Nursing students' perceptions of the barriers to applying theory to practice in clinical placement settings

By

Petronella Chekerwa

Thesis presented in fulfilment of the requirements

for the degree of Master of Nursing Science

in the Faculty of Medi cine and Health Sciences

Stellenbosch University

Supervisor: Dr. Cornelle Young

Co-supervisor: Mrs. Anneline Robertson

March 2023

Stellenbosch University https://scholar.sun.ac.za

DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third-party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: March 2023

Copyright © 2023 Stellenbosch University

All rights reserved

Stellenbosch University https://scholar.sun.ac.za

ABSTRACT

Background: Healthcare organisations today increasingly demand that nursing graduates be assertive, operational and able to make informed decisions regarding patient care and provide quality care to patients. To achieve this level of performance, nursing students should acquire sound theoretical information in various disciplines, while mastering their practical skills to successfully combine theoretical knowledge with practice. Hence, clinical placements are crucial in ensuring nursing students' ability to master nursing competencies. Nursing knowledge is taught in the classroom as a theory, which is translated into skills in skills laboratory sessions. Skills are applied in the clinical setting to provide meaningful, patient-centred care. Because theoretical application takes place outside the classroom in a complicated and dynamic environment comprising staff, patients, and preceptors, this setting and relationships within can either enhance or hinder students' professional development. Student nurses in the clinical setting often have difficulty correlating the taught theoretical material with what they practice in the clinical setting, hence, they are unable to provide competent care to patients. This study aimed to explore nursing students' perceptions of barriers to applying theory to practice in clinical placement settings. Such information would be valuable to decrease patient care risk and provide a more satisfying learning experience for the student nurse.

Methods: The study used a qualitative descriptive approach to explore the perceptions of 15 nursing students through three focus group interviews, on the barriers to applying theory to practice in clinical settings. The Health Research Ethics Committee of Stellenbosch University, and the selected Higher Education Institution in the Western Cape Province of South Africa, granted permission to conduct the study. Purposive sampling was used to select participants, and Creswell's six step framework was used to analysis the data.

Results: The themes that emerged were: The ability of the students to apply theory to practice; Situational barriers; Personal barriers; Interactions with other parties and Strategies suggested by the students to facilitate the application of theory to practice. The study determined the skills that the fourth-year students mastered and those that they still needed help. Furthermore, barriers to utilising theoretical knowledge in the clinical placements settings were related to the situation, the person and the interactions with other parties. Strategies suggested by the students to facilitate the application of theory to practice included improved communication between the nurse educator, clinical supervisor and preceptors. In addition, ideally one clinical supervisor for each facility should be assigned, for students to

Stellenbosch University https://scholar.sun.ac.za

receive more supervision.

Conclusion: The findings demonstrated that it was difficult for student nurses to engage in clinical activities or to learn effectively without the necessary supervision and guidance. Barriers exist in the clinical environment and faculty, which disabled them from translating theory into practice. From their experience with such barriers in the first three years of their study, nursing students shared some effective strategies in facilitating theory to practice. Additionally, clinical supervisors and preceptors are urged to support and mentor the students throughout their clinical placement by providing more supportive-educative environments.

Keywords

Theory practice gap; nursing students, barriers, clinical setting, clinical supervisor, preceptor

Stellenbosch University https://scholar.sun.ac.za

OPSOMMING

Agtergrond: Gesondheidsorgorganisasies vereis vandag al hoe meer dat verpleeggraduandi assertief en operasioneel sal wees, en die vermoë het om ingeligde besluite te neem ten opsigte van pasiëntsorg en voorsiening van kwaliteitsorg aan pasiënte. Om hierdie vlak van optrede to bereik, moet verpleegstudente wyse teoretiese informasie in verskeie dissiplines ontvang terwyl hulle terselfdertyd hul praktiese vaardighede bemeester vir suksesvolle kombinasie van teoretiese kennis met praktyk. Daarom is kliniese plasings van uiterste belang om te verseker dat verpleegstudente die vermoë het om verpleegvaardighede te bemeester. Verpleegkennis word onderrig in die klaskamer in die vorm van teorie, en hierdie inligting word vertaal na vaardighede in die vaardigheidslaboratoriumsessies. Vaardighede word toegepas in die kliniese area om betekenisvolle en pasiëntgesentreerde sorg te verskaf. Teoretiese toepassing vind plaas buite die klaskamer in 'n gekompliseerde en dinamiese omgewing met personeel, pasiënte en preseptore, en daarom kan die omgewing en verhoudinge studente se professionele ontwikkeling óf aanhelp, óf verhinder. Vir studente is dit dikwels problematies om in die kliniese omgewing die teoretiese materiaal waarin hulle onderrig is, te korreleer met die praktyk, wat hulle onbevoegd laat om vaardige sorg aan pasiënte te lewer. Deur hierdie studie word daar gepoog om die ervaringe van verpleegstudente oor daardie hindernisse wat toepassing van teorie in die praktyk beperk in kliniese plasings areas te ondersoek. Sulke inligting is waardevol om pasiëntsorgrisiko te verminder en om meer bevredigende leerondervindinge vir die studentverpleegster te bewerkstellig.

Metode: Daar is gebruik gemaak van 'n kwalitatiewe, beskrywende benadering in die studie om die persepsies van 15 verpleegstudente m.b.t. die hindernisse in die toepassing van teorie in die praktyk in kliniese areas te ondersoek, deur middel van drie fokusgroepe. Die Gesondheidsnavorsing Etiese Komitee van Stellenbosch Universiteit en die geselekteerde Hoër Opvoedings Instelling in die WesKaap provinsie van Suid Afrika het toestemming verskaf vir die studie. Doelbewuste proefsteekneming is gebruik om deelnemers te kies, en Creswell se ses-stap raamwerk is gebruik om data te ontleed.

Resultate: Temas wat ontstaan het was: Die vermoë van studente om teorie toe te pas tot parktyk, Hindernisse m.b.t die situasie, Hindernisse m.b.t. die persoon, Interaksie met ander partye en Strategiëe voorgestel deur studente om die toepassing van teorie na praktyk te fasiliteer. Die studie het die vaardighede bepaal wat die vierdejaar-studente bemeester het, sowel as daardie waarmee hulle steeds hulp benodig. Verder is hindernisse tot gebruik van

Stellenbosch University https://scholar.sun.ac.za

teoretiese kennis in die kliniese plasings in verband gebring met die situasie, die persoon en met interaksies met ander partye. Strategieë voorgestel deur studente om die toepassing van teorie tot praktyk te bemiddel, het ingesluit verbeterde kommunikasie tussen die verpleegopvoeder, kliniese toesighouer en preseptore. Ook behoort een kliniese toesighouer toegewys word per fasiliteit, sodat studente meer toesig ontvang.

Slotsom: Die bevindinge van hierdie studie het getoon dat dit moeilik was vir studentverpleegkundiges om betrokke te raak in kliniese aktiwiteite of om effektief te leer sonder die nodige toesig en leiding. Hindernisse bestaan in die kliniese omgewing en fakulteit wat dit vir hulle bemoeilik om teorie in praktyk om te skakel. Met behulp van hul ervaringe met sulke hindernisse in die eerste drie jaar van hulle studie, kon verpleegstudente strategieë wat behulpsaam was met fasilitering van teorie na praktyk, deel. Daarbenewens word toesighouers en preseptore aangespoor om deur die skepping van meer inspirerende omgewings die studente te ondersteun en te mentor regdeur hul kliniese plasings.

Sleutelwoorde: Teorie-praktyk gaping, verpleegstudente, hindernisse, kliniese plasing

Stellenbosch University https://scholar.sun.ac.za

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to:

- My God and Lord Jesus Christ for blessing me with health, inspiration, and patience so that I could finish this thesis.
- My sister, my best friend Tanya Barker, and my deepest gratitude; this would not be possible without you. You know what you did; I simply couldn’t have done this without you; special thanks!
- My mother, Leah Chekerwa, for your constant loving support and assistance and for helping take care of the house and the baby when I was busy with work and studying.
- Nicole, my 2-year-old daughter, sat next to me all night as I researched. She wouldn’t go to sleep until her mommy joined her in bed. You made the trip more fascinating, my lovely girl.
- My supervisor, Dr Cornelle Young, for your patience, encouragement, guidance, support, and advice. Your comprehensive insights into this project have made this an inspiring experience for me.
- My co-supervisor, Mrs. Anneline Robertson, for providing guidance and feedback, asking insightful questions, and offering invaluable advice.
- The participants, for their willingness to participate in this study.

Stellenbosch University https://scholar.sun.ac.za

TABLE OF CONTENTS

Declaration .... **i**
Abstract **ii**
Opsomming.. **iv**
Acknowledgements.. **vi**
List of tables.. **xi**
List of figures.. **xii**
Appendices.. **xiii**
Abbreviations.. **xiv**
Chapter 1: Foundation of the study.. **1**
1.1 Introduction..1
1.2 Background of the study..2
1.3 Rationale.. 4
1.4 Research framework.. 5
1.5 Problem statement.. 6
1.6 Research question..7
1.7 Research aim.. 7
1.8 Research objectives.. 7
1.9 Research methodology..7
1.9.1 Research design..8
1.9.2 Study setting..8
1.9.3 Population and sampling.. 8
1.9.4 Data collection tool.. 8
1.9.5 Pilot interview.. 8
1.9.6 Trustworthiness.. 8
1.9.7 Data collection.. 9
1.9.8 Data analysis.. 9
1.10 Ethical considerations..9
1.10.1 Right to self-determination..9
1.10.2 Right to confidentiality and anonymity..10
1.10.3 Right to protection from discomfort and harm.. 10
1.11 definitions.. 11
1.12 Duration of the study.. 12
1.13 Chapter outline.. 12
1.14 Significance of the study..13

Stellenbosch University https://scholar.sun.ac.za

1.14.1 Benefits to nurse educators....13
1.14.2 Benefits for the nursing profession....13
1.14.3 Benefits to the Nursing Administration....13
1.14.4 Benefits for the community....14
1.15 Summary....14
Chapter 2: Literature review....15
2.1 Introduction....15
2.2 Electing and reviewing the literature....15
2.3 Support structure categories....15
2.3.1 Lecturers/Nurse educators....16
2.3.2 Clinical supervisors....18
2.3.3 Registered professional nurses/ Preceptors....21
2.3.4 Peer Interaction....23
2.3.5 Clinical learning environment....24
2.4 Personal Factors of students....26
2.4.1 Student learning drives/motivation....26
2.4.2 Student anxieties....27
2.5 Clinical factors....27
2.5.1 The institutionalized disconnect between theory and practice....27
2.5.2 Lack of resources....28
2.5.3 Limited opportunities to experience skills....29
2.6 Conceptual framework....29
2.6.1 Influencing a positive learning environment....30
2.6.2 ZPD, Scaffolding and Theory-practice integration....31
2.7 Summary....33
Chapter 3: Research methodology....34
3.1 Introduction....34
3.2 Aim and objectives....34
3.3 Study setting....34
3.4 Research methodology....35
3.5 Research design....35
3.5.1 Research paradigm....36
3.5.2 Population and sampling....37
3.5.3 Inclusion criteria....38
3.5.4 Exclusion criteria....38
3.6 Data collection tool....38

Stellenbosch University https://scholar.sun.ac.za

3.6.1 Focus group....39
3.6.2 Pilot interview.... 39
3.7 Trustworthiness.... 39
3.7.1 Credibility....40
3.7.2 Transferability....40
3.7.3 Dependability....41
3.8 Data collection....41
3.9 Data analysis....44
3.9.1 Step 1: Organize and prepare the data for analysis....44
3.9.2 Step 2: Read all data....44
3.9.3 Step 3: Coding the data....44
3.9.4 Step 4: The description stage....45
3.9.5 Step 5: Present the results of the analysis.... 45
3.9.6 Step 6:Interpretation of the analysis' results....45
3.10 Summary.... 45
Chapter 4: Findings.... 46
4.1 Introduction....46
4.2 Section A: Biographical data.... 46
4.3 Section B: Themes emerging from the interviews....47
4.3.1 Theme one: Ability to apply theory to practice:....47
4.3.2 Theme two: Situational barriers....49
4.3.3 Theme three: Personal barriers (or support).... 58
4.3.4 Theme four: Interactions with other parties 60
4.3.5 Theme five: Strategies suggested to facilitate the application of theory to clinical practice.... 65
4.3.6 Summary.... 68
Chapter 5: Discussion, conclusions and recommendations.... 69
5.1 Introduction....69
5.2 Discussion.... 69
5.2.1 Objective 1: To explore nursing students' perceptions on their ability to apply theory to practice without the guidance and supervision during their four-year course....69
5.2.2 Objective 2: To explore nursing students' perceptions on their ability to apply theory to practice with guidance and supervision during their four-year course. 70
5.2.3 Objective 3:To explore the barriers nursing students encounter when applying theory to practice in clinical settings....71

Stellenbosch University https://scholar.sun.ac.za

5.2.4 Objective 4: To describe the strategies nursing students suggest could be applied to facilitate the application of theory to clinical practice....................................84
5.3 Limitations of the study...86
5.4 Conclusions..87
5.5 Recommendations..89
5.5.1 Recommendation: Nursing Practice...89
5.5.2 Recommendation: Nursing education.. 90
5.5.3 Recommendation: Future research Nursing Research..................................... 91
5.6 Dissemination..91
References 92

Stellenbosch University https://scholar.sun.ac.za

LIST OF TABLES

Table 1.1: Modules of the curriculum of the selected university... 4
Table 1.2: The study time frame... 12
Table 4.1: Themes and sub-themes`... 47

Stellenbosch University https://scholar.sun.ac.za

LIST OF FIGURES

Figure 1.1: Conceptual map..6

Stellenbosch University https://scholar.sun.ac.za

APPENDICES

Appendix 1: Ethical approval from Stellenbosch University..111
Appendix 2: Permission obtained from institutions... 112
Appendix 3: Participant information leaflet and declaration of consent by participant and investigator...114
Appendix 4: interview guide... 118
Appendix 5: Letter of Amendement...121
Appendix 6: Declarations by language and technical editors.. 122

Stellenbosch University https://scholar.sun.ac.za

ABBREVIATIONS

HEI	Higher education institution
SANC	South Africa Nursing Council
NEI	Nurse Education Institution
ZPD	zone of proximal development

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 1: FOUNDATION OF THE STUDY

1.1 INTRODUCTION

The fundamental goal of nursing education institutions (NEI) is to produce graduate nursing students who are competent, independent professionals who can provide safe practice to patients (Arpanantikul & Pratoomwan, 2017: 121-134). Today's healthcare organisations increasingly demand that nursing graduates be assertive, operational, and able to make informed decisions regarding patient care and provide quality care to patients (Arpanatikul & Pratoomwan, 2017:121-134). To achieve this level of performance, nursing students should acquire sound theoretical information in various disciplines while mastering their practical skills at an elevated level, as successfully combining theoretical knowledge with practice are essential for optimum patient care delivery (Jamshidi, Molazem, Sharif, Torabizadeh & Kalyani, 2016:184-178).

Gardiner and Sheen (2016:7-12) pointed out that a gap exists between theoretical knowledge and clinical practice in the nursing profession, referred to as the theory-practice gap, which is associated with a risk to patient safety and leads to negative outcomes. This theory-practice gap is characterised by a lack of skills in nursing students who are theoretically prepared but unable to apply theory and knowledge in the clinical placement setting (Gardiner & Sheen, 2016:7-12).

Evidence shows that in the clinical setting, nursing students are often unable to link the theory they learn in the classroom to the practical work they must perform, resulting in their inability to provide the necessary competent care to patients, with patient safety could be jeopardised (Hussein & Osuji, 2017:20-25). Many nursing students report that they are adequately equipped with textbook knowledge but have difficulty understanding and applying the intricacies of good patient care when they are required to practice as independent professional nurses. They recognise they are a risk for patients, as safe patient care is not guaranteed under these circumstances (Brown, 2019:1-5; Usher, Woods, Conway, Lea & Parker, 2018: 82-89).

There are, however, barriers that nursing students face during their education that prevent them from acquiring sufficient professional clinical knowledge and skills (Kalyani, Jamshidi, Molazem, Torabizadeh & Sharif, 2019: 1). It has been shown that while clinical environments are important for the education of student nurses, they are also challenging for learning to take place efficiently (Mamaghani, Rahmani, Hassankhani, Zamanzadeh, Campbell et al., 2018: 222). It is thus critical to examine the issues nursing students face when applying theoretical

Stellenbosch University https://scholar.sun.ac.za

knowledge to practice. The necessary ability to combine theoretical knowledge with appropriate clinical practice experience enables nursing students to respond spontaneously to unexpected events, leading to better patient care outcomes (Safazadeh, Irajpour, Alimohammadi & Haghani, 2018:1-8).

1.2 BACKGROUND OF THE STUDY

Monaghan (2015:1-7) proposed that the theory-practice gap originates during the nurse's training years, affecting nursing students' clinical skills and abilities. Atakro, Armah, Menlah, Garti and Addo (2019 :1-10) and Odetola, Oluwasola, Pimmer, Dipeolu, Akande and Olaleye (2018:1-13) concurred that the problem of the theory-practice gap is especially associated with nursing students rather than professional nurses, with Brown (2019:1-5) affirming that the problem stems from the educational environments where nurses are being prepared to for practice. The frustrations related to putting theory into practice are particularly difficult for the student and newly qualified nurses and can hinder their integration into the nursing profession and stunt their professional growth (Monaghan, 2015:1-7). On the other hand, the clinical learning environment is where nursing students truly appreciate the importance of what they have learned in theory and have the opportunity and ability to apply this to their clinical practice (Admi, Moshe-Eilon, Sharon & Mann, 2018: 86-92; Hattingh & Downing, 2020: 100263).

Studies done by Pitkänen, Kääriäinen, Oikarainen, Tuomikoski and Elo (2018:143–149), Tomietto (2018: 57–70), Vizcaya-Moreno, Pérez-Cañaveras, Jiménez-Ruiz and De Juan, (2018: 319–331) revealed that clinical settings play a crucial role in ensuring the growth of nursing students as they learn to master nursing competencies. Vizcaya-Moreno et al. (2018, :319–331) and Lovecchio, DiMattio and Hudacek (2015: 252–254) agreed that these clinical environments should be well-organised and coordinated to ensure that student nurses get appropriate help and guidance, as well as opportunities to practice specific skills. Because theoretical application in nursing occurs outside the classroom in a complicated and dynamic clinical setting comprising staff, patients, and preceptors, this setting and relationships can either enhance or hinder the professional development of the nursing students (Rabia & Mastourah, 2017: 63-70).

Saifan, Devadas, Daradkeh, Abdel-Fattah, Aljabery et al. (2021: 490) pointed out that while nursing knowledge is taught in the classroom in the form of theory, this information is translated into skills in skills laboratory sessions, and these skills are applied in the clinical setting to provide meaningful, patient-centred care. However, student nurses in the clinical setting often have difficulty coordinating the theoretical material taught with what they practice

Stellenbosch University https://scholar.sun.ac.za

in the clinical setting, and as a result, they are unable to provide competent care to patients.

A variety of barriers and pitfalls in the clinical setting hinder the delivery of effective health services by student nurses (Salifu, Gross, Salifu & Ninnoni, 2018: 1-12; Safazadeh et al., 2018: 1-8; Odetola et al., 2018: 1-13). These include the lack of knowledge and inadequate nursing skills among nursing students, a lack of supervision and guidance from clinical supervisors and registered professional nurses, poor student-nurse relationships, and a lack of resources in clinical settings (Brown, 2019:1–5; Murray, Sundin & Cope, 2019: 1384–1390; Atakro et al, 2019: 1–10; Mbakaya, Kalembo, Zgambo, Konyani & Lungu, 2020:87). To overcome these challenges, one requires an understanding of such challenges (Panda, Dash, John, Rath, Debata et al., 2021: 104875).

Fadana and Vember (2021: e1- e10), in a recent study in South Africa, found that poor relationships between ward staff and nursing students were a barrier to effective learning in the clinical setting. To accommodate staff shortages, student nurses were ignored by ward staff members and were often transferred to other wards unrelated to their educational goals. Because of this, student nurses had difficulty meeting their clinical objectives in the unit they were originally assigned. Kaphagawani (2015: 211) highlighted the importance of assigning student nurses to clinical wards that complement and support their learning objectives so they can apply the theory learned in the classroom to practice.

According to Matlakala (2016:9), the ability to foster future growth and maintaining professionalism in nursing depends on continued examination of the variables that influence student nurses' experiences. Failure to acknowledge the barriers to the clinical learning experiences of nursing students adds to discontent and has a detrimental effect on the student nurse's motivation to remain in the profession (Jamshidi et al., 2016: 2). Bvumbwe and Mtshali (2018:9) indicated that despite educational reform by SANC, nursing students still face difficulties with applying theory to practice. This may be because, in South Africa, training and teaching in the health sector have not transformed adequately to sustain the country's requirements.

In South Africa, various degree programmes in nursing are offered. One of these was the legacy R.425, Bachelor of Nursing, an undergraduate degree programme regulated by Government Notice No. R.425 of 22 February 1985, as amended, which is being phased out. The new R.174, Bachelor of Nursing programme had replaced the R.425 programme. The selected NEIs began with the R.174 programme in 2020, which is now offered concurrently with the R.425 programme. The last intake for the R.425 programme was in 2019, and hence the final R.425 nursing students are expected to graduate in 2024. All the students in both the

Stellenbosch University https://scholar.sun.ac.za

R.425 and R.174, undergraduate programmes are assigned to the same SANC-approved clinical facilities and, may face the same challenges. According to Professor Matlakala's inaugural address at the University of South Africa in South Africa (2016: 7), there is no obvious difference between the R.425's and R.174's scope of practice. Hence, some of this study's findings may apply to the new programme.

The Bachelor of nursing students on the R.425 programme is expected to complete 4 000 clinical hours over four years, as per minimum requirement of the South African Nursing Council (SANC), the governing body of nurse education in South Africa (SANC, 1985: 21). Moreover, nursing students are expected to attend simulation-based learning in the skills laboratory to achieve both theoretical and clinical achievements, after which they complete clinical placements in healthcare facilities. This allows them to be exposed to real practice settings and put their university-taught information to practical use.

The R.425 modules with the clinical component of the curriculum of the selected NEI are listed in Table 1.2 below. In the first year of study, nursing students are taught basic nursing skills. The second year of study focuses on acquiring knowledge, skills and attitudes in general nursing. The clinical part of the second year of training includes taking medical histories, administering medication by different routes, wound care, suturing wounds and removing sutures and staples from patients. In the third year of training, the focus is on obtaining midwifery, community nursing, child health nursing and comprehensive primary health care knowledge, attitudes and skills, and in the fourth year, the focus is on acquiring the same in psychiatric nursing and becoming a professional registered professional nurse.

Table 1.1: Modules of the curriculum of the selected university

Year of study	**Modules**
One	Fundamentals of nursing
Two	General nursing science (E.g., Medication, injection, wound care, general suturing)
Three	Maternal and infant health care Comprehensive primary health care Community-based maternal and reproductive health Child health care
Four	Psychiatric nursing Professional practice

1.3 RATIONALE

The researcher, a registered nurse working in clinical practice, found that student nurses lacked confidence and presented with a lack of clinical skills. Students of all year levels

Stellenbosch University https://scholar.sun.ac.za

seemed confused when confronted with actual clinical situations. They found it difficult to function in clinical settings as they experienced a discrepancy between what was taught in the classroom and the actual performance of the skills in practice. This resulted in adjustment difficulties for nursing students, causing further anxiety and confusion.

The researcher observed that nursing students face various challenges in applying theory into practice, resulting from working in restrictive surroundings. An example is not being allowed to carry out certain procedures even with supervision in certain clinical placements. Rigid regulations, organisational structures, and ineffective care delivery approaches contribute to non-ideal circumstances in clinical practice settings. Internationally, a lack of adequate supervision often exists in facilitation of nursing students' theoretical understanding in clinical practice (Ahmadi, Shahriari, Keyvanara & Kohan, 2018: 64-71; Safazadeh et al. 2018: 1–8). As a result, student nurses fail to work effectively within nursing, and multidisciplinary teams, in pursuit of a common objective and are unable to develop interdependence and collaboration.

The researcher also noticed that nursing students could not cope with or respond to rapid changes in clinical environments, similar to the findings of Salifu et al. (2018: 72–83) and Fadana and Vember (2021: e1- e10). Salifu et al. (2018: 72-83) found that nursing students disengaged during clinical teaching and learning due to their inability to cope with these environments. Therefore, the researcher thought it prudent to formally assess nursing students' perceptions of the barriers to applying theory to practice in the last year of their four-year clinical training of the R.425 Bachelor of Nursing programme. Given the identified gap between nursing theory and practice, it is critical to investigate this phenomenon, as this has received little attention in South Africa in recent years. The findings of this study may aid nursing educators in understanding and recognising the difficulties nursing students experience when applying theory into practice in clinical settings. Identifying these issues may allow nurse educators to maximise the benefits of clinical training while minimising the challenges to ensure that nursing students receive the best educational experiences. The quality of nursing education may improve and may result in more confident, knowledgeable and skilled qualifying professional nurses, providing informed patient-centred care. This is especially necessary for phasing in of the new nursing R.174 programme in South Africa while phasing out the R.425 programme.

1.4 RESEARCH FRAMEWORK

According to Adom, Hussein and Agyem (2018: 438-441), the overall aim of a conceptual framework is to make research findings more meaningful and acceptable to the theoretical

Stellenbosch University https://scholar.sun.ac.za

constructs in the research field. In addition, the conceptual framework visually depicts how concepts in a research study connect to one another (Grant & Osanloo, 2014).

Lev Vygotsky's Zone of Proximal Development (ZPD) (1978) and Wood, Bruner and Ross' theory (1976: 89-100) of scaffolding are the theories applied as an integrated framework for this research study because they complement one another and add an understanding of the needs of nursing students in clinical supervision. Both theories emphasise collaboration between the teacher and student in building knowledge and skills through participation and feedback from the teacher/supervisor, which then influences the ability to apply theory to practice. The clinical supervisor needs to determine the ZPD and then provide scaffolding during supervision in the clinical placement setting to facilitate the integration of theory to practice and, thus, foster growth and independence in nursing students. This process should aid the clinical supervisor in directing the nursing students to achieve a profound degree of comprehension and advance their critical thinking abilities. Patient safety and the theory-practice gap could be addressed by assuring that the environment and training procedures relate to appropriate assignments. In this process, nursing students will also be encouraged to engage and participate in activities to actively acquire varied experiences. The figure below demonstrates the relationship between the determination of Vygotsky's ZPD and the scaffolding required, as Wood, Bruner and Ross (1976) proposed.

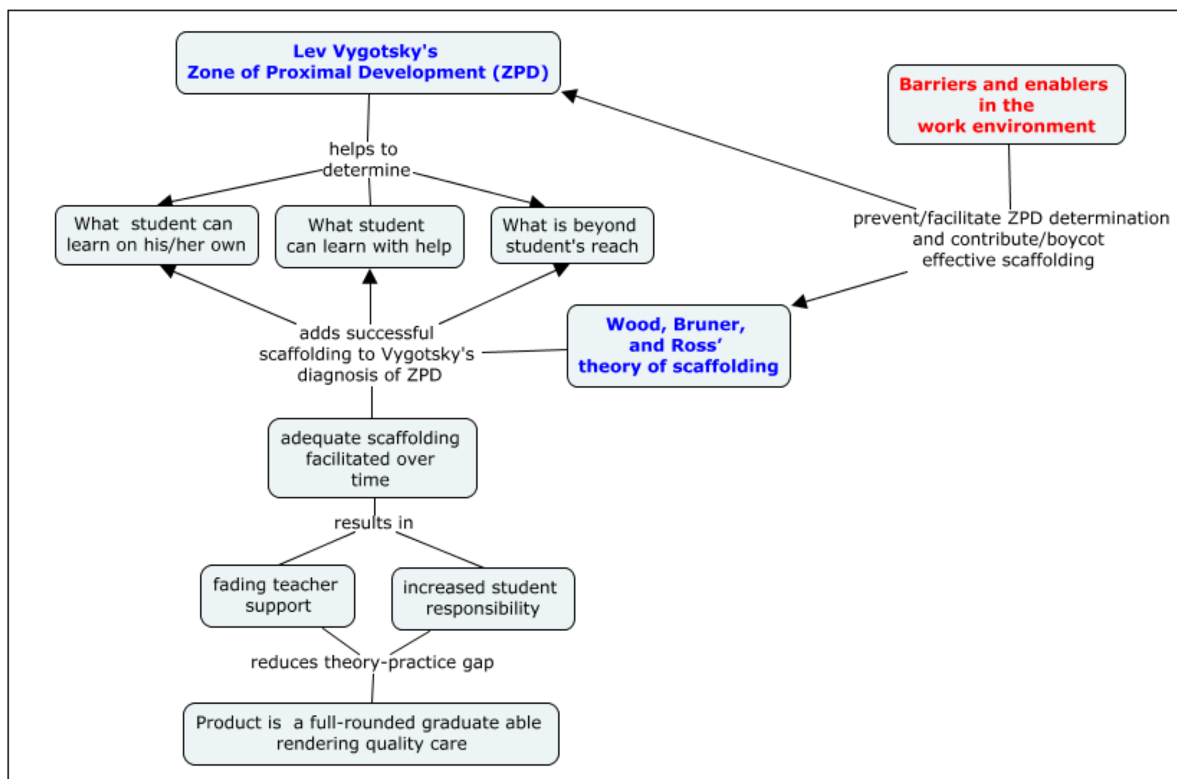


Figure 1.1: Conceptual map

Stellenbosch University https://scholar.sun.ac.za

(adapted from Vygotsky (1978) and Wood, Bruner and Ross (1976))

1.5 PROBLEM STATEMENT

Within the South African healthcare services framework, nurses are expected to have the capability and skill to address the nation's disease burden and meet South African healthcare service needs. On qualification, registered professional nurses are expected to have the ability and aptitude to function independently as professionals and be well-equipped with theoretical knowledge and the necessary practical competences. They should be able to consolidate and apply the information they learned in the classroom to practice in clinical settings. However, literature has shown that newly-graduated nurses and nursing students fail to adapt to the ward environment (Salifu et al. 2018: 72–83; Fadana & Vember, 2021: e1-e10). They are confronted with clinical circumstances in which they cannot apply the theory taught in class to solve clinical problems (Netshisaulu & Maputle, 2018: a1166; Salifu et al., 2018:1-12; Safazadeh et al., 2018:1-8). Kalyani et al. (2019:1) mentioned that such situations inhibit effective learning, and compromise the quality of graduating professional nurses, as well as the safety of patients.

Although the issue of the theory-practice gap and the barriers experienced by nursing students during clinical practice has been widely researched, effective solutions to guarantee safe patient care in South Africa are still lacking. Therefore, there is a need to update the existing information on this phenomenon to help nurse educators recognise those challenges nursing students face and to provide recommendations that will help to reduce the theory-practice gap.

1.6 RESEARCH QUESTION

What are nursing students' perceptions of the barriers to applying theory to practice in clinical placement settings?

1.7 RESEARCH AIM

This study aimed to explore nursing students' perceptions of barriers to applying theory to practice in clinical settings.

1.8 RESEARCH OBJECTIVES

The research objectives of this study were:

1. To explore nursing students' perceptions of their ability to apply theory to practice without guidance and supervision during their four-year Baccalaureus course.
2. To explore nursing students' perceptions of their ability to apply theory to practice with guidance and supervision during their four-year Baccalaureus course.

Stellenbosch University https://scholar.sun.ac.za

3. To explore the barriers nursing students encounter when applying theory to practice in clinical settings during their four-year Baccalaureus course.
4. To describe the strategies nursing students suggest could be applied to facilitate the application of theory to clinical practice.

1.9 RESEARCH METHODOLOGY

The research methodology followed for the study is briefly discussed in this chapter. A more detailed discussion will be provided in chapter three. A qualitative research approach was used for this research study. Qualitative research is an approach that allows individuals' perceptions to be examined in detail by using a specific research technique, for example, individual in-depth interviews and focus groups (Hennink, Hutter & Bailey, 2020:10).

1.9.1 Research design

A descriptive research design was used in this study as it allowed the researcher to use focus group interviews to explore nursing students' perceptions of barriers to applying theory to practice in clinical settings and provide a comprehensive summary of these perceptions. (Bradshaw, Atkinson, & Doody et al., 2017:1-8).

1.9.2 Study setting

The study was conducted with students from the nursing school of a higher education institution (HEI) situated in Cape Town in the Tygerberg sub-district of the Cape Metropole in the Western Cape Province of South Africa. The HEI is one of four in Cape Town providing an undergraduate degree in nursing.

1.9.3 Population and sampling

The target population for this study were 220 fourth-year nursing students registered for the R.425 Bachelor of Nursing degree at the HEI in 2022. Purposive sampling was utilised to select 15 participants. Three focus group interviews were held with five participants in each group.

1.9.4 Data collection tool

Focus group discussions were held using a semi-structured interview guide developed from the study's research questions, aim and objectives. Open-ended questions posed to the focus group participants were followed by probing questions to obtain detailed descriptions from the participants.

1.9.5 Pilot interview

Stellenbosch University https://scholar.sun.ac.za

A pilot focus group was conducted before the study, as per the inclusion criteria, in which the semi-structured interview guide, (Appendix 4), was tested (Majid, Othman, Mohamad, Lim & Yusof, 2017:1073-1080). The transcribed interview discussions' results confirmed the study's feasibility and proved that the data collection instrument and plan would obtain the necessary results. The pilot group interview information was found to be useful to be included in the study findings; hence, it served as the first focus group.

1.9.6 Trustworthiness

Lincoln and Guba's framework (1985) was used to ensure trustworthiness in this study. The four measures of credibility, dependability, transferability, and confirmability was applied to ensure trustworthiness in this research study (Morse, 2015:1212–1222). These measures will be discussed in detail in chapter three.

1.9.7 Data collection

Written informed consent was obtained from each participant before data collection commencement via the focus group interviews. The focus group interviews were conducted, using a semi- structured interview guide in English, in a private, quiet room at a student residence of the training hospital, at the participants' preference. The focus groups lasted between 60 and 77 minutes each. Data was collected over the two weeks between 19 to 31 March 2022.

1.9.8 Data analysis

After completing the focus group interviews, the researcher transcribed the audio recordings verbatim, and the clinical study supervisors checked the transcriptions to ensure accuracy. Data analysis was done using Creswell's (2014:196–200) six steps. These steps included organising and preparing the data for analysis, reading all the data, coding, describing the data, compiling the analysis, and interpreting the analysis.

1.10 ETHICAL CONSIDERATIONS

The ethical principles related to human subjects' research (World Medical Association, 2013) were applied in this study. These ethical principles include adherence to the Declaration of Helsinki, which underpins the rights to self-determination, confidentiality and anonymity, protection from discomfort and injury, beneficence, non-maleficence and justice (Brink et al., 2018: 31-35).

On February 25, 2022, the Health Research Ethics Committee (HREC) of Stellenbosch University approved this study (S21/08/147 – see Appendix 1). Following this, permission to conduct this research was acquired from the selected HEI on March 4, 2022 (Appendix 2) and

Stellenbosch University https://scholar.sun.ac.za

from the Faculty of Community and Health Sciences of the related institution's Nursing School on March 16, 2022. (Appendix 2).

1.10.1 Right to self-determination

According to Polit and Beck (2017:154) and Bitter, Ngabirano, Simon and Taylor (2020: S125-S129), autonomy involves respect for participants' human rights, including the right to be educated about the research. The principle of respect for human subjects requires that participants' autonomy be protected (Brink, Van der Walt & Van Rensburg, 2018: 29). The researcher made it clear to participants that their participation in the study was completely voluntary. In addition, participants were informed that they could withdraw from the study at any time. Participants were also advised that they could refuse to provide information should they feel unsafe to do so. Study participants had the chance to discuss any questions about the study and the informed consent forms (Brink et al., 2018: 29). Participants gave written informed consent to participate after a detailed explanation about the study and what was expected from them (Appendix 3).

1.10.2 Right to confidentiality and anonymity

Confidentiality and anonymity refer to keeping all participating information safe and private (not sharing) (Brink et al., 2018: 30-31). In this study, only the researcher and clinical supervisors had access to the data. At the beginning of the focus group session, participants were asked not to disclose any information they had learned about each other or the study to maintain confidentiality and anonymity. Furthermore, the participants and the institution in the study were not identified by their real names, as code names, such as focus group A participant 1 were used during data collection, analysis, and report writing to ensure true anonymity. All files and typed papers were password-protected on the researcher's laptop to protect against unsolicited access. Consent forms, transcriptions, and audio recordings are stored securely in a locked filing cabinet which only the researcher has access to and will be kept for five years (Polit & Beck, 2017:155; Georgiou, Magrabi, Hypponen, Wong & Nykanen, 2018: 25-28; Bitter et al., 2020: 125-S129).

1.10.3 Right to protection from discomfort and harm

Non-maleficence refers to the obligation of researchers not to deliberately cause or subject participants to harm (Bitter et al., 2020: 125-S129). The risk was considered minimal in this study. Participants were compensated for their time, inconvenience, and effort as per the South African Health Products Regulatory Authority prescriptions. Participants were served refreshments during the focus groups. Each participant was provided with a packed snack at the end of each focus group worthy R50.

Stellenbosch University https://scholar.sun.ac.za

Beneficence means doing good and preventing harm and exploitation. The guideline of beneficence is founded on the condition that benefits are maximised to profit the person and incorporates protecting the participant and the public from harm. Accordingly, participants had a right to be protected from distress and maltreatment (Bitter et al., 2020: S125-S129). In this study, emotional distress was anticipated. The possibility that participants might be traumatised or affected by recalling their experiences was constantly assessed and minimised throughout focus group discussions. Counsellors were available and could be contacted through the Centre for Student Support Services at the chosen institution of study or through the free telephonic 24/7 crisis counselling support. Participants were not subjected to unnecessary risks, injuries, or discomfort and were allowed to ask questions or voice their concerns should any of these situations occur (Polit & Beck, 2017:154).

1.11 DEFINITIONS

Bachelor of Nursing Degree: For this study, this qualification refers to a four-year nursing degree programme provided to undergraduate nursing students studying under Regulation 425 (SANC, 2005) existing on National Qualification Framework level 8 and allowing them to be registered as professional nurses after graduating.

Clinical learning in this study refers to a component of the nursing training strategy that incorporates simulation learning, work-directed theoretical learning, problem-based learning, project-based learning, and workplace-based learning that takes place in any clinical setting or skills laboratory (SANC, 2021:3).

Clinical placement: Clinical placement refers to a student's time spent in an authorised clinical institution or other experiential learning settings to ensure that the programme's goals are completed (SANC, 2021:3).

Clinical supervisor: In this study, a clinical supervisor is a registered professional nurse with a nursing education certification who helps the nursing student develop the knowledge, attitudes, beliefs, and required skills for practice in the clinical setting while also modelling behaviour. This person is appointed by the university, works with nursing students in skills laboratories, follows up with nursing students during clinical placement, and ensures a balance between theory and practice (work-integrated learning) (SANC, 2021: 3; Muthathi, Thurling & Armstrong, 2017: 1).

Competence in this study refers to knowledge, cognitive, behavioural, and decision-making qualities that enable a nursing student to perform a specific task to a predetermined level of competency (SANC, 2021: 3).

Stellenbosch University https://scholar.sun.ac.za

Faculty: In this study refers to a division within a university comprising one subject area or a group of related subject areas is an academic term used by universities to describe someone whose role is to teach students (SANC, 2012:4).

Learning outcomes: in this study, these refer to the required competencies and educational outcomes of the R425R.425 programme (SANC, 2021: 3).

Nurse educator/Lecturer: These terminologies refer to a professional nurse with an academic nursing education degree registered with SANC. The person is appointed by the HEI and is responsible for educating nursing students, teaching the theoretical part of nursing in the classroom, researching, publishing, and participating in the community (SANC, 2021: 3).

Nurse: This is a person registered in a category under section 31(1) to practice nursing or midwifery in terms of the Nursing Act, No 33 of 2005. In this study, 'nurse' is used as a general term, including professional, enrolled, and auxiliary nurses (SANC, 2021: 3).

Nursing Student: The nursing student is a person undergoing a four-year integrated nursing degree course leading to registration as a nurse (general, psychiatry, community) and midwife according to Regulation R425R.425 of 22 February 1985, as amended (SANC, 2021: 3). In this study, the nursing student refers to a nurse in their fourth year of study, who acquires theoretical knowledge at the specified university, and practical skills at the hospital or clinic accredited by the provincial Department of Health and SANC for this purpose.

Preceptor in this study refers to a trained registered nurse/midwife who provides day-to-day supervision during clinical placement and encourages students' integration of theory to practice. The hospital employs this registered professional nurse/midwife (SANC, 2021:3).

Theory and practice gap: In this study, this gap refers to what Ajani and Moez (2011: 3927-3931) described as the disparity between taught broad concepts and the difficulties in understanding them for application in clinical practice.

1.12 DURATION OF THE STUDY

The study was conducted between June 2021 and November 2022, with the different steps indicated in this time frame below in Table 1.2.

Table 1.2: The study time frame.

Year	Month	Activity

Stellenbosch University https://scholar.sun.ac.za

2021	June	Submission of proposal to Health Research Ethics Committee (HREC)
2022	February	Ethical approval obtained from the Health Research Ethics Committee at Stellenbosch University
	March	Permission received from the chosen HEI
	March	Approval obtained from the Nursing Department
	March-April	Data collection
	April-July	Data analysis
	July-October	Writing of thesis with continuous review by the clinical supervisor
	November	Technical and grammar editing
	December	Submission of thesis

1.13 CHAPTER OUTLINE

Chapter 1: Foundation of the study

This chapter gives a brief overview of the underlying reasons for the study, the research aims and objectives, the conceptual framework, a brief description of the research methodology and ethical considerations.

Chapter 2: Literature review

This chapter contains a comprehensive review of recent literature related to the study.

Chapter 3: Research methodology

This chapter provides comprehensive detail of the research methodology, sampling, data collection and analysis, ethical issues, and measures to ensure trustworthiness pertaining to the study.

Chapter 4: Results

This chapter displays the themes and sub-themes that emerged from data analysis.

Chapter 5: Discussion, conclusions, and recommendations

This chapter provides the results of the study concerning existing literature. Limitations of the study are declared, and recommendations and conclusions are presented.

1.14 SIGNIFICANCE OF THE STUDY

1.14.1 Benefits to nurse educators

The findings and recommendations of this study may be utilised to create new methods, interventions, and policies to assist nursing students to bridge the theory-practice gap and become well-prepared registered professional nurses able to function in complex and

Stellenbosch University https://scholar.sun.ac.za

changing healthcare environments. In addition, bridging the discrepancy between theory and practice will strengthen evidence-based practice and promote positive patient outcomes.

1.14.2 Benefits of the nursing profession

This study will contribute significantly to the nursing profession at large by addressing challenges experienced in nursing education. The recommendations made in this study could improve professional practice to ensure that student nurses of all categories are prepared to provide safe patient care. In addition, this study might prompt reform of the education of healthcare professionals to include practices and strategies that ensure the integration of theory to practice resulting in quality patient care and enhanced patient safety.

1.14.3 Benefits to the nursing administration

The Department of Health might particularly benefit as the study could challenge curriculum development policies, reducing the cost of study leave offered without a good outcome. Furthermore, the study's findings could contribute to the expanding literature that recognises the theory-practice gap as a worldwide phenomenon. Such knowledge is critical to guide and improve nursing care practice, filling knowledge gaps and changing how healthcare professionals work. Furthermore, it could help produce nurse leaders with higher critical thinking skills and participate in developing policies for the health sector.

1.14.4 Benefits for the community

The developed strategies may aid nursing students' academic and practical performance, thereby increasing the country's production of competent graduate nurses and improving access to better health services. This means that the health system can function more effectively and efficiently by finding better solutions to health problems. By addressing the difficulties faced by nursing students and nurse educators, this study might help address the critical lack of clinical staff that healthcare institutions worldwide are experiencing.

1.15 SUMMARY

This chapter explained the background, significance, and importance of determining nursing students' perceptions of the barriers to applying theory to practice. The research aim, research objectives, and conceptual framework of this study were discussed. A descriptive qualitative design was the most appropriate approach to achieve this study's aims. An outline of the research methodology and a detailed discussion of the study's ethical considerations were presented in this chapter. A comprehensive review of the literature about the theory-practice gap and its related aspects will be provided in chapter two. Chapter two also includes a detailed discussion of the conceptual framework.

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Chapter one provided an overview of the study. This chapter comprises a comprehensive literature review, including reporting on the search strategy, the appraisal of selected studies, and the themes generated from the literature sources.

A literature review enhances the knowledge and comprehension of the specific field of research. Thus, the researcher determines the knowledge gap by first establishing what is known. Furthermore, a literature review offers a structure to explain the significance of a study and a point of reference for comparison of study results (Creswell, 2014: 28).

2.2 ELECTING AND REVIEWING THE LITERATURE

A comprehensive search of the following electronic databases was done with the help of a Stellenbosch University librarian: Elton B Stephens Company, Cumulative Index to Nursing and Allied Health Literature, Cochrane, MEDLINE, PubMed, Google Scholar, and Science Direct. The search was limited to available English research articles published from 2015 to 2022. Journal articles and publications were found using the following keywords and medical subject terms: “student nurse” or “nursing student” or “undergraduate nurse”, “theory to practice gap”, “clinical setting” or “hospital” or “clinical practice”, “barriers”, or “challenges” or “obstacles”, “clinical learning environment”, “clinical supervision”.

Outcomes from selected research papers were analysed, compared, contrasted, combined, and synthesised to determine the literature review themes. Three key themes were identified as support structure, the students’ personal factors, and the clinical factors.

The literature review provides research studies from low-, middle- and high-income countries, including research studies from South Africa. Utilising articles from several countries allows for a global perspective on the topic. This may enable comparison and recommendations to be employed globally.

2.3 SUPPORT STRUCTURE CATEGORIES

In South Africa, the three support structure categories are the educators at the nursing education institution; the clinical supervisors, who are employed by the NEI and provide clinical supervision at the NEI simulation laboratory and the clinical placement facilities; and registered nurses, who are preceptors at the clinical placement facilities. All three categories have responsibilities towards nursing students’ teaching and learning. Apart from these

Stellenbosch University https://scholar.sun.ac.za

categories, supportive peers and the clinical environment also provide successful support structures for adequate learning.

Student nurses need support to benefit optimally from their classes. When nursing students undertake a placement, they expect input and feedback from key people who can help them identify learning opportunities. Atakro et al. (2019:1-10) confirmed that learning should be the shared responsibility of nurses, educators, preceptors, and managers to promote a positive practice environment for nursing students.

2.3.1 Lecturers/nurse educators

Theory as background for the science of nursing is the subject matter taught to nursing students in the classroom (Greenway, Butt & Walthall, 19:1-6). Practical nursing education is specialised training that transitions from disseminating theories about the profession to implementing such knowledge in hospital settings (Osuji, Onyiapat, El-Hussein, Iheanacho & Ogbogu, 2019: 71). Even though clinical education is considered the centre of the nursing curriculum, scientific theory is the backbone to practice (Saifan, Aburuz, Masa'deh et al., 2015: 20-29). Thus, healthcare outcomes will undoubtedly suffer if student nurses are not taught and introduced to the theoretical background and professional duties expected of a nurse. The SANC defines a nurse educator as a licensed nurse registered with the SANC and holding a specialist postgraduate qualification in nursing education. The nurse educator is employed by the HEI and is responsible for supervising the education of nursing students, teaching nursing theory in the classroom, conducting research, publishing papers, and collaborating with the community (SANC, 2021:3).

According to Hussein and Osuji (2017: 20-25), in a study conducted in Canada, nursing educators play a crucial role in bridging the gap between theory and practice, making learning relevant to students, helping them apply their theoretical knowledge in practice, by marrying the ideal taught in the class, with the reality of practice. Furthermore, nurse educators must not only provide nursing students with the academic knowledge but also help them become enculturated to the nursing profession and the workplace situations in which the theory will be applied. To ensure that student nurses receive current, tested, and accurate knowledge, nursing educators should also share their practical knowledge and experiences (Hussein & Osuji, 2017: 20-25; Günay & Kilinç, 2018: 81-86). The successful integration of theory and practice depends on the nurse educators' skills in developing and applying evidence-based practices and managing subjects and curricula (Abusalah, Aljerjawy & Akram, 2019: 876).

Hussein and Osuji (2017: 20-25) reasoned that nurse educators could help students connect theoretical knowledge and practical nursing practice. Also, in considering the key role of

Stellenbosch University https://scholar.sun.ac.za

nursing faculties in curriculum development, clinical instruction and supervision should be part of their teaching and quality improvement duties towards creating the necessary links for the students (Abusalah et al., 2019: 876).

Osuji, Onyiapat, El-Hussein, Iheanacho, Ogbogu et al. (2019: 71-86) conducted a qualitative study in Nigeria to explore the methods used to help students close the theory-practice gap among 18 nursing educators. The authors found that it would be ideal if the NEI used the same nursing educators that taught the theory, in the clinical setting with nursing students. Hussein and Osuji (2017: 20-25) pointed out that the nurse educator must not only ensure that the student nurse correctly understands the theoretical knowledge but must also illustrate how this knowledge can be assimilated and, most importantly, implemented. Nurse educators should thus work alongside student nurses to support them through mentorship and role modelling when student nurses are placed in clinical settings. In this process, they help student nurses to acquire the necessary practical competencies required for their year of study and develop an identity as a professional nurse (Osuji et al., 2019: 71-86). Furthermore, nurse educators should establish an atmosphere that fosters trust and promotes mutually beneficial and comprehensive communication between themselves and student nurses. This will facilitate exchanges in which the nurse educator supports nursing students by prompting critical thinking through asking stimulating questions, providing guidance, establishing a secure environment for developing new skills, and exhibiting professionalism via self-reflective practice (Osuji et al., 2019: 71-86).

A recent qualitative study from the Eastern Cape province in South Africa looked at 16 new nurse educators' experiences and mentorship requirements at a public nursing college. It was found that nurse educators confronted many obstacles that restricted their ability to support nursing students (Sodidi & Jardien-Baboo, 2020: 1-8). The authors revealed that the clinical component of the orientation programme for educators in the college lacked mentoring. The clinical procedures were not explicitly demonstrated to the trainee nurse educators, nor were they guided in their capacity as clinical educators. In addition, the new educators reported that there was no standardisation in the way clinical procedures were carried out or of the clinical evaluation instruments used to grade the students (Sodidi et al., 2020: 1-8).

According to Safazadeh et al. (2018: 1-8), the inexperience and professional incompetence of nursing educators were debilitating factors that contributed to the inability of students to put theory into practice. These authors sought to identify and describe the factors causing a theory-practice gap in emergency nursing education in Iran. Safazadeh et al. (2018: 1-8) conducted interviews with theoretical and clinical instructors and nursing students in the

Stellenbosch University https://scholar.sun.ac.za

emergency department of Isfahan University Hospital. Study results indicated that the translation of theory into reality was associated with various difficulties for nursing students in the emergency department. These difficulties involved the divide between the faculty as the academic environment and the hospital as the practical teaching environment. Improving collaboration within these areas would help the nursing profession become more knowledgeable and competent. The main objectives of the nursing curriculum are to assist nursing students in applying learned concepts and improving their decision-making abilities in difficult, real-life scenarios. This process could be advanced by focusing on the major causes of the gap between theory and practice, as well as on faculty and healthcare institutions' staff management, materials, and organisational procedures. It is crucial to use all the elements associated with effective education to translate theoretical knowledge into practical skills for nursing interventions (Safazadeh et al., 2018: 1-8).

Shahzadi et al. (2017: 896-906) conducted a quantitative and descriptive study to assess the gap between theory and practical training in a nursing education system at the University of Lahore, Pakistan. The conclusions showed that the theoretical knowledge of nursing students was superior to their practical skills. However, the clinical faculty’s inability to control the clinical circumstances prevented them from bridging the gap between theory and practice and improving the nursing student's performance in the clinical setting. Recognising the significance of connecting theory and practice, as well as emphasising the need for practical training for nursing students, were therefore vital. Salifu et al. (2018: 72-83) suggested that one likely reason for faculty failure is that nursing educators were characterised as helpless in challenging clinical practice situations because they lacked the necessary academic credentials, clinical competencies, and readiness for new roles in the university setting, as well as the skills to guide, inspire and evaluate nursing students. Nursing educators’ lack of confidence in clinical scenarios was attributed to the fact that several lecturers were academics with little experience working in a clinical setting (Ahmadi et al., 2018: 64-71; Salifu et al., 2018: 72-83). Nurse educators thus need to keep abreast of current information and evidence-based practices to support student nurses with their knowledge (Hussein & Osuji, 2017: 20-25). According to Atakro et al. (2019: 10–20), the solution to stay current in competencies is for teachers to schedule time for ward visits to ensure that they understand what is required of students in practice. Another suggestion was that ward managers could provide nursing educators with continuous teaching and learning opportunities in the wards.

2.3.2 Clinical supervisors

Clinical supervision is widely used as a formal process of professional support for student nurses and supports the development of student nurses’ professional competence and

Stellenbosch University https://scholar.sun.ac.za

confidence, which ultimately improves the delivery of quality patient care (Muthathi et al., 2017: 2). In addition, such supervision helps to apply the theory to real-life situations, integrating theoretical knowledge and practical skills in the clinical setting (Muthathi et al., 2017: 2). Directly supervising the nursing students in the clinical setting, ensures a supportive relationship is established between the clinical supervisor and the nursing student (Bifarin & Stonehouse, 2017: 331–335).

SANC defines a clinical supervisor as a registered professional nurse who helps nursing students develop the knowledge, attitude, beliefs and skills necessary for clinical practice while serving as a role model. The HEI appoints the person who works with student nurses in the skills laboratories to obtain skills through simulated practice. This person also accompanies the student nurses during the clinical placement to apply the skills learned by simulation in the real-world context, ensuring a balance between theory and practice (SANC, 2021: 3). Arkan et al. (2018:127-132) furthermore added that the clinical supervisor's role is to help, guide and conduct fair and timely assessments to enhance learning. Pitkänen et al. (2018:143-149) emphasised the importance of these functions and motivated providing further education to clinical supervisors to develop their competence in supervising students.

SANC Regulation 425 of 2012 recommends that each student nurse be supervised weekly for half an hour (SANC, 2012:5). However, many studies have found a lack of supervision, support and mentorship among nursing students (Kaphagawani & Useh, 2018: 100-109; Muthathi et al., 2017: 5; Donough & Van der Heever, 2018: e1-e8). For example, a study by Kaphagawani and Useh (2018: 100-109) in Malawi found that student nurses believed that clinical supervisors in clinical settings were primarily there to evaluate rather than supervise them. Consequently, if there is inadequate supervision, students may engage in trial-and-error learning, which significantly impacts the outcomes of students' experiences, potentially adversely affecting patients (Arkan et al., 2018:127-132).

A study by Kaphagawani and Useh (2018: 100-109) in Malawi, employing both quantitative and qualitative techniques, focused on clinical supervision and support. According to the quantitative results, as many as 85% of nursing students as participants in this study received supervision from preceptors and clinical supervisors. However, although receiving clinical supervision at some point during their placement, they were generally dissatisfied with it as such supervision only took place occasionally. Furthermore, assistance was not provided at the point where support was needed, and thus supervision was not individualised. Thus, it can be inferred that although students received clinical supervision, it was inadequate and inconsistent to achieve learning (Kaphagawani & Useh 2018: 100-109). The negative attitude

Stellenbosch University https://scholar.sun.ac.za

of clinical staff regarding clinical supervision of nursing students, a shortage of staff and nurse educators, a high volume of nursing students in the clinical setting, and a demanding workload for clinical supervisors contributed to this situation.

A quantitative study on the role of clinical instructors in bridging the gap between theory and practice in nursing education was conducted in Palestine with 135 nursing students in the four main governmental hospitals in the Gaza strip (Abusalah et al., 2018: 18). According to these research findings, clinical instructors can improve their influence on student nurses learning by fostering a supportive learning environment and taking an active role in class. This study highlighted the fact that the phenomenon of the theory-practice gap exists and that there are solutions to this problem that enable best practices in the clinical environment, as well as a linkage of the disciplines of education and practice (Abusalah et al., 2018: 18).

In the context of Finland, Pitkänen et al. (2018: 143-149) conducted a cross-sectional study with nursing students to assess the clinical learning environment and supervision. They found that students who received extensive supervision and support and had three or more one-to-one meetings with their supervisor experienced a more positive clinical learning environment and supervision. This study concluded the importance of individualised and focused supervision and the importance of a student-centred atmosphere in the clinical learning environment. This finding is consistent with some research indicating that the success of student socialisation depends on competent clinical supervisors who provide support, follow-up and providing feedback to students. Furthermore, clinical supervisors who get along well with nursing students are highly valued because they combine professional skills and motivate nursing students with their theoretical and practical knowledge. However, a barrier to translating theory into practice is often the inadequate application of clinical judgement and the perception that some techniques are outdated (Safazadeh et al., 2018: 1-8).

According to a study in Malawi by Mbakaya et al. (2020: 87), clinical supervisors could not accompany or supervise students in the clinical setting due to time constrains. In addition, student assessments and feedback were not conducted promptly. This finding is consistent with a study conducted in Ethiopia by Berhe and Gebretensaye (2021: 2214-1391), who reported that clinical supervisors did not follow protocols in carrying out procedures with nursing students, which affected their ability to develop clinical skills. The authors suggest that assessment is essential to the learning process, as it enhances nursing students' development and shapes future professional nurses (Berhe & Gebretensaye, 2021: 2214-1391).

Stellenbosch University https://scholar.sun.ac.za

Nursing students tend to acquire skills more easily under supervision of a cheerful, welcoming, and motivated clinical supervisor (Doyle, Sainsbury, Cleary, Parkinson, Vindigni et al., 2017: 27-32). However, studies about student nurses' perceptions of clinical supervision in South Africa include reported negative experiences such as lack of consistency in teaching clinical procedures by different clinical supervisors and abuse of power (Donough & Van der Heever, 2018: e1- e8; Muthathi et al., 2017: 5). Similar studies (Günay & Kilinç, 2018: 81-86; Safazadeh et al., 2018: 1-8) have highlighted inconsistencies in clinical assessment approaches of clinical competencies. Muthathi et al. (2017: 5) advise standardising the demonstration of procedures. Although procedures performed by clinical supervisors may differ in detail, all clinical supervisors should use the same guidelines for clinical demonstrations and assessments. The need for continuous professional development of clinical supervisors through in-service training was recommended. by Donough and Van der Heever (2018: e1-e8).

2.3.3 Registered professional nurses/preceptors

In South Africa, the SANC (2021:3) defines a preceptor as a qualified registered professional nurse or midwife who supervises students daily in clinical settings and encourages them to apply their classroom learning to the real world. According to SANC, such persons need to have completed an accredited mentorship, and assessor course and must be registered at SANC for this purpose. Accordingly, the hospital employs this registered professional nurse and midwife.

Studies conducted in Malawi and Ghana amongst nursing students demonstrated that students benefited from the positive learning environment created by skilled preceptors (Phuma-Ngaiyaye, Bvumbwe & Chipeta, 2017: 164-168; Atakro & Gross, 2016:np). Preceptors were praised for being kind, friendly, supportive, approachable and responsive to nursing students. Compared to other nurses in the clinical setting, nursing students felt that preceptors were more accommodating toward them (Phuma-Ngaiyaye et al., 2017: 164-168; Atakro & Gross, 2016). Therefore, nursing students need to be educated in a friendly, accommodating environment that promotes learning to prepare for professional development and practice (Atakro & Gross, 2016:np). Consequently, the role of preceptors is crucial because their way of treating nursing students with respect increases students' self-esteem and directly affects their academic success (Ahn & Choi, 2019: 48–53).

A quantitative study conducted in the Northwest Province of South Africa by Lethale, Makhado and Koen (2019: 19-25) investigated factors influencing preceptorship in clinical learning for an undergraduate nursing programme. Second, third- and fourth-year nursing students

Stellenbosch University https://scholar.sun.ac.za

(n = 177) and preceptors (n = 9) and unit managers (n = 38) participated in this study. The researchers concluded that preceptorship was positively influenced by course objectives that were communicated at the start of a clinical practicum, preceptors and unit managers who had the necessary knowledge to meet nursing students' clinical objectives, hospital units that were appropriate clinical learning environments, and positive interprofessional interactions that occurred in clinical settings. Combining all these aspects made for a positive clinical placement experience for student nurses.

Unfortunately, this ideal situation is not practiced as a standard, and nursing students from several countries indicated that registered professional nurses in clinical practice did not have time for education or supervision, which made nursing students feel isolated in the clinical setting (Atakro et al., 2019: 1-10; Odetola et al., 2018: 1-13; Fadana & Vember, 2021: e1–e10). Preceptors were not eager to accept the responsibility of teaching student nurses due to their heavy workloads (Ahmadi et al., 2018: 64-71; Mbakaya et al., 2020: 87) and were considered a burden by preceptors, leaving students without support or encouragement in their units (Günay & Kilinç, 2018: 81–86). These preceptors found it difficult to perform their clinical duties of patient care while simultaneously providing the necessary assistance and supervision to student nurses (Mbakaya et al., 2020: 87; Atakro et al., 2019: 7) in the constantly crowded hospital wards (Kaphagawani & Useh, 2018: 100–109, Ahmadi et al., 2018: 64-71).

However, Kaphagawani and Useh (2018: 100-109) emphasised that the absence of supervision negatively impacts nursing students' confidence. Salifu et al. (2018: 72-83) from Ghana found that preceptor programmes were unsuccessful due to untrained preceptors who were not compelled to teach in the clinical setting because there was no formal agreement between educational institutions and preceptors. Consequently, the obligation to work with nursing students was considered optional. Preceptors in the clinical setting complained that there are no tangible incentives for taking on this role of preceptorship to student nurses. They asserted that their support to student nurses was not appreciated by either the unit manager nor the university, and they claimed to have received no feedback on their efforts, let alone monetary incentives (Atakro et al., 2019: 1-10). In some cases, professional nurses even refused to teach or supervise nursing students, citing that they were not paid to do so (Kaphagawani & Useh, 2018: 100-109; Atakro et al., 2019: 1-10). Professional nurses in clinical settings in South Africa, on the other hand, are required to educate and guide student nurses and are responsible for the actions of student nurses while practicing under their supervision (SANC, 2012).

Stellenbosch University https://scholar.sun.ac.za

A qualitative study conducted in South Korea by Ahn and Choi (2019: 48-53) examined incivility experiences in clinical practicum education among nursing students. Negative behaviours and attitudes of preceptors were reported; these lead to uncivil behaviours such as disrespect, indifference, scolding, rude language, and insults towards nursing students, affecting student learning. These findings are congruent with those reported in Nigerian research in which nursing students indicated that preceptors were unfriendly and communicated poorly with them (Odetola et al., 2018: 1-13).

A study in Iran reported the prevalence of poor communication, bullying, conflict, and harassment by preceptors in the clinical setting, which resulted in poor interactions between nursing students and clinical staff (Ahmadi et al., 2018: 64-71). According to Günay and Kilinç (2018: 81-86), such experiences not only lead to stress and burnout but also have a negative effect on overall clinical education, hinder students' learning, influence their career decisions, and cause dissatisfaction with the clinical practicum (Ahn & Choi, 2019: 48-53; Atakro et al., 2019:1-10; Fadana & Vember, 2021: e1–e10; Mbakaya et al., 2020: 87; Kaphagawani & Useh, 2018: 100-109; Odetola et al., 2018: 1-13; Arkan et al., 2018: 127-132). Ahn and Choi (2019: 48-53) conclude that this type of incivility appears to be due to students' relatively inferior position in the clinical practice setting. According to Phuma-Ngaiyaye et al. (2017: 164-168), the level of assistance nursing students receive from preceptors during clinical learning on the unit impacts their ability to achieve learning objectives. When nursing students are supported and guided by trained and willing preceptors, they acquire the necessary skills, confidence, and competencies to develop and become independent professional nurses. However, several factors negatively impacted preceptorship. These included ward nurses who did not support student supervision and lacked the knowledge and skills to satisfy the learning objectives of the preceptees (Lethale et al., 2019:19-25).

2.3.4 Peer interaction

Peers in this study refer to any nursing student in the clinical setting. Peer interaction is an important component of learning and putting theory into practice. Peer support is crucial to nursing students as they help each other, share ideas, and collaborate during clinical practicum (Arkan et al., 2018: 127-132). It has been found that peer contact and encouragement are beneficial in clinical learning settings (Mbakaya et al., 2020: 87). However, in the clinical setting, competitiveness and conflict among nursing students have been noted (Ahmadi et al., 2018: 64-71; Arkan et al., 2018: 127-132). This is attributed to the presence of a large number of nursing students from multiple schools in the same ward, all with similar learning goals (Mbakaya et al., 2020:87). Conflicts among nursing students are brought on by overcrowding in clinical settings (Fadana & Vember, 2021: e1–e10), as rivalry

Stellenbosch University https://scholar.sun.ac.za

to complete procedures can be demotivating and cause worry and anxiety (Ahmadi et al., 2018: 64-71). However, the key to success in clinical learning is strong collaboration among students, encouragement, and teamwork that helps students develop clinical competence (Ahmadi et al., 2018: 64-71). Peer relationships during clinical practice thus have the potential to help students build supportive connections beneficial to their well-being.

2.3.5 Clinical learning environment

Rabia and Mastourah (2017: 63-70) defined the clinical learning environment as a multifaceted environment that involves professionals, patients, and nurse educators and influences the nursing students by either enhancing or detracting from their effectiveness. The SANC (2013: Section 58(1)) defines the clinical setting as an environment in which nursing care is delivered, including the education of nursing students.

Studies performed in Finland by Pitkänen et al. (2018:143-149), Mbakaya et al. (2020:87), and Rabia and Mastourah (2017: 63-70) have proven the significance of the clinical setting in nursing students' growth in learning nursing skills. According to Vizcaya-Moreno et al. (2018: 319-331), these clinical settings need to be properly managed and aligned to provide the right support and guidance to nursing students and allow them to improve certain skills. In the clinical setting, students practice their skills and apply their knowledge to real work scenarios. The clinical setting has numerous factors, including equipment, interdisciplinary staff, and unpredictable patient care scenarios that challenge the clinical supervisor to provide optimal learning opportunities (Manap, Kamaruddin, Mokhtar, Parmalusami & Ismail, 2019: 15-19).

In the clinical environment, nursing students are encouraged to participate as team members and acquire knowledge from the nursing staff. A supportive environment has a pleasant ward atmosphere, allows for the maintenance of solid relationships, and is believed to produce favourable learning outcomes (Jaganath, Bimerew & Mthimunye, 2022:100467). In such a milieu, nursing students receive encouraging feedback about their work from peers and clinical staff, and the nursing staff are welcoming. These aspects were an important element in assessing the success of the nursing students’ placement (Doyle et al., 2017: 27-32).

Not all clinical learning environments promote effective learning (Mbakaya et al., 2020: 87). A study in Addis Ababa by Berhe and Gebretensaye (2021: 2214-1391) examined the difficulties nursing students face in a clinical learning environment. They identified elements such as poor communication skills, inadequate supervision and an unfriendly clinical climate as limiting clinical practice for student nurses. The authors concluded that student nurses should receive adequate support, helpful feedback, and impartial evaluation in the clinical setting (Berhe & Gebretensaye, 2021: 2214-1391).

Stellenbosch University https://scholar.sun.ac.za

Mbakaya et al. (2020: 87) conducted a mixed-methods study to assess student nurses' and midwives' experiences and perceptions of the clinical learning environment in Malawi. The quantitative results of this study indicated that student nurses were satisfied with the clinical learning environment as the satisfaction subscale had the highest mean score. The authors concluded that higher scores indicated a high level of satisfaction with the clinical placement. However, the qualitative results did not support this finding, which indicated that student nurses in the focus groups were dissatisfied with the level of support in clinical teaching and supervision. Berhe and Gebretensaye (2021: 2214-1391) stated that student nurses expected to encounter helpful healthcare professionals and a welcoming environment. Instead, they encountered an unsupportive clinical environment and uncooperative, unprofessional nursing staff.

A recent quantitative study was conducted in South Africa at an HEI to investigate student nurses’ perceptions of the clinical learning environment. The student nurses perceived their clinical learning environment as satisfactory because the facilitators incorporated innovative activities in the clinical learning environment. However, findings showed that the degree of satisfaction declined as students progressed from the third to the fourth year (Jaganath et al., 2022:100467).

In clinical settings, transfer of theory to practice depends on good interpersonal relationships and support between clinical staff and students provide a favourable environment for nursing student learning (Arkan et al., 2018:127–132). Clinical staff attitudes toward student nurses and their enthusiasm to educate can facilitate student learning (Mbakaya et al., 2020: 87) and increase their confidence and independence (Odetola et al., 2018, :1-13). In addition, positive interpersonal relationships alleviate anxiety and enhance confidence and self-esteem, resulting in improved clinical learning (Ahn & Choi, 2019: 48-53; Fadana & Vember, 2021: e1–e10).

Studies conducted in Ghana have revealed that negative and toxic work environments, on the other hand, can hinder student learning in clinical settings. Poor relationships between nursing students and staff act as a barrier to learning because students lack the confidence to seek advice when it is needed and, therefore, do not achieve their learning goals (Atakro et al., 2019: 1-10; Fadana & Vember, 2021: e1–e10; Mbakaya et al., 2020: 87; Kaphagawani & Useh, 2018: 100-109; Ahn & Choi, 2019: 48-53; Odetola et al., 2018: 1-13; Arkan et al., 2018: 127-132; Ahmadi et al., 2018: 64-71).

The disputes in the clinical setting were associated with jealousy and hostility caused by clinical staff with lower qualifications (but greater experience) than the nursing students’

Stellenbosch University https://scholar.sun.ac.za

degrees (Odetola et al., 2018: 1-13; Kaphagawani & Useh, 2018: 100-109). According to Ahn and Choi (2019: 48-53), similar unpleasant experiences in the clinical setting may directly impact the development of students' future professional skills and competencies as nurses. Atakro et al. (2019:1-10) identified work overload as a reason for such poor attitudes, with staff viewing student nurses as an additional burden and obligation.

2.4 PERSONAL FACTORS OF STUDENTS

The development of nursing students' competence is influenced by their motivation to be successful and their ability to deal with their anxiety levels as learners. (Safazadeh et al., 2018: 1-8; Günay & Kılınç, 2018: 81-86).

2.4.1 Student motivation

There are a variety of motivators that drive nursing students to study. According to Safazadeh et al. (2018: 1-8), to understand nursing, nursing students must accept the situation of the clinical environment with all its good and bad elements and try to acquire skills in this context. This Iranian study found that nursing students are indifferent to the nursing profession, more enthusiastic about good grades than learning, and unprepared to enter the clinical environment (Safazadeh et al., 2018: 1-8). Similarly, Günay and Kilinç (2018: 1-8) found that students in Turkey valued grades and marks over learning.

Safazadeh et al. (2018: 1-8) mentioned that the high demand for nurses in the labour market was the deciding factor in choosing a career in nursing rather than the motivation to serve and provide care. This attitude has far-reaching effects on the clinical learning process, as nursing students lack enthusiasm for learning (Salifu et al., 2018: 72-83; Safazadeh et al., 2018: 1-8, Ahn & Choi, 2019: 48-53). In another study, clinical activities were seen by nursing students as routine, ritualistic, and boring, which led to disinterest and apathy in clinical learning activities (Salifu et al., 2018: 72-83).

According to a study by Arkan et al. (2018: 127-132), students also suffered from exhaustion when the demands of caring for patients and the expectations of their supervisors were high. As a result, nursing students reported that they suffered from fatigue and lost motivation to learn. Salifu et al. (2018: 72-83) and Ahmadi et al. (2018: 64-71) concurred and added that high expectations of student nurses regarding their competencies led to pressure and a decrease in their enthusiasm for learning.

Student nurses felt that their clinical supervisors focused more on fault finding than on encouraging and assisting student nurses with their clinical assessments. (Günay & Kilinç, 2018: 81-86; Arkan et al., 2018: 27-132). Student nurses were concerned because the

Stellenbosch University https://scholar.sun.ac.za

preceptors' demands often exceeded students' knowledge and experience; consequently, they felt demotivated and fatigued (Arkan et al., 2018: 127-132). Some clinical supervisors were observed to be harsh and aloof with their nursing students. As a result, student nurses were hesitant to ask questions or seek clarification (Ahn & Choi, 2019: 48-53). According to Salifu et al. (2018: 72-83) and Atakro et al. (2019: 1-10), some nursing educators emphasise memorisation, which does not promote critical thinking and problem-solving. As a result of this approach, students appeared disinterested in learning.

2.4.2 Student anxiety

Continuous and adequate feedback about performance and explanations from preceptors addressed anxiety successfully and facilitated learning (Ahmadi et al., 2018: 64-71). A successful relationship with all stakeholders involved in the learning process helps to mitigate anxiety (Fadana & Vember, 2021: e1–e10).

Nursing students reported feeling powerless and anxious as a result of dreading patient management and the possibility of failing to cope with patient problems and making mistakes (Mbakaya et al., 2020: 87), as well as interacting with nurses, patients, and physicians (Günay & Kilinç, 2018: 81-86; Arkan et al., 2018: 127-132; Ahmadi et al., 2018: 64-71; Ahn & Choi, 2019: 48-53; Factor et al., 2017: 82-87; Fadana & Vember, 2021: e1–e10).

Student–faculty relationships are also often strained by the assessment and evaluation process during clinical days (Arkan et al., 2018: 127–132; Ahmadi et al., 2018: 64-71; Factor et al., 2017: 82–87). Students became anxious when lecturers did not respond to them because their input, while being important for clinical learning, was not received timeously or at all (Ahmadi et al., 2018: 64–71; Factor et al., 2017:82–87). In a study by Ahmadi et al. (2018: 64-71), anxiety was found to negatively impact students' confidence and motivation as they became upset about nursing outcomes not achieved before completing the course. Nursing students were lost and confused (Factor et al., 2017: 82–87; Fadana & Vember, 2021: e1–e10) when instructors failed to perform their role as educators, which inhibited students' learning (Odetola et al., 2018: 1–13). Inadequate facilities and poor relationships with instructors and nursing staff frustrated and distressed student nurses (Ahmadi et al., 2018: 68).

2.5 CLINICAL FACTORS

The clinical factors identified as barriers to applying theory to practice are the institutionalised disconnect between the theory–practice, lack of resources, and limited opportunities to experience skills.

Stellenbosch University https://scholar.sun.ac.za

2.5.1 The institutionalised disconnect between theory and practice

Kerthu and Nuuyoma (2019: 21-28) explored the difficulties that nursing students encountered when they translated their knowledge from the classroom into practice in the clinical setting in Namibia. Their findings include that theory–practice gaps cause difficulties for student nurses as they realise that the knowledge taught in class is often unrealistic and has little to do with the real clinical world. Günay and Kilinç (2018: 81-86) and Salifu et al. (2018: 72-83) concur when they state that nursing students are able to distinguish that what is taught in the classroom has little to do with what happens in practice. This study from Turkey showed that nursing students were reluctant to interact with patients or attend to their needs because they felt that their clinical knowledge and skills were limited or irrelevant.

Salifu et al. (2018: 72–83) reported that nursing students and nurse faculty felt that the unsatisfactory and inadequate design of the curriculum did not facilitate the integration of theory with practice. In some cases, nursing students were assigned to clinical placements before being taught the theoretical knowledge required for these clinical settings (Salifu et al., 2018: 72–83). Odetola et al., (2018: 1–13) mention that such insufficient experimental learning opportunities in the wards prevent nursing students from mastering expected clinical skills. Ahmadi et al. (2018 :64-71) concurred, as student nurses from their study reported that course material at the university was not well planned, negatively affecting their clinical learning. In addition, the short clinical placements and increased number of students per instructor in the classroom, skills laboratory, and hospital placements did not allow for comprehensive skill learning.

2.5.2 Lack of resources

The lack of fundamental equipment and supplies for nursing care prohibits student nurses from learning effectively and consequently impacts their competencies' development. In clinical settings, a lack of resources, materials, and labour prevented illustration of procedures and ideas practically, as well as nursing students from implementing the best practice learned in the classroom (Factor et al., 2017: 82-87; Safazadeh et al., 2018: 1-8). Nursing students were perplexed when they were assigned clinical tasks that required them to adapt procedures with limited resources. This pushes student nurses to improvise and modify procedures and led to hazardous reusing of hospital supplies like recycling of gloves (Factor et al., 2017: 82-87). Consequently, student nurses are prevented from practicing the ideal taught skills, using inadequate and substandard equipment and supplies, and resulting in missed chances for teaching and learning. (Factor et al., 2017: 82-87; Salifu et al., 2018: 72-83; Odetola et al., 2018: 1-13; Safazadeh et al., 2018: 1-8; Fadana & Vember, 2021: e1–e10).

Stellenbosch University https://scholar.sun.ac.za

A shortage of patients due to multiple students from different universities wanting to participate in the same clinical procedures slowed student nurses' learning (Mbakaya et al., 2020: 87). Inadequate facilities for students in clinical placements were another source of stress for students (Ahmadi et al., 2018: 64-71). Because there was no adequate breakroom for lunch breaks and tea, students reported being physically and mentally tired (Günay & Kilinç, 2018: 81-86; Ahmadi et al., 2018: 64-71; Arkan et al., 2018: 127-132). A lack of computers to access health information systems, difficulty with using specialised equipment, and lack of equipment for standard procedures are more examples of such problems experienced by students.

2.5.3 Limited opportunities to experience skills

Too many students in a practical setting decrease the learning opportunities for nursing students (Mbakaya et al., 2020: 87). Nursing students expressed concern about gaining clinical experience, given the large number of nursing students in one clinical setting (Safazadeh et al., 2018: 1). Enrolment of too many student nurses reduced classroom participation opportunities, skills laboratories, and clinical settings (Safazadeh et al., 2018: 1 Salifu et al., 2018: 72-83). According to a qualitative study performed in Turkey on factors affecting clinical learning, hospital wards were perceived to be overcrowded (Arkan et al. 2018 : 127-132), and patient care took priority over student learning (Safazadeh et al., 2018: 1-8). As a result, there was competition and conflict among nursing students (Ahmadi et al., 2018: 64-71) and fighting over patients (Mbakaya et al., 2020: 87), with some nursing students that did not have the opportunity to gain clinical experience (Salifu et al., 2018: 72-83; Ahmadi et al., 2018: 64-71). Consequently, some entered their fourth year at the nursing school with knowledge gaps or lacking critical competencies in nursing practice (Ahmadi et al., 2018 :64-71; Mbakaya et al., 2020:87).

2.6 CONCEPTUAL FRAMEWORK

A framework for examining the factors of support and supervision is provided by Vygotsky's ZPD (1978), which combines Wood, Bruner, and Ross's (1976: 89-100) notion of scaffolding. The relationship and interaction between the preceptors, clinical supervisors, and nursing students were examined in this study as barriers to determining students' ZPD and individual needs for learning scaffolding. The ZPD is based on sociocultural learning, and one of its main principles is expert-assisted learning. Vygotsky (1978: 86) argued that learning is inherently progressive and is divided into two zones: actual (current) and potential (proximal). The constructivist educator believes that existing information and experience serve as a foundation for developing new knowledge and cognitive skills and that this foundation determines how one develops.

Stellenbosch University https://scholar.sun.ac.za

The proximal zone, an extension of the actual zone, describes the area between what students can accomplish under guidance and what they can accomplish on their own. The ZPD represents the student's abilities to complete tasks independently and those that require just the right amount of guidance or supervision. Consequently, instruction is about preparing students to complete tasks in their ZPD and supporting them until they can perform the activity independently (Naeini, 2014: 1297-1306; Shooshtar & Mir, 2014: 1771-1776). Vygotsky (1978) and Wood et al., (1976: 89-100) described scaffolding as a growth strategy for helping students achieve independence. To achieve this goal, students take small, doable actions. Students can make connections between ideas by working with an experienced clinical supervisor, preceptor, or more informed classmate. Nursing students are guided through a task within their ZPD by a preceptor and an experienced clinical supervisor as part of scaffolding. Any task that requires assistance to complete is within a person's ZPD. The activities provided by the clinical supervisor, preceptor, or more experienced peer to assist the student nurse as she moves through the ZPD are referred to as scaffolding.

According to Wood et al. (1976: 90), scaffolding is a technique "that helps a student accomplish a task or reach a goal beyond his or her own efforts." As students' progress in their ZPD and gain confidence, they practice new skills with the help of those around them. However, support is gradually reduced until the student achieves independence and becomes independent, acquiring new knowledge and skills as they master the skill (Margolis 2020: 15-26; Kurt 2020:np). According to Vygotsky, learning results from intentional, meaningful interactions with others. Therefore, the clinical supervisor must be constantly aware of which tasks and skills their students can perform independently and which require supervision. The difficulty for the clinical supervisor is knowing where supervision is needed for each student and course in a nursing programme.

Clinical training takes place in small groups. Working with a small number of students allows for efficient assessment of current knowledge and skills and identifies what has not yet developed, is developing, or can be developed with guidance (Wass & Golding, 2014: 671–684). The actual abilities of students vary depending on their prior experience. The clinical supervisor and preceptor can assess a student's potential abilities as they interact with them.

Because the ZPD is a potential learning phase, students are most open to education that addresses the ZPD (Wass & Golding, 2014: 671–684). Lack of knowledge of a student's ZPD, i.e., the gap between the student's actual and potential abilities, may lead to over (or under)-supervision of the student, which could affect the student's ability to learn independently.

Stellenbosch University https://scholar.sun.ac.za

Furthermore, insufficient supervision of a nursing student may compromise patient safety and impede learning. It is thus necessary for the ideal clinical supervisor to know both the student's actual abilities and potential as a novice student. According to Wood, Bruner, and Ross (1976: 89-100), good student supervision depends on clinically qualified mentors who provide encouragement and give students space to reflect and debrief.

2.6.1 Influencing a positive learning environment

In a positive environment, students are motivated to learn and take responsibility for their education. Such an environment is created through the intentional and reflective efforts of the clinical supervisor to foster trust, teamwork, and appreciation (Day & Benner, 2018:np). ZPD learning strategies are linked to the clinical setting and the collaborative aspect of nursing. Therefore, preceptors can maximise learner progress and migration across ZPD zones by working with students to provide care. According to Tomlinson (2008: 1–6), a collaborative and trusting environment is essential to use scaffolding effectively. Wass and Golding (2014: 671-684) emphasise the importance of the educational environment and its relationship to the extent of ZPD.

Preceptors and clinical supervisors should emphasise the value of student engagement in developing relationships in the clinical environment, as a cornerstone of Vygotsky's ZPD. In acknowledgement of the ZPD these role-players assumes that nursing students acquire new concepts and skills most effectively when they work collaboratively and cooperatively with people who have more experience than they do (Shabani, Karim, Mohammad, Khatib & Ebadi et al., 2010: 237-248). Thus, partnership is critical to good nursing practice as all healthcare team members communicate with each other throughout the course of patient care. The benefits of an educational partnership extend beyond the classroom and include fostering a climate of respect and trust in which nursing students are seen as active members of the healthcare system. Collaboration is at the forefront, consistent with Day and Benner's (2018:np) recommendation to incorporate respect and trust among role-players in the clinical environment.

Nursing activities are thought to provide nursing students with the skills to deal with various clinical challenges and practical problem-solving (Benner, 2019:np). Because soliciting feedback, discussing practice, and engaging in the reflective process are important components of ZPD, clinical settings promote more intensive focus on what should happen in the ZPD. Preceptors and clinical supervisors strive to engage students in the nursing process and continually engage them in conversations about management and the overall care plan by creating a safe and encouraging learning environment (Doyle et al., 2017: 27-32).

Stellenbosch University https://scholar.sun.ac.za

2.6.2 ZPD, scaffolding and theory-practice integration

In applying Vygotsky's ZPD theory to clinical nursing education, a clinical supervisor or preceptor helps nursing students use the knowledge gained in the classroom in clinical practice. The clinical supervisor/preceptor assesses the student's learning needs and theoretical knowledge of the learned skill. In the ZPD area, the clinical supervisor/preceptor helps the student translate theory into essential practical skills through guidance, supervision, and feedback. This is done first by demonstrating how it is done and then guiding the student through the procedure with practice in the skills laboratory until they build the confidence to work independently (Margolis, 2020: 15-26; Kurt, 2020:np). In nursing, students are often placed in a clinical setting that is unfamiliar to them and needs guidance to make sense of what they are experiencing. The role of the clinical supervisor/preceptor is to assess and facilitate learning and to supervise students in their clinical practice in the clinical setting. The clinical supervisor/preceptor acts as an expert and professional role model for nursing students, illustrating and monitoring skill practice and tracking theoretical and clinical progress by visiting and observing students in their clinical placement, promoting the integration of theory and practice. Thus, the ZPD is continuously modified as the student grows and becomes independent (Margolis, 2020:15-26).

The role of a clinical supervisor and preceptor is to help students reconfigure their ZPD by making connections between their prior knowledge and the culture and practices of the clinical placement or, perhaps more fundamentally, professional practice (Spooner, Corley, Chaboyer, Hammond, & Frazer, 2015: 19-23). It is possible to determine whether students need support to lower their ZPD by assessing their knowledge's internal and external boundaries. This provides a basis for deciding the nature of the clinical experience and supervision and the support needed to make connections between theory and practice (Margolis, 2020: 15-26; Kurt, 2020:np).

An effective social connection between students and knowledgeable individuals is essential to help students overcome their ZPD, or in other words, learn how to apply their existing knowledge. The relationship between clinical supervisors, preceptors, and nursing students should be non-threatening and criticism-free (Doyle et al., 2017: 27-32). Nursing students who participate in such experiences can develop their professional skills much more quickly and, more importantly, safely than those left to their own devices. The preceptor, clinical supervisor, and nursing student should demonstrate effective social engagement that serves as a scaffold to support the application of existing knowledge in a new way (Doyle et al., 2017: 27-32).

Stellenbosch University https://scholar.sun.ac.za

Regular opportunities to review the boundaries of knowledge allow nursing students and clinical supervisors/preceptors to identify new developmental activities and opportunities to acquire professional knowledge (Margolis, 2020: 15-26). When nursing students encounter clinical supervisors/preceptors unable to scaffold them through their ZPD, they cannot use their existing knowledge or clinical experience. They fail to meet their expectations and those of their clinical supervisors/preceptors. As a result, their learning is constrained, and they become trapped in a cycle of deprivation perpetuated in subsequent placements unless intensive remedial help is available (Spooner, et al, 2015: 19-23).

2.7 SUMMARY

This chapter presented an overview of the literature reviewed and the major themes that emerged from the literature. The conceptual framework used in this study is also described in full and applied in this chapter. The literature revealed the varied experiences that nursing students had during their clinical placements. The inability of preceptors to model excellent nursing practice contributed to the widening of the theory–practice gap. In addition, routine hospital procedures contradicted the information and skills that nursing students had received in the classroom. As a result, student nurses need varying support, supervision, and guidance levels to develop their skills and narrow the gap between theory and practice. Chapter 3 provides the research methodology used in this study.

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter one provided the background, rationale, and a brief description of the research methodology of this study. The literature review in chapter two introduced the experiences of South African and international nursing students in their clinical settings as they attempted to integrate theoretical knowledge into practice. Furthermore, the conceptual framework is discussed comprehensively in chapter two. Chapter three provides more detail about the study setting, research design, population, sampling methods, the interview guide as an instrument, and the pilot study. This chapter also lays out the data collection and analysis strategies adhered to in the study.

3.2 AIM AND OBJECTIVES

This study aimed to explore nursing students' perceptions of barriers to applying theory to practice in clinical settings.

The research objectives of this study were:

1. To explore nursing students’ perceptions of their ability to apply theory to practice without guidance and supervision during their four-year Baccalaureus course.
2. To explore nursing students’ perceptions of their ability to apply theory to practice with guidance and supervision during their four-year Baccalaureus course.
3. To explore the barriers nursing students, encounter when applying theory to practice in clinical settings during their four-year Baccalaureus course.
4. To describe the strategies nursing students, suggest could be applied to facilitate the application of theory to clinical practice.

3.3 STUDY SETTING

A research setting is defined by Polit and Beck (2018: 744) as the actual place and conditions under which data is gathered. According to Majid (2018: 3), the study setting logistics like the nature, context, and environment may impact how the research study is carried out. By evaluating the study setting, the researcher can anticipate any practical obstacles inherent to the research setting's structure or layout.

The research setting for this study was the School of Nursing at an HEI situated in the Cape Town Metropole of the Western Cape Province of South Africa. As one of four HEIs in the Western Cape Province offering a bachelor's degree programme in nursing, the institution was selected as the best setting, also being the largest nursing school in the Western Cape

Stellenbosch University https://scholar.sun.ac.za

Province. This institution also matched the study's requirements since the nursing school still provided the R.425 nursing course (in the phasing out stage), which is being discontinued by the SANC under Regulation 425 of the Nursing Act No. 33 of 2005 (SANC, 2014:3).

3.4 RESEARCH METHODOLOGY

This study made use of qualitative research framework. Qualitative research allows for an in-depth examination of people's experiences and perspectives using interviews, observation, and focus groups. Qualitative research methodology is a subjective approach associated with constructivism and interpretive philosophy. This type of research takes a naturalistic approach to the world and is appropriate to investigate the perspectives and attitudes of participants and provide insight into social phenomena occurring in the natural context (Hennink et al., 2020: 10; Creswell & Creswell, 2018:10).

Furthermore, qualitative researchers investigate occurrences in people's natural environments, aiming to make sense of, or interpret events in terms of the meanings they convey through social interaction (Creswell & Creswell 2018:10). Finally, the researcher approached the topic holistically by employing qualitative research to understand nursing students' perspectives, opinions, and attitudes regarding the barriers to applying theory to practice (Creswell, 2014:196-200).

3.5 RESEARCH DESIGN

This study used a descriptive qualitative design to explore nursing students' perceptions of barriers to applying theory to practice in clinical placement settings. This design aims to describe a population, phenomenon, or circumstance accurately, efficiently, and straightforwardly. The descriptive qualitative design is used to gain insight and knowledge from participants about an insufficiently understood phenomenon and is often used in health care and nursing (Bradshaw et al., 2017: 1-8).

This design was chosen for the study due to the subjective nature of the research problem, the unique experiences of the participants, and the presentation of the results in a manner that directly or nearly mirrored the language used in the research question (Doyle, McCabe, Keogh, Brady & McCann, 2020: 443). In addition, the design assisted the researcher in gaining deep insight into the participants' perspectives and attitudes through their descriptions. (Bradshaw et al., 2017: 2).

The use of bracketing in this study resulted in more reliable analyses and increased research accuracy. In order to fully understand the experiences of individuals being investigated, it is imperative that the researcher set aside any prior personal information. The researcher must

Stellenbosch University https://scholar.sun.ac.za

therefore deliberately purge his or her mind of all prior information, preconceived ideas, and personal biases (Polit & Beck, 2018: 742). Preconceived notions identified included the researcher's perception that preceptors treated student nurses as employees rather than learners on the unit and that student nurses in the healthcare setting received too little support and were occasionally disrespected.

3.5.1 Research paradigm

Khatri (2020: 1435-1440) suggested that a research paradigm is a foundational and broad belief system used to view research phenomena as an ideological perspective, mindset, or shared understanding of the researcher that influences the connotation or interpretation of research data. Simply put, Polit and Beck (2018: 738) described a paradigm as a way of looking at the world or a phenomenon by way of a set of assumptions that inform the research approach. Ontology, epistemology, methodology, and axiology are research philosophies that provide specific characteristics for each research paradigm, such as positivism, interpretivism, pragmatism, and/or realist research.

The researcher used an interpretivist paradigm for this study. The main goal of this paradigm was to understand the subjective realm of human experience (Guba & Lincoln, 1989) by interpreting what the participant thinks or what meaning they derive from the circumstances. According to the interpretivist paradigm, reality is socially constructed (Kivunja & Kuyini, 2017: 26-41). This paradigm is based on a subjectivist epistemology, a relativist ontology, a naturalistic methodology, and a balanced axiology. These aspects are briefly explained below.

A subjectivist (or relativist) epistemology implies that the researcher makes sense of the data through their own thinking and cognitive processing as influenced by their interactions with the participants. The researcher is assumed to socially construct their knowledge from their personal real-life experiences within the natural environments being researched (Khatri 2020: 1435-1440). The researcher and participants are assumed to be engaged in processes in which they interact, converse, and collect research data.

The ontological perspective of interpretivism or subjectivism views reality as multidimensional, comprehensive, and comparative. The researcher attempts to view the event from numerous angles, and meaning can be gained through interactions between the researcher and the participants. There is not one method to capture the reality of an event; it can be interpreted in multiple ways (Lincoln, Lynham & Guba, 2017: 108-150).

The researcher employs a naturalistic technique, relying largely on data obtained through interviews, focus groups, observation, text messaging, and reflection sessions, with the

Stellenbosch University https://scholar.sun.ac.za

researcher acting as a passive observer. These strategies ensure that the researcher and participants engage in sufficient dialogue to develop a meaningful reality collaboratively. The methodology also determines the best strategy for data collection, analysis, interpretation, and presentation of findings (Bradshaw et al., 2017: 3).

3.5.2 Population and sampling

3.5.2.1 Population

A population is defined as the whole group of people (or components, articles or substances) sharing particular traits and about whom a researcher wishes to make conclusions (Polit and Beck, 2018:739; Majid, 2018:1-7). The overall target population for this study was the 220 fourth (and final) year nursing students registered during the 2022 academic year for the Bachelor of Nursing degree under Regulation 425 of the Nursing Act No. 33 of 2005 (SANC, 2014:5).

3.5.2.2 Sampling

Brink et al. (2018:115) describe sampling as "the act of selecting a sample from a given population to obtain information about a phenomenon in a way that represents the study population. Non-probability purposive sampling was used to select participants based on their ability to provide rich information and details about the studied topic (Holloway & Galvin, 2017: 107-23).

Recruitment among the entire population of qualified students was done through a Whatsapp group. The researcher was given a clinical supervisor by the NEI to assist with contacting the nursing students via a Whatsapp group. The researcher was added to an existing Whatsapp group by the clinical supervisor. After receiving information about the study which was posted in the WhatsApp group by the researcher, those who expressed interest were encouraged to contact the researcher for further details. Only 18 students expressed interest and all 18 were invited to participate, thus the sample size was determined by the number of people who were interested in participating in the study. However, three volunteers who had agreed to participate in the focus groups were unable to do so due to personal commitments at the time the focus groups were organised. Saunders, Sim, Kingstone, Baker, and Waterfield (2018: 1893-1907) stated that a small number of participants from the target population might be sufficient if accurate and comprehensive data are provided. The sample was divided into three focus groups of five participants each, composed of female and male students of different age groups to maximise the diversity of the sample (Grove, Gray & Burns, 2015: 274). According to Guest, Namey, and Chen (2020:1), saturation is achieved by sampling until no new data are collected or until respondents in the study repeatedly provide information.

Stellenbosch University https://scholar.sun.ac.za

The third focus group did not produce new information as participant were repeating similar themes from the previous two focus groups.

3.5.3 Inclusion criteria

According to Majid (2018:1-7), the basic characteristics of the population of interest are the inclusion criteria for the sample. A potential research participant must have certain characteristics to be selected for the study. The inclusion criteria were fourth-year nursing students enrolled in the four-year baccalaureate degree programme in nursing for the 2022 academic year following Regulation 425 of the Nursing Act No. 33 of 2005 (SANC, 2014) and who agreed to participate in the study by signing an informed consent form.

3.5.4 Exclusion criteria

This study does not have an exclusion criterion as all fourth-year nursing students were approached.

3.6 DATA COLLECTION TOOL

A semi-structured interview guide was used for data collection. The semi-structured interview guide consisted of open-ended questions with probes based on the research question and objectives of the study. As per the literature review findings, these questions were related to the students' learning experiences, expectations, working relationships, teaching methods, and challenges encountered during the clinical placement. Open-ended questions allowed participants to explain their experiences and perceptions in their own words (Korstjens & Moser, 2018: 120-124). The same topics were discussed in each focus group, but the researcher probed according to what the participants in each group elicited at the time. The interview guide was written in English, as English was the medium of instruction used at the selected NEI (see Appendix 4).

An example of open-ended questions and probes to obtain more clarity is:

> Tell me about the challenges you experienced in the clinical settings in applying theory to practice.
>
> In which way was the support lacking? Please provide examples.

3.6.1 Focus group interview

The focus group interview is used to collect data by in depth questions about the perceptions or opinions of a group of participants as part of a discussion about the research question. The focus group discussions were conducted using a semi-structured interview guide as a data

Stellenbosch University https://scholar.sun.ac.za

collection tool. More understanding is gained through group dynamics than through individual interviews with the same number of participants (Nyumba, Wilson, Derrick & Mukherjee, 2018: 20-32). Four to eight members per focus group are optimal for fostering dialogue (Krueger & Casey, 2015:2-37).

In this study, having participants explore similar themes of barriers to applying theory to practice in a group led to improved levels of discussion as they helped each other express and clarify their views (Gray et al., 2017:264-284). Participants heard different perceptions and added their own without reservation as the discussion progressed, as confirmed by Plummer (2017: 297-301) and Holloway and Galvin (2017). In addition, the condensed nature of the focus group allowed the researcher to gather deeper and richer information from multiple individuals in a shorter time than time-consuming individual interviews (Gundumogula, 2020: 299-302).

3.6.2 Pilot interview

A pilot interview is defined as a pre-test of the interview guide as a research tool before conducting the actual study (Majid et al., 2017: 1073-1080). By testing the interview guide, the research team can identify problems with the questions, the order of the questions, and the process of recording the responses, and refine the researcher's interviewing skills (Gray et al., 2017: 405). The researcher was trained to conduct qualitative interviews.

The researcher conducted the pilot focus group interview with five participants who volunteered to participate. The focus group interview was recorded and transcribed and then reviewed by the two supervisors to determine if the questions were clear and if the participants had adequately answered the study question. Finally, the two supervisors made suggestions for the next focus group interviews. Based on the quality of the information gathered and the flow of the conversation, the supervisors felt that the pilot focus group provided sufficient data to be included into the main study.

3.7 TRUSTWORTHINESS

Lincoln and Guba’s framework (1985) was used to ensure rigour in this study. Guba and Lincoln (1989) proposed that a study ought to fulfil the four measures of credibility, dependability, transferability, and confirmability to ensure trustworthiness in research (Morse, 2015: 1212–1222). The four measures are discussed in detail below.

3.7.1 Credibility

Cypress (2017: 253-263) defined the credibility of a study as the degree to which it reflects how accurate and honest the representation of participants' experiences is. The strategies

Stellenbosch University https://scholar.sun.ac.za

used to ensure credibility were member checking, bracketing, self-reflection and documenting in a reflective journal.

Member checking is a process in which interview results and/or preliminary conclusions are shared with study participants to confirm the accuracy of the data (López-Zerón, Bilbao-Nieva & Clements, 2021). The researcher conducted member-checking by emailing focus group transcripts to participants to obtain feedback and confirmation (Korstjens & Moser, 2018: 120-124). Ten participants verified the correctness of their real experiences after receiving the researcher's analysis through email. The other five participants did not respond.

To observe and explain a phenomenon without bias, a researcher must apply bracketing (Weatherford & Maitra, 2019: 91-102). In this study, bracketing was applied by having the researcher disregard their preconceptions, past experiences, and prior understanding of the phenomenon (Cypress, 2017: 258; Brink et al., 2018: 159). As a student in 2018, the researcher did not want her preconceived notions, personal biases, or prior knowledge to influence the research study's conclusions. The researcher used self-reflection to avoid bias when engaging with the data collected. This includes examining one's opinions, being aware of possible biases, and knowing about oneself when researching to determine if the researcher's opinions may have impacted the findings (Polit & Beck, 2018: 742). The researcher created a list of her knowledge, assumptions, preconceived notions, and experiences related to the research problem throughout the study in a reflective journal, constantly monitoring for any biases during data collection and transcription. This technique helped the researcher eliminate any prior assumptions about the phenomenon and focus only on the participants' experiences.

3.7.2 Transferability

Transferability means that the results of this research can be applied to another context, setting, or participants with comparable results (Korstjens et al., 2018: 122). To this end, the researcher provided a thick, detailed description as a thorough and exhaustive account of the study setting, nursing students' perceptions, and events to enable any outsider to conclude whether transferability to their context is possible (Korstjens & Moser, 2018: 120-124). The researcher selected participants as per the inclusion criteria and used non-probability purposive sampling to ensure that the participants who were selected were able to provide abundant information. The findings of this study are discussed in chapter five to illustrate the similarities and differences with studies conducted in other contexts (Grove, et al, 2015: 274).

3.7.3 Dependability

Stellenbosch University https://scholar.sun.ac.za

Dependability refers to the extent to which the study could be recreated or duplicated under similar conditions. To ensure dependability in this study, the researcher used the same semi-structured interview guide to conduct all three focus groups. The supervisors reviewed and validated the transcripts, contributing to the study's dependability (Cypress, 2017: 258). In addition, as experts in qualitative research, the two supervisors acted as external inquiry auditors. The supervisors evaluated the data collection procedure, data analysis, and research findings to ensure that all of these characteristics were supported by the data collected from the participants (Streubert & Carpenter, 2014: 316). In addition, dependability was achieved by maintaining an audit trail of the transcripts, data analysis procedure, and other research materials and records to ensure that the study's conclusions could be replicated.

3.7.4 Confirmability

Confirmability refers to the extent to which the research outcome was consistent with the data obtained from the participants and the researcher's interpretation of the information is not fabricated by the researcher (Polit & Beck, 2018: 559; Brink et al., 2018: 111). To ensure confirmability in this study, the researcher kept a traceable record of the research path throughout the study. The researcher recorded the process of information gathering, information analysis, and interpretation. Notes were taken for each step taken during the research process. Backup files were kept on an external drive so they could be viewed later if needed to verify the accuracy of the data analysis (Cypress, 2017: 253-263).

3.8 DATA COLLECTION

Data collection is the process of gathering information reliably and systematically (Polit & Beck, 2018: 577). The data was obtained methodically and is relevant to the study's aim, question, and specific objectives.

The focus groups were organised to take place on days when participants had no clinical or academic commitments and took place between the 19th of March and the 31st March, 2022. After receiving permission from Stellenbosch University HREC and the nursing school of the selected HEI to contact the nursing students, the researcher contacted the nursing students via WhatsApp class groups after being added to the groups by one of the clinical supervisors, whose contact details was provided by the NEI. The clinical supervisor was contacted telephonically. The researcher posted a message defining the purpose and scope of the study in the student Whatsapp group. Nursing students who had questions or wanted to participate in the study were encouraged to contact the researcher as soon as possible. Eighteen students expressed interest in participating in the focus group discussions. The

Stellenbosch University https://scholar.sun.ac.za

researcher exchanged phone numbers with one of the volunteers, who then set up a WhatsApp group for all participants so that they could easily exchange information about the desired time and location of the focus group. This volunteer was in constant communication with the researcher. All participants received WhatsApp messages reminding them of the scheduled date of the focus group. One day before the scheduled focus group meeting, WhatsApp messages were sent again as a reminder to those who were to participate. The other two groups were treated in the same way. Three students that initially volunteered were unable to meet on these allocated days, and hence only 15 were included in the focus groups, with five participants in each focus group.

The focus group discussions took place in a private room in the student dormitory. Participants chose this location because it was convenient for them, as they did not have to travel. The study was conducted following the level five protocols of Covid-19 and the regulations, guidelines, and policies of Stellenbosch University and the Department of Health. The rules for the safe conduct of research during the Covid-19 epidemic are explained in Appendix 2. In addition, the researcher ensured that Covid-19 pre-screening activities were conducted, masks were always worn, hands were washed hygienically, and all participants maintained social distancing.

The private room located in the student’s residence was sufficiently large, adequately ventilated, and located in a quiet area so that participants were not distracted during discussions. Participants were seated 1.5 metres apart on chairs arranged in a circle to encourage group discussion. Participants were encouraged to speak loudly enough so the audio recording would be clear.

Participants were informed that there were no immediate benefits from participating in the study but that the findings and recommendations could lead to the development of new strategies, policies, and guidelines to help educators bridge the gap between theory and practice and best prepare nursing students during their years of education before they become qualified nurses. Participants were educated about their right to be protected from distress and mistreatment (Bitter et al., 2020: S125-S129). Because some issues were sensitive, participants were advised that counsellors were available at the selected institution's Centre for Student Support Services or through their 24/7 free telephone crisis line at 0800 222 333. Consequently, participants were continuously monitored for signs of distress during the focus group discussions. Participants were not exposed to any unnecessary risk, danger, or discomfort and did not suffer injury harm or distress (Polit & Beck, 2017: 154; Brink et al., 2018: 35-36; Grove & Gray, 2019: 468).

Stellenbosch University https://scholar.sun.ac.za

Before the focus group session began, participants were served refreshments which were individually packed as per Covid protocols. Participants were invited to mingle casually to get to know each other. The researcher also interacted with the participants to build a rapport and trust so that participants felt comfortable, eager and willing to talk about their experiences. While enjoying the refreshments, the researcher introduced herself and welcomed the participants. She briefly discussed the research topic and group norms, such as giving each other speaking time, respecting each other, and turning off cell phones. The importance of confidentiality was discussed and emphasised. Participants did not sign a confidentiality agreement. At the beginning of the focus group session, participants were asked not to disclose any information they had learned about each other or the study. After refreshments were enjoyed, the session officially began. The researcher acted as a discussion moderator and encouraged participants to share their experiences (Holloway & Galvin, 2017). To ensure the researcher's views did not compromise the reliability of the study, the researcher took notes during the focus group interview on participants' comments, body language, and the researcher's ideas and thoughts during the focus group discussions (Cypress, 2017: 258; Brink et al., 2018: 159).

Participants gave permission to use the audio recorder to assist the researcher in recording the data discussed during the meeting. A second digital recorder was a backup in case technical problems occurred during the initial recording. The researcher explained the purpose of the study, the duration, and the roles of the participants using the study information sheet. The right to participate, decline participation, or withdraw from the study was also explained and enforced. Participants were allowed to read the information sheet, and any questions were answered. After each participant gave written informed consent in the presence of a witness, participants provided their anonymous socio-demographic data without specific private details.

The researcher began with the first open-ended question, waited for a response, and then asked probing questions to elicit detailed responses from participants. To ensure that participants answered the questions, the researcher rephrased the questions in simple terms to ensure that participants did not stray from the main topic. During the discussions, the researcher had to restrain dominant or overbearing participants and engage those who were passive by respectfully asking their opinions about the issues or concepts mentioned in the discussion while maintaining eye contact to keep attention. The researcher continued these steps in all focus group sessions until the third session when no new information was available, and redundancy was achieved (Pilot & Beck,2017; LoBiondo-Wood & Haber, 2018: 212). Guest, Namey, and Chen (2020:1) also mention that saturation is achieved by sampling

Stellenbosch University https://scholar.sun.ac.za

until no new data are collected or until respondents in the study repeatedly provide same information.The researcher used the same interview guide for each focus group and asked the same questions to each group for improved dependability. Probing was done, depending on the responses given by each participant. Each focus group discussion lasted approximately 60-70 minutes. Since participants did not travel, the money allocated for travel expenses was not spent. By the third focus group participants raised similar issues already discussed.

3.9 DATA ANALYSIS

Data analysis was manually guided by Creswell’s (2014: 196–200) six steps. The steps of the data analysis are discussed below.

3.9.1 Step 1: Organise and prepare the data for analysis

After the focus group interviews, the researcher listened to the audio recordings of the focus group meetings and transcribed them word for word. In addition, the researcher delved into the data by repeatedly listening to the focus groups' audio recordings to familiarise herself with the content. Finally, the two supervisors reviewed the transcriptions alongside the audio recordings, and incomplete or incorrectly transcribed sections were noted and corrected as needed.

3.9.2 Step 2: Read all data

The researcher read the transcripts repeatedly until familiarity with the data was obtained and reflections could be done on the meaning of the information, the general views and perceptions of the participants, and the overall meaning of the data. The researcher highlighted some important statements in the transcripts. The highlighted key statements were relevant to the study's objectives, but the researcher also extracted noteworthy comments that helped paint a vivid picture of the lived experience. The researcher took notes in the margins of the transcripts which helped to locate and identify the highlighted text. Meanings were then created from the relevant statements that were extracted. Finally, the meanings were developed by comparing the extracted statements and transcripts to capture the essence and meaning.

3.9.3 Step 3: Coding the data

The researcher read and reread the transcripts independently to identify patterns in the data. Each transcript was coded by reviewing the text line by line to extract relevant concepts directly related to the student nurses' experiences. Recurring ideas, similarities, and differences were identified. To categorise the data, codes were created and placed in the margins, then labelled with the phrases and terms used by the participants. The coding

Stellenbosch University https://scholar.sun.ac.za

technique helped the researcher organise and categorise similar coded data to bring related topics together (Gray et al., 2017: 271).

3.9.4 Step 4: The description stage

Similar meanings were grouped together and then further sorted into clusters or sub-themes. Subtopics were grouped into major themes. To eliminate bias, supervisors helped code and formulate the themes. The themes were considered as the study's findings. The researcher underlined the key statements in each focus group transcription. The key statements selected were linked to the study objectives. However, the researcher also found important observations that helped to detail the student nurses' experiences.

3.9.5 Step 5: Present the results of the analysis

This step addresses the findings of the analysis. The researcher provided detailed discussions of the various formulated meanings, subthemes and themes, with illustrations, several perspectives of participants, quotations, tables and figures as adjuncts to the discussions.

3.9.6 Step 6: Interpretation of the analysis results

The final step was the interpretation of the study results and conclusions. The researcher presented the research findings and the data obtained from the participant's experiences and the literature. Participants were again presented with descriptive results to verify that the analysis accurately represented their experiences. Participants who received the researcher's analysis via email could attest to the accuracy of their actual experiences. Not all participants responded; the ten participants who did respond did not make any changes, and the results were considered an accurate reflection of their focus group discussions. The next chapter presents the study results that emerged from the focus groups.

3.10 SUMMARY

The research methodology used to conduct the study and ensure the study's validity and reliability was described in Chapter 3. The qualitative descriptive research which enabled the researcher to explore and describe the nursing students' perceptions of barriers to applying theory to practice was fully explained, as well as how the 15 participants were purposively selected and recruited from the NEI under study. The focus group interview sessions were performed in accordance with the ethical standards of the Declaration of Helsinki of 2013 for protecting human rights to protect the participants' rights (World Medical Association Declaration of Helsinki, 2013: 2191-2194).

Stellenbosch University https://scholar.sun.ac.za

Before conducting the focus group interviews, written informed consent was obtained. The four criteria of credibility, dependability, confirmability, and transferability were met, ensuring the study's rigour. Data collection and analysis were done simultaneously. Data analysis was performed guided by Creswell's (2014: 196–200) six steps. The next chapter will provide the study findings.

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 4: FINDINGS

4.1 INTRODUCTION

Student nurses' perceptions of barriers towards applying theory to practice are discussed in this chapter. The three focus group interviews with fourth-year nursing students were audio recorded and then transcribed verbatim by the researcher. Subsequently, the data were analysed using Creswell's (2014: 196-200) six steps to extract themes and sub-themes. With this chapter these themes and sub-themes are presented, and accompanied by quotes from participants to substantiate the findings of the study.

Section A contains the demographic data, and Section B has the themes and sub-themes that emerged from the focus group interviews. These findings are also discussed in the context of existing literature about the phenomenon.

4.2 SECTION A: BIOGRAPHICAL DATA

This section contains analysed information about the demographics of the sample. Demographic information is provided so that readers can understand the characteristics of the sample. A description of the characteristics of the sample helps to appraise the information obtained from the context from which it was generated for comparison with other contexts, or thus transferability (Bryman, Bell, Hirschsohn, DosSantos, Du Toit et al., 2014: 45).

Fifteen fourth-year nursing students registered for the baccalaureate nursing programme under Regulation 425 of the Nursing Act No. 33 of 2005 (SANC, 2014: 5) for the academic year of 2022 participated in the study. Twelve participants (80%) were female, and three (20%) were males. This gender distribution is common in South African nursing, as females dominate nursing. All participants were of African descent, two were international students from elsewhere in Africa, and 13 were South African nationals from different provinces. Focus group A consisted of five participants, four of whom were females and one a male. The participants were aged between 20 to 25. Focus group B consisted of five participants, three female and two males, aged between 20 to 26. Focus group C consisted of five participants, all female, and of the age group 21 to 24 years.

In the fourth year of the Bachelor of Nursing programme (R.425), many nursing students are under 30 years old, consistent with national statistics on nursing students. This is because most of them enroll in the programme immediately after matriculation when they are 19 years old. In addition, those who have enrolled from environments post-high school are mostly also younger than 25 years when the programme starts (SANC, 2014).

Stellenbosch University https://scholar.sun.ac.za

4.3 SECTION B: THEMES EMERGING FROM THE INTERVIEWS

Five themes were extracted from the raw data, with a further 21 sub-themes emerging, as presented in Table 4.1. The formulated meanings are depicted in Table 4.2.

Table 4.1: Themes and sub-themes

Themes	Sub-themes
1. Ability to apply theory to practice (4.3.1)	a) Learning objectives achieved without guidance and supervision (4.3.1.1) b) Learning objectives achieved with guidance and supervision (4.3.1.2)
2. Situational barriers (4.3.2)	a) Delegation of duties for nursing students not relevant to learning objectives (4.3.2.1) b) Task-orientated versus comprehensive care (4.3.2.2.) c) Replacing permanent staff during staff shortages (4.3.2.3) d) Mismatch between nursing actions in a simulated environment and the clinical settings (4.3.2.4) e) Discrimination and racism (4.3.2.5)
3. Personal barriers (or support) (4.3.3)	a) Role preparedness (4.3.3.1) b) Anxiety and fear (4.3.3.2) c) Forced learning through humiliation and bullying (4.3.3.3)
4. Interactions with other parties (4.3.4)	a) Peer interactions (4.3.4.1) b) Registered professional nurses' interaction (4.3.4.2) c) Interactions and support from supervisors (4.3.4.3) d) Interactions with doctors and operational managers (4.3.4.4) e) Interactions with NEI staff (4.3.4.5)
5. Strategies suggested by the students to facilitate the application of theory to practice (4.3.5)	a) Student strategies (4.3.5.1) b) NEI strategies (4.3.5.2) c) Clinical practice strategies (4.3.5.3)

4.3.1 Theme one: Ability to apply theory to practice:

The importance of nursing education leading to independence as a professional nurse in the workplace is emphasised as a goal of the R.425 legacy curriculum (University of the Western Cape, Annual report. 2014/2015). The clinical practice portion of the education provides opportunities for nursing students to apply the theoretical knowledge acquired in the classroom. This requires a sense of self-efficacy and a belief that one can succeed in becoming a competent professional. This first topic addresses students' perceptions of the learning objectives they were able to achieve without guidance and supervision, and the second topic the objectives with which they needed guidance and supervision to achieve.

4.3.1.1 Learning objectives achieved without guidance and supervision

Stellenbosch University https://scholar.sun.ac.za

The focus group interviews were conducted at the beginning of the clinical practicum in the fourth year. At this point, nursing students must have mastered the skills acquired in the first, second, and third years of training. All participants felt confident that they could independently perform most of the nursing tasks learned in the first and second years, as indicated in Table 1.2.

Participants indicated that they acquired skills in the skills laboratory to use independently in the hospital, such as making a bed, taking vital signs, inserting a catheter, and drawing blood.

> *"I feel like [the] … first thing we learned was how to make a bed. So, I could do that without any supervision or guidance because [it is] quite simple, making a bed, and also I would say the vital signs…"(Participant 3 focus group B)*

> *"I know how to put up a drip, catheter, little bit of administering medication." (Participant 4 focus group B)*

4.3.1.2 Learning objectives achieved with guidance and supervision

The students have been taught how to perform a clinical procedure in the skill laboratory or simulation rooms; however, their growth was impacted by their experiences and interactions with the multidisciplinary team in a real patient situation. Some of the skills should have been taught during the second and third years, during which participants still required assistance and guidance from their preceptors and clinical supervisors. This resulted from Covid 19 restrictions imposed by government lockdowns. Nursing students could not complete their required clinical hours in this period, which spanned their 2nd and 3rd years of training (the 2020 and 2021 academic years) and resulted in the restriction of clinical practice in general.

> *"COVID was a very, huge barrier for us…" (Participant 2 Focus group B)*

> *"… Covid also, because we didn't get much. Some other skills we were doing them online. We didn't get much. [The] second year we missed out. We were supposed to learn medication [administration] at that time, and now we must catch up on this final year with the medication; we are struggling…" (Participant 4 Focus group A)*

Participants indicated that face-to-face nursing skills classes were changed to the online portal. Because of this lack of face-to-face practical sessions, participants felt uncomfortable and lacked confidence when they were finally allowed to resume their clinical practice. Participants also reported that examinations were administered via an internet-based platform during the examination period. In the absence of an examiner, participants reported copying their answers from textbooks during the exams. Participants indicated that this was a barrier to

Stellenbosch University https://scholar.sun.ac.za

applying theory in practice because they weren't learning.

> *"Because I don't think I actually have the necessary skills fully, as I'm supposed to have them. Due to Coronavirus [Covid-19] hitting and from physical classes to online classes and mostly, we haven't been learning because when you're writing tests and exams we're copying [looking for answers in textbooks and Google]. So, we don't know the actual theory..." (Participant 5 Focus group B)*

Some participants reported some dependency on supervision with some of the skills that should have been achieved in their second and third years. Eleven of the participants reported an increased dependence on supervision when administering medication via different routes, eight needed assistances with normal vertex deliveries, five with taking blood samples, six with perineal suturing, eight with performing episiotomies, nine with inserting intravenous lines, and six with caring for the new-born, and one with inserting a urinary catheter.

> *"… in midwifery, delivering a baby, I do not feel confident in doing it by myself because (participant whistles) it gets hectic sometimes…I've done a lot of deliveries, but with supervision, because anything can go wrong. So, I feel like I will need someone with more experience every single time, and like maybe 15, 16 more times before I feel … maybe I can try it by myself…" (Participant 2 Focus group A)*

> *"I struggle with inserting a catheter because sometimes, it's weird [difficult]..." (Participant 2 Focus group A)*

> *"I need assistance to administering medication" (Participant 6 Focus group A)*

> *".. With the medications, the pronunciations of the medications, I don't know how to pronounce them. And then also, sometimes, I confuse the generic names and trade names.…" (Participant 4 Focus group A)*

> *"…I would say I need assistance doing episiotomy, yes…" (Participant 3 Focus group A)*

The students, however, indicated that they are developing these competencies currently, following increased practice under the guidance and supervision of preceptors in the clinical setting.

4.3.2 Theme two: Situational barriers

The main barriers identified by participants in the clinical setting were delegation of duties for students that were not relevant to learning objectives; comprehensive care versus task-orientated care; having to replace permanent employees when staff shortages occur; being

Stellenbosch University https://scholar.sun.ac.za

transferred to other departments to replace absent staff there; a lack of resources in wards; the Mismatch between nursing actions in a simulated environment versus that done in the clinical settings; and non-standardised practices in the clinical setting. Furthermore, the participants reported that they were exposed to discrimination related to racism and language.

4.3.2.1 Delegation of duties for students not relevant to learning objectives

The senior fourth year nursing participants conveyed that they could not achieve their required learning goals because they were not delegated duties according to their level of study; instead, they were expected to engage in the ward routine. They felt that the emphasis on performing routine and repetitive tasks limited their opportunity to learn other skills or meet their learning objectives:

> *"When you literally come … to learn to mix IVs [intravenous fluids]: but now you must do bed washes, [then] fix beds because there's no one else who is gonna [going] do that" (Participant 2 Focus group C).*

> *"…I can't be doing washes now; I don't have a problem to do it, especially if there is need for it. But I can't be doing it when I still need to learn other things in the ward, and I don't know those things." (Participant3 Focus group A)*

> *"…And sometimes…we must just go with the routine. Like we do this, like at this time. And we do this like maybe to clean the bed…and so they're saying …our routine is this. (Participant 3 Focus group C).*

4.3.2.2 Task-orientated care versus comprehensive care versus

The participants mentioned that the preceptors in the wards would take over a task if they (as students) could not complete it quickly. In addition, participants perceived that everything was done in a hurry, so they did not have the opportunity to practice adequately.

> *"… when you're dealing with a patient, you have to be very delicate and caring. But sometimes, you find that it's a rush-rush thing. No one is even thinking of proper care towards this patient, but [they] are just rushing things, for example, even washes, people just rush the patient: [Saying to the patient]: No, turn! I say turn! Some people are very rude to patients, just because of time and wanting to finish …" (Participant 2 Focus group B)*

> *"…you're doing a wound care [and] you are applying your theory there, and then the staff will say:' you're taking too long'. Because you are trying to apply everything step by step and everything correctly. But they [staff] will be like: 'no man, you should be done [already]…" (Participant 5 Focus group C).*

Stellenbosch University https://scholar.sun.ac.za

A lack of compassion and patient-centred care, as taught in NEI, was observed in the clinical setting. Participants reported that the care provided by clinical staff tended to be task-orientated, without adaptation to the context and individual needs of patients, hence compromising quality patient care. The care was not in line with the required deep-rooted knowledge and carefully learned skills acquired before entering the clinical setting. Participants questioned the quality of care provided to patients, claiming that the lack thereof puts patients' lives at risk.

> *"… the nurses, when they're doing washes, you just wonder what is happening here: two minutes [then] they are done. Even the way they are handling the patient: the patient is crying, in pain, they're [staff] just turning the patient. And in the textbook, in class, you never learn that you must turn a patient like that. But their skills that they've learned, I don't know who taught them. Where do they get them? Because those skills are really not fair… Let's say I'm doing a wash with a nurse, and the nurse will end up shouting at me, [saying] we will finish late, we must go. And I'm like: how can I turn someone who's in pain? Someone who has a fracture?" (Participant 5 Focus group A).*

4.3.2.3 Replacing permanent staff during staff shortages

Participants reported that student nurses are used to fill staff positions in times of shortages, which deprive them of the opportunity to achieve their clinical practice goals. An example of this was that when an auxiliary nurse was absent, the participants reported that they had to perform the duties of the auxiliary nurse even though they were in the fourth year. Participants report being regarded as manpower instead of students who are there to learn and develop the required skills.

> *"So, we are basically replacing the staff. So hence we are not going to practice our scope of practice, but we are going to do what the ENAs are doing... So, hence it's hard for us to cover our objectives.…" (Participant4 focus group B)*

> *"…the shortage of staff thing: because now you can't do what you're here to learn to do. Because you are busy filling in spaces, by the time you are done with that, it's way past time to give medicine and IVs [intravenous fluids], and you fail to practice your scope of practice because you are short staff… "(Participant 2 focus group C).*

> *"…We are not there to work; we are there to learn. I must make sure that every day I leave the ward, I have learned something that I didn't know before, but now if I go to the sister, she[says] 'No, No, I will do medication alone, [it's] rushing time, we are short of staff, so two nurses can't wash 32 patients alone'. But is that my fault? Not really; it's not my fault. There is a lot to learn.*

Stellenbosch University https://scholar.sun.ac.za

It's not only medication, even the IVs [intravenous fluids] … how to mix Kefzol, how much water do you need to mix, we struggle with that, but we are a 4th year..." (Participant 5 focus group A).

Being transferred to other departments

Participants mentioned that they were even utilized to fill gaps of staff shortagein other wards, filling positions that had nothing to do with their scheduled learning objectives at the time. Participants expressed that they could only get the full benefit of their clinical training and practice if they were to remain in their assigned wards to reach the required learning objectives.

"…being transferred to other wards… I'm here to fulfil my neonatal hours. But in, in the cancer ward, they, they are short-staffed … they send you there. And it's just a mess, you know…" (Participant 2 focus group C)

Lack of resources in wards

The participants reported a lack of resources, such as consumables and equipment which further impeded their clinical practice objectives. They verbalised that they have had to improvise continuously to ensure a required procedure is completed.

"… Sometimes things are short, short of stock, so you don't have all the equipment you are supposed to have... (Participant 5 Focus group C)

"Equipment, you would be amazed, one time we ran out of pads, swabs, we ran out of stuff…we take an unsterile pad, and we just go with it, we have also used the hand towels to sweep there [the perineum]. Because there are no supplies. (Participant 3 Focus group B)

4.3.2.4 Mismatch between nursing actions in a simulated environment and the clinical settings

Participants reported conflicting realities between theory and practice in the clinical settings compared to skills laboratory demonstrations. Students were forced to conform to the practices of the preceptors in the clinical setting. Participants did not know the correct practice in these circumstances, which caused confusion and affected clinical learning as participants did not know which rules to follow.

"Sometimes, what we learn theoretically isn't in practice in facilities, or it doesn't necessarily match. Like sometimes, you get to the facility and things are done a certain way, and you always think: no man, but this isn't how my clinical supervisor says we should do it. But then you can't verbalise that, because it's going to seem like you're undermining the staff…" (Participant 6 Focus group C)

Stellenbosch University https://scholar.sun.ac.za

In addition, participants reported that they wish clinical supervisors could create realistic scenarios in the skills laboratory that correspond to real environmental, physical, and emotional experiences. Such scenarios would allow them to deal with the realities and complexities of the clinical site, which promote applying theory to practice, as actual clinical situations are matched with theoretical knowledge. Participants also stated that they wished clinical supervisors could teach them how to improvise correctly in case of a shortage of resources.

> *"…I think most people or some of the people who teach us have worked in the hospital setting at some point. I think they should actually bring that…reality of things in the clinical settings to the class. They should not only use the theoretical things like the book of Florence Nightingale [textbooks]. Yes, that too is important because that is how things should be. But I feel it would be really, really helpful if they will bring the reality of the real situations in hospitals and bring them to us. And when they are teaching us skills, that they do not only give [teach] us the skills based on the textbook, but they also give us the skills where they can determine if you don't have this equipment, what kind of improvisation would you make, I feel like that would be really helpful…" (Participant 2 Focus group C)*

> *"I feel like sometimes in class, they kind of like water it down. They don't really tell you or give you the full picture. They kind of give you a simplified version of what the situation could be like [in a clinical setting]. Yeah, they just show you the tip of the iceberg, basically. Because, for instance, in midwifery, they made it seem like delivering a baby could be easy. I felt like they simplified it for me. I felt like they simplified it until I saw it. And I was like: Hi, this [is a big] thing. I thought, maybe delivering a baby could be, like, 45 minutes or something. No, that process takes time…" (Participant 2Focus group A)*

Participants reported that professional nurses (preceptors) did not adhere to prescribed medications for pain relief according to theoretical knowledge presented in the classroom. Participants reported that preceptors refused to give medication to patients in pain even though pain medication was prescribed, and also gave some patients scheduled drugs that were not prescribed to them. Participants described how misusing prescribed medications or administering non-prescribed medications went against what they were taught in class. It also interferes with patient care and the positive experiences of nursing students in modelling the behaviour of professional nurses and putting theory into practice.

> *"…in class, you're learning that if a script is like this, then you give the medication. When a patient has got pain medication written here [on the prescription script] 'as required'. The patient says they are in pain, I informed the sister, the sister says, "no, no, no, no, don't do*

Stellenbosch University https://scholar.sun.ac.za

anything. Don't give [medication,] patients like to do that". And the last time they got [medication] was five hours ago, so another Panado now won't really do any damage. And it's [the stronger pain medication] is written [on the script] 'as required'. So now I can't give because the sister said, "no, no, no, don't do anything". And she doesn't even have a rationale or anything behind that... So, I cannot give [the proper] medication without supervision or guidance.... "(Participant 3 Focus group B)

"So, say a patient is having pain, for example, and they were prescribed Tramadol, and then the sisters won't give Tramadol, probably give Morphine. The other patient prescribed Morphine, they [preceptors] will give Tramadol; I've seen this happen. So, with me, it would be an issue because it doesn't make sense to give someone another thing [medication] which is not prescribed" (Participant 4 Focus group B)

Participants reported that nursing staff deviated from the correct hospital procedures, and failed to change gloves from patient to patient (used the same gloves on several patients), and staff did not wash or disinfect their hands between patients. Participants report that these examples contradicted what they were taught in class.

"At school, we are taught when you touch a patient's folder, you de-germ [disinfect your hands], just after touching the folder, before when you move to another patient: there' nothing like that. That theory is not applied. They will chart the whole ward with those gloves. You go to the other room [using the] same gloves, [and] no de-germ" (Participant 5 Focus group B)

"...they don't change gloves, especially the staff, they do not change gloves. They're literally [used] from one patient to another... They don't wear masks. And some of us, we adapt to the to the norms of the ward. So, we wouldn't have a mask, also...."(Participant 4 Focus group B)

Participants stated that discrepancies existed between the theory presented in the classroom and what their instructors required of them in the clinical setting. Even in the simulation rooms, they were instructed to follow a precise procedure, but in the clinical setting, the preceptors discouraged them and told them they did not have time to follow the procedure. The preceptors become impatient with nursing students as they try to put theory into practice. As a result, participants indicated that they adapt or conform to the staff's non-standard methods in their clinical tasks to avoid conflict.

"...I don't know. For me, it's tricky. Because I do want to do like exactly how we were shown in the skills laboratory, yes. But it's not that easy to continue doing it the way they do it in the textbook, because in the hospital, you see them doing something different. And when you try to do

Stellenbosch University https://scholar.sun.ac.za

it the way the clinical supervisor says you're supposed to do it, they [preceptors] get impatient with you, and then the sisters[preceptors] ends up doing it themselves, they will be like, "oh, you can leave it, just go help with something else, I'll just finish it up". (Participant 2Focus group A)

"… I understand that what I've learned is the correct way of doing things. And then when I get to the ward, and I get taught the shortcut way, and it's incorrect, I personally will do what they say in the ward and try to maintain the sterility. But making sure I'm not offending anyone by saying this is not how my clinical supervisor teaches me, in the sense that I don't want to cause conflict and conflict with anyone in the ward, by pointing out that this is wrong. And 'this is how it should be done'. Because I'm also a student, I'm there to learn. But I'm always going to maintain and keep all the information that I learned in skills lab and know that I'm going to apply it when I'm finally graduated and in position to do it better,". (Participant 6 Focus group C).

4.3.2.5 Discrimination and Racism

Discriminatory practices make victims feel unwelcome and excluded, which is associated with poor patient care outcomes (Johnson, Browning, & De Clerk, 2021: 697-702). One of the difficulties that nursing students have faced during their clinical rotation has been discrimination in clinical settings. Regrettably, nurses help exacerbate this discrimination against student nurses as it occurs in healthcare systems (Mamaghani et al., 218:220). Discrimination takes place by way of providing more opportunities for other types of students, such as medical or paramedic students, and by way of racism and refusing to use English as the commonly spoken language for improved understanding.

Discrimination against nursing students versus other student categories

Participants expressed feelings of discouragement because of being treated differently than students in other medical categories. Participants felt that nursing students were not treated fairly and were not respected compared to other students in other disciplines, such as medical or paramedic students.

"Exactly, we are not treated equally even if its more of equality …equality with other students like doctors and physios [physiotherapist students], dieticians, paramedic" Participant 5Focus group B)

"…Let's say I am the student nurse, and they are the student doctors; I finished my 15 deliveries. If the other student, a student doctor [and] catches the baby, [and] she is done, she is not coming back to the ward and nobody is going to give her hell for that. They catch the baby, and they get the signature, and sit and relax. Suturing: no, they [student doctors] didn't do anything. So, student doctors, and paramedics and other people are much respected, but us nursing students,

Stellenbosch University https://scholar.sun.ac.za

we are slaves… Exactly; we are not treated equally…" (Participant 5 Focus group B)

"…They [student doctors, paramedics] come to do what they are supposed to do [their objectives], what they are supposed to learn. But we come and become slaves." (Participant 3 Focus group B)

In addition, participants reported that discrimination against nursing students from other institutions and inequities in clinical education were significant barriers to learning in the clinical setting. According to participants, the type and amount of support provided from preceptors varied between the nursing students of the different nursing institutions. Participants in this study felt ignored and unsupported.

"They also have this thing of preferential treatment with other institutions like [name of other institution given] students are always the most favoured students. Students from our school are referred to as theory nerds, theory nurses …" (Participant 2 Focus group A)

Discrimination via Racism

Participants reported struggling with pervasive bias and racial discrimination, which limited their learning opportunities in the clinical settings.

"… I think most of the wards that I have been in [name of institution given] have been primarily very racist. In [name of institution given], you know, sometimes you go in, and you are probably the only black student, and the ward is predominantly coloured staff. When you have coloured students or white students, white students only get the best treatments. I've had a situation where in the ward, you're nearly 90% of the time invisible…" (Participant 4 Focus group A)

"…Sometimes I've experienced that a black nurse would prefer a white student over me [black student] …" (Participant 4 Focus group A)

Participants stated that students of black ethnicity felt they always had to work harder, be smarter, and prove themselves more than students of white or coloured ethnicity to get the attention of the preceptor in clinical settings.

"…maybe you are a black student, and your colleague is a white student or a coloured student, and a sister happens to be a coloured or white person; the person of interest is automatically your colleague. They don't mind about you; they don't pay attention to you; they don't care what you do, or what you don't do. And they mainly focus on the white person. So now, if you happen to be a black student, you need to work twice as hard to get access to the sister or to get the sister to notice that you want to learn… (Participant 2, Focus group C).

Stellenbosch University https://scholar.sun.ac.za

Discrimination via Language

Participants reported a breakdown in communication between preceptors and students because of a language barrier which resulted in miscommunication and delay in execution of tasks and activities.

> *"…what happened is that the coloured sisters were discriminating me; they were speaking Afrikaans. I didn't even understand, sometimes the sister will just send me to get something, speaking Afrikaans. "Why are you still standing here? Didn't I tell you to go fetch something?" 'I didn't understand you, why, I don't know Afrikaans'…" (Participant 3 Focus group C)*

> *"…I was working in theatre. I would ask a simple thing. What is this instrument? Instead, the sister will just explain to me in Afrikaans. Because my partner, my colleague, is a coloured student. I didn't understand… (Participant 5 Focus group A)*

Participants reported that similarly, preceptors of black ethnicity also communicated in isiXhosa in the presence of nursing students of coloured ethnicity.

> *"...sometimes it happens that the staff, not really the sister, will be against any coloured student. In such a way that when they are talking about certain things, they will use Xhosa, …" (Participant 3 Focus group A)*

According to participants, some preceptors only communicated in Afrikaans, including performing handovers in Afrikaans, even though there were nursing students who didn't understand Afrikaans. Also, in some wards, handover reports were written in Afrikaans. Participants perceived this habit is a major barrier to translating theory into practice in the clinical setting.

> *"…there are certain wards here (name of institution given), for instance, they do hand over in Afrikaans, even if you can say, 'I'm sorry, I don't understand Afrikaans'. They won't do anything. It comes into the book [patient cardex] they write in handover in Afrikaans. I can't even relate; I don't even understand what's happening. Is this a handover? Or this is just a certain report? You feel stupid, you write another hand over interim when someone already wrote it..." (Participant 3 Focus group A).*

4.3.3 Theme three: Personal barriers or support

Personal influences as barriers or support to ideal learning and development can be found in nursing students (Safazadeh et al., 2018: 1-8; Günay & Kılınç, 2018: 81-86). Therefore, three sub-themes focus on the nursing student's ability or inability to apply theory to practice: role preparedness, lack of motivation, anxiety and fear, and the last subtheme forced learning

Stellenbosch University https://scholar.sun.ac.za

through humiliation and bullying.

4.3.3.1 Role preparedness.

Participants reported mixed feelings about their preparedness to transition from student to competent and independent registered nurses. Some participants felt prepared for the transition from university to professional life, but the majority felt unprepared to work as a registered professional nurse and reported an inability to work independently and felt that they required more supervision.

> *"I feel like I'm not ready for the responsibility. I mean, right now, it sounds fun and okay, but if anything goes wrong, it's the sister's responsibility. I can lose my licence over something. So that responsibility I'm not ready for. It's just the pressure and the responsibility that I'm not exactly ready for… ". (Participant 6 Focus group C)*

> *"I do not feel ready at all. Honestly, if I could, I would ask them to take their time with giving me this degree, honestly, because I am not ready to be a sister. I thought being a sister would be easy. But now, as a fourth year, you get an idea of what it would be like to be a sister, and I'm not ready to take charge of an entire ward and entire staff and tell whoever to do what [do delegation]". (Participant 2 Focus group A)*

4.3.3.2 Anxiety and fear

Participants reported feeling anxious and stressed when working in real-life situations because they had to cope with patients' lives in the clinical setting. In addition, the fear of making mistakes was anxiety-provoking in clinical practice. Finally, they described their fear of harming the mother, or the newborns in the maternal and child environments.

> *"… in neonatal, a lot can go wrong - in the matter of a split second, and with deliveries, for me I think the biggest issue is you're not dealing with just one person. It's two people, so [with] the one mistake you could make, you could lose two people at the same time…" (Participant 6,Focus group C)*

> *".. those ones [episiotomies] are really difficult because I'm scared of cutting. What if I cut more than I should?" (Participant 5 Focus group A)*

> *"I feel like, I'm scared. I'm too scared to do something wrong…" (Participant 2 Focus group C)*

> *"… in midwifery, like when delivering a baby, I'm too scared. Like, I don't know. I'm so scared of that thing. The new life man, like you're bringing the baby in life. So, I think I still need supervision there (Participant 3 Focus group C)*

Stellenbosch University https://scholar.sun.ac.za

4.3.3.3 Forced learning through humiliation and bullying

Participants reported that negative experiences with poor role models motivated them and made them more determined to be different once they qualified and became preceptors themselves. Participants reported that they used the bad experiences as an inspiration to learn and be different.

> *"… I enjoy situations like that. I don't want to lie because it gives me an idea of what kind of sister I'm going to be. I know what's wrong. So, I always tell myself: you know what, when I'm running the ward, I'm not going to do this, I'm not going to do that …I keep collecting all these practices, which are not good, which are not right…." (Participant 3 Focus group B)*

Participants reported that staff put pressure on student nurses by making them feel inadequate for not knowing how to do something. This makes them determined to learn and prevent being made to feel stupid.

> *" …, I think it's the pressure you get from the staff. Some of the staff in hospitals can be so mean, like they can make you feel useless. So that strikes something inside you, it makes you wants to be able to do this [procedure] so that you're not dependent on anyone to do your work. And throughout the years, what I've learned, is that staff can be so mean to students and sometimes they [staff] make you do things that are outside of your scope of practice…So, I feel like the pressure in the hospital setting drove me to learn…" (Participant 2 Focus group C)*

> *"…the pressure from the sisters in the ward, sometimes they are just so rude or so mean. And then you will be like, oh, no, I don't want to be treated like this. Let me just do this [learn how to do procedures] so that I know my work, so that I won't disappoint them [preceptors] because sometimes they [preceptors] treat us like we know nothing…." (Participant 5 Focus group C)*

Participants reported being intimidated or harassed by clinical staff when they refused to perform a task, refused to be transferred to another ward, or raised a problem with clinical supervisors. Participants reported that some preceptors punished them by forcing them to continue without the necessary support and guidance: Participants reported being yelled at in front of patients which left them feeling humiliated.

> *"…[if] you are going to be the student that complains, you are going to be treated badly and when the [preceptor] need someone to do something you are not going to be the one who is going to be asked. While all the other students are going to get help, even if you complained about something that is really detrimental to what you need to learn, you are not going to get anything [help]…" (Participant 3 Focus group A)*

Stellenbosch University https://scholar.sun.ac.za

> *"…there are some sisters who didn't even show you [how to do something]; they will just come and yell at you if you don't do something as they expected you to do it…" (Participant 2 Focus group B)*

> *"…The thing is, if you report something, you're not going to be removed from that ward. You're still going to stay in the same ward, and you are going to be treated badly; you are going to be the student that complains…" (Participant 2 Focus group A)*

> *"…I could say I wasn't treated well, especially by coloured sisters. If maybe, I do something wrong. So, when I'm taking care of a patient, instead of them pulling me aside and telling me 'Don't do this, and this', they would shout at me, there, right there in front of a patient in Afrikaans, and I'm lost. I don't know what is happening. They're just shouting and shouting. So that was not nice for me…". (Participant 3 Focus group A)*

4.3.4 Theme four: Interactions with other parties

Many factors contribute and/or manifest themselves as barriers or support to applying theory in practice. This theme focuses on how other parties (peers, professional registered professional nurses, clinical supervisors, and faculty) create barriers that make it difficult for nursing students to apply theory to practice, or to support student nurses' experience in clinical practice settings. The five sub-themes are interactions with peers, registered professional nurses, clinical supervisors, doc tors, and NEIs.

4.3.4.1 Interactions with peers

Participants reported finding encouragement and support from fellow fourth-year nursing students allocated in the same facility.

> *"I feel like the peers, I enjoy having them in the facility, but it's more for support, especially on your first day at a new facility. If you find that you're not there [at the facility] alone, I always find that cheering [along], and it actually motivates you to go to work… it's nice to know; it's comforting that you're not the only student there, it helps to remove the anxiety" (Participant 3 Focus group B)*

> *However, some participants stated they decided not to rely on their peers because they have had unpleasant experiences with them.…because some[peers] would actually make you feel bad for not knowing something, I've had an experience of one of the students who made me feel that way. so hence I withdrew from relying on peers…" (Participant 4 Focus group B)*

Participants reported rivalry between students from different HEIs present in the same ward, all with the same learning goals. In addition, participants reported being pressured by

Stellenbosch University https://scholar.sun.ac.za

competition between some nursing students from different universities doing the same clinical placement rotation.

> *"Even though sometimes during midwifery, there was a lot of drama [conflict] between [other HEI's] students and our students, that [other HEIs] students jump for babies [fight for deliveries], it was some sort of competition because everybody wanted to finish deliveries …" (Participant 2 Focus group C)*

4.3.4.2 Interactions with registered professional nurses

Participants reported that some preceptors refused to teach and support students, claiming that it was not their job to provide nursing education, as patient care is their main focus.

> *"…the staff isn't interested in teaching students because they will literally let you know it's not their job. Their job is to take care of the patient, their job is bedside nursing, and not educational nursing, they will let you know…" (Participant 6 Focus group C).*

Participants stated that there was a lack of trust in the clinical competence of nursing students by both patients and preceptors. As a result, patients resisted when participants attempted to perform clinical procedures on them.

> *"…Challenges I've experienced is that patients don't trust students. That's the main point. The second, you say "Hi, I'm Ben Barney, I'm the student after you say 'student', they don't even care. Those are the challenges of actually doing a procedure on a person that I've faced…The patients are not cooperative; they want a well-informed person more than you [a mere student] …"(Participant 5 Focus group B)*

Participants indicated that preceptors' distrust of student nurses in the clinical setting, deprived them of the opportunity to work independently and prevented them from practicing the theory they had learned and learning new clinical skills.

> *"I think mistrust, being a student, you are not trusted at all. Even if you can actually show that you can do [a procedure]. You cannot be fully trusted, because sometimes, we [students] make mistakes, especially with the medication. So, I think it might be because, since sisters work with many students, if one student placed in the ward makes a mistake, if I [then]come and I say I want to do this, they won't fully allow me to do it. Because of that one student who made a mistake…" (Participant 6 Focus group A)*

Participants reported experiencing challenges such as disrespect, poor communication and negative attitudes, conflict, and physical harassment when interacting with preceptors and

Stellenbosch University https://scholar.sun.ac.za

nursing staff, resulting in strained interpersonal relationships. Preceptors were reportedly rude, harsh, impatient, and angry when instructing them.

> *"...Some of the staff in hospitals can be so mean, like they can make you feel useless…" (Participant 2 Focus group C)*

> *"…my first delivery was terrible. The sister thought I knew what to do, and I told her that I don't. So, when she saw I was doing something wrong, she got so angry [and] hit my hand. And then she yelled and pushed me away, you see.…"(Participant 3 Focus group B)*

> *"…sometimes in the clinical setting there are, those rude sisters …" (Participant 5 Focus group A)*

4.3.4.3 Interactions with clinical supervisors

Participants complained that the clinical supervisor's presence in the clinical setting was inadequate and that their performance was inadequately monitored throughout the semester, such that they did not receive support and guidance when they needed to ask questions. In addition, participants claimed that clinical supervisors did not spend enough time teaching or demonstrating a procedure before making the final competency assessment.

> *"The clinical supervisors only help with the skills laboratory. When it comes to practical, me, I've never gotten guidance from a clinical supervisor…" (Participant 2Focus group C)*

> *"…my clinical supervisor came last week. And we had a session. But a week later, we already have an assessment. Like that's not enough [practice]. I feel it's not enough for me…" (Participant 4, Focus group A)*

Participants complained that different clinical supervisors presented the same clinical procedures differently. They stated that these differences often negatively impacted their learning and ability to pass the final Objective Structured Clinical Examination. One participant said:

> *"…the thing is, you will meet a certain clinical supervisor, today she teaches you or she demonstrates [a procedure] on certain way. Next time, you get another one [clinical supervisor], she demonstrates in a different manner. Now, it's difficult for you as a student to say, but Mrs so-and-so [a clinical supervisor] said you must do it like this because this clinical supervisor will feel like you are saying the other one is better than her. What she is teaching you is not how it should be. I feel like with clinical skill: all clinical supervisors should get maybe the same way or same technique of teaching students because really, if one clinical supervisor come with this way*

Stellenbosch University https://scholar.sun.ac.za

and then another one comes with the other way and the one [clinical supervisor] who is going to assess me on the OSCE is another clinical supervisor, then now, I will say what I have learnt from the other clinical supervisor, and this clinical supervisor wants her technique[to be used]she doesn't want what [I] learnt…"(Participant 5, Focus group A)

Participants cited the high ratio of nursing students to clinical supervisors, and the many facilities a clinical supervisor must oversee as reasons for poor clinical supervision. It was hypothesised by the participants that applying theory to practice in the clinical context is strongly influenced by the supervisor-to-student ratio. In addition, participants strongly expressed their opinion that the number of facilities assigned to each clinical supervisor as being too high.

"…It will be nice for the clinical supervisors to come more often because, the clinical supervisors, I understand that they're allocated many different hospitals, and they have to deal with many students also. So, I understand why they don't come most of the time. …" (Participant 4 Focus group A)

Participants expected support from their clinical supervisors when they encountered difficulties in a clinical setting. However, participants described instances when they complained to their clinical supervisors about problems, and nothing was done. Thus, support was lacking, and students perceived that clinical supervisors did not advocate for them.

*"I feel like the school [faculty] needs to advocate for us, literally, because we are in fourth year now. We can't be stuck in giving bed pans, we can't, honestly, that's why they say community services sisters from our school are incompetent, we are busy with bedpans in fourth year and the school is not fighting enough" (Participant **5** focus group B).*

"… we just don't have the support of the clinical supervisors". (Participant Focus group B)

Another participant reported that clinical supervisors come only to have their timesheets signed, which prove that they have visited the facility, yet no teaching was provided.

"…Sometime, you see our clinical supervisors only when they come to sign your timesheets…" (Participant 6 Focus group B)

4.3.4.4 Interactions with doctors and unit managers

Participants reported that operational managers and doctors were readily available and approachable to the student nurses. Participants perceived that they were genuinely interested in supporting the student nurses' learning process. Participants described them as

Stellenbosch University https://scholar.sun.ac.za

helpful and willing. One participant stated:

> *"… I had OMs [operational managers] helping me, and doctors as well. Doctors are willing to help and explain…and chilled to just give up the information…" (Participant 5 Focus group B)*

> *… She [operational manager] has this thing of taking students out of the ward and putting them in the tearoom and then asking them questions, and going through the work, step by step, this is how you deliver a baby, most of the of my OSCE skills, I learned from her". (Participant 6 Focus group B)*

4.3.4.5 Interactions with the NEI staff

Participants reported that the nursing faculty was not supportive. Participants emphasised that the NEI did not want to take responsibility for mistakes made by nursing students or for injuries nursing students sustained during the programme. Student nurses were required to sign an indemnity form that would protect the university from being sued if something untoward happened to the student. Participants felt isolated and unsupported.

> *"... I feel like nursing students are in hell, we are literally on our own, you sign an indemnity form saying, if I get a needle prick, and I happen to get HIV, the Department of Health is not responsible. The university is not responsible; you are on your own. You sign an indemnity form saying, if you go to a psychiatric facility, if I get assaulted by a psych patient, the Department of Health is not responsible. Okay, so the hospital is not responsible, and the University is not responsible…" (Participant 2 Focus group C)*

Participants reported that nursing faculty were unhelpful with nursing students' challenges. These challenges included being overworked in the clinical area to the point that participants referred to themselves as "slaves".

> *"…as students, we do complain about certain wards that are treating us not well. And for that good reason, I feel like our school, they should just consider that. Let's take for instance: students are not treated well in certain ward. But on the next placement, they will even put other students in the same ward of which the students are not learning anything. So, it's difficult for the students to apply the theory to practice…" (Participant 5 Focus group A)*

> *"…they [clinical supervisors, faculty] don't hear us, clearly…I'm really suffering in this ward, I feel like a slave and if I don't slave [work hard] away I'm not going to get the signature…" (Participant 5 Focus group B)*

Stellenbosch University https://scholar.sun.ac.za

4.3.5 Theme five: Strategies suggested to facilitate the application of theory to clinical practice.

This theme led to three sub-themes. These revolved around student nurses' strategies, NEI strategies, and clinical practice strategies to facilitate the application of theory to clinical practice.

4.3.5.1 Student strategies

Participants indicated that they used self-directed learning techniques to learn and apply theory to practice, such as repeating the same activity until they mastered it, observing while the preceptor performed a procedure, consulting the textbooks, and then trying it on their own. These techniques helped them to manage their work environment and tasks better and to enhance their professional development. As one participant commented:

> *"…repetition and practice help [with] mastery of skills; as they say, practice makes perfect. So, the more you do something, the more you are perfected. And it also depends on whether you were able to learn the theory of the whole practice… I would say, my drive and my ability to link theory and practice was the passion for nursing because the more you are willing to do something, the more you are able to perfect any skill or any procedure. So, my passion is what has driven me so far…" (Participant 2 Focus group B)*

> *"…So, the more I do the activities, the more I got to know the activities, and the more comfortable I got doing these activities…" (Participant 3 Focus group C)*

> *"…I observe before I go to theory. So, for me to actually [to] know something, how to do something, I will have to observe how to put in a catheter, how to put on a drip, and then go to [to the] theory to actually make a connection of how it's done…". (Participant 4 Focus group B)*

4.3.5.2 NEI strategies

The theme revolved around NEI strategies that facilitate the application of theory to clinical practice. Participants suggested that collaboration/partnership should occur between the academic and clinical settings. Students should be placed in teaching hospitals designed for student learning to bridge the gap between theory and practice. Participants recommended the establishment of "student-centred" units in hospitals with preceptors specifically responsible for teaching.

> *"…the clinical facilities should have people [preceptors] there for educational purposes. They should have their staff, yes, but they should have people allocated strictly for educational purposes". (Participant 2 Focus group C)*

Stellenbosch University https://scholar.sun.ac.za

"…So, I feel like facilities and institutions need to have a relationship where if they place students, they put students in facilities and hospitals that are more strictly for educational purposes…" (Participant 6 Focus group B)

Participants suggested that more clinical supervisors be assigned to supervise students, preferably one clinical supervisor per facility.

"…But it would be nice for them, our school to employ more clinical supervisors so that they can have maybe one clinical supervisor per facility so that they can focus on us [students] here and help us to practice....." (Participant 4 Focus group A)

…More clinical supervisors must be allocated to students. Yes. For support …" (Participant 4 Focus group A)

4.3.5.3 Clinical practice strategies

According to the participants, theory and practice can be linked if there is communication between the nurse educator, clinical supervisor, and preceptor. Participants stated that preceptors are often unaware of nursing students' goals and needs when placed in a clinical setting. Participants recommended that NEIs establish clear objectives and expectations for clinical supervisors, preceptors, and nursing students. This means that all stakeholders, including the preceptors in the clinical settings should be aware of what is expected of student nurses when placed in the clinical setting.

"I feel like in the clinical setting, they must have a nurse who knows that first-year students are coming, second-year students are coming, third years, and these are what they are supposed to be doing their objectives so that when you get to a ward, the sister will be able to say this is a second-year student, she is supposed to learn medication and wound care. As much as she will do the blood pressure, and make the bed, she must definitely learn the medication because sometimes you get there [clinical setting] and students must do everything and the ENA will sit there while you make the beds and after that you are doing the blood pressure, when do you do the medication? The sister is already done [giving the medication] so you didn't learn what you are supposed to do [fulfil your objective] …" (Participant 4 Focus group C)

"…They [preceptors] must know our scope of practice and objectives, I don't know if it's something our clinical supervisors should come up with every time we go for clinical placements and give this scope of practice and objectives …this is the student's objective for that particular placement..." (Participant 3 focus group A)

Stellenbosch University https://scholar.sun.ac.za

The participants called for greater preceptor assistance during clinical practice. They stressed the necessity for preceptors who are prepared, knowledgeable, and eager to supervise and direct nursing students through the many stages of training

> *"… We need to be placed in facilities that are strictly for educational purposes. I can't go into a facility that is understaffed, and obviously we'd like staff [preceptors] that are purposely there with the purpose of teaching students and helping patients at the same time. Because we go to some facilities, and you don't learn a thing..." (Participant 6 Focus group C)*

Participants spoke about the financial difficulties they face as nursing students. They reported being recipients of a government-funded scholarship known as the National Student Financial Aid Scheme (NSFAS). However, participants felt that this grant does not fully meet their needs. Participants suggested stipends as a strategy to allow nursing students to complete their nursing school without stress, as they could use them to pay for their living expenses, food, and transportation. Participants felt that since they work so hard and many hours in the clinical setting, they should be rewarded in some way:

> *"…The money we get from NSFAS it's not enough, you need to do your groceries three times more than the normal student because when you have work, you eat three times a day at work if you cook on a Friday, you literally need to cook for six people because you're going to eat and you have lunch tomorrow [Saturday] and you need to come and have food and you need lunch for tomorrow [Sunday]….[if working the whole weekend] "(Participant 3 Focus group C)*

> *"…I'm suggesting there should be compensation for students [as] we are just really working, sorry to say this, but we are working our asses off, and some staff members relax since we are there …. So, why not at least acknowledge that we are helping, and just give us compensation to be more encouraged." (Participant 2 Focus group B)*

> *"…It's difficult for us students to wake up at certain time, and dress a certain way, they want us to dress. And there is no sort of compensation, money given to students to make sure that that happens the correct way, you can't be sending the students back for wearing black shoes and there is no money allocated for the uniform. There is no money allocated for the student" (Participant 6 Focus group B)*

4.3.6 SUMMARY

This chapter provided an interpretation of the focus group discussions to explain the skills students mastered, with and without assistance from their clinical supervisors and preceptors. Furthermore, the participants' perceptions of barriers to applying theory to practice were

Stellenbosch University https://scholar.sun.ac.za

provided by giving meaning to these experiences. These experiences included the delegation of duties for nursing students not relevant to learning objectives, comprehensive nursing care versus task-orientated nursing care, replacing permanent staff during staff shortages occurred, lack of physical resources on the wards, mismatch between nursing actions in a simulated environment versus that in the clinical setting, discrimination and racism, role preparedness, lack of motivation, anxiety and fear, forced learning through humiliation, and bullying. The findings suggest that nursing students in the clinical setting experience several challenges that may negatively impact their clinical learning. The subsequent and final Chapter 5 focuses on the discussion of the study and the recommendations based on the study's findings.

Stellenbosch University https://scholar.sun.ac.za

CHAPTER 5: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter one provided the background of this study, while chapter two contained a review of available literature about previous studies conducted regarding the theory-practice gap related to nursing students. The third chapter addressed the methodology of the study. In the fourth chapter, the findings of this study were presented with verbatim quotes to support these findings and provide a rich narrative. This fifth chapter concludes the study and confirms or contrasts findings with similar studies. This chapter subsequently highlights the contribution that the study of the phenomenon makes to the existing body of knowledge. Finally, recommendations are made for nursing education, clinical practice, and future research, and the limitations of this study are identified.

5.2 DISCUSSION

With this study an attempt was made to explain the barriers to applying theoretical knowledge taught in the classroom to clinical practice. It was found that nursing students experience various difficulties in the clinical placement environment, which impacts their ability to integrate theory and practice. The themes that emerged from the study include situational and personal barriers that negatively impacted student nurses' learning. Participants also made several suggestions for strategies to facilitate the application of theory to practice for future nursing students.

5.2.1 Objective 1: To explore nursing students' perceptions of their ability to apply theory to practice without guidance and supervision during their four-year course

All participants felt that they could independently perform most of the nursing tasks taught in the first year, where skills such as making a bed, taking vital signs, inserting a catheter, and drawing blood were successfully acquired (as indicated in Table 1.1). Participants mentioned that by attending skills laboratory sessions, they could practice until competence was reached and they could manage the skills independently in the hospital. This situation reflects Lev Vygotsky's ZPD, where clinical supervisors diagnose the zone of current development and then tailor further teaching and learning to the needs of nursing students as advised by Wood, Bruner and Ross' scaffolding theory. Such support by scaffolding gradually fades when nursing students demonstrate responsibility for learning and develop their full potential, allowing them to accomplish a task they would not have been able to do on their own in the

Stellenbosch University https://scholar.sun.ac.za

past (Naeini, 2014: 1297-1306; Shooshtari & Mir, 2014: 1771-1776).

These findings about gaining independence in the current study are consistent with the findings of a study done in Turkey. This study found that simulation strategies produced improvements in knowledge and abilities, as nursing students could draw parallels between what they learned in the skills laboratory and what they had to perform in the clinical setting, which helped transfer skills to clinical practice. Many other studies report the successful use of clinical simulation in nursing education to bridge the gap between theory and practice (Salah, Aljerjawy, Salama, 2018: 17-18; Greenway, Butt & Walthall, 2019: 1-6). Raines (2018: 182-183) elaborate that effective simulation exercises promote critical thinking and pave the way to more self-directed learning, allowing for better adaptation to challenging clinical environments.

The ability of nursing students to transfer what they learn in simulation to clinical practice is an essential process in developing their clinical judgement. The study by Tanriverdi, Ozyazicioglu, Atay, Sivrikaya, Gursoy et al. (2017: 199-208) found that making connections between classroom requirements and the clinical setting is critical for the most effective learning outcomes with third- and fourth-year nursing students in Turkey.

5.2.2 Objective 2: To explore nursing students' perceptions of their ability to apply theory to practice with guidance and supervision during their four-year course.

Participants in the present study reported that they were unable to meet all of their clinical goals during the second and third years of their studies, as some still needed help and guidance with certain skills that they should have mastered in the Covid-19 period with restrictions imposed by the government for 2020 and 2021. Because clinical practice was generally limited, nursing students could not complete their required clinical hours during this period. This finding is consistent with Dewart, Corcoran, Thirsk and Petrovic (2020: 104471), who reported similar delays and interruptions in clinical education for nursing students during the Covid-19 period. Clinical hours were reduced, and some clinical courses were converted from face-to-face to online instruction.

Participants in the current study reported that Covid-19 limitations required a shift to online learning environments and clinical simulations and were accustomed to face-to-face interactions that promoted engagement, participation, collaboration, and critical thinking; participants were suddenly denied this platform. As a result, participants felt uncomfortable and lacked confidence when they were finally allowed to resume their clinical practice. Hargreaves, Zickgraf, Paniagua, Evans and Radesi (2021: 237) explored the pandemic's impact on nursing student education and reported that students missed being in the ward and having direct contact with patients and nurses. O'Keefe and Auffermann (2022: S61-S65)

Stellenbosch University https://scholar.sun.ac.za

concurred when reporting that the cessation of clinical placements was a significant barrier to meeting graduation requirements and qualifying for national licensure examinations. A study from Ethiopia among midwifery and nursing students confirmed that shortening clinical practice time due to Covid-19 decreased both clinical and interpersonal communication skills among learners (Angasu, Bekela, Gelan, Wakjira & Melkamu et al., 2021: 1411-1417).

When examinations were administered online due to isolation procedures for the pandemic, participants admitted that they copied answers from textbooks, as they were not directly invigilated. This is congruent with Buabeid and Al Dmour (2021: 220-228) who reported in Iran the disadvantages of online tests, noting that students can easily communicate with each other about questions and answers, which increases the likelihood of cheating on online exams, and thus inadequate assimilation of theory. Such a lack of knowledge increases the inability to master practical skills, as students struggle to make the connection when performing the practical skill to theory that is non-existent. An example is the doing of vital signs, but the inability to interpret the signs for action, as they do not know the difference between normal and abnormal values.

Apart from the pandemic, participants identified that organisational culture and traditions prevented them from achieving the desired learning objectives of medication administration by various routes, normal vertex deliveries, perineal suturing, intravenous lines, and neonatal care. Sometimes referred to as norms or routines, traditions and routines do not allow for best practices. If the quality of supervision were appropriately supportive and challenging in the organisation they were placed in, the student nurses in this study would have gained new information that would've pushed the boundaries of their ZPD, even in the Covid-19 period and would've led to continued development.

5.2.3 Objective 3: To explore the barriers nursing students encounter when applying theory to practice in clinical settings

The barriers identified in this study related to applying theory to practice in a clinical setting were identified as situational, personal and related to other parties.

5.2.3.1 Situational barriers

For situational barriers, the following were derived from the analysis of the focus group data: delegation of duties for nursing students not relevant to learning objectives, task-orientated care instead of comprehensive care, replacing permanent staff during staff shortages, a lack of physical resources in the wards, mismatch between nursing actions in a simulated environment versus that in the clinical settings, and discrimination and racism experienced

Stellenbosch University https://scholar.sun.ac.za

Delegation of duties for students not relevant to learning objectives

A barrier to achieving clinical outcomes resulted when delegated activities were unrelated to their level of study and non-aligned with the nursing students' learning objectives. The participants felt dissatisfied, as they were assigned tasks below their skill level, rendering them unable to complete tasks appropriate to their level of training. This finding is corroborated by studies done in South Africa by Fadana and Vember (2021: e1-e10), who reported that student nurses failed to accomplish their clinical goals due to poor delegation of clinical tasks to nursing students in the ward. The authors argued that nursing students' curriculum learning objectives weren't considered before delegation. A systematic review by Vizcaya-Moreno et al. (2018: 306-318) in Spain, found that performing repetitive and non-nursing tasks, and even routine nursing tasks, was considered a waste of time by nursing students. Mamaghani et al. (2018: 216–222) stated that nursing students' duties and job descriptions in the clinical setting are not clearly defined, contributing to the unsatisfactory situation. Rodrguez-Garca et al. (2021: 986-994) also from Spain confirmed the crucial need to establish a clinical setting where students' roles are clearly defined. Rajeswaran (2017) in Botswana added that preceptors must be informed of curriculum changes and about the learning objectives of the student nurses so that they can efficiently allocate the nursing students to areas where they need skills rather than according to the demands of the ward.

Nursing students must apply what they have learned in the classroom to real-life situations under the guidance of professional nurses who serve as preceptors on the wards. However, participants in this study reported that the professional nurses in the clinical setting had practiced routine approaches for managing nursing units which conflicted with what the nursing students had learned in the classroom. A related Iranian study found that the clinical setting's routines posed a learning challenge for student nurses. Nursing students' performance was impacted by having to adhere to the clinical staff's instructions and methods rather than applying what clinical supervisors had taught them in the skills laboratory (Hashemiparast et al., 2019: 399-405).

Task-orientated care versus comprehensive care

Compassion and caring are considered fundamental to the nursing profession. To provide holistic care, nurses are expected to have a caring attitude. Patients assume that they will receive such compassionate care; however, this is not the experience of everyone. Participants in this study reported that everything was done in a hurry in the wards; consequently, patients experienced a lack of compassion and caring because care was task-orientated without addressing the context and individual needs of patients. Comparable results were found in a study done in Namibia, where task-orientated care was provided

Stellenbosch University https://scholar.sun.ac.za

without being grounded in scientific knowledge, diminishing the standards of the care supplied (Kerthu & Nuuyoma, 2019: 21-28). This study's findings are similar to other studies from South Africa and Nigeria, where patient overload, uncaring approaches, nurses' negative attitudes toward patients, routine task-orientated care, and a lack of patient engagement impediments to caring were identified as impediments to learning (Kobe et al., 2020: e1-e9; Lateef and Mhlongo, 2022: 40). Factor et al. (2017: 82-87) also reported that patient overload forces nurses to forgo ideal procedures to finish their tasks.

Other international studies similarly reported patients not receiving person-centred care or even being neglected or abused (Babaei & Taleghani, 2019: 213–9; Kuipers, Cramm & Nieboer, 2019: 1–9). A study conducted in America reported that patients experienced rudeness from nurses and felt that the nurses did not take their health problems seriously (Kerber, Astroth, Jenkins & Woith, 2017: 211–220). Nursing students are experiencing a lack of compassion and care in the same setting in which they are expected to learn best practices; consequently, their learning process is affected. According to De Swardt, Van Rensburg and Oosthuizen (2017: 1-7), the preceptor as the role model in the clinical setting helps student nurses to acquire the professional qualities and skills they display as they perform their daily nursing tasks. Kobe et al. (2020: e1-e9) argues that to provide high-quality nursing care, student nurses should learn to demonstrate compassion and accountability as desired characteristics of becoming professional nurses. Subsequently, according to Babaei and Taleghani (2019: 213), nurses are less likely to exhibit compassionate behaviours when they do not have role models for those actions at work.

Replacing permanent staff during staff shortages

In the current study, participants reported being reassigned to other wards due to short-staffed realities, while these wards had nothing to do with their current learning objectives. To maximise learning, it is necessary to place students in clinical settings that match their goals so they can apply what they learned in class (Fadana & Vember, 2021: e1-e10). A study by Vizcaya-Moreno et al. (2018: 306-318) confirmed that student nurses felt like temporary workers in the clinical setting as they were moved around as per the needs of the wards. Another study by Morley (2018: 173-190) on student perceptions of clinical learning experiences in a private hospital in South Africa reported that students frequently complained that they were viewed as an extra pair of hands to compensate for staff shortages and that they were not allowed to complete their clinical learning outcomes. These results are congruent with the findings of this current study. A study conducted in Turkey found that nursing students valued the opportunity to work on activities that helped them absorb information from instructors (Arkan et al., 2018: 127-132). However, the authors noted that

Stellenbosch University https://scholar.sun.ac.za

these instances are uncommon and that nursing students were usually disregarded, compromising learning and the ability to achieve learning objectives.

Mismatch between nursing actions in a simulated environment versus that in the clinical settings

In this current study, participants felt that nursing students experienced transitional difficulties from skills laboratory teaching and learning to the clinical practice environment. Several participants in this current study found a mismatch in teaching nursing skills in the skills laboratory and how these skills are applied by nursing staff and nursing students in practice. Notably, several studies confirmed that student nurses were struggling to establish links between didactics and actual clinical scenarios (Salifu et al., 2018: 1-12; Safazadeh et al., 2018: 1-8; Mamaghani et al., 2018: 216-222; Factor et al., 2017: 82–87; Odetola et al., 2018: 1–13; Günay & Kilinç, 2018: 81-86).

Nurses in the wards have their way of doing things, quite different from the textbooks and procedures taught by the clinical supervisor (Berhe & Gebretensaye, 2021: 2214-1391; Odetola et al., 2018: 1–13; Hashemiparast et al., 2019: 399-405). Wighus and Bjørk (2018: 143-149) stated that the unfamiliarity of carrying out clinical skills and low staffing levels in wards are often used as reasons why these skills were not executed correctly by professional registered nurses, and this may hinder the teaching and learning of these skills. Participants in the current study indicated that although they were taught about the proper performing of clinical procedures, they discovered on entering clinical practice that alternative principles and protocols were used. This coincides with research conducted in the United Arab Emirates, which reported that because of the differences observed in performing nursing interventions on actual patients, difficulty was experienced in applying nursing skills taught in laboratories in the clinical setting (Saifan et al., 2021: 1869-1879). Different hospitals have different nursing policies and protocols; however, standardising clinical practice towards uniformity throughout the health sector is recognised as a need (Martinez-Linares, Martinez-Yébenes, Andjar-Afán, & López-Entrambasaguas, 2019: 2774).

Participants in the current study wanted clinical supervisors to create realistic scenarios in the skills laboratory that match the environmental, physical, and emotional experiences of an actual clinical experience. This would help create the realities and complexities of the clinical site, and such realism can be matched with theoretical knowledge to promote the application of theory to practice. This line of thinking is supported by Saifan et al. (2021: 1869–1879), who reported that when preparing nursing students, clinical simulation laboratories should provide a variety of skills, performed in various ways and on various patient populations and should be

Stellenbosch University https://scholar.sun.ac.za

long enough to allow students' immersion in these aspects before they move to clinical settings. In addition, attention should be directed to 'soft' skills (e.g., communicating with real patients). This might be problematic while dealing with simulated patients; hence other methods may be necessary to compensate for these limitations (Saifan et al., 2021: 1869–1879).

The current study reported a lack of resources such as supplies and equipment. Participants stated that nurses in the clinical setting improvised in ways that deviated from best practices because of a lack of equipment and supplies. Kerthu and Nuuyoma (2019: 21-18) and Odetola et al. (2018: 1-13) confirmed differences between what students have available in the skills laboratory and what is available in the ward. Participants reported having to improvise to complete a procedure in the clinical placement; thus, skills taught in the skills laboratory were found to be irrelevant. Consequently, participants in this study questioned the meaning of learning content that does not correspond to reality. Gassas (2021: 105095) concurred by stating that such deviation from the norm causes nursing students to be confused and lose confidence in what they are learning in the skills laboratory and Factor et al. (2017: 82-87), Salifu et al. (2018: 72-83) and Fadana and Vember (2021: e1-e10) mentioned how this situation consequently affected skill development. Allari and Farag (2017: 66) and Safazadeh et al. (2018: 1-8) mentioned how having access to the hospital's facilities, tools, and supplies enabled students to practice in a standardised and ideal manner.

Participants in this current study reported that the use of 'shortcuts' was prevalent in the wards as preceptors emphasised getting the job done routinely. This non-adherence to established procedures or standards and guidelines left participants confused about how to do the procedures as they differed from what they had learned in the classroom and the skills laboratories. Mbakaya et al. (2020: 87) confirmed that clinical staff's use of shortcuts made it difficult for nursing students to apply theory to practice and ascribed these actions to the high workloads of ward nurses. Hashemiparast et al. (2019: 399-405) reiterated that students align their practices with those of clinical staff in the clinical setting and do not use the updated protocols taught by nurse educators. De Swardt et al. (2017: 1-7) in a study conducted in South Africa reflected that professional development suffers as nursing students tend to imitate preceptors who are poor role models in the ward. Out of fear, student nurses blindly imitate (Factor et al., 2017: 82–87) observed unsatisfactory clinical practices to escape arguments with nurses due to their disempowered positions (Odetola et al., 2018: 1–13; Safazadeh et al., 2018: 1–8; Salifu et al., 2018: 72–83; Fadana & Vember, 2021: e1-e10).

Discrimination

Stellenbosch University https://scholar.sun.ac.za

Many participants in the current study mentioned that they experienced discrimination and felt discouraged because clinical staff treated them differently from students from other medical professions. Safan et al. (2018: 304) similarly reported that nursing students complained about the rife discrimination because of the preferential treatment of medical students. Mamaghani et al. (2018: 220) found that medical students were favoured over nursing students, the latter also experiencing inequity in the allocation of educational resources such as the library and internet, where only student doctors had free access to these tools. Mamaghani et al. (2018: 220) and Engelbrecht, Heyns, and Coetzee, (2017: 8494) found that such discrimination resulted in a loss of motivation and negative professional attitudes, a deterioration in the quality of patient care, resentment of others, an increase in the likelihood to quit the nursing profession, and a loss of interest in attending clinical practice. These findings are supported by studies from the African context in Namibia, South Africa, and Ethiopia, where discriminatory attitudes were prevalent in the clinical learning environment and negatively impacted student nurses' learning (Kerthu & Nuuyoma, 2019: 21-18; Fadana & Vember, 2021: e1-e10; Berhe & Gebretensaye, 2021: 2214-1391).

Participants in this study reported discrimination by clinical staff and preceptors against nursing students in the clinical setting from selective HEIs. Fadana and Vember (2021: e1-e10) confirmed this situation in the South African context. Participants reported feeling abandoned and disregarded when this happened. Kerthu and Nuuyoma (2019: 21-18) concurred that clinical staff have preferential and discriminatory attitudes toward nursing students from different nursing institutions and that student nurses pursuing diplomas and certificates received preferential treatment from the clinical staff compared to student nurses from universities. Furthermore, constant comparisons were made between nursing students from different NEIs, which hindered their ability to learn in the clinical setting. Sadly, in South Africa, a study of interprofessional violence found that registered professional nurses were primarily responsible for violence and discrimination against nursing students (Engelbrecht et al., 2017: 8494). These studies confirmed the perceptions of the participants of this current study.

Racism

Participants reported having to deal with bias and racism in the clinical setting, in which one race got more clinical support from preceptors compared to the other races. Such behaviour limited student nurses' learning opportunities. Furthermore, all participants of this study, being traditionally classified as black, felt that they always had to work harder, be smarter, and prove themselves more than their white and coloured peers to get the attention of the preceptor in clinical settings. These findings are supported by a United Kingdom study which examined

Stellenbosch University https://scholar.sun.ac.za

student nurses' lived experiences of racism in both clinical practice and education (Miller, Nambiar-Greenwood, 2022: 105581). These authors discovered that student nurses experienced direct and indirect racism in academic and clinical settings. Common examples included inadequate support and professionals who were uncomfortable or refused to discuss sensitive subjects.

Even though apartheid laws were revoked in 1994 and discrimination was outlawed, disparities and distance between races persist and are still deeply embedded in the South African culture (Posel, 2001: 50–74; Pillay, 2019:77-92). To meet the demands of a growing diverse populace and mirror the diversity of the general population, there was a critical need for more persons of colour to be included in the student population. There has thus been increased growth in racial and ethnic diversity among the healthcare professionals of South Africa. Unfortunately, this has not eliminated deep-seated discriminatory attitudes in people’s treatment of each other, with resultant perpetual experiences of bigotry towards student nurses, although being ‘born-free’ (born in the era since democracy in 1994).

Johnson, Browning, and DeClerk, L. (2021: 697-702) declared that preceptors of majority-advantaged groups may not be adequately prepared to serve students of diverse ethnicities. Wilson-Mitchell and Handa (2016) added that in a racial-discordant student-preceptor pairing, an unprepared preceptor may carry unconscious bias, making the student feel uncomfortable participating in learning or alienated in the clinical setting. Therefore, Johnson et al. (2021: 697 -702) concluded that preceptors have a professional obligation to teach, instruct, and model fair, antiracist clinical education for nursing students.

Language

Participants of the current study reported a breakdown in communication between preceptors and nursing students because of different mother tongues and English being most students’ second language only. Kerthu and Nuuyoma (2019: 21-18) agreed that nursing students encountered language barriers in a clinical setting, whereas Mikkonen, Elo, Kuivila, Tuomikoski and Kääriäinen (2016: 173-187) added that differences in language and culture impeded the learning of student nurses in healthcare facilities.

Afrikaans and IsiXhosa are the prevalent languages used in clinical practice in the Western Cape Province, despite English being the language of instruction in academic nursing programmes. As a result, language minority students from this sample not well-versed in either Afrikaans or isiXhosa felt excluded from conversations about patient care.

Stellenbosch University https://scholar.sun.ac.za

The clinical learning opportunities, clinical guidance and support mechanisms in place for nursing students are hampered by ineffective communication, according to Jahanpour, Azodi, Azodi, and Khansir (2016: 2). Similarly, participants of the current study reported that the Afrikaans or isiXhosa-speaking clinical staff avoided nursing students who could not express themselves in these languages and only focused on communicating and helping those students who could speak and understand Afrikaans or isiXhosa. According to Jooste (2018: 229), such a lack of communication can compromise a patient's life, creating a situation where medical hazards can occur. Furnes, Kvaal and Høye (2018: 1) also commented on the additional challenges nursing students faced by speaking another vernacular than most of their peers, while Fadana and Vember (2021: e1-e10) reported feelings of frustration and isolation expressed in such situations.

Manias, Geddes, Watson, Jones and Della (2015: 4) declared that effective clinical handover requires the transfer of pertinent patient information from one healthcare professional to another for patient safety, high-quality care, and the best possible patient outcomes. Inadequate nurse communication during clinical handovers can result in unsatisfactory patient outcomes or even patient injury. Participants in the current study indicated that some preceptors intentionally conducted handovers in Afrikaans or isiXhosa, despite the presence of nursing students and other professionals who did not understand this language. In some wards, patient notes were exclusively written in Afrikaans, and student nurses thus had a problem understanding written documentation and handovers. According to participants, this was a significant barrier to applying theory in the clinical setting. De Lange, Van Eeden and Heyns (2018: 46-50) study confirmed the communication issue related to using indigenous language during bedside clinical handover. Furthermore, these authors believed that it was insulting to use an indigenous language with other health professionals who could not understand what was being discussed.

Slade, Murray, Pun and Eggins (2018: 161-171) elucidated that a patient-centred approach to the handover of clinical responsibility includes effective communication to provide a safer, clearer, more comprehensive, and more thorough mechanism for sharing information among nurses critical to the quality of care and resulting patient outcomes. Also, standards of good record-keeping should be observed while recording patient care because patient records are legally binding documents, providing evidence of continuity of care,

5.2.3.2 Personal barriers

Personal barriers include a lack of role preparedness, anxiety and fear experienced and forces learning through humiliation and bullying.

Stellenbosch University https://scholar.sun.ac.za

Role preparedness

Nursing students are expected to be ready to start their jobs upon graduation. Hospital administrators and nursing authorities expect them to be employable, provide evidence-based care, work independently, and take responsibility for their activities Netshisaulu and Maputle (2018: a1166). Participants in the current study reported having mixed feelings about being prepared to transition from student to competent and independent registered professional nurse. Some participants felt prepared for the transition from university to professional life, but the majority felt unprepared to work as registered nurses and reported an inability to work independently with a constant need for supervision. Netshisaulu and Maputle (2018: a1166) explored the expectations of experienced midwives regarding the clinical competence of midwifery graduates during community service placement. They similarly found that newly-graduated midwives did not meet the expectations as they lacked a sense of independence and commitment to patient care. They could not perform delegated duties towards ward coverage by experienced midwives, resulting in increased workload and frustration on the part of experienced midwives. Experienced midwives unrealistically expected newly graduated midwives to be competent and behave like independent practitioners. When newly graduated midwives fail to act as expected, experienced midwives become frustrated.

Contrary to the current study's findings, Haruzivishe and Macherera (2021: e7138) found that in Zimbabwe, most graduates expressed high readiness to practice, despite having challenges with selected nursing procedures. This was attributed to clinical learning in that country resembling real practice as students learn about actual patients in real-world settings. Other studies done in America also recorded perceptions of increased readiness amongst student nurses for their professional roles (Brown, 2016: np; Fitzgerald, 2019:np.

Anxiety and fear

Student nurses sometimes suffer from anxiety due to problems they encounter in the clinical setting. When they cannot control their anxiety, they have learning problems because they lack motivation and are unprepared for learning. This study's participants reported feeling anxious and afraid because they were dealing with patients’ lives. This finding was consistent with Fadana and Vember’s (2021: e1-e10) study, which stated that nursing students were stressed about dealing with patients, fearing they might harm them. The authors stated that real-life situations differed from skills laboratory simulations. Kalyani et al. (2019: 1-8) ascribed psychological problems, fear and stress to the challenges students encountered in the clinical setting. The authors urged that these feelings were rooted in the unknown, managing without the proper equipment, and fear of harming the patients. Ahmadi et al. (2018: 64-71) similarly found that the reality of practice can trigger anxiety in student nurses and hinder the

Stellenbosch University https://scholar.sun.ac.za

implementation of skills learned in practice. Mbakaya et al. (2020: 87) reported that students were usually very anxious during the first clinical practicum because they were unfamiliar with patient care and were afraid of making mistakes. Therefore, managing student nurses' anxiety can help optimise learning and clinical performance.

Forced learning through humiliation and bullying

Participants indicated that while clinical nurses were unwilling to teach, they also put pressure on student nurses by making them feel stupid and incompetent if they did not know how to do something. In the current study, attempts by a participant to report mistreatment were followed by even worse encounters, leading to psychological distress in the victim. This finding aligns with a study done in Ghana, where nursing students reported verbal and physical abuse from preceptors (Amoo, Menlah, Garti & Appiah, 2021: e0257620). In the current study, negative experiences of bullying by nursing staff in the clinical setting subsequently motivated them to be more studious in preventing being made to feel inadequate. It also made them more determined to be different role models once they qualified and became preceptors themselves.

Budden, Birks, Cant, Bagley, and Park, (2017: 125-33) identified the incidence and nature of bullying and/or harassment experienced by nursing students during clinical placement in Australia and reported that 50% of nursing students were bullied during clinical placement, with many of the perpetrators that were registered professional nurses, consistent with findings of the current study. Participants furthermore reported being subjected to verbal humiliation by preceptors, which eroded their confidence. In addition, they were humiliated and ridiculed by clinical staff. Even though humiliation and bullying were motivating factors for them to do better, Budden et al. (2017: 125-33) found that bullying and/or harassment in the workplace can affect students personally, with clear implications for patient safety and the quality of care. Furthermore, long-term effects are felt in the profession, as nursing students are driven away from this career path. Therefore, teaching nursing students' resilience prepares them to better deal with uncivil behaviour in the workplace.

In this current study, participants reported being shouted at in front of the patients, excluded from clinical procedures if they complained about anything, ignored by preceptors, and experiencing widespread emotional abuse. Amoo et al. (2021: e0257620) concurred from Ghana with findings of multiple incidents of bullying occurring among nursing students, including experiences of yelling, exclusion, humiliation, and being given work that was beneath their skill level. The most frequent kind of bullying that all students encountered in the clinical setting was being shouted at.

Stellenbosch University https://scholar.sun.ac.za

5.2.3.3 Interaction with other parties

Interactions with other parties can provide barriers, but also provide support. These interactions with peers, preceptors, clinical supervisors and NEI staff as mentioned by students are related to similar findings in other literature.

Peer interaction

One major finding of this study was that nursing students benefited from peer interaction when placed in the same ward. Participants had the chance to take care of patients collaboratively, share workloads, talk about experiences and difficulties, and legitimise their practice while learning from and with one another. This is in line with earlier research, which found that nursing students' learning process, self-confidence, and self-efficacy improved when they collaborated with their peers to provide care delivery (Pålsson, Martensson, Swenne, Mogensen & Engström, 2021: 102946; Stenberg, Bengtsson, Mangrio & Carlson, 2020: 102668; Arkan et al., 2018: 127-132; Mbakaya et al. 2020: 87). Pålsson et al. (2021: 102946) also provided the benefits of peer contact, as sharing the responsibility for nursing a patient, which enhances nursing students' learning outcomes through collaborative planning, organising, and nursing practice. Peer relationships during clinical practice help students build supportive connections that benefit health.

Unfortunately, participants in this current study also report having had negative interactions with peers in the clinical setting and thus have decided to avoid peer interaction. This finding is similar to what other studies have reported: competitiveness and conflict among nursing students exist in the clinical setting, resulting in negative feelings (Ahmadi et al., 2018: 64-71; Arkan et al., 2018: 127-132). This is attributed to the presence of many nursing students from multiple schools in the same ward, all with the same learning goals (Mbakaya et al., 2020: 87).

Registered professional nurses (preceptors)

In the current study, participants reported that preceptors refused to teach and support students, claiming that it was not their job to provide nursing education. These results were also shown in earlier research, where nursing students viewed clinical staff as uninterested in dealing with nursing students (Mamaghani et al., 2018: 216–222; Serçekus & Başkale, 2016, :134–138; Chipwaza, Nyangena, Kalolo, Mirisho, Gemuhay, 2019: 1-9). Arkan et al. (2018: 127–132) also reported neglect of nursing students by preceptors.

Recent research from a similar context as the current study established that the majority of nursing students found that registered nurses (preceptors) in clinical practice did not have time for education or supervision, which made nursing students feel isolated in the clinical

Stellenbosch University https://scholar.sun.ac.za

setting (Atakro et al., 2019: 1-10; Odetola et al., 2018: 1-13; Fadana and Vember, 2021: e1-e10). Due to the heavy workloads because of staffing shortages (Mbakaya et al., 2020: 87), preceptors were not eager to accept the responsibility of teaching student nurses (Ahmadi et al., 2018: 64-71; Atakro et al., 2019: 1-10).

In contrast to the findings of the current study, a study from Malawi by Kaphagawani and Useh (2018: 100-109) found that certain preceptors were considered exceptional because they were seen as motivated to teach and interested in student nurses' learning, which they demonstrated through interaction and support of student nurses despite their increasing clinical responsibilities. In addition, effective ward leadership also promotes skill development and independent thinking, which facilitates the translation of theory into practice (Mbakaya et al., 2020: 87).

Participants reported that patients resisted when they wanted to perform clinical procedures on them, exhibiting a lack of trust in nursing students' clinical competence. Hashemiparast et al. (2019: 399-405) similarly found that patients were uncooperative and refused to reveal private information to nursing students. Since trust is established in the early stages of a patient-provider relationship, nursing students should be able to connect with their patients at the first interaction by being taught therapeutic communication.

Similarly, preceptors distrusted students from the current study and refused to let them perform tasks independently. This situation prevented nursing students from taking advantage of opportunities to gain experience and develop clinical abilities. This often occurred because the previous group of nursing students made a mistake, causing preceptors to forbid them from practicing autonomously again. These findings are consistent with Hashemiparast et al. (2019: 399-405), who found that preceptors questioned nursing students' clinical competence and did not trust them to perform clinical procedures appropriately. However, Baraz, Memarian and Vanaki (2015: 52) in a study conducted in Iran found confidence in student nurses' ability to perform their tasks independently, encouraging applying theoretical knowledge in actual clinical settings.

Clinical supervisors

Participants in the current study reported that clinical supervision was inadequate and that their performance was not adequately monitored during the semester. In addition, participants indicated that clinical supervisors did not spend enough time teaching or demonstrating a procedure before conducting the final competency assessment. Many studies similarly found a lack of clinical supervision and support for nursing students (Odetola et al., 2018: 1-13; Kaphagawani & Useh, 2018: 100-109; Fadana & Vember, 2021: a2127). However, Günay

Stellenbosch University https://scholar.sun.ac.za

and Kilinç (2018: 81-86) and Odetola et al. (2018: 1-13) found that third-year nursing students in their contexts, Turkey and Nigeria, were subsequently satisfied with their clinical supervision, as it included the necessary support and scaffolding. In addition, due to instructor feedback, nursing students developed confidence and competence in their ability to practice independently. Ahmadi et al. (2018:67-71) also concurred that student nurses' learning in their study was enhanced when clinical supervisors were supportive.

Furthermore, participants from the current study complained that different clinical supervisors presented the same clinical procedures differently. They stated that these differences often negatively impacted their learning and ability to pass the final OSCE exam. Such conclusions were confirmed by Mamaghani et al. (2018: 216–222:), who found confusion among nursing students due to the various inconsistent teaching techniques employed by clinical instructors and the absence of set standards for clinical education. Confusion and inconsistency resulted from each clinical instructor uniquely approaching clinical education.

Participants cited the high ratio of nursing students to clinical supervisors and the many facilities a clinical supervisor must oversee as reasons for poor clinical supervision. This conclusion is consistent with Donough and Van der Heever's (2018: 1-8) report that the supervisor-to-supervisee ratio of 1:35 was too high and such ratios influenced the standard of clinical supervision, as excellent clinical supervision is correlated with accessibility and assignment of qualified clinical supervisors. In Australia, the "ideal" environment for clinical supervision in nursing and healthcare was reported to be a ratio of 1 to 4 (or possibly 6) for "non-demanding" students and a ratio of 1 to 2 for "demanding" nursing students. The importance of students working one-on-one with clinical supervisors was also emphasised. The main benefit is the depth and disclosure possible in a one-on-one interaction (King, Edlington & Williams, 2020: 187-196). These ratios unambiguously demonstrate that, compared to nursing students in Africa, students in first-world nations receive more in-depth supervision.

According to the participants in the current study, clinical supervisors only visited the facilities to have their timesheets signed, with no teaching taking place. This finding is consistent with Donough and Van der Heever’s (2018: 1-8) findings that signing a record does not guarantee that bedside teaching actually occurred. Deficiencies in the supervision system, thus, compromised students' perceptions of clinical supervision.

Interactions with NEI staff

Participants in this current study reported that the nursing faculty were not experienced as being supportive, as the NEI did not want to take responsibility for student nurses' mistakes or

Stellenbosch University https://scholar.sun.ac.za

injuries student nurses sustained during the programme. As a result, student nurses were required to sign a release of liability intended to protect the NEI. However, according to Legalwise, students do give up their right to sue the school if they suffer harm, lose something, or are injured (Legalwise, 2022:np).

Participants in this current study reported that nursing faculty were not interested in the difficulties nursing students experienced. Participants claim that clinical supervisors do nothing when student nurses complain about abuse or exploitation by preceptors on the unit. Participants described themselves as "slaves" due to being exploited by overload in the clinical area. Budden et al. (2017: 125-33) concur by saying that although NEIs expected clinical supervisors to be the students' advocates, mentors, protectors and role models in the healthcare facilities, they often demonstrate conflicting loyalties, lack of commitment, and because of their dual responsibilities to the hospital and the student. These authors motivate for completion of an accredited programme as a prerequisite to ensure that clinical supervisors are well-prepared for their roles.

5.2.4 Objective 4: To describe the strategies nursing students suggest could be applied to facilitate the application of theory to clinical practice

The participants suggested possible strategies by students, the NEIs and the clinical settings to facilitate the application of theory to clinical practice.

5.2.4.1 Student strategies

This study's participants reported using self-directed learning techniques to learn in the clinical setting. Self-directed learning is a process where individuals take primary charge of planning, continuing and evaluating their learning experiences. This meant that participants self-initiated strategies to learn without a preceptor or clinical supervisor. They used tactics such as repeating a task until they mastered it, observing how a preceptor or doctor performs a procedure or technique and then trying it out on their own. Using reference materials and collegial techniques that involved supporting and helping each other (peer collaboration) when working with patients in a clinical setting helped them reach their goals. Zhang and Cui (2018: 378-388) in study conducted in China identified collaborative learning (peer collaboration) as an option used by nursing students to increase learning and engagement in clinical practice. With this strategy, student nurses work together and are responsible for the composition of the group and its activities.

5.2.4.2 NEI strategies

Participants felt that student nurses should be placed in teaching hospitals created exclusively for undergraduate education to bridge the gap between academia and practice. Participants in

Stellenbosch University https://scholar.sun.ac.za

the current study proposed establishing "student-centred" units in hospitals with preceptors specifically responsible for teaching. Kerthu and Nuuyoma (2019: 21-18) also advocated that student nurses should be moved to clinical practice sites where they have sufficient exposure to clinical cases to promote the growth of future competent and confident professionals. According to Saifan et al. (2021: 490), student nurses wished to complete all their clinical training in a place that belonged to NEI. However, the authors realised that this would be challenging, given the diversity of clinical courses in the nursing curriculum, including courses in medicine and surgery, pediatrics, maternity, mental health and community health. The concentration of these courses in one location would be difficult.

Participants recommended that more clinical supervisors be assigned to supervise students, ideally one clinical supervisor for each facility, for students to receive more supervision. This suggestion is supported by Saifan et al. (2021: 490), who mentioned that clinical supervisors should have less responsibility and more time to monitor students. This would make their job easier, and provide more time to spend with their students. In addition, the authors recommended placing fewer students under a single clinical supervisor's supervision. This would maximise the time available to each student during clinical practice and allow clinical supervisors to support their students. A United Arab Emirates study by Saifan et al. (2021: 490) explored how to close the gap between theory and practice in nursing education. They found that clinical supervisors of nursing students should have extensive experience working with patients in their specialty. Some clinical supervisors have excellent academic backgrounds and a deep theoretical understanding of the courses they teach, but sadly they lack good clinical experience or have never participated in clinical placements (Safan & Ebrahim, 2018: 304).

In addition, students' experiences were severely impacted by financial challenges. Although students received financial assistance from the government through the National Student Financial Aid Scheme (National Student Financial Aid Scheme, 2022), this grant did not fully meet their needs. The Democratic Nurses' Organisation of South Africa also criticised the bursary system for student nurses after implementing it in most provinces of South Africa in 2010 as it offered fewer benefits than the previous salary-based (stipend referred to) system (Democratic Organisation of South Africa, 2012:1). According to Kimberley (2012: 2), the salary system should be re-established.

Students proposed receiving stipends as compensation for their earnest effort in the clinical setting, which would help them complete their course without financial stress. This would help towards covering living expenses, food, and transportation costs. Jacobs, Scrooby, and Du

Stellenbosch University https://scholar.sun.ac.za

Preez (2019: 1103) recognise students' inability to meet their basic needs, family responsibilities, academic demands, clinical work assignments, and workload due to the bursary system applied in South Africa. Some are forced to take part-time jobs to pay for their education. These part-time jobs affect students' academic performance and experiences in higher education (Rochford, Connolly & Drennan, 2009: 601-606).

5.2.4.3 Clinical practice strategies

Participants in the current study suggested that improved communication between the nurse educator, clinical supervisor and preceptor could link theory and practice. Participants reported that preceptors are often unaware of nursing students' goals and requirements when placed in a clinical setting. Hussein and Osuji (2017: 20-25) encouraged a collaborative process between nurse educators and preceptors working in clinical settings to promote a conducive atmosphere for research utilisation. They mentioned that such collaboration and support also ensured the safety of care and the best clinical outcomes. Participants in this current study suggested that all stakeholders, such as nursing students, clinical supervisors, and preceptors should have clear expectations and objectives for student learning spelled out to them by higher education institutions. Needham, McMurray, and McSharry (2016: 131-138) and McSharry and Lathlean (2017: 73-80) concurred with the present study's findings that active collaboration between the clinical nursing supervisor and the nursing preceptor positively influences student learning.

Study participants emphasised the need for willing, knowledgeable, and motivated preceptors to supervise and guide student nurses through the various stages of training. The study by Kerthu and Nuuyoma (2019: 21-18) also suggested this strategy, recommending that experienced clinical preceptors and instructors provide more instruction, supervision, and a caring attitude to nursing students in the clinical setting. According to Saifan et al. (2021: 490), enthusiastic, compassionate, and cooperative preceptors were highly valued by nursing students as they are willing to help students and provide advice and feedback on performance . Participants in the current study suggested that nurses who were engaged in teaching or were interested in teaching and guiding nursing students during their practicum should be identified and recognised or compensated to strengthen their preceptorship. Those who actively participated in clinical facilitation and served as preceptors could receive certificates of recognition and gratitude from the nursing facility.

5.3 Limitations of the study

The following limitations of this study were identified:

Stellenbosch University https://scholar.sun.ac.za

This study does not represent nursing students' experiences from all ethnic groups in the Western Cape. The small sample size of 15 recruited participants were less than anticipated after contact was made for the study, only 18 students showed interest of participating, which included 3 black male and 12 black female participants from two African countries and 13 South African ethnicities originating from the country's nine provinces. Subsequently, the participants' demographics were not truly diverse and the opinions were only from the Black ethnic category of nurses at the specific university. However, as the HEI is recruiting from all nine provinces in South Africa and further afield on the African continent, these voices are important to listen to and act upon for improved experiences of their student stakeholders.

The study was conducted in a specific NEI setting, so the results cannot be extrapolated to other NEIs in the Western Cape or South Africa unless the contexts are comparably related to similar student populations recruited. Certainly, the context of the Western Cape's clinical facilities used by these different NEIs is similar, which means that some findings may be transferable to other situations. However, many of the results of this study support and complement the findings of previous studies, which indicate similar problems experienced nationally and internationally.

5.4 CONCLUSIONS

The research question for this study was, 'What are nursing students' perceptions of the barriers to applying theory to practice in the clinical setting?' The research question could only be answered comprehensively if all aspects of the research question were addressed, as explained below. The major findings were situational barriers such as delegation of tasks to student nurses that do not align with learning objectives, task-oriented versus comprehensive nursing care, replacing permanent staff during staff shortages, differences between nursing actions in a simulated setting and those in the clinical setting, discrimination, racism, and language barriers. Personal barriers identified were role preparedness, anxiety and fear, forced learning through humiliation and bullying, interactions with other parties such as peer interactions, interactions with registered nurses, interactions and support from supervisors, interactions with doctors and operational managers.

According to the summary and conclusions of the findings of this study, based on qualitative data, clinical learning is negatively affected by nursing students' experiences in clinical practice. As a result, they do not learn in clinical practice in a way that enables them to become skilled and provide quality care to the patients they are expected to serve. During clinical practice, students also encounter numerous facilitative and inhibitory elements to their learning. The current study provided a thorough understanding of student experiences that

Stellenbosch University https://scholar.sun.ac.za

negatively impact their ability to learn clinical skills and become effective practitioners.

This study has shown that when clinical supervisors are committed to supervising and supporting student nurses during clinical placements, they can increase their knowledge and learn new skills to practice independently. Student nurses admitted that it was challenging for them to learn new skills and techniques without the help and guidance of clinical supervisors and preceptors, which was so common in the context of the study. The student nurses' descriptions closely resemble the terminology used to describe the theory-practice gap. In addition, all participants confirmed the importance of using simulation techniques and participating in skills laboratory sessions, both of which facilitated the application of their theoretical knowledge.

This was primarily true in the first year of their studies. However, because some nursing students still need assistance and direction with specific skills that they should have mastered by the Covid-19 period, they were unable to complete all of their clinical goals during their second and third years of study. With the help of preceptors and clinical supervisors, learning objectives could be met. This guidance and help should be modified over time as students' ability for self-learning grows and they become better able to manage their own learning. In contrast to what nursing students had learned in the classroom, professional nurses in the clinical setting unconventional approaches to managing nursing units. If the assigned tasks did not match the student nurses' learning objectives and their level of education, it was difficult to achieve clinical outcomes. On the wards, everything was done quickly, which led to patients feeling that nursing care was uncaring and lacked compassion as it was task-oriented and ignored their special circumstances and needs. Patient overload forced nurses to skip best practices to get their work done. When wards were understaffed, student nurses were transferred to other wards, which was a significant barrier to putting theory into practice, as the new wards they were transferred to had little to do with their current learning objectives.

This made it harder to put theory into practice. Nursing students discovered that there are differences between teaching nursing skills in a skills laboratory and nurses applying those skills in practice. According to this study, simulations that closely resemble real patient care settings are the most effective way to engage students, promote critical thinking, and link teaching and clinical learning. These simulations should include patient-like scenarios that elicit patient-like behaviors. The results of this study also revealed that there is a severe lack of resources for student learning in the clinical setting. The lack of resources forces nursing students to improvise, which impacts their ability to improve their skills. Due to the lack of equipment and supplies, students are unable to practice in a standardized and optimal

Stellenbosch University https://scholar.sun.ac.za

manner.

According to the results of the study, the integration of theory and practice in the clinical context is also hindered by the discriminatory attitude of healthcare professionals. Such discrimination leads to a loss of motivation, a decline in the standard of patient care, and an increased risk of student nurses leaving the profession. Racism and a language barrier were two other forms of discrimination encountered by the students. Racism and language barriers can make students feel uncomfortable in the classroom or alienated in the clinical setting, which can be barriers to learning. In this study, it was also found that due to the fact that nursing students still need supervision when performing clinical operations, they lack confidence in their ability to assume their role as professional nurses after graduation. This could be a sign that the students were not able to master the clinical skills required for the nursing profession, so they were unprepared and lacked confidence to work as registered nurses after graduation. In addition, the reality of practice could cause anxiety and panic among nursing students and prevent them from putting the skills they had acquired into practice.

In addition, the study found a lack of clinical supervision. According to the study, the negative attitude of nurses and preceptors toward supervising students' clinical education is responsible for the lack of clinical supervision. In the absence of role modelling, guidance, or support, it is reasonable to assume that students were unable to successfully master the skills of the nursing profession, which made them incompetent and dangerous to patients. To bridge the gap between theory and practice, nursing students need the support and guidance of ward staff, clinical supervisors, and their peers. This integration of theory and nursing skills is essential to clinical practice and the nursing profession. Another important finding was the participants' poor relationships with clinical staff and preceptors. The strained relationship may have hindered learning. It is suggested that a hostile environment may have caused students to be frightened, demoralized, and low in self-confidence, which may have prevented them from learning clinical skills effectively.

Nursing students in this study shared strategies they believed could assist with the facilitation of theory into practice thus address the theory-practice gap. Such as establishing "student-centred" units in hospitals with preceptors specifically responsible for teaching, allocating more clinical supervisors to supervise students, ideally one clinical supervisor for each facility, for students to receive more supervision. To improve communication between the nurse educator, clinical supervisor and preceptor positively influences student learning.

5.5 RECOMMENDATIONS

Stellenbosch University https://scholar.sun.ac.za

Recommendations will be discussed in the context of nursing practice, nursing education and future research nursing research.

5.5.1 Recommendation: Nursing practice

South Africa nursing council (SANC)

- The results of this study show that nursing students have difficulty putting theory into practice. This is due to the differences between what they learn in skills laboratory and how nurses apply these skills in practice. The study found that nurses in the wards have their own ways of doing things that differ from the textbooks and procedures taught by clinical supervisors in the skills laboratory, and that student nurses had difficulty making connections between didactics and actual clinical scenarios. The South Africa Nursing Council (SANC), which is charged with setting and maintaining standards for nursing education and practice in South Africa, should ensure that nursing standards are maintained in the clinical setting by continuously monitoring standards and inspecting nursing education institutions and clinical sites through audits to ensure that standards are being met by nursing staff. This ensures that students develop and adhere to the standard practices learned in theory consequently integrating theory to practice. The SANC should also create standardized assessment tools to be used in all NEIs to ensure uniformity across all NEIs such measures will ensure that nursing students are properly assessed and evaluated for competencies thus ensuring that only competent nurses are registered.
- This study found lack of resources such as human resources, supplies and equipment which interfered with nursing students' learning. Therefore, due to a lack of preceptors, clinical supervisors, and clinical staff, the government must enhance financing for NEIs and hospitals in order to fill vacant positions. Additionally, funding for hospitals needs to be expanded in order to provide enough resources for students to gain clinical skills in well-equipped nursing environments.

5.5.2 Recommendation: Nursing education

- ***Nursing Education Institutions***

  This study found out that nursing students benefited from attending skills laboratory sessions, where they could practice until competence was reached and they could manage the skills independently in the hospital. Additionally to the mannikins available in skills laboratories, the researcher recommends use of High-fidelity simulation (HFS) at the HEI as a learning and teaching strategy. Simulated environment helps nursing students practice in a safe environment until competence is attained. Simulation also

Stellenbosch University https://scholar.sun.ac.za

enhances nursing students' knowledge, skills and attitudes in a safe learning environment, prior to their interaction with patients. Appropriate simulation activities would improve critical reasoning and self-reflection, and lead the way to more self-directed learning (Raines, 2018: 182-183) which would foster better adjustments to the complex clinical environment and reduce the gap between theory and practice. The learning activities should involve patient-care scenarios that closely resemble the actual patient-care environment, be appropriate for the student's knowledge level, be conducted by trained faculty, and be promptly followed by active and interesting debriefing exercises in order to achieve these benefits. None of the current study participants mentioned simulation training and its contributions towards bridging the theory-practice gap. This could be attributed to the fact that simulation training has only recently started gaining momentum.

5.5.3 Recommendation: Future research

- Further studies need to analyse this phenomenon from the perspective of graduates who have already made the transition to the clinical setting, as well as from the point of view of clinical faculty, clinical supervisor and clinical staff.
- The study could be replicated in other NEIs to determine their problems about integrating theory and practice.
- A study in all accredited hospitals where students are placed for clinical practice to determine the facilitating and hindering factors in these hospitals is recommended.
- To ascertain how peer support enhances student clinical learning in clinical setting, a study would be required.
- It would also be advisable to do research to ascertain how the selection of clinical wards / units and the length of the clinical placement may affect clinical learning.

5.6 DISSEMINATION

The HEI where the study was conducted will receive a copy of the results. The thesis will be published electronically by the university through SUN Scholar, and the researcher intends to submit an article to a recognised peer-reviewed publication. The researcher plans to present the study's findings at conferences and events, including the Department of Health Research Day and the Research Day at Stellenbosch University.

5.6 CONCLUSION

It was evident from this study that nursing students have challenges in integrating theory and practice because of some barriers in the clinical environment and faculty. Such obstacles were identified as situational barriers such as the prominence of ward routine, replacing

Stellenbosch University https://scholar.sun.ac.za

permanent staff during a staff shortage, lack of physical resources in the wards, mismatch between nursing actions in a simulation environment versus that in the clinical setting and discrimination. Personal barriers included lack of role preparedness, motivation, anxiety and fear, and forced learning through humiliation and bullying. Barriers from other parties included unsatisfactory interaction with peers, registered professional nurses, clinical supervisors, and with the NEI. Nursing students recommended some strategies for the effective facilitation of theory to practice. Additionally, clinical supervisors and preceptors functioning in inspiring environments are needed to support and mentor the students throughout their clinical placement.

Stellenbosch University https://scholar.sun.ac.za

REFERENCES

Abusalah A.S., Aljerjawy., M. & Akram., S. 2019. The role of clinical instructor in bridging the gap between theory and practice in nursing education. *International Journal of Caring Sciences,* 11(2): 876 – 882.

Admi, H., Moshe-Eilon, Y., Sharon, D. & Mann, M. 2018. Nursing students' stress and satisfaction in clinical practice along different stages: A cross-sectional study. *Nurse Education Today*, 68: 86 – 92.

Adom, D., Hussein, E.K. & Agyem, J.A. 2018. Theoretical and conceptual framework: Mandatory ingredients of a quality research. *International Journal of Scientific Research*, 7(1): 438 – 441.

Ahmadi, G., Shahriari, M., Keyvanara, M. & Kohan, S. 2018. Midwifery students' experiences of learning clinical skills in Iran: A qualitative study. *International Journal of Medical Education*, 9: 64 – 71.

Ahn, Y.-H. & Choi, J. 2019. Incivility experiences in clinical practicum education among nursing students. *Nurse Education Today* 73: 48 – 53.

Ajani, K. & Moez, S. 2011. Gap between knowledge and practice in nursing. *Procedia Social and Behaviour Sciences*, 15: 3927 – 3931.

Aliafsari-Mamaghani, E., Rahmani, A., Hassankhani, H., Zamanzadeh, V., Campbell, S., Fast, O. & Irajpour, A. 2018. Experiences of Iranian nursing students regarding their clinical learning environment. *Asian Nursing Research*, 12(3): 216 – 222.

Allari, R.S. & Farag, M.K. 2017. Nursing students’ expectations regarding clinical training: A qualitative study. *International Journal of Nursing Science,* 7(3): 63 – 70.

Amoo, S.A., Menlah, A., Garti, I. & Appiah, E.O. 2021. Bullying in the clinical setting: Lived experiences of nursing students in the Central Region of Ghana. *PLoS One*, 16(9):

Stellenbosch University https://scholar.sun.ac.za

p.e0257620. https://doi.org/10.1371/journal.pone.0257620

Angasu, K., Bekela, T., Gelan, M., Wakjira, D., Melkamu, E., Belachew, B., Diribsa, T., Ahmed, A. A., Eba, A., Tadesse, K. & Boche, B. 2021. COVID-19's negative impacts on clinical learning and proposed compensation mechanisms among undergraduate midwifery and nursing students of Jimma University. *Advances in Medical Education and Practice*, 12: 1411–1417.

Arkan, B., Ordin, Y. & Yılmaz, D. 2018. Undergraduate nursing students' experience related to their clinical learning environment and factors affecting to their clinical learning process. *Nurse Education Practice*, 29: 127 – 132.

Arpanantikul, M. & Pratoomwan, A. 2017. Clinical learning experiences of second-year Thai nursing students: A phenomenological study, Pacific Rim. *International Journal of Nursing Research,* 21(2): 121 – 134.

Atakro, C.A. & Gross, J. 2016. Preceptorship versus clinical teaching partnership: Literature review and recommendations for Implementation in Ghana. *Advances in Nursing* 2016 (1): 1-5 https://doi.org/10.1155/2016/1919246

Atakro, C.A., Armah, E., Menlah, A., Garti, I. & Addo, S.B. 2019. Clinical placement experiences by undergraduate nursing students in selected teaching hospitals in Ghana. *BMC Nursing*, 18(1): 1 – 10.https://doi.org/10.1186/s12912-018-0325-8

Babaei, S. & Taleghani, F. 2019. Compassionate care challenges and barriers in clinical nurses: A qualitative study. *Iranian Journal of Nursing and Midwifery Research*, *24* (3): 213 – 219. https://doi.org/10.4103/ijnmr.IJNMR_100_18

Baraz, S., Memarian, R. & Vanaki, Z. 2015. Learning challenges of nursing students in clinical environments: A qualitative study in Iran. *Journal of Education and Health promotion*, *4*: 52. DOI: 10.4103/2277-9531.162345

Benner, P. 2019. Two key roles of preceptors: Situated coaching and teaching local knowledge. [online] Available at: <https://www.educatingnurses.com/two-key-roles-ofpreceptors-situated-coaching-and-knowledge/?utm_source=Free+Newsletter&utm_campaign=61186db> [Accessed 22 April 22].

Berhe, S., & Gebretensaye, T. 2021. Nursing students challenges towards clinical learning environment at the school of nursing and Midwifery in Addis Ababa University. A qualitative study. *International Journal of Africa Nursing Sciences*, 15: 100378.

Stellenbosch University https://scholar.sun.ac.za

Bifarin, O. & Stonehouse, D. 2017. Clinical supervision: An important part of every nurse's practice. *British Journal of Nursing,* [e-journal] 26(6): 331 – 335.

Bitter, C.C., Ngabirano, A.A., Simon, E.L., & Taylor, D.M. 2020. Principles of research ethics: A research primer for low- and middle-income countries*. African Journal of Emergency Medicine*, 10(Suppl2): S125-S129.

Bradshaw, C., Atkinson, S. & Doody, O. 2017. Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research,* 4: 1–8.

Brink, H, Van der Walt, C & Van Rensburg, G.H. 2018. *Fundamentals of research methodology for healthcare professionals.* 4th ed. Cape Town: Juta.

Brown, H.D. 2016. Examination of baccalaureate nursing students' readiness for practice (*Doctoral dissertation, Colorado State University*-Pueblo. Library).

Brown, J. E. 2019. Graduate nurses' perception of the effect of simulation on reducing the theory-practice gap. *SAGE Open Nursing*, 5: 1 - 5.

Bryman, A. & Bell, E. 2014. *Research methodology: Business and management contexts*. Cape Town: Oxford University Press Southern Africa.

Buabeid, M.A. & Al Dmour, N.H. 2021. The shift to online assessment due to covid-19: An empirical study of university students, behaviour and performance, in the region of UAE. *International Journal of Information and Education Technology,* 11(5): 220–228.

Budden, L.M., Birks, M., Cant, R.P., Bagley, T. & Park, T. 2017. Australian nursing students' experience of bullying and/or harassment during clinical placement. *Collegian,* 24: 125 – 133.

Bvumbwe, T. & Mtshali, N. 2018. Nursing education challenges and solutions in Sub Saharan Africa: An integrative review. *BMC Nursing,* 17.

Chipwaza, B., Nyangena, E., Kalolo, A., Mirisho, R. & Gemuhay, H.M. 2019. Factors affecting performance in clinical practice among preservice diploma nursing students in Northern Tanzania. *Nursing Research and Practice*, 2019: 1-9.

Creswell, J.W. & Creswell, J.D. 2018. *Research design: Qualitative, quantitative, and mixed methods approaches.* 3rd ed. Los Angeles, SAGE.

Stellenbosch University https://scholar.sun.ac.za

Creswell, J.W. 2014. *Research design: Qualitative, quantitative and mixed methods approaches.* 4th ed. London: Sage. 196-200

Cypress, B.S. 2017. Rigor or reliability and validity in qualitative research. *Dimensions of Critical Care Nursing*, 36(4): 253 – 263.

Day, L. & Benner, P. 2018. Clinical precepting: situated coaching and learning-the heart of very reliable organizations. [online] Available at: <https://www.educatingnurses.com/clinical-precepting-situated-coaching-and-learning-the-heart-of-highly-reliable> [26 July 2021].

De Lange, S., Van Eeden, I. & Heyns, T. 2018. Patient handover in the emergerncy department: 'How' is as important as 'what'. *International Emergency Nursing*, 36: 46 - 50.

De Swart., H.C.R., Van Rensburg., G.H. & Oosthuizen., M.J. 2017. Supporting students in professional socialisation: Guidelines for professional nurses and educators. *International Journal of Africa Nursing Sciences*, 6: 1-7.

Democratic Organisation of South Africa (DENOSA). 2012. Media statement, 23 July 2012.

Dewart, G., Corcoran, L., Thirsk, L. & Petrovic, K. 2020. Nursing education in a pandemic: Academic challenges in response to COVID-19. *Nurse Education Today*, *92*: 104471.

Donough, G. & Van der Heever, M. 2018. Undergraduate nursing students' experience of clinical supervision, *Curationis,* [e-journal] 41(1): e1-e8.

Doyle, K., Sainsbury, K., Cleary, S., Parkinson, L., Vindigni, D., McGrath, I. & Cruickshank, M. 2017. Happy to help/happy to be here: Identifying components of successful clinical placements for undergraduate nursing students. *Nurse Education Today,* 49: 27-32. https://doi.org/10.1016/j.nedt.2016.11.001

Doyle, L., McCabe, C., Keogh, B., Brady, A. & McCann, M. 2020. An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing: JRN*, 25(5): 443–455.

Engelbrecht, A.S., Wolmarans, J. & Mahembe, B. 2017. Effect of ethical leadership and climate on effectiveness. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur,* 15: a781.

Stellenbosch University https://scholar.sun.ac.za

Engelbrecht, N., Heyns, T. & Coetzee, I.M. 2017. South African undergraduate nursing students' experience of intra-professional violence. *Gender and Behaviour,* 15(1): 8492–8508.

Factor, E. M. R., Matienzo, E.T. & De Guzman, A.B. 2017. A square peg in a round hole: Theory-practice gap from the lens of Filipino student nurses. *Nurse Education Today*, 57: 82–87.

Fadana, F.P. & Vember, H.F. 2021. Experiences of undergraduate nursing students during clinical practice at health facilities in Western Cape, South Africa. *Curationis*, 44(1): e1–e10.

Fitzgerald, M. 2019. *The perception of student nurses' progress towards practice readiness in a revised baccalaureate nursing programme*. PhD, Northeastern University, Boston Massachusetts.

Furnes, M., Kvaal, K.S. & Høye, S. 2018. Communication in mental health Nursing-Bachelor Students' appraisal of a blended learning training programme-an exploratory study. *BMC Nursing,* 17(1): 1–10

Gardiner, I. & Sheen, J. 2016. Graduate nurse experiences of support: A review. *Nurse Education Today,* 40: 7-12.

Gassas R. (2021). Sources of the knowledge-practice gap in nursing: Lessons from an integrative review. *Nurse education today*, *106*, 105095. https://doi.org/10.1016/j.nedt.2021.105095University of the Western Cape. 2015. Nursing course guide. *Annual report.* University of the Western Cape, Bellville.

Georgiou, A., Magrabi, F., Hyppönen, H., Wong, Z.S., Nykänen, P., Scott, P.J., Ammenwerth, E. & Rigby M. 2018. The safe and effective use of shared data under pinned by stakeholder engagement and evaluation practice. *Year Med Inform*, 27(1): 25-28.

Grant, C. & Osanloo, A. 2015. Understanding, selecting, and integrating a theoretical framework in dissertation research: Developing a 'blueprint' for your "house". *Administrative Issues Journal,* 4.

Gray, J.R., Grove, S.K. & Sutherland, S. 2016*. Burns and Grove's the practice of nursing research-e-book: Appraisal, synthesis, and generation of evidence.* 8th ed. St. Louis: Elsevier Health Sciences.

Stellenbosch University https://scholar.sun.ac.za

Gray, J.R., Grove, S.K. & Sutherland, S. 2017. *Burns and Grove's The practice of nursing research: Appraisal, synthesis, and generation of evidence*. 8th ed. St. Louis: Elsevier Saunders.

Greenway, K., Butt, G. & Walthall, H. 2019. What is a theory-practice gap? An exploration of the concept. *Nurse Education Practice,* [e-journal] 34: 1–6.

Grove, S.K., Gray, J.R. & Burns, N. 2015. *Understanding nursing research: Building an evidence-based practice.* 6th ed. St Louis: Saunders Elsevier.

Guba, E. & Lincoln, Y. 1985. *Naturalistic inquiry*. Newbury Park, CA: *Sage*.

Guba, E.G. & Lincoln. Y.S. 1989. What is this constructivist paradigm anyway? *Fourth Generation Evaluation.* London: Sage Publications.

Guest, G., Namey E. & Chen, M. 2020. A simple method to assess and report thematic saturation in qualitative research. *PLoS One,* 15(5):

Günay, U. & Kılınç, G. 2018. The transfer of theoretical knowledge to clinical practice by nursing students and the difficulties they experience: a qualitative study. *Nurse Education Today,* 65: 81–86.

Gundumogula, M. 2020. Importance of focus groups in qualitative research. *International Journal of Humanities and Social Science (IJHSS), Center for Promoting Ideas (CPI), USA*, 8(11): 299-302.

Hargreaves, L., Zickgraf, P., Paniagua, N., Evans, T.L. & Radesi, L. 2021. Covid-19 pandemic impact on nursing student education: Telenursing with virtual clinical experiences. *SAGE Open Nursing*, 7, 23779608211044618.

Haruzivishe, C. & Macherera, D.M. 2021. Perceived readiness to practice among BSC honours in nursing graduates: Implications for training. *Open Access Library Journal*, 8: e7138.

Hashemiparast, M., Negarandeh, R. & Theofanidis, D. 2019. Exploring the barriers of utilising theoretical knowledge in clinical settings: A qualitative study. *International Journal Nursing Science*, 6(4): 399-405.

Hattingh, H., & Downing, C. (2020). Clinical learning environment: Lived experiences of postbasic critical care nursing students. *International Journal of Africa Nursing*

Sciences, 13, 100263. https://doi.org/https://doi.org/10.1016/j.ijans.2020.100263

Hennink, M., Hutter, I. & Bailey, A. 2020. *Qualitative research methods*. Vancouver: SAGE Publications. pp. 1-376

Holloway, I. & Galvin, K. 2017. Chapter 7: *Participant observation and documents as sources of data. Qualitative research in nursing and healthcare*. Chichester, West Sussex, UK: Wiley Blackwell. pp.107-23

Hussein, M.H. & Osuji, J. 2017. Bridging the theory-practice dichotomy in nursing: The role of nurse educators. *Journal Nurse Education Practice*, 7(3): 20–25.

Jacobs, E., Scrooby, B. & Du Preez, A. 2019. Experiences of student nurses regarding the bursary system in KwaZulu-Natal province. *Health SA = SA Gesondheid*, *24*: 1103.

Jaganath, C., Bimerew, M. & Mthimunye, K.D.T. 2022. Nursing students' perceptions of the clinical learning environment at a university in South Africa. *International Journal of Africa Nursing Sciences*, 17: 100467.

Jahanpour, F., Azodi, P., Azodi, F. & Khansir, A.A. 2016. Barriers to practical learning in the field: A qualitative study of Iranian nursing students' experiences. *Nursing and Midwifery Studies*, *5*(2): e26920.

Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C. & Kalyani, M.N. 2016. The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*, 2016: 1- 7.

Johnson, R., Browning, K. & DeClerk, L. 2021. Strategies to reduce bias and racism in nursing precepted clinical experiences. *Journal of Nursing Education,* 60(12): 697-702.

Jooste, K. 2018. *The principles and practice of nursing and health care: Ethos and professional practice, management, staff development, and research.* 2nd ed. Pretoria: Van Schaik.

Kalyani, M.N., Jamshidi, N., Molazem, Z., Torabizadeh, C. & Sharif, F. 2019. How do nursing students experience the clinical learning environment and respond to their experiences? A qualitative study, *BMJ Open,* 9(7): e028052.

Stellenbosch University https://scholar.sun.ac.za

Kaphagawani, N.C. & Useh, U. 2018. Clinical supervision and support: Exploring pre-registration nursing students' clinical practice in Malawi. *Annals of Global Health*, 84(1): 100–109.

Kaphagawani, N.C.C. 2015. Nursing students clinical learning experiences in selected colleges in Malawi: A model to facilitate clinical learning'. PhD. North-West University, Mafikeng. http://hdl.handle.net/10394/17680

Kerber, C., Astroth, K.S. & Jenkins, S.H., Woith, W.M. 2017. Lessons from the homeless: Civil and uncivil interactions with nurses, self-care behaviors, and barriers to care. *Nursing Forum*, *52*(3): 211–220.

Kerthu, H.S. & Nuuyoma, V. 2019. Theory-practice gap: Challenges experienced by nursing students at the satellite campus of a higher education institution in Namibia. *International Journal of Higher Education*, *8*(5): 21-28.

Khatri, K.K. 2020. Research paradigm: A philosophy of educational research. *International Journal of English Literature and Social Sciences*, *5*(5): 1435-1440.

Kimberley M. 2012. Bursary bankrupts Eastern Cape nurses. *The Herald*, 04 July. [online] Available at: http://www.peherald.com/news/article/7151 [Accessed 18 February 2022].

King, C., Edlington, T. & Williams, B. 2020. The "ideal" clinical supervision environment in nursing and allied health. *Journal of multidisciplinary healthcare*, *13(1)*: 187–196.

Kivunja, C. & Kuyini, A.B. 2017. Understanding and applying research paradigms in educational contexts. *International Journal of higher education*, *6*(5): 26-41.

Kobe, S.C., Downing, C. & Poggenpoel, M. 2020. Final-year student nurses' experiences of caring for patients. *Curationis*, 43(1): e1–e9.

Korstjens, I. & Moser, A. 2018. Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1): 120-124.

Korstjens, I., & Moser, A. 2018. Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. European Journal of General Practice, 24:1, pp. 120-124.

Stellenbosch University https://scholar.sun.ac.za

Krueger, R.A. & Casey, M.A. 2015. *Focus groups: A practical guide for applied research.* 5th ed. Los Angeles: SAGE. [eBrary]. [online] Available at: https://play.google.com/books/reader?

Kuipers, S.J., Cramm, J.M. & Nieboer, A.P. 2019. The importance of patient-centered care and co-creation of care for satisfaction with care and physical and social well-being of patients with multi-morbidity in the primary care setting. *BMC Health Serv Res,* 19(13): 1–9.

Kurt, S. 2020. Vygotsky's zone of proximal development and scaffolding, in Educational Technology. [online] Available at: https://educationaltechnology.net/vygotskys-zone-of-proximal-development-and-scaffolding/ [Accessed 9 May 2021].

Lateef, M.A. & Mhlongo, E.M. 2022. A qualitative study on patient-centered care and perceptions of nurses regarding primary healthcare facilities in Nigeria. *Cost effectiveness and resource allocation: C/E*, 20(1): 40.

Legalwise. 2022. Public school activities and indemnity forms. [online] Available at: https://www.legalwise.co.za/help-yourself/media-centre/public-school-activities-and-indemnity-forms [Accessed 20 September 2022].

Lethale, S., Makhado, L. & Koen, M.P. 2019. Factors influencing preceptorship in clinical learning for an undergraduate nursing programme in the Northwest Province of South Africa. *International Journal of Africa Nursing Sciences*, *92*(Suppl 2): 9-25.

Lincoln, Y., Lynham, S. & Guba, E. 2017. Paradigmatic Controversies, Contradictions, and Emerging Confluences. In N.K. Denzin & Y. Lincoln (eds.), *Handbook of qualitative research.* London: Sage Publishers. pp.108-150

LoBiondo-Wood, G. & Haber, J. 2018. *Nursing research: methods and critical appraisal for evidence-based practice.* 9th ed. St. Louis, Missouri: Elsevier.

López-Zerón, G., Bilbao-Nieva, M.I. & Clements, K.A.V. 2021. Conducting member checks with multilingual research participants from diverse backgrounds. *Journal of Participatory Research Methods*, 2(2).

Lovecchio, C.P., DiMattio, M.J. & Hudacek, S. 2015. Predictors of undergraduate nursing student satisfaction with clinical learning environment: A secondary analysis*. Nurse Education Perspective,* 36(4): 252-4.

Stellenbosch University https://scholar.sun.ac.za

Majid, M.A.A., Othman, M., Mohamad, S.F., Lim, S.A.H. & Yusof, A. 2017. Piloting for interviews in qualitative research: Operationalization and lessons learnt. *International Journal of Academic Research in Business and Social Science*s, 7(4): 1073-1080.

Majid, U. 2018. Research fundamentals: Study design, population, and sample size. *Undergraduate Research in Natural and Clinical Science and Technology (URNCST) Journal*, 2(1): 1–7a.

Mamaghani, E.A., Rahmani, A., Hassankhani, H., Zamanzadeh, V., Campbell, S. & Fast, O. 2018. Experiences of Iranian nursing students regarding their clinical learning environment, *Asian Nursing Research,* 12(3): 216–222.

Manap., A.B., Jailani., N., Govindan, N.A.G., Kamaruddin, N.K., Mokhtar, Z.H.M., Parmalusami, K.V.P., Mior Ismail, W.N.M.I. & Alfred Anthony, S.A.A. 2019. Student nurses' perceptions of the clinical learning environment: Student nurses' perceptions of the clinical learning environment. *ILKKM Journal of Medical and Health Sciences* , 1(1): 15-19.

Manias, E., Geddes, F., Watson, B., Jones, D. & Della, P. 2015. Communication failures during clinical handovers lead to a poor patient outcome: Lessons from a case report. *SAGE Open Medical Case Reports,* 3: 2050313X15584859

Margolis, A.A. 2020. Zone of proximal development, scaffolding and teaching practice. *Cultural-Historical Psychology*, 16(3): 15–26.

Martínez-Linares, J. M., Martínez-Yébenes, R., Andújar-Afán, F. A., & López-Entrambasaguas, O. M. (2019). Assessment of Nursing Care and Teaching: A Qualitative Approach. *International journal of environmental research and public health*, *16*(15), 2774. https://doi.org/10.3390/ijerph16152774

Matlakala, M.C. 2016. *Proposing evidence-based strategies to strengthen implementation of healthcare reform in resource-limited settings: a summative analysis*. [online] Available at: https://doi.org/10.1136/bmjopen-2016-012582 [Accessed 20 September 2022].

Mbakaya, B.C., Kalembo, F.W., Zgambo, M., Konyani, A., Lungu, F., Tveit, B., Kaasen, A., Simango, M. & Bvumbwe, T. 2020. Nursing and midwifery students' experiences and perception of their clinical learning environment in Malawi: a mixed-method study. *BMC Nursing,* 19(1): 87.

Stellenbosch University https://scholar.sun.ac.za

McSharry, E. & Lathlean, J. 2017. Clinical teaching and learning within a preceptorship model in an acute care hospital in Ireland: A qualitative study. *Nurse Education Today;* 51: 73 – 80.

Mikkonen, K., Elo, S., Kuivila, H.M., Tuomikoski, A.M. & Kääriäinen, M. 2016. Clinical learning environment and mentoring of culturally and linguistically diverse nursing students: A systematic review of qualitative studies. *International Journal of Nursing Studies,* 54: 173 – 187.

Miller, E. & Nambiar-Greenwood, G. 2022. Exploring the lived experience of student nurses perspective of racism within education and clinical practice*:* Utilising the flipped classroom*. Nurse Education Today,* 119: 105581.

Monaghan, T. 2015. A critical analysis of the literature & theoretical perspectives on theory-practice gap amongst newly qualified nurses within the United Kingdom. *Nurse Education Today,* 35(8): 1–7.

Morley, D.A. 2018. The 'ebb and flow'of student learning on placement. *Enhancing employability in higher education through work-based learning*. London: Palgrave Macmillan, Cham.

Morse, J.M. 2015. Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, 25(9): 1212–1222.

Murray, M., Sundin, D. & Cope, V. 2019. New graduate nurses' clinical safety knowledge by the numbers. *Journal of Nursing Management*, 27(7): 1384–1390.

Muthathi, I., Thurling, C. & Armstrong, S. 2017. Through the eyes of the student: Best practices in clinical facilitation. *Curationis,* 40(1): 1-8.

Naeini, J. 2014. On the study of DA and SLA: Feuerstein's MLE and EFL learners' reading comprehension. *Procedia - Social and Behavioral Sciences*, 98: 1297-1306.

National Department of Health (NDoH). 2015*. Ethics in health research: Principles, processes and structures.* 2nd ed. Pretoria: NDoH

National Student Financial Aid Scheme. 2022. [online] Available at: < https://www.nsfas.org.za> [Accessed 24 March 2022].

Stellenbosch University https://scholar.sun.ac.za

Needham, J., McMurray, A., Shaban, R.Z. 2016. Best practice in clinical facilitation of undergraduate nursing students. *Nurse Education Practice*, 20: 131–8.

Netshisaulu, K.G. & Maputle, M.S. 2018. Expected clinical competence from midwifery graduates during community service placement in Limpopo province, South Africa. *Health SA Gesondheid,* 23(0): a1166.

Nyumba, T.O., Wilson, K., Derrick, C.J. & Mukherjee, N. 2018. The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9: 20 – 32.

Odetola, T.D., Oluwasola, O., Pimmer, C., Dipeolu, I.O., Akande, S.O. & Olaleye, O.S. 2018. Theory-practice gap: The experiences of Nigerian nursing students. *Africa Journal of Nursing and Midwifery*, 20(1): 1–13.

O'Keefe, R. & Auffermann, K. 2022. Exploring the effect of Covid-19 on graduate nursing education. *Academic Medicine: Journal of the Association of American Medical Colleges*, *97*(3S): S61–S65.

Osuji, J., Onyiapat, J., El-Hussein, M., Iheanacho, P., Ogbogu, C., Ubochi, N. & Obiekwu, A. 2019. “Relational transformation”: A grounded theory of the processes clinical nurse-educators use to assist students bridge the theory-practice gap. *American Journal of Qualitative Research, 3*(2): 71 - 86.

Pålsson, Y., Mårtensson, G., Swenne, C.L., Mogensen, E. & Engström, M. 2021. First-year nursing students’ collaboration using peer learning during clinical practice education: an observational study. *Nurse Education in Practice*, 50: 102946.

Panda, S., Dash, M., John, J., Rath, K., Debata, A., Swain, D., Mohanty, K. & Eustace-Cook, J. 2021. Challenges faced by student nurses and midwives in clinical learning environment – A systematic review and meta-synthesis. *Nurse Education Today*, 101: 104875.

Phuma-Ngaiyaye, E., Bvumbwe, T. & Chipeta, M.C. 2017. Using preceptors to improve nursing students' clinical learning outcomes: A Malawian students' perspective. *International Journal of Nursing Sciences*, *4*(2): 164–168.

Pillay, K. 2019. Indian Identity in South Africa. *The Palgrave handbook of ethnicity.* pp.77-92

Stellenbosch University https://scholar.sun.ac.za

Pitkänen, S., Kääriäinen, M., Oikarainen, A., Tuomikoski, A.M., Elo, S., Ruotsalainen, H., Saarikoski, M., Kärsämänoja, T. & Mikkonen, K. 2018. Healthcare students' evaluation of the clinical learning environment and supervision – A cross-sectional study. *Nurse Education Today*, 62: 143– 149.

Plummer, P. 2017. Focus group methodology. Part 1: Design considerations. *International Journal of Therapy and Rehabilitation,* 24(7): 297 – 301

Polit, D.F. & Beck, C.T. 2017. *Nursing research. Generating and assessing evidence for nursing practice*. 10th ed. China: Lippincott Williams & Wilkins.

Polit, D.F. & Beck, C.T. 2018. *Essentials of nursing research: Appraising evidence for nursing practice.* 9th ed. Philadelphia: Lippincott, Williams & Wilkins.

Posel, D. 2001. What's in a name? Racial categorisations under apartheid and their afterlife. [online] Available at: https://www.ascleiden.nl/news/whats-name-racial-categorizations-under-apartheid-and-their-afterlife#:~:text=Racial%20categorizations%20under%20apartheid%20and%20their%20afterlife,-Seminar%20date%3A&text=This%20paper%20is%20an%20analysis,politically%2C%20culturally%20and%20socially). [Accessed 2 December 2022]

Rabia, S.A. and Mastourah, K. 2017. Nursing students' expectations regarding clinical training: A qualitative study. *IJNS, 7*(3): 63–70.

Raines, D.A. 2018. Using a KWL chart to bridge the theory-practice gap. *Nursing Education Perspect*, 39(3): 182–3.

Rajeswaran, L. 2017. Clinical experiences of nursing students at a selected institute of health sciences in Botswana. *Health Science Journal*, 10(6).

Rochford, C., Connolly, M. & Drennan, J. 2009. Paid part-time employment and academic performance of undergraduate nursing students. *Nurse Education Today,* 29(6): 601 – 606.

Safan, S.M. & Ebrahim, R.M.R. 2018. Problems and obstacles facing nursing interns and its relation to their performance at clinical setting: A comparative study. *American Journal of Nursing,* 7(6): 304.

Stellenbosch University https://scholar.sun.ac.za

Safazadeh, S., Irajpour, A., Alimohammadi, N. & Haghani, F. 2018. Exploring the reasons for theory-practice gap in emergency nursing education: A qualitative research. *Journal Education Health Promotion,* 7(132): 1-8.

Saifan, A., Devadas, B., Daradkeh, F., Abdel-Fattah, H., Aljabery, M. & Michael, L.M. 2021. Solutions to bridge the theory-practice gap in nursing education in the UAE: A qualitative study. *BMC Medical Education,* 21(1): 490.

Salah, A.A., Aljerjawy, M. & Salama, A. 2018. Gap between theory and practice in the nursing education: The role of clinical setting. *Emergency*, *24*(17.18).

Salifu, D.A., Gross, J., Salifu, M.A. & Ninnoni, J.P.K. 2018. Experiences and perceptions of the theory practice gap in nursing in a resource- constrained setting: A qualitative description study. *Nursing Open, 6*(1): 72-83.

SANC Circular SANC Circular. 2016. [online] Available at: www.sanc.co.za/archive/archive2016/Circular720of202016phasingout0fLegacyQualificationspdf. [Accessed 11 October 2022].

SANC R786. 2013. [online] Available at: <www.gpwonline.co.za> [Accessed 15 June 2021].

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H. & Jinks, C. 2018. Saturation in qualitative research: Exploring its conceptualisation and operationalization. *Quality & Quantity,* 52: 1893 – 1907.

Serçekuş, P. & Başkale, H. 2016. Nursing students' perceptions about clinical learning environment in Turkey. *Nurse Education in Practice*, 17: 134 – 138.

Serçekuş, P., & Başkale, H. 2016. Nursing students' perceptions about clinical learning environment in Turkey. *Nurse Education in Practice*, **17**, 134–138. https://doi.org/10.1016/j.nepr.2015.12.008

Shabani, K., Khatib, M. & Ebadi, S. 2010. Vygotsky's zone of proximal development: Instructional implications and teachers' professional development. *English language teaching*, *3*(4): 237-248.

Shahzadi, C., Kousar, R., Hussain, M., Waqas, A., Gilani, S.A. & Safdar, M. 2017. The assesssment of gap between theory and training classes in nursing education system: A case of university of Lahore. *Saudi Journal of Medical and Pharmaceutical*

Stellenbosch University https://scholar.sun.ac.za

Sciences, 3(8): 896-906.

Shooshtari, Z.G. & Mir, F. 2014. ZPD, tutor; peer scaffolding: sociocultural theory in writing strategies application. *Procedia - Social and Behavioral Sciences*, 98: 1771 - 1776.

Slade, D., Murray, K.A., Pun, J.K.H. & Eggins, S. 2018. Nurses' perceptions of mandatory bedside clinical handovers: An Australian hospital study. *Journal of Nursing Management*, 27(1): 161-171.

Sodidi, K. & Jardien-Baboo, S. 2020. Experiences and mentoring needs of novice nurse educators at a public nursing college in the Eastern Cape. *Health SA Gesondheid, 25*: 8.

South African Nursing Council. 1985. Approval of and minimum requirements for education and training of nurse (general, psychiatric, community and midwife) leading to registration. *Regulation R.425 of 22 February 1985 as amended*. Pretoria: Government printers.

South African Nursing Council. 2005. Nursing education and training standards. *Nursing Act (No. 33 of 2005)*. Pretoria: Government printers.

South African Nursing Council. 2012. *Regulation 425 of 1985.* [online] Available at: <www.sanc.co.za> [Accessed 20 September 2021].

South African Nursing Council. 2013. *(SANC) Regulation 786*. Pretoria: Government Printers.

South African Nursing Council. 2021. *Nursing-education and training standards*. [online] Available at: <www.sanc.co.za> [Accessed 27 April 2021].

Spooner, A.J., Corley, A., Chaboyer, W., Hammond, N.E. & Frazer J.F. 2015. Measurement of the frequency and source of interruptions occurring during bedside nursing handover in intensive care unit: An observational study. *Australian Critical Care,* 28(1): 19-23.

Stenberg, M., Bengtsson, M., Mangrio, E. & Carlson, E. 2020. Preceptors' experiences of using structured learning activities as part of the peer learning model: A qualitative study. *Nurse Education in Practice*, 42: 102668.

Stellenbosch University https://scholar.sun.ac.za

Streubert, H.J. & Carpenter, D.R. 2014. *Qualitative research in nursing*. 5th ed. Philadelphia: Lippincott, Williams & Wilkins.

Tanriverdi, G., Ozyazicioglu, N., Atay, S., Sivrikaya, S.K., Gursoy, M.Y. & Cetin, A. 2017. The recommended solutions of nursing students to bridge the gap between the school and practice areas. *Int J Caring Sci*., 10(1): 199 – 208.

Tomietto, M., 2018. A Good Clinical Learning Environment as an Organizational Challenge: *The CLES-Scale: An Evaluation Tool for Healthcare Education,*10:57-70

Tomlinson, C.A. 2008. The goals of differentiation. *Educational leadership*, 66(3): 1–6.

Usher, K., Woods, C., Conway, J., Lea, J., Parker, V., Barrett, F., O'Shea, E. & Jackson, D. 2018. Patient safety content and delivery in pre-registration nursing curricula: A national cross-sectional survey study. *Nurse Education Today*, 66: 82-89.

Vizcaya-Moreno, M.F., Pérez-Cañaveras, R.M., Jiménez-Ruiz, I. & De Juan, J. 2018. Student nurse perceptions of supervision and clinical learning environment: A phenomenological research study. *Enfermeria Global*, 17(3): 319–331.

Vygotsky, L. S. 1978. *Mind in society*. Cambridge, MA: Harvard University Press.

Wass, R. & Golding, C. 2014. Sharpening a tool for teaching: The zone of proximal development. *Teach. High. Educ.,* 19(6): 671 – 684.

Weatherford, J. & Maitra, D. (2019). How Online Students Approach Bracketing: A Survey Research Study. *Educational Research: Theory and Practice*, 30(2), 91-102

Wighus, M. & Bjørk, I.T. 2018. An educational intervention to enhance clinical skills learning: Experiences of nursing students and teachers. *Nurse Education in Practice*, 29: 143-149.

Wilson- Mitchell, K. & Handa, M. 2016. Infusing diversity and equity into clinical teaching:

training the trainers. *Journal of Midwifery & Women's Health,* 61(6): 726-736.

Wood, D.J., Bruner, J.S. & Ross, G. 1976. The role of tutoring in problem solving. *Journal of Child Psychiatry and Psychology,* 17(2): 89-100.

World Medical Association. 2013. World Medical Association Declaration of Helsinki ethical principles for medical research involving human subjects. *JAMA: Journal of the*

Stellenbosch University https://scholar.sun.ac.za

American Medical Association, 310(20): 2191–2194.

Zhang, J. & Cui, Q. 2018. Collaborative learning in higher nursing education: A systematic review. *J Prof Nurs,* 34(5): 378–388.

Stellenbosch University https://scholar.sun.ac.za

APPENDICES

APPENDIX 1: ETHICAL APPROVAL FROM STELLENBOSCH UNIVERSITY

Approved with Stipulations

New Application

25/02/2022

Project ID: 23189

HREC Reference No: S21/08/147

Project Title: Nursing students' perceptions of the barriers to apply theory to practice

Dear Ms P Chekerwa

The **response** received on 15/01/2022 was reviewed by members of the **Health Research Ethics Committee** via Minimal Risk Review procedures on 25/02/2022 and was **approved with stipulations**.

Please note the following information about your approved research protocol:

Approval date: 25 February 2022

Expiry date: 24 February 2023

The stipulations of your ethics approval are as follows:

Research questions

- There are 2 research questions. The student must remove the 2nd research question as it not aligned to the overarching aim.

Interview guide

- Question 2 – the student must remove the examples as these examples are leading/guiding the student's responses.

Please remember to use your project ID 23189 and ethics reference number S21/08/147 on any documents or correspondence with the HREC/UREC concerning your research protocol.

Translation of the consent document(s) to the language(s) applicable to your study participants should now be submitted to the HREC.

Please note that this decision will be ratified at the next HREC full committee meeting. HREC reserves the right to suspend approval and to request changes or clarifications from applicants. The coordinator will notify the applicant (and if applicable, the supervisor) of the changes or suspension within 1 day of receiving the notice of suspension from HREC. HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note you can submit your progress report through the online ethics application process, available at: https://apply.ethics.sun.ac.za and the application should be submitted to the Committee before the year has expired. Please see Forms and Instructions on our HREC website for guidance on how to submit a progress report.

The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: https://www.westerncape.gov.za/general-publication/health-research-approval-process. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: Forms and Instructions on our HREC website (www.sun.ac.za/healthresearchethics)

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely,

Melody E Shana

Page 1 of 2

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 2: PERMISSION OBTAINED FROM INSTITUTIONS

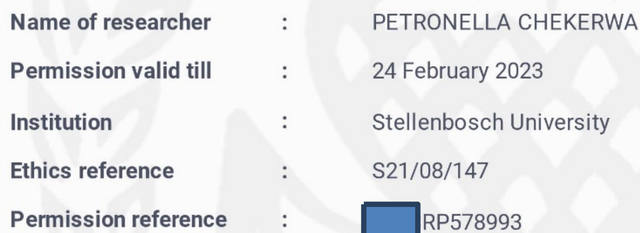
PERMISSION TO CONDUCT RESEARCH

DEAR **PETRONELLA CHEKERWA**

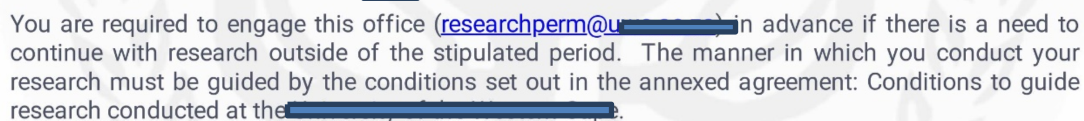
This serves as acknowledgement that you have obtained and presented the necessary ethical clearance and your institutional permission required to proceed with the project referenced below:

RESEARCH TOPIC

Nursing students' perceptions of the barriers to apply theory to practice



Name of researcher	:	PETRONELLA CHEKERWA
Permission valid till	:	24 February 2023
Institution	:	Stellenbosch University
Ethics reference	:	S21/08/147
Permission reference	:	RP578993



You are required to engage this office (researchperm@u) in advance if there is a need to continue with research outside of the stipulated period. The manner in which you conduct your research must be guided by the conditions set out in the annexed agreement: Conditions to guide research conducted at the .

Please be at liberty to contact this office should you require any assistance to conduct your research or require access to either staff or student contact information.

Regards

Deputy Registrar Academic Administration

Approval status: **APPROVED** 4 March 2022

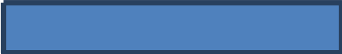
To verify or confirm the authenticity of this document please contact the University at r

Stellenbosch University https://scholar.sun.ac.za

16 March 2022

Dear Ms Chekerwa

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE SCHOOL OF NURSING,



Name of Researcher: Petronella Chekerwa
Research Topic: *Nursing students' perceptions of the barriers to apply theory to practice*
Institution: Stellenbosch University
Health Research Ethics Committee - Ethics Clearance Reference No.: S21/08/147
Project ID: 23189
P578993
Target population: B Nur final year students
Validity Period: 25 February 2022 to 24 February 2023

As per your request and evidence provided, we acknowledge that you have obtained the necessary permission and ethics clearance. Permission is therefore granted for you to conduct your research as outlined in your proposal.

Please note that while permission is granted to conduct your research (i.e. interviews and surveys) staff and students at the School of Nursing are not compelled to participate and may decline to participate or withdraw should they wish to.

Should you wish to make use of or reference the School's name, spaces, identity, etc. in any publication/s, you must first furnish the School with a copy of the proposed publication/s so that the School can verify and grant permission for such publication/s to be made publicly available.

As per your letter of permission to conduct research at the y Registrar, assistance to access student contact information, must be done through the office of the Deputy Registrar.

We wish you success with your research.

Yours sincerely

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 3: PARTICIPANT INFORMATION LEAFLET AND DECLARATION OF CONSENT BY PARTICIPANT AND INVESTIGATOR

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF RESEARCH PROJECT:

Nursing students' perceptions of the barriers to apply theory to practice

DETAILS OF PRINCIPAL INVESTIGATOR (PI):

Title, first name, surname: Ms Petronella Chekerwa	**Ethics reference number:**
Full postal address: Division of Nursing **Faculty of Medicine and Health Science** **Stellenbosch University** **PO Box 241** **Cape Town 8000**	**PI Contact number:** **0813113821**

I would like to invite you to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please feel free to ask me any questions about any part of this project that you do not fully understand. It is very important that you are completely satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. In other words, you may choose to take part, or you may choose not to take part. Nothing bad will come of it if you say no: it will not affect you negatively in any way whatsoever. Refusal to participate will involve no penalty or loss of benefits or reduction in the level of care to which you are otherwise entitled. You are also free to withdraw from the study at any point, even if you do agree to take part initially.

The HREC at Stellenbosch University has approved this study**.** The study will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, the South African Guidelines for Good Clinical Practice (2006), the Medical Research Council Ethical Guidelines for Research (2002), and the Department of Health Ethics in Health Research: Principles, Processes and Studies (2015).

What is this research study all about?

- The study will be conducted at the University of the Western Cape, and data will be gathered through three focus group discussions, with five participants in each group. In total, 15 participants will be recruited.

Stellenbosch University https://scholar.sun.ac.za

- The descriptive qualitative research that you are asked to partake in aims to explore the perceptions of nursing students of barriers to applying theory to practice in clinical settings. This study is being done because nursing students in clinical settings are frequently incapable of integrating the theory studied in the classroom with the practical work they must do in clinical settings, and they thus fail to competently provide quality care to patients, which result in compromised patient safety. There are barriers that deters nursing students' learning to apply theory to practice, and this study intends to find out what these barriers are, and which strategies could be applied to facilitate the application of theory to clinical practice. The solutions and recommendations from this study can be used to develop new strategies, interventions and policies that will help educators to close the theory practice gap and best prepare nursing students during their training years before they become qualified nurses. This information may also complement the South African Nursing Council's (SANC) new nursing qualifications to ensure that student nurses are groomed to practice safe patient care.

Why do we invite you to participate?

- Being a final year student nurse, you have completed 80% of your required course work and clinical hours, hence have had opportunities to experience the elements of teaching and learning and several clinical placements, therefore is well-informed about the subject under study to be able to give rich and thick description of your experiences.

What will your responsibilities be?

- You will need to be responsible to attend the focus group at the time which we will agree to, as well as answering all questions honestly.

Will you benefit from taking part in this research?

- You will get an opportunity to give your perspective on the theory-practice gap experienced by students when they implement theoretical knowledge learned in class in the clinical setting. The information will help the educator to develop new strategies, interventions and policies that will help future students, as well as yourself that will be their mentor in practice as future registered nurse in clinical practice.

Are there any risks involved in your taking part in this research?

- There is no danger posed to you by participating in this research. The time you will take to partake in the focus group meeting is the only disadvantage identified with this investigation.

If you do not agree to take part, what alternatives do you have?

- There is no obligation to take part in the study if you do not feel comfortable with it.

Who will have access to your medical records?

- N/A

Even though it is unlikely, what will happen if you get injured somehow because you took part in this research study?

Stellenbosch University https://scholar.sun.ac.za

No injury is anticipated in this study. If you feel emotionally upset after imparting your experiences, you will be referred to campus health for counselling if necessary.

Will you be paid to take part in this study and are there any costs involved?

- You will not be paid for taking part in this study*;* however, your transport costs will be covered, and you will receive a refreshment. There will be no other expenses involved on your part if you participate in this study.

Is there anything else that you should know or do?

- You can phone the Health Research Ethics Committee at 021 938 9677/9819 if there still is something that the researcher has not explained to you, or if you have a complaint.
- You will receive a copy of this information and consent form for you to keep safe.

Declaration by participant

By signing below, I …………………………………..………….. agree to take part in a research study entitled **Nursing students' perceptions of the barriers to apply theory to practice.**

I declare that:

- I have read this information and consent form, or it was read to me, and it is written in a language in which I am fluent and with which I am comfortable.
- I have had a chance to ask questions and I am satisfied that all my questions have been answered.
- I understand that taking part in this study is **voluntary,** and I have not been pressurised to take part.
- I may choose to leave the study at any time and nothing bad will come of it – I will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan that we have agreed on.

Signed at (*place*)......................…......……………….. on (*date*) …………...……….. 2021.

....

Signature of participant **Signature of witness**

Declaration by investigator

I *(name)* ………Petronella Chekerwa………………………………………..……… declare that:

- I explained the information in this document in a simple and clear manner to ……………………………………..
- I encouraged him/her to ask questions and took enough time to answer them.

Stellenbosch University https://scholar.sun.ac.za

- I am satisfied that he/she completely understands all aspects of the research, as discussed above.
- I did/did not use an interpreter. (*If an interpreter is used then the interpreter must sign the declaration below.)*

Signed at (*place*)......................……........……………….. on (*date*) …………....……….. 2021.

....

Signature of investigator **Signature of witness**

Permission to have all anonymous data shared with journals:

Please carefully read the statements below and think about your choice. No matter what you decide, it will not affect whether you can be in the research study, or your routine health care.

When this study is finished, we would like to publish results of the study in journals. Most journals require us to share your anonymous data with them before they publish the results. Therefore, we would like to obtain your permission to have your anonymous data shared with journals.

Tick the Option you choose for anonymous data sharing with journals:

I agree to have my anonymous data shared with journals during publication of results of this study

☐ Signature____________

OR

I do not agree to have my anonymous data shared with journals during publication of results of this study

☐ Signature____________

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 4: INTERVIEW GUIDE

Semi-structured interview guide

Socio-demographic information

Instruction: Dear Students,

The following questions below are asking for your socio-demographic data to be utilised on this research topic “Nursing students’ perceptions of the barriers to apply theory to practice”. Kindly insert your information in the spaces provided. The demographic information will describe the characteristics and composition of the research participants in the study.

Nationality:…………………………………………………………………………………..

Home Language:……………………………………………………………………………

Gender:…………………………………………………………………………………..…..

Age:……………………………………………………………………………………………

Number of years studied so far:……………………………………………………………

<u>The focus group discussions will be guided by the following questions:</u>

Introductory question

‘You have read the information leaflet and have agreed to participate in the study,1. What is your understanding of the application of theory to practice’?

Research objective 1.Explore nursing students’ perceptions on their ability to apply theory to practice without the guidance and supervision during their four-year course.

2. Which clinical skills are you able to accomplish/complete on your own without guidance and supervision?

Probes: What has allowed you to be able to accomplish these skills on your own?

What has allowed you to be able to link the theory to practice in the wards?

3. Reflecting on your four years completed, how confident do you feel in practising independently on receiving your qualification?

Stellenbosch University https://scholar.sun.ac.za

Research objective 2.Explore nursing students' perceptions on their ability to apply theory to practice with guidance and supervision during their four-year course.

4. Tell me which clinical skills you required guidance and supervision for to be able to achieve

Probes:

Why do you think that you were not able to achieve these tasks on your own?

Who provided you with guidance and supervision and what strategies were used?
Probes: Would you have preferred to have more support from the academic, clinical or facility's side? In which way was the support lacking? (Please provide examples)

Did peer interaction assist you in accomplishing tasks? If yes/ no. Can you elaborate?

5. Tell me about tasks which you still perceive to be beyond your reach?
Probes:

Why do you perceive that you are not able to accomplish these tasks?

Research Objective 3. Explore the barriers students encounter when applying theory to practice in clinical settings

7. Tell me about the challenges you experienced in the clinical settings in applying theory to practice.

Probes:

Can you identify similarities with what you had been taught in lectures and simulation to what you have experienced in the clinical settings?

Can you identify differences with what you had been taught in lectures and simulation to what you have experienced in the clinical settings?

How did you deal with the differences found between what you have been taught in the classroom and simulation with what you have experienced in the clinical setting?

Research Objective 4. Describe the strategies nursing students, suggest could be applied to facilitate the application of theory to clinical practice.

8. What strategies will allow you to apply theory to practice better?
Probes:

Stellenbosch University https://scholar.sun.ac.za

What strategies in the classroom will assist in the application of theory to practice?

What strategies in simulation skills training will assist in the application of theory to practice?

What strategies in the clinical settings will assist in the application of theory to practice?

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 5: LETTER OF AMENDEMENT

Approval Letter
Amendment

08/06/2022

Project ID: 23189

Ethics Reference No: S21/08/147

Project Title: Nursing students' perceptions of the barriers to apply theory to practice

Dear Ms P Chekerwa

We refer to your amendment request dated 03/05/2022.

The Health Research Ethics Committee (HREC) reviewed and approved the amendment as well as the following amended documentation through an expedited review process:

- Research Proposal_ 20220501.

Where to submit any documentation

Kindly note that the HREC uses an electronic ethics review management system, *Infonetica*, to manage ethics applications and ethics review process. To submit any documentation to HREC, please click on the following link: https://applyethics.sun.ac.za.

Please remember to use your project ID 23189 and ethics reference number S21/08/147 on any documents or correspondence with the HREC concerning your research protocol.

Yours sincerely,

Melody Shana
Coordinator: Health Research Ethics Committee1

National Health Research Ethics Council (NHREC) Registration Number:

REC-130408-012 (HREC1)•REC-230208-010 (HREC2)

Federal Wide Assurance Number: 00001372
Office of Human Research Protections (OHRP) Institutional Review Board (IRB) Number:
IRB0005240 (HREC1)•IRB0005239 (HREC2)

The Health Research Ethics Committee (HREC) complies with the SA National Health Act No. 61 of 2003 as it pertains to health research. The HREC abides by the ethical norms and principles for research, established by the

World Medical Association (2013). Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects; the South African Department of Health (2006). Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2nd edition); as well as the Department of Health (2015). Ethics in Health Research: Principles, Processes and Structures (2nd edition).
The Health Research Ethics Committee reviews research involving human subjects conducted or supported by the Department of Health and Human Services, or other federal departments or agencies that apply the Federal Policy for the Protection of Human Subjects to such research (United States Code of Federal Regulations Title 45 Part 46); and/or clinical investigations regulated by the Food and Drug Administration (FDA) of the Department of Health and Human Services

Page 1 of 1

Stellenbosch University https://scholar.sun.ac.za

APPENDIX 6: DECLARATIONS BY LANGUAGE AND TECHNICAL EDITORS

To whom it may concern

This serves as confirmation that I, Lize Vorster, performed the language editing and technical formatting of Petronella Chekerwa's thesis entitled:

Nursing students' perceptions of the barriers to applying theory to practice

Editing is done in track changes and the student has final control over accepting or rejecting changes at their own discretion. Technical formatting entails complying with the Stellenbosch University's technical requirements for theses and dissertations, as presented in the Calendar Part 1 – General or where relevant, the requirements of the department.

Yours sincerely

Lize Vorster
Language Practitioner

Vygie street 9, Welgevonden Estate, Stellenbosch, 7600 * e-mail: lizevorster@gmail.com * cell: 082 856 8221