%) in the group aged 30 years and above (Table 4.1). The median age was 22 years, and the mean age was 22.9(\pm 3.904) years. The minimum age was 18 years, and the maximum age was 39 years.

Table 4.1: Demographic information

Demographic information		N	Percentage
Gender	Male	32	21.5%
	Female	117	78.5%
Year of study	Second-year mainstream	119	79.9%
	Second-year extended curriculum programme.	30	20.1%
Age groups	18–20 years	30	20.3 %
	21–25 years	98	66.2%
	26–30 years	10	6.8%
	31+ years	10	6.8%
	Unspecified	1	1.49%

4.3 Mean scores for the six domains influencing academic persistence.

The mean score for academic integration was $M=3.7534$, $SD \pm 0.48694$ at a 95% confidence interval (CI) (Table 4.2). The mean score for social integration was $M=3.3358$, $SD \pm 0.61919$. Student support services (Table 4.2) reported a mean score of $M=3.3761$, $SD \pm 0.69419$. The mean score of student commitment was $M=4.2008$, $SD \pm 0.52346$ – the highest among the factors. The mean score for academic conscientiousness was $M=3.8918$, $SD \pm 0.85645$, and for institutional commitment it was $M=4.0180$, $SD \pm 0.68378$.

Table 4.2: Mean scores for the six domains of academic persistence

	N	Mean	Std deviation	Minimum	Maximum
Academic integration	149	3.7534	0.48694	2.50	4.75
Social integration	148	3.3358	0.61919	1.75	5.00
Student support services	148	3.3761	0.69419	1.00	5.00
Student commitment	148	4.2008	0.52346	2.43	5.00
Academic conscientiousness	148	3.8919	0.85645	1.00	5.00
Institutional commitment	148	4.0180	0.68378	2.50	5.00

4.4 Nursing students' academic integration

The integration of students academically plays a role in the persistence of students. As indicated (Table 4.3) below, the most positive responses were for the statement that respondents could see much connection between what they were learning at the institution and their future career possibilities, with 133 (89.3%) agreeing with the statement, 16 (10.7%) disagreeing and 3 (2.0%) being uncertain. Of the respondents, 63 (42.3%) disagreed that they were concerned about their intellectual growth at the institution, while 56 (37.6%) agreed with the statement and 30 (20.1%) were unsure. Many students 125 (83.9%) were satisfied with their intellectual growth since they joined the institution, while 24 (16.1%) were uncertain. The mean score for intellectual growth is the lowest ($M=2.95$; $SD=1.170$). About 74 (49.7%) of respondents disagreed with the statement that lecturers deliberately impose unreasonable requirements on students and enjoy their distress; however, 38 (25.5%) agreed with the statement and 36 (24.2%) were uncertain. About 105 (70.4%) agreed that they were satisfied with the quality of instruction they were receiving, and one-third (43; 29.5%) of the respondents were uncertain about the statement. Of the respondents, 69 (46.3%) were not disappointed with the amount of interaction they had with the lecturer, while 36 (24.1%) indicated that they were disappointed and 43 (28.9%) were uncertain about the statement.

Table 4.3: Nursing students' academic integration

Variables	Agree	Uncertain	Disagree	Mean	SD
1. I understand the thinking of my lecturers when they lecture or ask students to answer questions in class	118 (79.2%)	30 (20.1%)	1 (0.7%)	4.01	0.707
2. I am satisfied with the extent of my intellectual growth and interest in ideas since coming here	125 (83.9%)	24 (16.1%)	0 (0.0%)	4.18	0.688
3. In general, I am satisfied with the quality of instruction I am receiving here	105 (70.4%)	43 (29.5%)	0 (0.0%)	3.91	0.701
4. I am concerned about my intellectual growth at this school of nursing	56 (37.6%)	30 (20.1%)	63 (42.3%)	2.95	1.170
5. On average across all the courses, I am interested in the things that are being said during class discussions	123 (82.5%)	21 (14.1%)	5 (3.4%)	4.07	0.741
6. I can see much of a connection between what I am learning here and my future career possibilities	133 (89.3%)	13 (8.7%)	3 (2.0%)	4.37	0.729
7. I believe that many lecturers deliberately impose unreasonable requirements on students and enjoy their distress	38 (25.5%)	36 (24.2%)	74 (49.7%)	3.28	1.148
8. Students differ widely in how much interaction they want to have with the lecturer. I am disappointed with the amount of interaction I have with the lecturer	36 (24.1%)	43 (28.9%)	69 (46.3%)	3.25	1.068

4.4.1 Academic integration among age groups

Means test was conducted to determine influence of academic integration on student persistence. The results indicate that academic integration varies among the different age groups. Those aged 31 years and older (Table 4.4) had the highest mean score ($M=4.0125$, $SD=0.45$), meaning that academic integration positively influences their persistence more than other age groups. The 18– 20 years age group had the second highest mean ($M=3.7708$, $SD=0.53$). The age group with the lowest mean was those of 26–30 years ($M=3.5875$, $SD=0.50$), meaning academic integration has the least impact on their persistence. The minimum score for the 31 years and older age group was 3.13, and the maximum score was 4.63. Among the 26–30 years age group, the minimum score was 3.00 and the maximum was 4.75,

which was the highest. However, statistically, there were no significant statistical differences observed for academic integration among the age groups ($F(3,144) = 1.381, p = 0.251$).

Table 4.4: Mean test for academic integration among age groups

Age (years)	N	Mean	Std deviation	95% CI for mean		Minimum	Maximum	P-value
				Lower bound	Upper bound			
18–20	30	3.7708	0.53143	3.5724	3.9693	2.75	4.63	0.251
21–25	98	3.7372	0.47471	3.6421	3.8324	2.50	4.63	
26–30	10	3.5875	0.49669	3.2322	3.9428	3.00	4.75	
31+	10	4.0125	0.45050	3.6902	4.3348	3.13	4.63	
Total	148	3.7525	0.48849	3.6732	3.8319	2.50	4.75	

4.5 Social Integration factors influencing student persistence

As indicated in Table 4.5, the highest number of positive responses from respondents (101; 68.2%; $M=3.75, SD 0.954$) agreed that their interpersonal relationships with other students had an impact on their personal growth, attitudes, and values, while 27 (18.2%) were uncertain about this and 20 (13.5%) disagreed. More than half of the respondents (96; 64.9%; $M=3.72, SD=0.917$) agreed that their interpersonal relationships with other students had an impact on their intellectual growth and interest in ideas, while 34 (23.0%) were uncertain about this. Regarding the statement about having a lot in common with other students at the institution, 60 (40.3%; $M=3.37, SD=0.875$) respondents were uncertain about this, while 67 (45.0%) agreed that they had a lot in common and 21 (14.1%) disagreed. Close to half of the respondents (72; 48.3%) were uncertain whether they had a strong sense of connectedness with other lecturers, students, and staff on the campus, while 51 (34.2%) agreed that they did and 24 (16.1%) disagreed.

A significant number of respondents (62; 41.6%) disagreed that they had many of their closest friends at the campus rather than elsewhere, such as at other universities, a workplace, or hometown, while 53 (35.6%) agreed with the statement.

Table 4.5: Social integration factors

Variables	Agree	Uncertain	Disagree	Mean	SD
9. My interpersonal relationships with other students had an impact on my personal growth, attitudes, and values	101 (68.2%)	27 (18.2%)	20 (13.5%)	3.75	0.954
10. My interpersonal relationships with other students had an impact on my intellectual growth and interest in ideas	96 (64.9%)	34 (23.0%)	18 (12.2%)	3.72	0.917
11. I have a strong sense of connectedness with other lecturers, students, staff on this campus	51 (34.2%)	72 (48.3%)	24 (16.1%)	3.25	0.810
12. I have a lot in common with other students here at the university	67 (45.0%)	60 (40.3%)	21 (14.1%)	3.37	0.875
13. I am satisfied with my overall social life here friendships, student organisations, extracurricular activities, and so on	84 (56.4%)	48 (32.2%)	15 (10.1%)	3.61	0.940
14. I have many closest friends here in the campus with me rather than elsewhere such as at other universities, workplace, or hometown	53 (35.6%)	33 (22.1%)	62 (41.6%)	3.01	1.240
15. My overall impression of the other students here on the campus is favourable	82 (55.0%)	50 (33.6%)	16 (10.7%)	3.52	0.861
16. I often wear clothing with this university's emblems or logo on it	35 (23.5%)	19 (12.8%)	94 (63.1%)	2.45	1.247

4.5.1 Social integration and age groups

The age group of 31 years and older had the highest mean ($M=3.6125$, $SD=0.75$) (Table 4.6) for this factor, meaning that social integration positively influences their persistence more than for other groups. The minimum score for the 31+ age group

was 2.13 and the maximum was 4.75. The 18–20 years age group had the lowest mean ($M=3.2911$, $SD=0.67$), indicating that among all the age groups their persistence is the least affected by social integration. The minimum score for the 18– 20 years age group was 1.75 and the maximum was 4.38. However, there was no statistical differences in the influence of social integration on persistence across the age groups ($F(3,143) = 0.743$, $p=0.534$).

Table 4.6: Social integration in terms of age groups

Age groups (years)	N	Mean	Std deviation	Minimum	Maximum	P-value
18–20	30	3.2911	0.67420	1.75	4.38	0.534
21–25	97	3.3192	0.58797	1.88	4.88	
26–30	10	3.3500	0.67649	2.63	5.00	
31+	10	3.6125	0.74640	2.13	4.75	
Total	147	3.3355	0.62130	1.75	5.00	

4.6 Student support services

Students rely on support from their institutions in order to be able to persist. An overwhelming number of respondents (Table 4.7) – 100 or 67.1% ($M=3.74$, $SD=1.024$) agreed that the HEI communicated important information well to students. Such information includes academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, and financial aid and scholarship opportunities. Nineteen (12.8%) respondents disagreed with the statement and 29 (19.5%) were uncertain about it. More than half of the respondents (82; 55.0%, $M=3.53$, $SD=0.958$) agreed that it was easy to get answers to their questions about things that were related to their education in the institution, while 46 (30.9%) were uncertain and 20 (13.4%) disagreed. A notable number of

respondents (65; 43.6%, $M=3.10$, $SD=0.960$) were uncertain about whether they can have much input on matters such as course offerings, rules and regulations, and registration procedures, with 48 (32.2%) respondents in agreement that they could and 34 (22.2%) in disagreement. More than one-third of the respondents (59; 39.6%) were unsure whether if they had needs that were different from those of the majority of the students at the university, it would meet these needs well, while 60 (40.3%) agreed with the statement.



Table 4.7: Student support services factors influencing nursing students' persistence.

Variables	Agree	Uncertain	Disagree	Mean	SD
17. I am satisfied with the academic support I receive here.	81 (54.3%)	44 (29.5%)	23 (15.5%)	3.52	0.993
18. This institution communicates important information well to students, such as academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, and financial aid and scholarship opportunities	100 (67.1%)	29 (19.5%)	19 (12.8%)	3.74	1.024
19. It is easy to get answers to my questions about things related to my education here	82 (55.0%)	46 (30.9%)	20 (13.4%)	3.53	0.958
20. I can have much input on matters such as course offerings, rules and regulations, and registration procedures	48 (32.2%)	65 (43.6%)	34 (22.8%)	3.10	0.960
21. Even if I have needs that are different from the majority of the students at this university, it meets these needs well	60 (40.3%)	59 (39.6%)	29 (19.6%)	3.25	0.932
22. I believe the students are handled fairly in this institution	57 (38.3%)	44 (29.5%)	47 (31.5%)	3.11	1.089

4.6.1 Student support services and age groups

Mean test was conducted to determine whether there was a difference in the age groups in terms of Student Support Service. The results indicate that those aged 31 years and more had the highest mean ($M=4.0167$, $SD=0.49$) (Table 4.8), while the 21–25 years age group had the lowest mean ($M=3.2732$, $SD=0.69$). These differences

were statistically significant among the age groups ($F(3,143) = 3.9, p = 0.010$). A post hoc test concluded that the mean of responses for respondents in the 31+ age group was significantly different from those of the other three age groups, as this factor was highly rated among that age group. The minimum score for the 31+ age group was 3.33 and the maximum was 5.00. The lower bound and upper bound indicate the range of the mean scores of 95% CI for each age group.

Table 4.8: Mean test value for student support services

Age groups (years)	N	Mean	Std deviation	95% CI for mean		Minimum	Maximum	P-value
				Lower bound	Upper bound			
18–20	30	3.4389	0.64399	3.1984	3.6794	2.00	4.83	0.010
21–25	97	3.2732	0.69355	3.1334	3.4130	1.00	5.00	
26–30	10	3.4167	0.62485	2.9697	3.8637	2.83	5.00	
31+	10	4.0167	0.49348	3.6637	4.3697	3.33	5.00	
Total	147	3.3673	0.68827	3.2552	3.4795	1.00	5.00	

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4.7 Student commitment to earning their degree.

As indicated in Table 4.9, an overwhelming majority of the respondents (139; 93.3%, $M = 4.57, SD = 0.629$) agreed that they were certain at the time that they would earn their nursing degree. The majority of respondents (137; 91.9%, $M = 4.49, SD = 0.861$) agreed with the statement that ‘At this moment in time, I would say my commitment is strong to earn a university degree, here at this university’. A notable number (86; 57.7%, $M = 3.46, SD = 1.337$) of the respondents disagreed that their commitment to earning a nursing degree at another university was strong. Likewise, a significant number of respondents (92; 62.2%) disagreed that they had a strong intention to

persist in pursuit of their degree at another university, while 30 (20.1%) were uncertain and 26 (17.5%) agreed with the statement.

Table 4.9: Student commitment factors influencing persistence.

Variables	Agree	Uncertain	Disagree	Mean	SD
23. When I think of the people who mean the most to me, friends, and family, they would be very disappointed if I quit my study	131 (87.9%)	9 (6.0%)	8 (5.4%)	4.49	0.861
24. At this moment in time, I am certain that I will earn my nursing degree	139 (93.3%)	8 (5.4%)	1 (0.7%)	4.57	0.629
25. At this moment in time, I would say my commitment is strong to earn a university degree, here at this university.	137 (91.9%)	8 (5.4%)	3 (2.0%)	4.53	0.694
26. At this moment in time, I would say my commitment is strong to earning a nursing degree at another university.	34 (22.8%)	28 (18.8%)	86 (57.7%)	3.46	1.337
27. I have a strong intention to persist in my pursuit of the degree, here at this university	136 (91.3%)	9 (6.0%)	3 (2.0%)	4.42	0.700
28. I have a strong intention to persist in my pursuit of the degree at another university	26 (17.5%)	30 (20.1%)	92 (62.2%)	3.62	1.198
29. I have a supportive family on my pursuit of a university degree, in terms of their encouragement and expectations	125 (83.9%)	16 (10.7%)	7 (4.7%)	4.31	0.961

4.7.1 Influence of age on student commitment

Mean test value was measured to determine the influence of age on student commitment (Table 4.10). The age group with the highest mean responses for student commitment was that of 18–20 years ($M=4.3238$, $SD=0.54$), indicating that they were the group most likely to persist because of commitment to earning their degree,

compared to other age groups. The minimum mean for this age group was 3.00 and the maximum was 5.00. The age group with the lowest mean was that of 31+ years (M=4.1429, SD=0.53), indicating that their commitment to earn their degree was the least likely factor to have positively influenced their persistence, compared to other age groups. However, an independent sample Kruskal-Wallis test indicated that there were no statistical differences in the influence of student commitment on persistence across the age groups ($H(3) = 2.40, p = 0.493$).

Table 4.10: Mean test value for student commitment

Age (years)	N	Mean	Std deviation	95% CI for mean		Minimum	Maximum	P-value
				Lower bound	Upper bound			
18–20	30	4.3238	0.53968	4.1223	4.5253	3.00	5.00	0.493
21–25	97	4.1694	0.52137	4.0643	4.2744	2.43	5.00	
26–30	10	4.2429	0.50866	3.8790	4.6067	3.00	5.00	
31+	10	4.1429	0.53452	3.7605	4.5252	3.43	4.86	
Total	147	4.2041	0.52369	4.1187	4.2894	2.43	5.00	

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4.8 Students' academic conscientiousness

Academic conscientiousness is an inherent characteristic of students that is vital in persistence. Four questions measured the students' academic conscientiousness, and the results indicate that 124 (83.2%) of the respondents agreed that it is likely that they will earn a degree at the current university, while 16 (11.4%) disagreed and 7 (4.7%) were unsure (Table 4.11). These responses had a mean score of $M = 4.17 \pm 1.139$. Among the respondents, 25 (16.8%) were uncertain about the statement 'I often do miss class for reasons other than illness or participation in school-sponsored activities', with close to half (73; 49.3%) disagreeing and 50 (33.5%)

agreeing with the statement. The majority (127; 85.8%) of respondents disagreed that they often turned in their assignments past the due date, while 16 (10.8%) agreed that they did so and 5 (3.4%) were uncertain. This response had a mean score of $M=4.22\pm 1.047$. The majority (119; 79.8%) of respondents disagreed with the statement that they were 'disinterested in academic work and do as little as possible', while 17 (11.4%) were uncertain and 12 (8.0%) agreed with the statement. The response had a mean score of $M=4.11\pm 0.973$.

Table 4.11: Academic conscientiousness factors influencing persistence.

Variables	Agree	Uncertain	Disagree	Mean	Standard deviation
30. I often do miss class for reasons other than illness or participation in school-sponsored activities	50 (33.5%)	25 (16.8%)	73 (49.3%)	3.34	1.287
31. I often do turn in assignments past the due date	16 (10.8%)	5 (3.4%)	127 (85.8%)	4.22	1.047
32. I am disinterested in academic work and do as little as possible	12 (8.0%)	17 (11.4%)	119 (79.8%)	4.11	0.973
33. It is very likely that I will earn a degree from this university	124 (83.2%)	7 (4.7%)	16 (11.4%)	4.17	1.139

4.8.1 Academic conscientiousness and age group

Mean test was used to measure academic conscientious across the age groups. The 18–20 years age group had the highest mean score ($M=4.122$, $SD=0.79$), as shown in Table 4.12, and this indicates that academic conscientiousness was more likely to influence their persistence, compared to other age groups. On the responses, the minimum for the 18–20 years age group was 1.67 and the maximum was 5.00. The group with the lowest mean was those aged 21–25 years, with a mean value

($M=3.8144$, $SD=0.75$) indicating that they were the least likely to persist as a result of their academic conscientiousness, and a minimum value of 1.33 and maximum of 5.00. The differences among the age groups were not statistically significant ($H(3) = 6.34$, $p=0.096$).

Table 4.12: Mean test for academic conscientiousness by age group

Age (years)	N	Mean	Std deviation	95% CI for Mean		Minimum	Maximum	P-value
				Lower bound	Upper bound			
18–20	30	4.1222	0.78532	3.8290	4.4155	1.67	5.00	0.096
21–25	97	3.8144	0.75303	3.6627	3.9662	1.33	5.00	
26–30	10	3.9333	1.22525	3.0568	4.8098	1.00	5.00	
31+	10	3.9667	1.46944	2.9155	5.0178	1.33	5.00	
Total	147	3.8957	0.85813	3.7558	4.0356	1.00	5.00	

4.9 Students' commitment to the institution

As shown in Table 4.13, a notable 120 (80.6%, $M=4.25$, $SD=0.867$) of the respondents agreed that they were confident that the university was the right one for them; however, 23 (15.4%) were uncertain about this and 4 (2.4%) disagreed. The majority of the respondents (120; 80.5%, $M=4.12$, $SD=1.122$) agreed that they were likely to re-enrol at the institution the following semester, while 15 (10.0%) disagreed and 12 (8.1%) were uncertain. More than half of the respondents (88; 59.0%, $M=3.54$, $SD=1.316$) disagreed with the statement that they had thought a lot about stopping their education at the institution and perhaps transferring to another university, or going to work, or leaving for other reasons, while 39 (26.1%) agreed with the statement.

Table 4.13: Institutional commitment factors influencing persistence.

Variables	Agree	Uncertain	Disagree	Mean	Standard deviation
34. I am confident that this is the right university for me	120 (80.6%)	23 (15.4%)	4 (2.6%)	4.25	0.867
35. It is very likely that I will re-enrol at this university next semester/ next year	120 (80.5%)	12 (8.1%)	15 (10.0%)	4.12	1.122
36. I have thought a lot about stopping my education here, perhaps transferring to another university, or going to work, or leaving for other reasons	39 (26.1%)	21 (14.1%)	88 (59.0%)	3.54	1.316

4.9.1 Institutional commitment and age group

The mean test was used to measure institutional commitment across the age groups. The results indicate that the 26–30 years age group had the highest mean score (Table 4.14) ($M=4.1750$, $SD=0.58$), which indicates that their commitment to the institution was more likely to positively influence their persistence, than in other age groups. The minimum score in this age group was 3.00 and the maximum was 5.00. The age group with the lowest mean was the 21–25 years group ($M=3.9940$, $SD=0.69$), indicating that they were the least likely to have their persistence influenced by their commitment to the institution. There was no statistical differences in the influence of institutional commitment on persistence across the age groups ($H(3) = 0.981$, $p=0.821$).

Table 4.14: Mean test for institutional commitment and age groups

Age (years)	N	Mean	Std deviation	95% CI for mean		Minimum	Maximum	P - value
				Lower bound	Upper bound			
18–20	30	4.0000	0.66306	3.7524	4.2476	2.75	5.00	0.821
21–25	97	3.9940	0.68626	3.8557	4.1323	2.50	5.00	
26–30	10	4.1750	0.57795	3.7616	4.5884	3.00	5.00	
31+	10	4.1250	0.89946	3.4816	4.7684	2.75	5.00	
Total	147	4.0164	0.68584	3.9046	4.1282	2.50	5.00	

4.10 Conclusion

This chapter presented the results of the study in addressing its objectives. The objectives of the study were to determine the levels of undergraduate nursing students' academic integration, social integration, use of support services, commitment to obtain a nursing degree and academic conscientiousness towards academic success at an HEI in the Western Cape. Data was presented in descriptive and tabular format.

In terms of academic integration, the majority of the respondents (133; 89.3%) could see a great link between what they were learning at the institution and their future career possibilities, while 16 (10.7%) disagreed with this 13 (8.7%) were uncertain. Regarding social integration, 101 (68.2%) of the respondents agreed that their interpersonal relationships with other students had an impact on their personal growth, attitudes, and values, while 27 (18.2%) were uncertain and 20 (13.5%) disagreed. Social integration was lacking, as it was the lowest rated factor (M=3.34, SD=0.63).

For student support services, 100 (67.1%) of the respondents agreed that the institution communicated important information well to them, while 19 (12.8%) disagreed and 29 (19.5%) were uncertain. Regarding student commitment, the majority of the respondents (139; 93.3%, $M=4.57$, $SD=0.629$) agreed that they were certain at the time that they would earn their nursing degree. Student commitment was the highest-rated factor ($M=4.20$, $SD=0.69$).

For academic conscientiousness, 124 (83.2%) of the respondents agreed that it is likely that they will earn a degree at the current university, while 16 (11.4%) disagreed and 7 (4.7%) were unsure. Regarding institutional commitment, 120 (80.6%) of the respondents agreed that they were confident that the university was the right one for them, while 23 (15.4%) were uncertain and 4 (2.4%) respondents disagreed with the statement.

During the analysis, statistical significance of $p<0.05$ were employed to test the construct to determine factors influencing students' persistence. There was a statistically significant association between age group and the respondents' outlook on student support services ($F(3,143) = 3.9$, $p=0.010$).

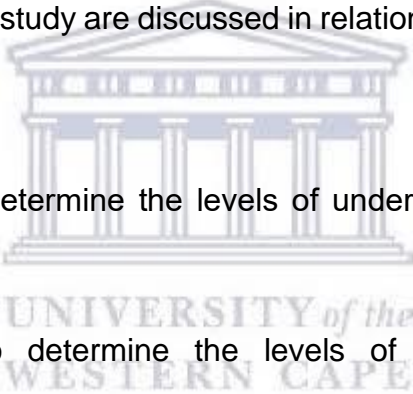
The following chapter provides a detailed discussion of the results.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This chapter discusses the results of the study as presented in the preceding chapter. A descriptive study was performed to assess factors that influence nursing students' persistence at an HEI in the Western Cape. The objectives of the study were to determine the levels of undergraduate nursing students' academic integration, social integration, student support services, commitment to obtain a nursing degree, academic conscientiousness, and degree of commitment towards their educational institution. The results of the study are discussed in relation to relevant evidence in the current literature.

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- Objective 1 was to determine the levels of undergraduate nursing students' academic integration.
 - Objective 2 was to determine the levels of social integration among undergraduate nursing students.
 - Objective 3 was to describe the use of student support services by undergraduate nursing students.
 - Objective 4 was to describe the undergraduate nursing students' commitment to obtain a nursing degree.
 - Objective 5 was to describe the academic conscientiousness of undergraduate nursing students towards their academic success.
 - Objective 6 was to determine the degree of institutional commitment that undergraduate nursing students have towards their educational institution.

5.2 Undergraduate nursing students' academic integration

The findings of the study show that 133 (89.3%) of the respondents could see a link between what they were learning at the institution and their future career possibilities. This indicates that the respondents were more likely to stay in the programme, because they felt that they were completing the right course. One of the attributes that characterises academic integration is the student's assimilation with the norms of the institution's academic system, meaning the extent of coherence between the student's goals and values and those of the institution (Roland et al., 2016). These findings resonate with a study carried out in Ireland on first-year students' views of the promoters and barriers to their persistence, where doing the right course was cited as a promoter of persistence (Daniels & MacNeela, 2021).

About half of the students did not believe that lecturers imposed unreasonable requirements on them and enjoyed their distress; however, about a quarter agreed that the lecturers do impose unreasonable demands, while 24.2% of the students were uncertain as to whether the lecturers impose unreasonable demands or not. The fact that about quarter of the students were uncertain and another quarter agreed with the statement indicates that empathy on the part of the lecturer is lacking to some extent, which can affect the students' perception of the learning environment. This is supported by Henderson et al. (2020), who reported that lecturers' caring behaviour and their show of empathy towards students gave the students a positive perception of the academic environment and motivation to persist. How the lecturers deliver the curriculum determines the students' passion for learning, and Zambas et al. (2020)

reported that curriculum content and teaching practices have an impact on the students' experiences and their desire to persist.

When students arrive at an institution of higher education, they are looking for intellectual growth. Generally, most students were satisfied with the extent of their intellectual growth, with about 83.6% of students having an interest in ideas at the institution. This shows that since coming to the institution, the students felt they were progressing intellectually; this is one of their expectations when they enter an HEI that motivates them to persist. This can be attributed to intellectual stimulation that students get, such as problem-solving and higher order thinking activities that they receive from the lecturers, as well as exposure to the clinical setting.

Most of the respondents (70.4%) were satisfied about the quality of instruction they were receiving; however, a notable percentage (29.5%) felt unsure about the quality of instruction, which is a cause for concern. Quality instruction was cited by more than one-third of the respondents in one study as being the main reason for their motivation in higher education (Sogunro, 2017). The uncertainty about the quality of instruction could be because students perceive different qualities as important in the way lecturers impart knowledge to them or the competency of the instructor. In a study carried out at a Spanish university on students' perception of quality instruction characteristics, students indicated that teaching competence or the lecturers' ability to teach course content in depth and in a dynamic way was clearly vital for them (Martínez-Linares et al., 2019).

The results also indicate that almost half of the students disagreed that they were disappointed with the time they spent interacting with the lecturer. The study also

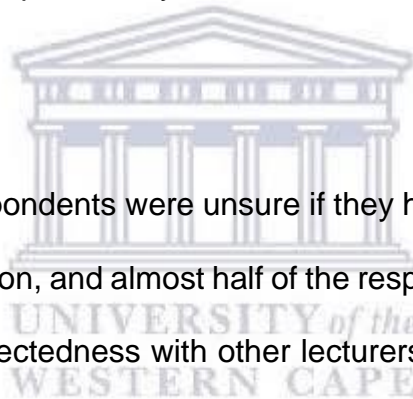
reveals that one-third of the students were unsure about this, and just less than a quarter were disappointed with the time they spent interacting with the lecturer. Students expect more interaction with their lecturers, and the study findings reflect that the time that students spent interacting with their lecturers was generally below what they expected. These results can be attributed to the fact that data collection was conducted at a time when the students were mostly taking online courses due to COVID-19; hence some of these respondents felt unsure about the quality of the instruction they were getting, and they felt that the interaction with their lecturers could have been better. Kanyumba and Shabangu's (2021) study conducted among university students in South Africa showed that online and eventually blended learning was overwhelming for some university students, as they were living away from the university campus where they would normally get to interact with academic staff, peers, and tutors in informal settings, which enhances their learning and academic experience. Students come from various socio-economic backgrounds, with differing availability of resources and levels of support to complement their classwork, leading to academic inequalities and differences in satisfaction (Kanyumba & Shabangu, 2021).

5.3 Social integration among undergraduate nursing students

The mean score for social integration ($M=3.34$) was the lowest rated among all the factors, indicating that the students were apprehensive about social integration. This can be attributed to the students having been getting their lectures online, with no social interaction on campus. Similar findings were reported in Austria, where a study was conducted to explore the effects of COVID-19 emergency remote education on social integration. Students' social integration was found to be significantly lower during the COVID-19 home learning period than prior to it (Resch et al., 2022).

Findings from this study show that peer interactions and creating friendships in the institution positively impact the students' experiences.

Most of the students indicated that their relationships with other students had an impact on their personal growth attitudes and values. A third of students reported that peer relationships had an impact on their intellectual growth and interest in ideas. This indicates the importance of peer relationships in the institution as they have a positive impact on the nursing students' persistence. This finding is consistent with a study conducted by Tsang (2018) in the USA, which reported that student-peer interaction allowed them to share hardships, and their relating to one another through these hardships led them to develop solidarity and share a common identity which helped them to persist.



More than a third of the respondents were unsure if they had a lot in common with the other students at the institution, and almost half of the respondents were unsure if they had a strong sense of connectedness with other lecturers, students, and staff on the campus. When students converge at an institution, they do so as different individuals from different backgrounds, but this does not deter them from being able to socially integrate. This finding is in line with those of a study at a nursing institution in the USA with diverse nursing students from different ethnic and socio-economic backgrounds, who indicated that peer interaction was what mostly made them persist (Fortes et al., 2022). A sense of connectedness between the respondents and other students and university staff develops when there is normal interaction. A study conducted in South Africa reported that COVID-19 altered the way in which students and university staff interact, as the relationship had become more formal than before (Kanyumba & Shabangu, 2021). Even though the respondents felt that they were unsure if they had

a lot in common with other students at the institution, those students could still have an impact on their personal growth.

Most of the students do not often wear clothing with the university's emblems or logo on it. This study did not explore the reason for not wearing such clothing, but it could be because the students lack pride in their institution and therefore do not want to be associated with it outside of the campus, or perhaps they were not aware where the university shop was because of the limited time they had on campus. Another reason could be lack of affordability of the branded materials. These results resonate with the results of a study conducted at a university in the Western Cape province of South Africa, where less than one half of the university students and alumni agreed that they were proud to wear university clothes in public, while 55.1% were shy to wear university clothes off campus because they did not see it as prestigious to be seen wearing them (Rust & Uys, 2014). However, in that institution more than half (55.6%) indicated that they had not encountered a campus shop that sold items with the university logo or emblem (Rust & Uys, 2014), implying that they did not know where to buy these clothes. The current study also identified that more than one-third of the students had many of their closest friends outside of the campus rather than on campus. The reason could be that these were second-year students who had spent less time at the institution due to COVID-19.

5.4 Use of academic support services by undergraduate nursing students

Findings from the study indicate that the majority of the students reported that the institution communicates important information to them, such as academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, and financial aid and scholarship opportunities.

Student support services from the faculty has been shown to be important in student persistence (Arifin, 2018). A study conducted in Indonesia on the role of student support services in enhancing persistence indicated the importance of communication by the institution, with the students reporting that lack of information regarding course material and assignments, and lack of responsiveness from the study centre acted as a barrier to their persistence (Arifin, 2018). In that study, an improvement in systemic student support showed enhanced persistence (Arifin, 2018).

More than half of the students reported that it was easy to get answers to their questions about things related to their education in the institution. These findings concurred with those of a study by Cipher and Urban (2022) among nursing students, where 40.4% of those surveyed indicated that they had persisted because of advice and helpfulness they received from the nursing faculty. This is also supported by results from a study in the USA where students reported that their persistence was greatly influenced by accessibility to the faculty, interaction with faculty and peers, and the support they got from the faculty (Tsang, 2018).

More than one-third of the students were unsure if the institution would be able to meet their needs well if they had needs that were different from those of the majority of the students. This uncertainty could be because the students were not aware of the existence of certain support services that meet certain needs. Student support services should be in various forms, which includes academic, psychological, and social support. Students in the institution may have various needs and the institution should have systems in place to be able to deal with such needs. Research conducted at an HEI in Australia indicated that about a quarter of the students (27.3%) suggested

that for optimum utilisation of available support services, there was need to publicise them as some were not aware of the existence of certain services (Baik et al., 2019).

One-third of the students were unsure if they were handled fairly in the institution, more than a third (57; 38.3%) reported they were handled fairly, and close to another third reported that they were not handled fairly. The notable numbers of students who were unsure and disagreed that they were handled fairly in the institution could be because students may have different needs, depending on their age and responsibilities. Therefore, different types of students require different levels of support from the institution, which creates a grey area on fairness in the institution. This resonates with findings at institutions of nursing in KwaZulu-Natal province in South Africa, where there was no uniformity in the types of student support services that the individual campuses offered, with different support services offered at different levels, and this was in a study conducted to determine students' perceptions of support services (Ndlela & Brysiewicz, 2018).

There was a significant difference among the age groups in their responses to student support services. These results resonate with a systematic review conducted by Mthimunye et al. (2017) on predictors of success in academic performance and retention among nursing students, which indicated that older students were associated with higher academic performance and success, which consequently improves persistence. A potential reason for the differences on how the age groups viewed the student support services was because some of them might have completed a tertiary qualification prior to this programme, and so understood the HEI systems.

Student support services had the second lowest ranked mean ($M=3.38$), which indicates that among the different factors, overall respondents lacked confidence in

the institution's support services. This may possibly lead to the support services making less of a contribution to the enhancement of nursing students' persistence than would be desired. Student support services are important in student persistence, as revealed in a study carried out at a university in Indonesia, where survey results revealed student support as having played a pivotal role in influencing student persistence (Arifin, 2018).

5.5 Undergraduate nursing students' commitment to obtain a nursing degree.

The majority of the students (93.3%) reported that they were certain that they would earn their nursing degree, and their commitment to earn a university degree at this particular university was strong. These findings indicate that the students were overwhelmingly committed to earn their nursing degree. Related research findings have shown that factors that positively affected nursing students' commitment were potential career growth, the students' level of understanding of available nursing specialties, and the influence of their family, but that high-level stress had a negative effect (Riley et al., 2019).

In this study, the student commitment showed the highest mean score ($M=4.20$), which indicates that the students' desire to persist was greatly influenced by their commitment to earn their degree. This finding corresponds with those of a study carried out in Australia to investigate the experiences of students in relation to goal commitment, among other aspects, which cited that students' goal commitment significantly predicted their persistence (Steele & Douglas, 2021).

5.6 Academic conscientiousness of undergraduate nursing students

Nursing students often underestimate the academic rigour that is needed when they start training, leading to an eventuality of them being unable to cope (Fagan & Coffey, 2019). In this study, most of the students reported that they often submit assignments in time, which is on or before the due date. Most of the students disagreed with the notion that they were disinterested in academic work and do as little as possible, and findings indicated that the majority of the students are dedicated towards their academic work, and able to cope with the academic demands. These findings could be attributed to the students being resilient in nature, conscientious, and getting the necessary support they need to cope – which can be social, academic and peer support. Social support was reported to be significantly associated with persistence, as students who participated in a peer mentoring programme had a deeper connection with the institution and the high level of support made them more likely to engage in academic and social activities (Fortes et al., 2022). These results resonate with those of a study carried out in Germany which showed that psychological attributes such as conscientiousness were vital in integrating students academically (Schaeper, 2020), which eventually led to their success and intention to stay.

The majority of the students indicated that it is likely that they would earn a degree from the institution. The confidence in their likelihood of obtaining their degree can be attributed to a myriad of factors reported as contributors to students' commitment to obtain their degree. A study in Australia on factors that impact grit among nursing students found that some of the factors associated with their passion and commitment to persist were greater perceived academic and clinical performance, being older in age, and being lower on the socio-economic spectrum (Terry & Peck, 2020)

5.7 Institutional commitment of the undergraduate nursing students

For students to be committed to an institution and persist in it, they need to have a sense of belonging. Most of the students reported that they were confident that the university was the right institution for them. The overwhelming majority of students indicated that they were likely to re-enrol at the institution in the following year or semester. This is an indication that they were committed to their institution and were willing to continue with their studies there, regardless of the challenges they faced. These results are congruent with those of a study conducted in the USA on commitment of college students, where the majority (92%) of undergraduate students indicated that they would re-enrol in the next semester (Savage et al., 2019).

More than half of the students (59.0%) reported that they never thought about stopping their education at the institution; however, about a quarter of the students (39; 26.1%) reported that they had thought of leaving. This was the lowest-ranked attribute among the institutional commitment aspects, which is an indication that a notable number of students were contemplating or had contemplated leaving. The reason for this may be attributed to challenges they had encountered. Previous findings indicated that some of the challenges which nursing students experienced on campus were the existing curriculum structure and lack of academic and clinical support (Mthimunye & Daniels, 2020). Other reasons cited as leading to discontinuation or contemplation to leave were financial issues, stress, and family responsibilities (Cipher & Urban, 2022). Institutional commitment had the second highest mean score ($M=4.02$), indicating that it was one of the most important factors that made a positive contribution to students' persistence at the institution. This result is consistent with the findings of Cam et al. (2019) from a study in Vietnam which explored factors influencing students to persist at an institution. The findings indicate that institutional commitment is one of the

important factors that were proved to have a positive impact on students' intention to persist, with academic integration and peer interactions being factors identified as vital in strengthening students' institutional commitment (Cam et al., 2019).

5.8 Conclusion

This chapter discussed research findings as outlined by the current literature related to factors influencing nursing students' persistence in relation to academic integration, social integration, student support services, student commitment, academic conscientiousness, and institutional commitment. The study findings show that the factor of student commitment was the most highly rated and important in positively affecting student persistence. Students' commitment to their goals is vital in their persistence, because even though other factors are in play, without commitment to their goals they will not be able to persist in order to attain their qualification.

The students had prominent levels of commitment to their institution, as this was the second most positively ranked factor influencing persistence. This is important because to attain their goal, students need to collaborate with and be committed to their institution for a positive impact on their persistence. Social integration was the lowest-ranked factor, which is an indication that the respondents viewed the social coherence between themselves and the campus community at the institution as lacking. There is a need to improve systems that promote social integration in the institution. The second lowest-ranked factor was student support services. This is also an indication that the student support services were lacking, which may have a negative impact on their persistence. This shows that the student support services in the institution are still not viewed by students as supportive enough, and therefore they need to be enhanced.

The next chapter presents a summary of the study, where the study's key findings will be emphasised, the limitations of the study will be characterised, and recommendations to help enhance student persistence in the institution will be suggested.



CHAPTER SIX

SUMMARY, LIMITATIONS, RECOMMENDATIONS, AND CONCLUSION

6.1 Introduction

This chapter provides a summary of the key findings of the study, followed by a description of its limitations. The chapter ends by outlining key recommendations, implications of the study, and its conclusion.

6.2 Summary of key findings

6.2.1 Undergraduate nursing students' academic integration

An objective of the study was to determine the levels of the respondents' academic integration. Most students could see a connection between what was being learned in class and their future career, were interested in what was being learned in class and were satisfied with the level of their intellectual growth. There were, however, varying opinions on whether they believed that the lecturers deliberately imposed unreasonable requirements on them and enjoyed their distress. About half of them did not feel any unreasonable imposition from lecturers, while about a quarter of the students believed that lecturers deliberately imposed unreasonable requirements, while the rest were unsure. The respondents also had varied responses regarding the amount of interaction they had with the lecturer: fewer than half of the respondents (46.3%) were satisfied with the amount of interaction they had with their lecturer, about a quarter of the students were not, and close to a third were uncertain.

6.2.2 Undergraduate nursing students' social integration

In determining the objective regarding respondents' level of social integration, most indicated that their personal relationship with other students had an impact on their personal growth attitudes, intellectual growth, and interest in ideas. There were more respondents who had their closest friends outside of the campus than who had them on campus. About half of the respondents were uncertain whether they had a strong sense of connectedness with the campus community of lecturers, staff, and other students, while slightly more than one-third of the respondents agreed that they had. The COVID-19 pandemic may have had an influence on this uncertainty because there was limited interaction between the respondents and the campus community, leading to an unclear sense of connectedness. Less than half of the respondents reported that they had a lot in common with other students, with the other half either being uncertain or feeling that they did not have a lot in common with them. About two-thirds of the respondents did not wear clothing with university emblems and logos. This finding could possibly be due to the fact that students had taken mainly online classes for the previous two years owing to the COVID-19 pandemic, with limited access to the campus, and therefore could not purchase such clothing at the university. Social cohesion among the respondents and the campus community was lacking, and social integration had the least favourable responses ($M= 3.34$).

6.2.3 Use of student support services by undergraduate nursing students

Describing the use of student support services, about two-thirds of the respondents agreed that the institution communicated important information to them well. Slightly more than (55.0%) of the respondents found it easy to get answers to questions related to their education. One-third of the respondents believed that students were handled

fairly at the institution, while two-thirds were either uncertain or did not believe this to be the case. The findings show that respondents did not find the institution convincingly supportive, and they did not feel included in the implementation of support services which would otherwise enhance their experiences at the institution. Student support services was the second lowest-rated factor (M=3.38).

6.2.4 Undergraduate nursing students' commitment to obtaining their nursing degree

Most respondents were clearly committed to obtaining their nursing degree, were certain that they would earn their nursing degree, and indicated their commitment to attaining their qualification in the institution they were registered at. Most respondents also had a strong intention to persist in pursuit of their degree at their present institution. These findings therefore indicate that commitment to obtain their nursing degree was robust among the respondents. Student commitment had the highest rated responses among the factors (M=4.20).

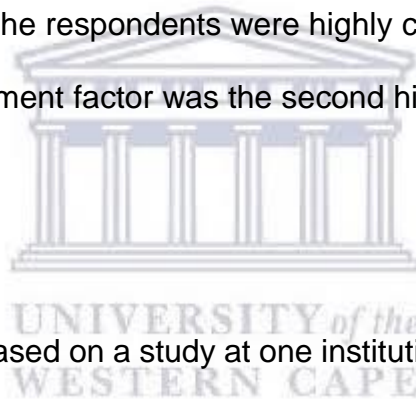
6.2.5 Academic conscientiousness of undergraduate nursing students towards their academic success

With regard to academic conscientiousness, most respondents turn in their assignments timeously and are interested in their academic work; they disagreed that they were disinterested in academic work and did as little as possible. About half of the respondents did not often miss class for reasons other than illness, but one-third did miss class for reasons other than illness. This study did not investigate the reasons for missing class. The study findings show an overall trend that the respondents take their academic work seriously and are academically conscientious, despite a

significant number of them admitting to missing class often due to reasons other than illness.

6.2.6 Undergraduate nursing students' institutional commitment

In determining the degree of the respondents' commitment to their institution, most of them agreed that the university was the right one for them and that they were likely to re-enrol at the institution the following semester. More than half of the respondents disagreed with the statement that they had thought a lot about stopping their education at the institution and perhaps transferring to another university, or going to work, or leaving for other reasons; however, about one-quarter had thought about it. Despite this, the findings show that the respondents were highly committed to their institution, and the institutional commitment factor was the second highest rated ($M=4.02$).



6.3 Limitations

The research findings are based on a study at one institution and had a response rate of 47%; therefore, the results may not be generalisable to other similar settings or populations.

The data was collected during COVID-19, and the data collection instrument was distributed to respondents using the online data collection platform on a number of occasions without any response from the respondents. It was later decided to collect the data face to face when the students came in for laboratory class. The researcher only managed to collect data from 149 respondents out of 317. Therefore, COVID-19 had impacted on the timely collection of data and the response rate.

The respondents were not on campus for a significant part of their time at the institution due to the COVID-19 pandemic, and therefore lacked institutional experience, which might have affected the results of the study.

6.4 Recommendations

Although more than 50% of the respondents responded positively to all six domains, there were significant numbers that expressed negative sentiments or experiences, and that were uncertain. Based on this study's findings, the following recommendations are proposed for consideration by the academic institution and the nursing lecturers, to enhance the nursing students' experiences and persistence and for future research purposes.

6.4.1 Recommendations to the institution

- The study findings show that overall, respondents were not satisfied with the academic support they were getting. It is vital that the faculty enhances the academic support that the students receive by devising academic programmes for first-year students, such as effective use of mentors that help them to develop cognitive and study behaviour which will help them to cope academically in their years at the HEI.
- Some of the respondents felt that students were not treated fairly at the institution. It is important for the faculty to identify the different academic, health or social needs of different groups of students, as they come from different backgrounds, and to offer them support services to enhance their experiences at the institution accordingly.
- Student social integration was the lowest rated, and lack of interaction with others in the institution can negatively affect students' desire to persist. The institution

can assist by setting up activities that encourage student engagement, such as extramural clubs at their campus residences, and publicise these clubs on various platforms such as a social media page specifically created for first-year students before they commence their studies, or by other methods used by the institution to communicate. Available sporting activities can also be publicised on these platforms.

6.4.2 Recommendations for nursing lecturers

- Respondents indicated that they often missed class due to reasons other than illness. It is important to have orientation at faculty level that clearly communicates expectations and the importance of attending class, and to create a system that flags students who are absent for a specific number of days in a certain time frame.
- Some respondents were disappointed with the amount of interaction they had with the lecturer. Therefore, the lecturers should attempt to make presentations that are more interactive, through creating numerous opportunities for discussion throughout, and also making use of humour. The lecturers can ask the students to rate their presentations using anonymous methods to assist in identifying where they can improve, in order to enhance the quality of the interaction which they have with students.

6.5 Implications for future research

For comparison purposes, a similar study can be conducted on a bigger scale which would also include the first-year students. Their inclusion is important because previous research reports them as having a greater chance of leaving the academic

programme. They were not included in this study, and the population sample for this study was also small.

6.6 Conclusion

This study looked at factors that influenced nursing students' persistence. The study established that most of the respondents were committed to completing their qualification, were committed to their institution, and had a strong intention to persist. The respondents were satisfied with their integration with the curriculum, but social integration was lacking. The respondents did not find the institution convincingly supportive. The respondents were academically conscientious, despite some of them admitting to often missing class due to reasons other than illness.



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APPENDIX A: QUESTIONNAIRE

Section A: Demographic information

1. Year of study

2. Indicate your sex
 - a. Female
 - b. Male

3. Indicate your age



SECTION B: COLLEGE PERSISTENCE QUESTIONNAIRE (CPQ)

Please complete the questionnaire below, which has got only 36 questions and may take about 20 minutes of your time.

Mark the response which best suit your thoughts, opinions, and experiences in the appropriate box as honest as you can.

It is important that you complete the whole questionnaire. Your responses will be treated as confidential information.

Academic integration

	Strongly Agree=5, Agree=4, Neutral=3, Disagree=2, Strongly Disagree=1					
1	I understand the thinking of my lecturers when they lecture or ask students to answer questions in class	1	2	3	4	5
2	I am satisfied with the extent of my intellectual growth and interest in ideas since coming here	1	2	3	4	5
3	In general, I am satisfied with the quality of instruction I am receiving here	1	2	3	4	5
4	I am concerned about my intellectual growth at this school of nursing	1	2	3	4	5
5	On average across all the courses, I am interested in the things that are being said during class discussions	1	2	3	4	5
6	I can see much of a connection between what I am learning here and my future career possibilities	1	2	3	4	5
7	I believe that many lecturers deliberately impose unreasonable requirements on students and enjoy their distress.	1	2	3	4	5
8	Students differ widely in how much interaction they want to have with the lecturer. I am disappointed with the amount of interaction I have with the lecturer	1	2	3	4	5

Social integration

9	My interpersonal relationships with other students had an impact on my personal growth, attitudes, and values	1	2	3	4	5
10	My interpersonal relationships with other students had an impact on my intellectual growth and interest in ideas	1	2	3	4	5
11	I have a strong sense of connectedness with other lecturers, students, staff on this campus	1	2	3	4	5
12	I have a lot in common with other students here at the University	1	2	3	4	5

1 3	I am satisfied with my overall social life here friendships, student organizations, extracurricular activities, and so on.	1	2	3	4	5
1 4	I have many closest friends here in the campus with me rather than elsewhere such as other Universities, workplace, or hometown	1	2	3	4	5
1 5	My overall impression of the other students here on the campus is favourable	1	2	3	4	5
1 6	I often wear clothing with this University's emblems or Logo on it	1	2	3	4	5

Supportive services

1 7	I am satisfied with the academic support I receive here	1	2	3	4	5
1 8	This institution communicates important information well to students such as academic rules, degree requirements, individual course requirements, campus news and events, extracurricular activities, tuition costs, and financial aid and scholarship opportunities	1	2	3	4	5
1 9	It is easy to get answers to my questions about things related to my education here	1	2	3	4	5
2 0	I can have much input on matters such as course offerings, rules and regulations, and registration procedures.	1	2	3	4	5
2 1	Even if I have needs that are different from the majority of students here at this university meet these needs well	1	2	3	4	5
2 2	I believe the students are handled in this institution fairly	1	2	3	4	5

Student's commitment to obtain degree

2 3	When I think of the people who mean the most to me, friends, and family, they would be very disappointed if I quit my study	1	2	3	4	5
2 4	At this moment in time, I am certain that I will earn my nursing degree	1	2	3	4	5
2 5	At this moment in time, I would say my commitment is strong to earn a university degree, here at this University.	1	2	3	4	5
2 6	At this moment in time, I would say my commitment is strong to earning a nursing degree at another University	1	2	3	4	5
2 7	I have a strong intention to persist in my pursuit of the degree, here at this university	1	2	3	4	5
2 8	I have a strong intention to persist in my pursuit of the degree at another University	1	2	3	4	5
2 9	I have a supportive family on my pursuit of a university degree, in terms of their encouragement and expectations	1	2	3	4	5
	Academic Conscientiousness					
3 0	I often do miss class for reasons other than illness or participation in school-sponsored activities	1	2	3	4	5

3 1	I often do turn in assignments past the due date	1	2	3	4	5
3 2	I am disinterested in academic work and do as little as possible.	1	2	3	4	5
	Institutional commitment					
3 3	It is very likely that I will earn a degree from this University	1	2	3	4	5
3 4	I am confident that this is the right university for me	1	2	3	4	5
3 5	It is very likely that I will re-enrol at this University next semester/ next year	1	2	3	4	5
3 6	I have thought a lot to stop my education here perhaps transferring to another University, or going to work, or leaving for other reasons	1	2	3	4	5

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APPENDIX B: INFORMATION SHEET



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: (021) 959 2443 Fax: (021) 959 2679

Email: 3914949@myuwc.ac.za

Private Bag X 17, Bellville 7535, South Africa

PARTICIPANT INFORMATION SHEET

TITLE: FACTORS INFLUENCING NURSING STUDENTS' PERSISTENCE AT A HIGHER EDUCATION INSTITUTION IN THE WESTERN CAPE

I would like to invite you to take part in a research study but before you decide to participate, you need to understand why the research is being done and what it would involve. Please take the time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

What is this study about?

This research project will be conducted by Eggesta Mapfuranewe at the University of the Western Cape. The reason why you are invited to participate in this study is as a second-year nursing student you have the experiences in academic life, and you are the best person to answer the research questions, which is why this research would benefit from your participation. This research aims to determine factors influencing nursing students' persistence at the University of the Western Cape.

What will I be expected to do if I decide to participate?

The questionnaire is related to your academic experiences, such as social integration, academic integration, support services you received, your commitment to obtain your degree, your institutional commitment and academic conscientiousness. If you agree to

participate, you will be expected to fill out a questionnaire and it can be online through Google Docs accessed through your email, or a printed one handed out by the researcher. You are expected to click the provided link which will lead you to the online questionnaire if using an online questionnaire. For each statement, please choose a response that best describes your experience or opinion. Please ensure you respond to all questions. At the end of the questionnaire, there is the submit button which you have to click after you have filled in the form to submit your response or return the filled-out questionnaire to the researcher if filling out a printed questionnaire. It will take about 20 minutes to complete the questionnaire.

What are the possible risk and benefits of taking part?

All human interactions whereby you talk about self or others carry some risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about factors influencing nursing student's persistence. However, in the future, results may assist in determining what factors influence nursing students' persistence which will help in improving and strengthening systems in the university that help more students in their academic achievement.

Do I have to be in this research, and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Would my participation in this study be kept confidential?

The researcher will protect your identity by ensuring no information that identifies you be put on the questionnaire. The responses that you will provide will be anonymised through use of codes which the researcher may use only to identify the programme you are registered in. The responses that you are going to provide will be used strictly for research purposes

only. The generated code will only be used by the researcher for the research purpose of data analysis and reporting and only the researcher and supervisor will have access to it.

To ensure the confidentiality of the returned anonymised questionnaires, they will be stored in a password -protected computer for five years and thereafter they will be destroyed by deleting from the computer.

What if I have questions?

This research is being conducted by Eggesta Mapfuranewe at the School of Nursing at the University of the

Western Cape. If you have any questions about the research study itself, please contact: Mobile number

(0734090129) or email 3914949@myuwc.ac.za

The supervisor Dr M. Bimerew e-mail mbimerew@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof. J. Chipps
Acting Director: School of Nursing
University of the Western Cape

Private
Bag X17
Bellville
7535
jchipps@uwc.ac.za



Prof. A. Rhoda
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag
X17
Bellville
7535 [chs-
deansoffice
@uwc.ac.za](mailto:chs-deansoffice@uwc.ac.za)

BMREC
/HSSREC
Research
Developme
nt Office,

Tel: 021 959
4111 Email:
research-
ethics@uwc
.ac.za



APPENDIX C: CONSENT FORM

UNIVERSITY OF THE WESTERN CAPE



Private Bag X 17, Bellville 7535, South
Africa
Tel: (021) 959 2443 Fax: (021) 959 2679
Email: 3914949@myuwc.ac.za

CONSENT FORM

Research Project title: Factors influencing nursing students' persistence at a higher education institution in the Western Cape.

I voluntarily agree to participate in this research study. The nature and purpose of the study has been explained to me in a language that I understand and in writing. My questions about the study have been answered.

I understand that I will not benefit directly from the research. I understand that the information I provide for this research will be treated with confidentiality and my identity will remain anonymous.

I understand that even if I agree to participate now, I can withdraw at any time without suffering any prejudice or negative consequences.

Participant's name.....
Participant's signature.....
Date.....

APPENDIX D: ETHICS APPROVAL



UNIVERSITY of the
WESTERN CAPE



17 November 2020

Mrs E. Mapfuzane
School of Nursing
Faculty of Community and Health Sciences

Ethics Reference Number: HS20/9/17

Project Title: Factors influencing nursing students' persistence at a higher education institution in the Western Cape.

Approval Period: 29 October 2020 – 29 October 2023

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

The permission to conduct the study must be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Joske
Research Ethics Committee Officer
University of the Western Cape

Division: Research Development
University of the Western Cape
Private Bag 117
Bellville 7531
Republic of South Africa
Tel: +27 21 959 6211
Email: researchethics@uwc.ac.za

HSSREC Registration Number: A52821-01/01/04/08

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

APPENDIX E: LANGUAGE EDITION CERTIFICATE

Leverne Gething, M.Phil. *cum laude*
PO Box 1155, Milnerton 7435; cell 072 212 5417
e-mail: leverne@eject.co.za

4 November 2022

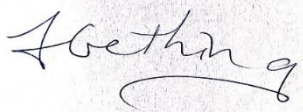
Declaration of editing of a Master's thesis

Factors influencing nursing students' persistence at a higher education institution in the Western Cape

I hereby declare that I carried out language editing of the above thesis on behalf of Eggesta Mapfuranewe.

I am a professional writer and editor with many years of experience (e.g., 5 years on *SA Medical Journal*, 10 years heading the corporate communication division at the SA Medical Research Council), who specialises in Science and Technology editing – but am adept at editing in many different subject areas. I have edited a great deal of work, including academic papers and theses, for various academic journals, universities, and publishers.

I am a full member of the South African Freelancers' Association as well as of the Professional Editors' Association.



Yours sincerely

LEVERNE GETHING leverne@eject.co.za

APPENDIX F: TURNITIN SIMILARITY REPORT

3914949:FACTORS_INFLUENCING_NURSING_STUDENTS'_PER...

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APPENDIX G: PERMISSION TO USE QUESTIONNAIRE

10:02 AM University of the Western Cape Mail - RE: Form submission from: Reprint Request

 EGGESTA MAPFURANEWE +3214345@myuwc.ac.za

RE: Form submission from: Reprint Request
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Hannah Wampler <hwampler3@jh.edu> Thu, Oct 22, 2020 at 5:29 PM
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Dear Eggesta Mapfuranewe,

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Hannah

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Johns Hopkins University Press
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