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DISSERTATION

for the fulfilment of the degree in

MASTER OF NURSING

In the field of

NURSING

with the title:

**UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT
NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING**

FACULTY OF SCIENCE AND AGRICULTURE

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Declaration

This is to certify that the work is entirely my own and not that of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). This work has not previously been submitted in any form to the University of Zululand or any other institution for assessment or any other purpose.



02 February 2021

Signature of student

Date

Approved for final submission



02 February 2021

Dr. S.T. Madlala

Date

D: Nursing

Abstract

Introduction

The comprehensive Diploma in Nursing (General, Community, Psychiatry) and Midwifery Regulation R.425 of 22 February 1985, as amended, introduced by the South African Nursing Council (SANC) requires that student nurses be competent in all four disciplines (General, Community, Psychiatry and Midwifery) (SANC 1985:1). The teaching of theory and practice to students is a challenge in most training institutions, with regard to the clinical placement areas accredited by SANC for student nurse training. Acquiring clinical skills effectively requires the effective and active use of a fully equipped clinical skills laboratory to improve student nurses' competency and self-confidence in performing clinical skills to meet training objectives.

Aim of the study

The study aimed at exploring and describing the perceptions of the nurse educators in using clinical skills laboratories in teaching of student nurses at the Free State School of Nursing.

Methodology

A qualitative, explorative, descriptive and contextual design conducted the study. The literature and King's conceptual system guided and supported the study. Data collection was from 17 nurse educators, sampled purposefully using face-to-face individual unstructured interviews. Data saturation determined the sample size, reached after the 15th participant. Data was analysed thematically.

The study finding

Three major themes that emerged from the interviews were clinical skills laboratory environment, human and material resources, and financial constraints. The study revealed various challenges leading to ineffective use of the clinical skills laboratory in teaching student nurses' clinical practice, as alluded by the participants, based on the major themes and sub-themes.

Conclusion and recommendations

Data gathered from the participants revealed the nurse educators at the Free State School of Nursing experienced challenges in using the clinical skills laboratory in teaching clinical practice to student nurses. Therefore, the study recommended that

the design of the clinical skills laboratory should be in a manner that is user friendly for multiple teaching and learning, with adequate space to accommodate sizable numbers of students. Nursing school administration should consider budgeting the funds for refurbishing of the clinical skills laboratory, which should be available on an annual basis. Nurse education institutions' managers should consider developing a review of existing policies regarding the use of the clinical skills laboratory by nurse educators, support staff and student nurses to ensure effective teaching and learning of clinical skills occurs. Moreover, the study findings recommended the conducting of more research studies regarding the phenomenon.

Key words: Clinical skills laboratory; clinical skills; clinical teaching; nurse educators; student nurses

Dedication

I dedicate the dissertation to the Lord my Savior, thank you for your guidance and more especially, your protection. To my two angels, my son Tshepo and my daughter Retshepile; thank you for your support and understanding.

Philippians 4: 13

“I can do all things, through Christ who strengthens me.”

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- To my guardian angels in heaven, my father, Mpumelelo Mvandaba, and my mother, Maipato Mvandaba, you have never left me. I know that you have been looking down on me. Thank you for your protection. I know that you are proud of me
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LIST OF ACRONYMS

Acronym	Full term
CSL	Clinical Skills Laboratory
DHET	Department of Higher Education
FSDOHRU	Free State Department of Health Research Unit
FSSON	Free State School of Nursing
NEI	Nurse Education Institution
SANC	South African Nursing Council
SCT	Social Cognitive Theory
SGB	Sustainable Developmental Goal
UZREC	University of Zululand Research Ethics Committee

GLOSSARY OF TERMS

Nursing educator – A registered nurse whose primary area of interest, competence and professional practice is the education of nurses at Higher Education Institutions. (Mosby's Medical Dictionary, 2009: 1300). In this study, a nurse educator is a person employed as a lecturer at the nurse education institution.

Student nurse – A person training to be a nurse at a nursing school. In this study, a student nurse is an individual registered for a comprehensive four year programme Diploma in Nursing (General, Community, Psychiatry) and Midwifery (R425), or a Bridging Course for Enrolled Nurses leading to Registration as General Nurse (R683).

Clinical skills laboratory - An educational facility that has the potential benefit for undergraduate and postgraduate medical students and medical staff (Online Dictionary). In this study, a clinical skills laboratory is a space for simulating or demonstrating procedure and teaching clinical skills using diagnostic and therapeutic equipment.

Clinical skills – A set of knowledge and practices, which aim to develop the competencies necessary for the proper professional practice (Online Dictionary). In this study, clinical skills are abilities needed for rendering quality and safe nursing care to patients.

Nursing school – A type of educational institution or part thereof, providing education and training to student nurses to become a fully qualified nurse (Online Dictionary). In this study, a nursing school is a nurse education institution accredited by the South African Nursing Council to provide training for nurses.

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

Worldwide, integration of theory to practice for student nurse training has been an ongoing debate for decades. Many studies have consistently demonstrated that the use of a clinical skills laboratory has helped student nurses to integrate theory to practice during their clinical placements (Morgan, 2006: 1). Over the past decades, the training of nurses has always been an on the job practice in the hospitals, but with the growing numbers of students enrolling in the nursing programme recently, placement of students in clinical areas becomes a challenge due to limited number of available hospitals (Quyami,Pachev, Zheng, Ziv, Koval, Badiel and Cheng, 2014: 1). According to Papastravrou, Dimitriadou, Tsangari and Andreou (2016: 2) the advancement of technology across the world has had a positive impact in the trainingof nurses using the clinical skills laboratory. Training programmes for student nurses require the exposure of all students to clinical learning opportunities.

The comprehensive Diploma in Nursing (General, Community, Psychiatry) and Midwifery Regulation R.425, of 22 February 1985, as amended, introduced by the South African Nursing Council (SANC) requires that student nurses be competent in all four disciplines (General, Community, Psychiatry and Midwifery) (SANC 1985: 1). These students learn both theory and practice, which becomes a challenge in most training institutions regarding the clinical placement areas accredited by SANC for student nurse training. Student nurses learn cognitive domain in the classrooms, and psychomotor skills, which they need to practice in clinical areas when placed on rotational basis in all four nursing disciplines (Jamshidi, Molazem, Sharif, Torabizadeh and Kalyani, 2016: 1). The psychomotor skills that need practicing in clinical areas may become ineffective due to large numbers of students, unavailability of resources and limited number of accredited clinical areas for student nurse training.

Nationwide, nursing colleges are currently upgrading their clinical skills laboratories in preparation for accreditation and movement to higher education for training of new nursing qualifications as proposed by SANC, Circular No 1/2018. According to Haraldseid, Friberg and Aase (2015: 2), the design of a clinical skills laboratory is to resemble a hospital ward to optimise the simulation of clinical learning. It is a place

with models and equipment similar to that used in patient care in the hospital units.

Papastravrou, Dimitriadou, Tsangari and Andreou (2016: 2) concur by stating that the learning environment in clinical skills laboratories is a place where the theoretical components of the curriculum integrate with practice, and transform into professional skills and attitudes within an emotionally safe environment. The authors further alluded that a clinical skills laboratory allows students to practice psychomotor and affective skills, acquire critical thinking skills, make mistakes, correct themselves and learn all the necessary steps required without the fear of posing life-threatening events to the patient (Papastravrou *et al.*, 2016: 2). Acquiring clinical skills requires an effective and active use of a fully equipped clinical skills laboratory to improve student nurses' competency and self-confidence in performing clinical skills to meet training objectives. Therefore, the study sought to explore the perceptions of lecturers regarding the use of a clinical skills laboratory for student nurse clinical teaching in the Free State School of Nursing.

1.2 PROBLEM STATEMENT

Worldwide, nursing education consists of theory and practice components, and covers cognitive, affective and psychomotor learning fields (Uysal, 2016: 2). Those learning fields cover the use of various teaching and learning strategies in different teaching environments, including clinical skills laboratories. Amany (2017: 5) stated that many NEIs use clinical skills laboratories to teach nursing skills to student nurses prior to their placement in clinical areas. A clinical skills laboratory is regarded as a safe and controlled learning space that offers student nurses the opportunity to learn psychomotor skills and integrate theory with practice, allowing them to experience self-learning, and help them to enhance their readiness for an actual clinical placement (Uysal, 2016: 2). Clinical skills laboratories require competent nurse educators knowledgeable in using various teaching methods within such environments.

Although a review of the literature showed that nursing educators were exploring innovative ways to transition students successfully to clinical practice, few studies focused on perceptions of nurse educators' effective teaching in clinical skills laboratories (Petrova Staykova, Von Stewart and Staykov, 2017: 153). Existing studies often targeted students' perceptions of influencing factors, such as positive attitude, time, affiliation to the ward, and personalisation of learning experiences (Haraldseid,

Friberg and Aase, 2015: 2). Furthermore, Freeth and Fry (2005: 272) concur that there are existing studies focusing on the perceptions of nurse educators in using clinical skills laboratories in teaching and learning as a research topic in itself. The nurse educators at the FSSoN faced challenges of effective use of clinical skills laboratories because of lack of technological knowledge in using high fidelity manikins, and lack of fully equipped resourced and functional skills laboratories, among others. Hence, this study focused on nurse educators' perceptions regarding the use of clinical skills laboratories in teaching and learning of student nurses.

1.3 AIM OF THE STUDY

The study aimed to understand the perceptions of the nurse educators in using clinical skills laboratories in teaching of student nurses at the Free State School of Nursing.

1.4 OBJECTIVES OF THE STUDY

The objectives of the study were to:

- Explore the perceptions of nurse educators regarding the use of clinical skills laboratories in teaching of student nurses.
- Describe factors contributing to the use of a clinical skill laboratory in the teaching of student nurses by nurse educators.

1.5 SIGNIFICANCE OF THE STUDY

The SANC issued a circular to all the nurse training institutions regarding the phasing out of the legacy qualification by 2020; all nursing institutions, including the Free State School of Nursing, were re-curriculating their programmes in preparation for accreditation of their new programmes with SANC and Department of Higher Education and Training (DHET) (SANC Circular, 1/2018). The study findings and recommendations are aimed at assisting the nursing schools who are developing and improving their clinical skills laboratories for their use in teaching clinical practice. The study findings were further aimed at contributing to the nursing schools' management and policy development pertaining to the use of clinical skills laboratory as a model to be considered when planning the environment of teaching clinical skills practice to student nurses. Furthermore, the study findings and recommendations will assist the nursing schools in the improvement of in-service training of the nurse educators to

equip them with knowledge on how to use the clinical skills laboratory in teaching student nurses. Moreover, the study identified existing gaps within the body of knowledge that recommended future research to be conducted based on the findings of the study.

1.6 STRUCTURE OF DISSERTATION

Table: 1 The structure of the dissertation

CHAPTERS	TITLE	CHAPTER OUTLINE
CHAPTER 1	Introduction and background of the study	Introduction and background, problem statement, aim, objective and the significance of the study
CHAPTER 2	Literature review and theoretical framework	Introduction, global perspective of the use of clinical skills laboratory, Sub-Saharan and South African views of clinical skills laboratory
CHAPTER 3	Research Methodology	Research paradigm, design and methodology, study setting and population, sampling process, technique and size, data collection, data analysis, trustworthiness and ethical consideration
CHAPTER 4	Presentation of the study findings	Presentation of the findings from data analysis
CHAPTER 5	Discussion of the study findings	Summary and discussion of findings, conclusion about the use of clinical skills laboratory in the Free State School of Nursing and the study findings and recommendations thereof

1.7 CONCLUSION

Chapter 1 introduced the study and the background, and discussed the aims, objectives and the significance of the study. The utilisation of clinical skills laboratory by nurse educators in teaching student nurses is important for providing an educational environment where student nurses receive assistance to integrate theory to practice. Also outlined were the chapters making up the dissertation. Chapter 2 will discuss the literature review to get a broader perspective on the use of clinical skills laboratory.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will discuss the literature review used to conduct the study. The purpose is to present the accumulated body of knowledge covered in Global, Sub-Saharan African, South African and local studies on the utilisation of clinical skills laboratories by nurse educators for teaching of student nurses. Primarily, the university library was utilised to search for books and journals that related to the topic on clinical skills laboratory related topics. Before engaging in the searches, a set of keywords and concepts were decided upon. In order to assemble the group of keywords that would be used in the search, a mind map was drawn so that all relevant publications in the area of interest could be identified. Relevance of the publication refers to how closely the information relates to the topic (Palmatier, Houston and Hulland, 2018: 1). The internet search engines such as Google Scholar, EBSCOhost and World Wide Web used to access articles, journals and books, utilised keywords such as: clinical skills laboratory, perception, challenges, student nurses, clinical learning. The literature used consisted mostly of primary sources regarding the phenomenon and less than five years being published unless the information in older publication was valuable to this study.

2.2 GLOBAL PERSPECTIVES OF THE USE OF A CLINICAL SKILLS LABORATORY

Worldwide health institutions have gone to considerable lengths to create educational facilities dedicated to the teaching of clinical skills to students. The first clinical skills laboratory was established in Maastricht, at the Netherlands Limburg University in 1976 (Abdulmohsen and Al-Elq, 2007:3). Since then many medical schools and educational institutions have integrated clinical skills laboratories into their curricula as stated by (Abdulmohsen *et al.*, 2007:3). Globally, there are clinical skills laboratories in various innovative teaching health professional training institutions, including, among many others, the Universities of Leeds, Dundee, Dublin, Southampton and Liverpool, Imperial College in London and Arab Emirates University in the United States of America (Amanya, 2017: 5). These clinical skills laboratories are effective for demonstrating, practicing and assessing students' competencies in performing required procedures

in various disciplines including nursing. The goal of the skill laboratory is to offer students an introduction to skills commonly performed in patient care scenarios. An early exposure to these procedural tasks permits the development of competency-based training (Amanya, 2017: 5).

The growth of clinical skill laboratories is sporadic worldwide. Kirwa (2016: 1) asserted that nursing students appreciate repetitive nursing skills practice. This repetitive practice of nursing skills is attainable by fostering a good foundation of the use of clinical skill laboratories throughout nursing schools (Kirwa 2016: 1). Nursing students commence practical training from the first semester of registration to ensure they grow and acquire experience. Raurell-Torredà, Olivet-Pujol, Romero-Collado, Malagon-Aguilera, Patiño-Masó and Baltasar-Bagué (2015:36) and Felton and Royal (2015: 41) state that when students master the techniques they become confident, they erase uncertainty and fear of making mistakes, thereby, boldly seeking to learn more skills while retaining those already learnt. Studies have shown that students become anxious and worried when practically attending to a patients' needs due to lack of sufficient skills, poor self-confidence, lack of preparedness and lack of knowledge (Jamshidi, *et al.* 2016: 1). Ethically, students are required to master basic procedures before practicing on patients (Kirwa, 2016:1). Hence, the use of a clinical skills laboratory is ideal in teaching clinical skills to student nurses to equip them with necessary skills and knowledge before performing those skills on real life patients.

According to Bvumbwe and Mtshali (2018:2), nursing education continues to experience under-investment, static and rigid curriculum, lack of inter-professional preparation of nurses, lack of coordinated collaboration and support from stakeholders. Therefore, in order to meet these challenges, the establishment of clinical skills laboratories was to increase patients' safety and foster proper foundations early in their nursing studies. Morgan (2006:1) alluded that many studies across Europe have consistently demonstrated that the use of clinical skills laboratories have helped students integrate theory to practice during practice placements. The changes in the teaching and learning methods, the radical changes in healthcare delivery, the rapid growth of technology and challenges in the traditional way of clinical skills development led to the emergence of clinical skills laboratories in healthcare training institutions worldwide (Amanya, 2017: 5).

2.3 SUB-SAHARAN VIEWS OF A CLINICAL SKILLS LABORATORY

Nurse training is undergoing rapid transformation due to the high demand for nurses globally (WHO, 2011: 22). This transformation requires that training institutions should keep up with the current use of high technological training facilities to produce a competent nursing workforce. The high demand of nurses puts the nurse training institutions under constant pressure of increasing the student nurse intake, despite the limited number of clinical areas used for work-integrated learning. This leads to the demand for the use of high technology equipped skills laboratory to train student nurses.

In Sub-Saharan Africa, many training institutions aim to establish and improve their clinical skills laboratories to ensure effective and reliable clinical skills' teaching of student nurses (Kpodo, 2015: 2). This may come with various challenges, such as lack of funds, inadequate laboratory infrastructure, resistance to use skills laboratory and poor technology literacies among the nurse educators (Elbireer, Opio, Brough, Jackson and Manabe, 2011: 5). This is supported by Kpodo (2015: 2) by stating that in Sub-Saharan countries, most nurse educators involved in teaching student nurses are teachers without an advanced degree in nursing education. This becomes a challenge in the utilisation of clinical skills laboratories as a method of clinical teaching of student nurses. Therefore, there is a need for an effective and efficient nursing education system in Sub-Saharan countries to ensure that the nurses produced are efficient and well equipped with clinical skills knowledge (Bvumbwe *et al.*, 2018: 1).

According to Kpodo (2015: 2) Kenya and Uganda have seen a rapid growth in private training institutions to increase the supply of nurses in the country. This adds to the number of students placed at the limited clinical areas for their clinical practice (Kpodo, 2015: 2). Hence, it is imperative that the nurse training institutions utilise the clinical skills laboratories in the training of student nurses. Van Vuuren (2016: 80) agrees that simulation of nursing skills experience in a clinical skills laboratory helps to reduce anxiety in students prior to their physical contact with the patients. Moreover, students will gain knowledge from this structured form of learning, under close supervision, and on-the-spot feedback, which takes place within the context of the clinical skills laboratory. It remains imperative that student nurses face exposure to the use of a skills laboratory to practice various procedures and master a high degree of psychomotor proficiency before performing skills on live patients (Van Vuuren, 2016:

80). Hence, it is important to explore the nurse educators' knowledge in using a clinical skills laboratory for teaching of student nurses.

2.4 SOUTH AFRICAN VIEWS ABOUT THE USE OF CLINICAL SKILLS LABORATORY

The South African Nursing Council has accredited the Nurse Education Institutions (NEIs) with the introduction of the new qualifications according to SANC Regulation R173 (2013: 5). This transformation will require that the NEIs have clinical skills laboratories that are fully equipped and functional for the clinical teaching of student nurses. This proposed model of clinical teaching and learning in South Africa requires that 70% of clinical acquired credits have to be supervised and mentored (Tenza, 2015: 13). Therefore, the NEIs are required to establish their clinical skills laboratories to enhance the teaching of various procedures to student nurses in a safe environment prior to the application of those procedures on real life patients.

Student nurses rely on the nurse educators' teaching to increase the period spent in clinical area learning and perfecting the art of clinical skills to comply with the nursing requirements of clinical teaching. Therefore, effective clinical teaching in a clinical skills laboratory is essential to produce knowledgeable and skillful nurse practitioners who are confident, and actively involved in a multidisciplinary health team (Okoronkwa, OnyianPat, Agba, Okpala and Ndu, 2013:63; Tenza, 2015: 24). This is achievable through the active use of clinical skills laboratories by nurse educators to teach clinical skills to student nurses.

According to SANC Regulation R173 (2013: 5), in order for the NEIs to be accredited for the purpose of student nurse training they should have a formal agreement with relevant authorities to secure clinical placement areas to place student nurses during their training. These training facilities must provide learning opportunities meeting the needs of students placed for their clinical learning, accompaniment and supervision (SANC, 2013: 5). In addition to this, the NEIs are required to utilise clinical skills laboratories to expose student nurses to patient-simulated procedures before placing them in different clinical facilities. Rikhotso, William and De Wet (2014: 1) stated that there are still uncertainties in South Africa with regard to who is responsible to facilitate learning in the clinical skills laboratories and there is often a shift of this role between nurse educators and registered nurses. However, clinical skills laboratories are widely

used in nursing education institutions to allow students to acquire the appropriate clinical competence in their different levels of study (Rikhotso, William and De Wet, 2014:1).

According to Msosa (2017:2), with the emerging technology, the clinical skills laboratory has expanded from being just a center for psychomotor skills practice to serving as a multifunctional teaching and learning center. Msosa (2017:2) further asserts the clinical skills laboratory, is regarded as a learning resources center, is a central hub of clinical instruction for students. In the study conducted by Tenza (2015:19) it is indicated that students and nurse educators lack commitment in the use of the clinical skills laboratories, as viewed in anecdotal evidence and laboratory attendance records, which indicate students use the facility irregularly and infrequently despite specified practical hours (Tenza,2015:19). Clinical skills laboratory is a recommended strategy to support students' development of clinical skills, however there is little research evidence about perceptions of the nurse educators' involvement in its use in teaching students.

2.5 THE USE OF CLINICAL SKILLS LABORATORY IN THE FREE STATE SCHOOL OF NURSING

The Free State School of Nursing is in Free State Province, and has three campuses situated in three regions; the Eastern, Northern and Southern regions of the province. The school offers a four-year comprehensive Nursing Diploma in Nursing Science (General, Community and Psychiatry) and Midwifery (R425) and a Bridging Course for Enrolled Nurses leading to Registration as General Nurse (R683). Nurse educators use the Clinical Skills Laboratory to demonstrate procedures to the students before their placements in different clinical areas. In these training programmes, a minimum of 4000 hours and 2000 supervised experience hours in clinical practicum is mandated (SANC R.425 and R.683). Student nurses face exposure to clinical training areas from their first year of study enrolment up to the end of their four (4) year study programme. According to Tenza (2015:13), nursing is a physical, practice-based profession hence clinical teaching is of vital importance.

Although there are clinical skills laboratories within the Free State School of Nursing used to teach clinical skills to student nurses, several challenges exist. These challenges include poor physical infrastructure, lack of availability of laboratory

equipment, manikins that are static and a lack of computer software to allow instructors to install programmes to imitate certain life-threatening situations. Many manikins remain in boxes, unused because of educators' lack of knowledge to operate them. Mathebula (2016:17) indicated that student's loose compassion for nursing because it becomes challenging to practice in clinical areas due to lack of clinical skills and shortages of clinical resources. Clinical skills laboratories require nurse educators who have clinical and theoretical expertise in the use of this teaching strategy to cope with student's demands.

There is a need for the teaching of communication skills in clinical skill laboratories. This gap in communication skills ranges from lack of updated knowledge and skills, lack of preparedness by students and unprepared clinical nurse educators for clinical teaching (Eta and Cruz, 2011:1). Large numbers of students, whose accommodation is not possible all at once, have an influence on the use of the clinical skills laboratory. According to Uwimama (2009:18), learning in a safe and controlled simulated area is conducive to learning clinical skills. Hence, it is vital that the nurse educators facilitate clinical teaching and learning in the skills laboratories.

2.6 FACTORS CONTRIBUTING TO INEFFECTIVE USE OF THE CLINICAL SKILLS LABORATORY

Clinical experience is an important aspect in nursing education as it transforms theoretical knowledge into practice and is the cornerstone of nursing as a health profession. Labeeb, Rajith, Ibrahim and Kamal (2017:141) further state it is an excellent opportunity for learning and a more hands on experience and, based on availability of equipment, forms effective communication with students and nurse educators, and encourages personal motivation. An effective use of the clinical skills laboratory enhances the clinical learning of student nurses. Clinical skills are composed of acquiring knowledge in the use of psychomotor, cognitive and affective domains, therefore it is imperative to utilise the clinical skills laboratory in practicing clinical skills (Uwimama, 2015:42). Numerous factors affect the use of clinical skills laboratory, such as student related factors.

2.6.1 STUDENT RELATED FACTORS

Kololo, Mirisho, Chipwaza, and Nyangena (2019:1) pointed out anxiety among students as a major factor affecting their performance in clinical practice, due to lack of experience and fear of making mistakes. Haraldseid, Friberg and Aase (2015:5)

were of the view that time constraints in using the clinical skills laboratory with limited resources was a major factor interfering with students' acquisition of clinical skills. The study findings of Labeeb, *et al.*, (2017:149) supported this and revealed that student nurses expressed the need for more clinical skills laboratory hours to practice and master the procedures. Furthermore, the similarities between the clinical skills laboratory and clinical area increased their confidence in practicing the procedures in the clinical areas (Labeeb, *et al.*, 2017:149).

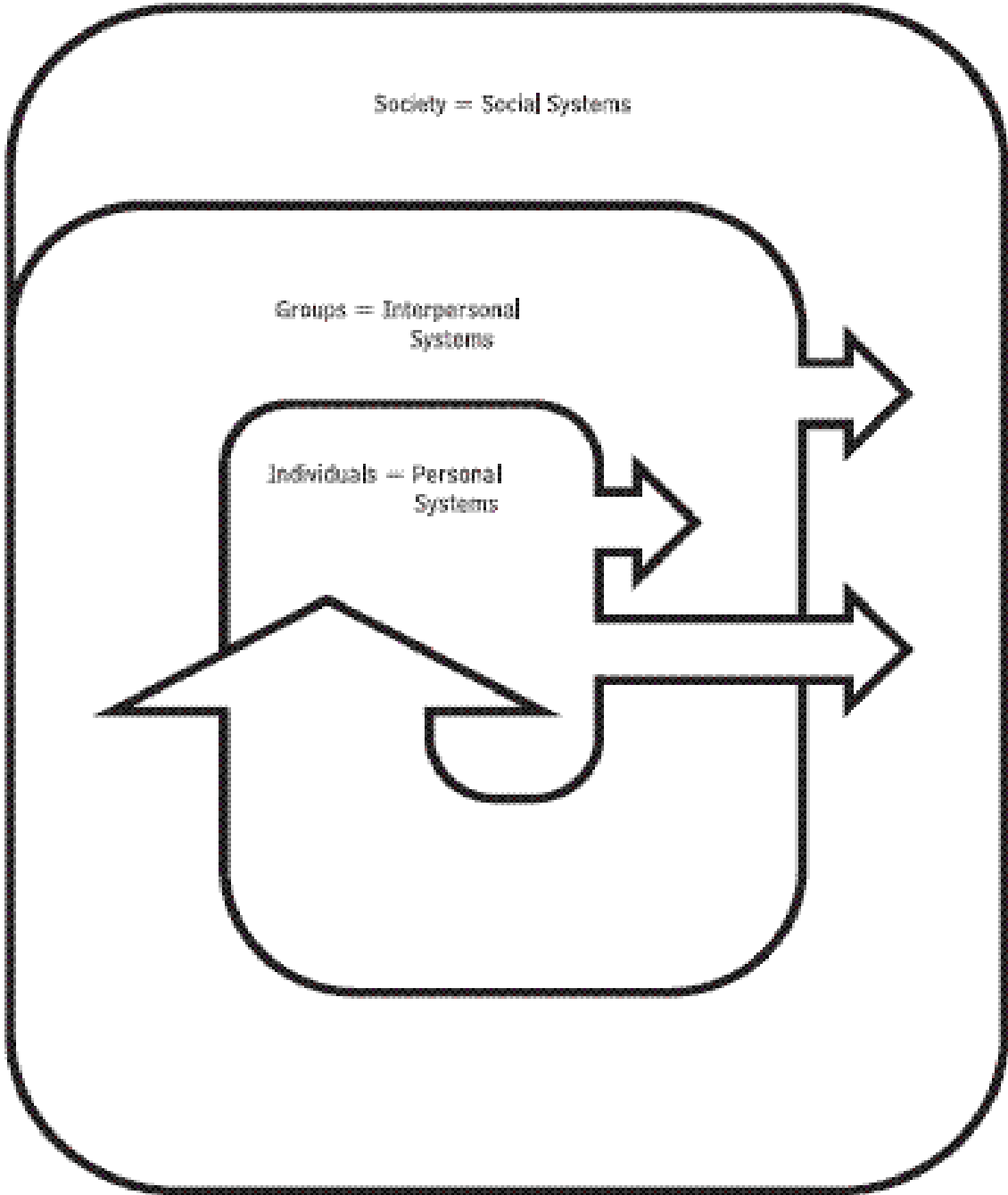
The integration of both theory and practice with good clinical supervision in the clinical skills laboratory could enable student nurses to feel confident with their abilities to render safe nursing care to real patients (Khoza, 2018:104). Learning experienced in the clinical skills laboratory forms an important component of nursing education, considering that nursing is a practice-based profession that requires competent practitioners to render safe and quality nursing care to patients in clinical areas (Khoza, 2018:104).

2.7 THEORETICAL FRAMEWORK THAT GUIDED THE STUDY

A theoretical framework shaped the inquiry in the sense that it provided a frame within which a problem under investigation was understood (Bryman, 2012:20). The framework of the study assisted the researcher in organising the study and provided a context in which the researcher assessed the problem, collected and analysed data, and reported on the findings (Brink, van der Walt and Van Rensburg, 2012:26). Moreover, the framework organised ideas and assisted in showing that the study was a logical extension of existing knowledge (Brink, *et al.*, 2012:26).

This study was guided by King's conceptual system, as identified by George of personal systems, interpersonal systems and the social systems (George, 1985: 234). King summarised conceptual system as focusing on human behaviour and each personal system represented an individual. When individuals interact with others, they form interpersonal systems. Ultimately, when a group interacts with one another it forms social systems. **Figure 1** represents King's dynamic interacting systems.

Figure 1
King`s Dynamic Interacting Systems (King, 1980, p. 20)



King's conceptual systems and their application to the study

2.7.1 Personal system

According to George (1985: 234), each individual is a personal system consisting of the following concepts, as illustrated in **Table 2**:

Table 2: Personal system

Concept	Application to the study
Perceptions	King referred to perception as a process in which data obtained through the senses and from memory are organised, interpreted and transformed (George, 1985: 234). Therefore, in this study the nurse educator's perceptions regarding the use of CLS in teaching of student nurses was organised, interpreted and transformed into a meaningful finding during the discussions of the study findings.
Self	King explained the concept of self as thoughts, feelings related to one's awareness of being a person separate from others, including attitudes, ideas, values and commitment (George, 1985: 234). In this study, the application of the concept of self was to explore the nurse educators' thoughts, feelings, attitudes, ideas values and commitment in using CLS in teaching of student nurses.
Growth and development	King defined this as a process in people's lives through which they moved from a potential for achievement to actualisation of self (George, 1985: 234). Therefore, in this study the application of the concept was to describe the nurse educators' use of CLS in teaching of student nurses to grow and develop professionally in a nursing profession.

2.7.2 Interpersonal system

According to George (1985: 237), interpersonal system is formed by the interaction of human beings. King's conceptual system further stated that the complexity of the interactions increased as the number of people interacting increased (George, 1985: 237). **Table 3** illustrates the application of the concepts of interpersonal system.

Table 3: Interpersonal system

Concept	Application to the study
Communication	Communication involved the exchange of information between persons, occurred through face-to-face, electronic media and through the written word (George, 1985: 237). The concept explored the nurse educators' perceptions in using CSL in teaching student nurses' various clinical skills including communication.
Stress	King defined stress as an ever changing condition, which has an open system process of exchange of information and energy with the purpose of regulating and controlling stressors (George, 1985: 237). In this study, stressors that dominated the nurse educators in the use of CSL in the training of student nurses gathered during data collection and analysed, which was then discussed in the study findings to make recommendations.

2.7.3 Social system

A social system is a structured large group in a system that included the roles, behaviors and practices defined by the system for the purposes of sustaining desirable attributes and for creating methods that maintained the practices and rules of the system (George, 1985: 238). Therefore, the application of the concepts of social systems are as indicated in **Table 4**:

Table 4: Social system

Concept	Application to the study
Organisation	George (1985: 238) stated that the organisation was characterised by a structure that ordered positions and activities and included formal and informal arrangements of people to gain both personal and organisational goals; in this study, the organisation was the Free State School of Nursing, where nurse educators were employed to teach student nurses in the CSL. This was to ensure the fulfilling of the training goals of the organisation, and whether the nurse educators had reliable

	resources that fulfilled the organisational goals.
Authority	King defined authority as an active, reciprocal process of transaction in which an actor's experience, understanding, and values influenced the meaning, legitimacy and acceptance of those in organisational positions associated with authority (George, 1985: 238). The concept was applied in the study by exploring the nurse educators' perceptions, understanding, influences they had in using CSL in teaching of student nurses.
Decision making	The definition of the concept is as a changing and orderly process through which choices related to goals were made among identified possible activities and individual or group actions taken to move towards the goal (George, 1985: 238). In this study, the decision making process of nurse educators in using CSL in teaching student nurses was described and explored.

The use of the concepts from King's conceptual system framework during the findings of the study regarding the phenomenon assisted the researcher in reporting the study findings in a scientific manner.

2.8 CONCLUSION

Chapter 2 reviewed literature regarding the use of clinical skills laboratory by nurse educators and clinical instructors in teaching clinical practice to student. A discussion followed of the theoretical framework that guided the study. Chapter 3 discusses the research study design and methodology used to conduct the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 3 discusses the research design and methodology used in the study, the sampling process, sampling technique, study setting, data collection process, data analysis, trustworthiness and ethical considerations.

3.2 RESEARCH PARADIGM

A paradigm is a worldview, general perspective on complexity of the world. Paradigms for human inquiry are often characterised in terms of the ways in which they respond to basic philosophical questions, such as what is the nature of reality? (ontologic), and what is the relationship between the enquirer and those being studied (epistemology) (Polit and Beck, 2012: 9). The researcher has adopted the constructivist worldview to inform the study based on the qualitative nature of the study. Polit and Beck (2014: 8) stated that for the naturalistic enquirer, reality is not a fixed entity but rather a construction of the people participating in the research; reality exists within a context, and many constructions are possible. Moreover, individuals developed subjective meanings of their experiences – meanings directed toward certain objects or things. These meanings were varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into few categories or ideas. The voices and interpretation of the study participants were crucial in exploring and describing the perceptions of nurse educators in using clinical skills laboratory for teaching of student nurses at the School of Nursing in the Free State Province.

3.3 RESEARCH APPROACH AND DESIGN

Polit and Beck (2012:99) describe a research design as being the overall plan for addressing a research question, including specifications for enhancing the study's integrity. Vosloo (2014:316) concurs with Polit and Beck (2012:99) that a research design focuses on the final product and all the steps in the process to achieve the anticipated outcome. This study employed a qualitative, explorative, descriptive and contextual design.

3.3.1 Qualitative design – Botma *et al.*, (2010: 182) referred to qualitative design as a systemic approach used when the little is known about the topic, it can also be used to examine the problem which is not clear or which is not clearly understood in order to give it a meaning. According to Brink *et al.*, (2012:121) qualitative design can be used by the researcher to focus on the experience and understanding of participant's perception on their actions. The researcher considered the use of the qualitative design to explore the perceptions of nurse educators in utilising the clinical skills laboratory for teaching of student nurses.

3.3.2 Descriptive design - According to Brink *et al.* (2012: 112), a descriptive design uses the practice of that time to identify problems and to make a decision on what others with common situations were doing. Through a descriptive design a researcher can find new meaning, describe what existed, establish how frequently the particular phenomenon occurred and classify the information (Burns and Grove, 2011: 34). In this study, the researcher intended to describe factors that contributed to the use of clinical skills laboratories by nurse educators in the teaching of student nurses.

3.3.3 Explorative design – the use of explorative design is if there is little or no research about the phenomenon (Botma *et al.*, 2010: 185). Polit and Beck (2014: 13) supported this by stating that it is aimed at understanding the full nature of a situation, the way in which it manifested and all other factors which caused it. In this study, the researcher used an explorative design to explore the perception of the nurse educators in utilising the CSL to teach student nurses.

3.3.4 Contextual design – Holtzblatt and Beyer (2014: 16) stated that a contextual design was a user-centered process that used comprehensive field research in managing innovative design. Therefore, the researcher contextualized the findings of the study following the description of the factors that contributed to the use of CSL.

3.4. STUDY SETTING

The study was conducted in Free State Province, which is situated within the borders of KwaZulu-Natal Province, Gauteng Province, Northern Cape Province, Eastern Cape Province and Lesotho. This province consists of five districts namely, Thabo Mofutsanyana District in the Eastern Free State, Fezile Dabi and Lejweleputswa in the Northern Free State and Mangaung District and Xhariep District in the Southern Free State. According to Statistics South Africa (2019: vi) the Free State Province had a population of approximately 2887,465 in 2019. The Free State School of Nursing

consists of three campuses accredited by SANC for the training of student nurses under Regulation R.425 for a four-year course leading to registration as a Nurse (General, Psychiatric Community) and Midwife, Regulation R.683 for a two-year course leading to registration as a General Nurse (Bridging Course) and Regulation R.271 for the training of a one-year Midwifery. The Eastern Campus of the Free State School of Nursing is situated at the Thabo Mofutsanyana District, the Northern Campus is situated in the Lejweleputswa District and the Southern Campus is situated in the Mangaung Metropolitan.’

3.4.1 Study area inclusion criteria

- All the Free State Schools of Nursing offering Regulation R.425 for a four- year course leading to registration as a Nurse (General, Psychiatric Community) and Midwife, Regulation R.683 for a two-year course leading to registration as a General Nurse (Bridging Course) and Regulation R.271 for the training of a one-year Midwifery.

3.4.2 Study area exclusion criteria

- Other Schools of Nursing offering Regulation R.425 for a four-year course leading to registration as a Nurse (General, Psychiatric Community) and Midwife, Regulation R.683 for a two-year course leading to registration as a General Nurse (Bridging Course) and Regulation R.271 for the training of a one-year Midwifery not within the Free State Province.

Figure 2 presents the map of the Free State Province Districts in which the Free State School of Nursing campuses are situated (Google Map of Free State, 1997).

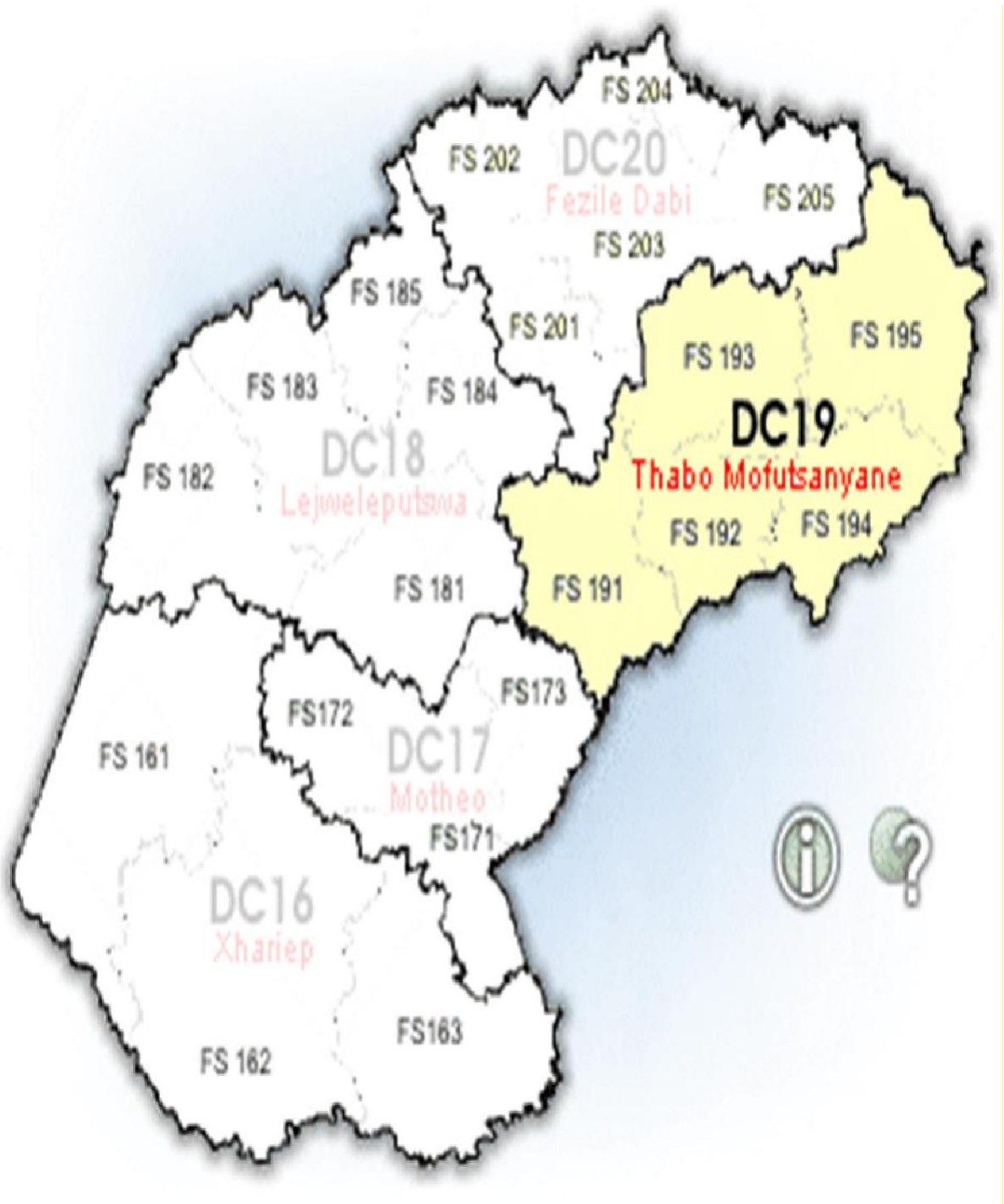


Figure 2: Map representing Free State School of Nursing per District (Google map of Free State 1997).

3.5. STUDY POPULATION

According to Botma *et al.* (2010: 200), the study population is all the elements (individuals, objects, or substances) or aggregation of cases meeting certain inclusion criteria for a given universe and in which the researcher is interested. Furthermore, Brink *et al.* (2012: 131) agreed that a population is an entire group of persons or objects of the interest to the researcher. The target population for this study was all the nurse educators employed at the Free State School of Nursing who met the inclusion criteria.

3.5.1 Identification of study participants

According to Burns and Grove (2011: 84), the researcher enlists participants to take part in a study because of their particular knowledge, experience or views related to the study. The researcher identified nurse educators employed at the Free State School of Nursing, in the Northern and Southern Campuses, as they were knowledgeable and had experience in using the clinical skills laboratory for teaching of student nurses. The Eastern campus participants were not included in the study due to the fact that the researcher conducted the pilot study in that campus.

3.6. SAMPLING PROCESS

Polit and Beck (2014: 177) describe sampling as a process that involves selecting a part of the population to represent the total population, and the findings from the sample represent the rest of the group. A purposive sampling technique was employed in this study as the research participants cover a full range of perspectives.

3.6.1 Inclusion criteria

- All the nurse educators working at the School of Nursing in the Free State Province who were above 18 years of age.
- All nurse educators who use CSL in teaching student nurses' clinical practice.
- All nurse educators willing to voluntarily participate in the study.

3.6.2 Exclusion criteria

- All nurse educators in the Free State Province not working at the School of Nursing.

- All nurse educators under the age of 18 years and not willing to participate in the study.

3.6.3 Recruitment Procedure

During recruitment, a purposeful sampling technique selected the participants. According to Botma (2010: 201) the choice of participants is because they demonstrate features of interest for a particular study and have knowledge and experience about issues under study. Polit and Beck (2014: 285) agree that a purposeful sampling is a strategy in which the researcher purposefully selects the cases that best contribute to the study. In this study, the researcher approached nurse educators working at the Northern and Southern Free State School of Nursing (FSSoN) Campuses, based on their knowledge and experience in using clinical skills laboratories for teaching student nurses. In total, 17 participants received information letters (Annexure A), explaining the aim of the study, to read and understand before being asked to sign the voluntary consent forms (Annexure B) giving permission to participate in the research study without coercion. The information letter and consent form were in English which was the universal medium of instruction and communication in the FSSoN. The researcher visited the two campuses from Monday to Friday during working hours in October to November 2020, and interviewed the nurse educators during their lunch times to avoid interrupting their working schedules.

3.6.4 Codebook for data definition

The researcher developed the codebook, following the sampling process, which identifies and defines each variable in the study. The codes, as detailed in the codebook, were used from data collection until the end of reporting the study's findings to ensure there was no link between the study data and the data sources. This was to safeguard the study's participants by ensuring confidentiality and anonymity. The study areas included in the study were all allocated codes (A and B), as detailed in **Table 5**. All the study participants (nurse educators) received code numbers (P1) for identification purposes depending on the number of interviews done in each study area.

Table 5: Coding of the study areas and the participants

Study areas	Study area code	Participants
Northern Free State School of Nursing	A	AP1 AP2
Southern Free State School of Nursing	B	BP1 BP2

3.6.5 PRE-TESTING

A pre-test is a study done on a smaller scale in order to explore the reliability and feasibility of the proposed study (Brink, 2018: 161). The interviews took place with two (2) participants at the Eastern Campus Free State School of nursing, which was not part of the main study. Participants responded well as the questions were clear and understandable. The findings of the pre-test did not appear in the main study's data.

3.7 DATA COLLECTION

In this study, unstructured individual face-to-face interviews were the data collection method. During an unstructured interview, the researcher poses a certain number of specific questions followed by additional probes (Brink *et al.*, 2012: 158). Unstructured interviews seldom take a long time and are usually based on a long period of inquiry developed by the researcher in advance of the interview (Creswell, 2016: 93). Botma *et al.* (2010: 208) support this statement and agree that the unstructured interview is used to gain a detailed picture of a participant's beliefs about, or perceptions or account of a particular topic.

The researcher visited nurse educators employed at the Northern and Southern Campuses in the Free State School of Nursing who met the inclusion criteria. The face-to-face individual interviews took place in a private room to ensure privacy and promote confidentiality. Chairs, tables, hand sanitisers and face masks were available and the seating arranged in such a way that social distancing was maintained to observe Corona Virus regulations. The researcher and the participants sanitised hands and wore face masks throughout the interviews. The researcher informed participants that their names would not be used in this study,

instead they would receive a code to ensure confidentiality. The researcher made known to the participants that field notes would be taken using a pen and a paper during the interviews and their verbatim responses would be recorded with the participants' permission.

The interview commenced with an open-ended tour guide question regarding their perception in utilising clinical skills for teaching student nurses. As the interview flowed, follow up occurred by asking probing questions to get rich information to meet the objectives of the study. The interviews were conducted in English as it was the universal medium of instruction and communication in the FSSoN. Each interview lasted for about 30 minutes to an hour, depending on the new emerging data. Field notes were taken and participants' verbatim responses recorded using a voice recorder, which was placed in a good position to capture the voice of the participants clearly. The researcher captured the participant's non-verbal responses, such as forehead and facial expressions, nodding and moods during data collection. The researcher conducted interviews with 15 participants before reaching data saturation, followed by two additional interviews to validate data saturation.

3.8. DATA ANALYSIS

Data analysis in qualitative studies is based on an interpretative philosophy aimed at examining meaningful and symbolic content of qualitative data (Creswell, 2016:109). Data analysis is a process that involves making sense of text and image data (Botma *et al.*, 2010: 220). It involves preparing data for analysis, conducting different analysis, moving deeper into understanding, and presenting and interpreting the larger meaning of data.

Data were thematically analysed. According to Schmidt and Brown (2009: 169), thematic analysis is the exploration and description of the reasons, feelings and thoughts of the participants regarding the phenomenon. This includes listening and re-listening to the recorded verbatim data, and repeatedly reading the transcripts to

ensure correct categories, themes and sub-themes emerged during data analysis were pieced together. The data collected was transcribed and divided into meaningful analytical units. The participants' feelings, understanding, knowledge, attitude, experiences, and perceptions were explored, described and categorized into themes and sub-themes. During data collection, participants received an identity code to conform to confidentiality. The coding process enabled the researcher to retrieve and collect all the text and other data associated with some ideas (Creswell, 2016: 116). Data collection and analysis took place concurrently.

3.9. DATA MANAGEMENT AND STORAGE

Transcribed data, field notes and voice notes captured with a tape recorder were stored in the secure locked office of the researcher to observe confidentiality. The tape recorder, which recorded voice notes, was locked in a secure lockable safe, and data on the computer was password protected. The key and the password were only known by the researcher. All the data collected will remain under lock and key for 5 years in case they are needed for verification.

3.10 TRUSTWORTHINESS

Polit and Beck (2014: 72) stated the qualitative researcher uses trustworthiness which encompasses several different dimensions as outlined by the model of Lincoln and Guba (1985). Credibility, dependability, confirmability, and transferability are the criteria used for developing the trustworthiness of a qualitative inquiry.

3.10.1 Credibility

According to Polit and Beck (2014: 323), credibility refers to confidence in the truth value of the data and interpretation. Brink *et al.* (2012:172) supports this by stating that confidence in the truth of the data and the interpretation thereof. The researcher spent quality time and had an in-depth interview with each participant in a private environment to allow confidentiality. The researcher ensured that participants felt relaxed and safe throughout the interview by observing them persistently. The researcher used a tape recorder to capture the participants' verbatim responses and took field notes during interviews. The researcher further used direct quotes from the participants' responses during analysis of data which were verified by the study supervisor to ensure credibility.

3.10.2 Dependability

Dependability refers to the provision of evidence, in that if it were repeated with the same or similar participants in the same context, its findings would be similar (Brink *et al.*, 2012: 172). In this study, the data was collected from the same nurse educators at the Free State School of Nursing campuses about their perceptions regarding the use of clinical skills laboratories for teaching student nurses. Field notes, transcripts with data from the interviews and the recorder were kept in a secure and safe place as evidence if verification is needed.

3.10.3 Confirmability

Brink *et al.* (2012: 127) stated that confirmability guarantees that the data support the findings, conclusion, and recommendations and that there is internal agreement between the investigator's interpretation and the actual evidence. Direct quotes from the raw data, collected during interviews, conveyed the participants' perceptions with regard to the use of clinical skills laboratories in teaching student nurses. The supervisors eliminated subjectivity and bias of the researcher when evaluating the relevance of the data.

3.10.4 Transferability

Transferability refers to the ability to apply the findings to other contexts or to other participants (Brink *et al.*, 2012: 173). Achieving transferability was by providing sufficient descriptive data so that consumers were able to evaluate its applicability to other contexts (Polit and Beck, 2012: 560). The researcher ensured transferability by densely describing the demographic data of the participants which were purposefully sampled and that was attained by ensuring that the findings were explained in detail to ensure other researchers could evaluate its applicability to other study contexts.

3.11 ETHICAL CONSIDERATIONS

Ethics is a system of moral values concerned with the degree to which research procedures adhere to professional, legal, and social obligations to the study participants (Polit and Beck, 2014: 380). The ethical principles followed in this study to protect the participants included the right to self-determination, privacy, informed consent, anonymity, and confidentiality.

The following authorities were asked to grant permission to conduct the research:

- The University of Zululand Research Ethics Committee (UZREC) (Annexure: G)
- The Free State Department of Health Research Unit (Annexure: C)
- The School of Nursing in the Free State Province (Annexure: D)

Right to Self-determination

This was based on the ethical principle of respect for person. In this study, the researcher informed and gave the participants an information letter (Annexure: A) that explained the aim of the study, allowed them to ask questions, chose whether they wanted to participate in the study or not, and also allowed them to withdraw from the study at any time without penalty (Burns and Grove, 2011:110).

Right to privacy

This is regarded as the freedom people have to determine the time, extent, and general circumstances under which their private information will be shared with or withheld from other (Burns and Grove, 2011:114). According to Polit and Beck (2014:85), the researcher must ensure that their research is not more intrusive than it needs to be, and privacy is maintained. The interviews took place in a private room where there were no interruptions. The collected data collected was divulged to no one, other than the supervisor. The raw data, tape recorder and field notes were stored in a secure safe place until analysed to ensure privacy.

Informed consent

This is an ethical principle that requires researchers to obtain people's voluntary participation in a study after informing them of possible risks and benefits (Polit and Beck, 2014: 382). Therefore, in this study the participants received an information letter (Annexure: A), explaining the aim and objectives of the study, to read and understand, before signing voluntary consent forms (Annexure: B), giving permission to participate in the research study without coercion. Permission to use the tape recorder, and to capture field notes during the interview was also requested from each participant.

Anonymity and confidentiality

The researcher ensured the participants remained anonymous by not writing down their names or those of the areas in which the study was conducted; this was replaced with codes. Polit and Beck (2014: 374) stated that it is imperative to ensure the protection of participants' confidentiality, so even the researcher is not able to link individuals with the data they provide. To safeguard this, the identification of the collected data was by using codes to ensure anonymity of the participants and the study areas' identities. The raw data, tape recorder and field notes remained confidential by storing them in a secure locked up place for a period of 5 years in case needed for verification.

Justice

The researcher ensured that participants who met the inclusion criteria were fairly selected based on the research requirements (Polit and Beck, 2014: 85). According to Botma *et al.*, (2010: 19) the information leaflets given to participants must be adhered to by the researcher during interviews and the agreement made must be respected. To ensure justice nurse educators who declined to participate in the study were fairly treated and respected for their decision.

3.12 CONCLUSION

Chapter 3 discusses the research design, methodology, the study area, sampling, data collection and ethical consideration. The conducting of unstructured, individual face-to-face interviews was to gain a detailed picture of participant's perceptions in using the CSL for teaching of student nurses. The next Chapter 4 presents the study findings.

CHAPTER 4

PRESENTATION OF THE STUDY FINDINGS

4.1 INTRODUCTION

Chapter 3 discussed the research design and methodology. This chapter presents the findings from the analysis of the unstructured interviews conducted with the nurse educators, supported with verbatim statements.

4.2 SAMPLE REALISATION

The conducting of the study was at the two campuses situated at the South and North Districts in Free State Province. The researcher conducted 17 individual face-to-face unstructured interviews. The reaching of data saturation was after 15 interviews; an additional two interviews were conducted to confirm data saturation. **Table 6** presents sample realisation based on study area where the participants were located and interview type.

Table 6: Sample realisation for the entire study (n=17).

Study area	Participants	Total
A	AP1	07
	AP3	
	AP7	
	AP8	
	AP9	
	AP12	
	AP13	
B	BP2	10
	BP4	
	BP5	
	BP6	
	BP10	
	BP11	
	BP14	
	BP15	
	BP16	
	BP17	
TOTAL		17

4.3 DEMOGRAPHIC DATA

In this study, 15 participants, plus two extras, were interviewed. The researcher requested their demographic information before the interview in order to determine possible commonalities regarding their work experience, level of education, role in the department and the programme they teach. The researcher interviewed the participants with the aim of exploring their perceptions regarding the use of a clinical skills laboratory in teaching student nurses at the Free State School of Nursing. Data collection took two months. The interviews explored the perceptions of nurse educators in using clinical skills laboratory for teaching student nurses and the factors contributing to the use of a clinical skills laboratory thereof. **Table 7** represents the demographic data of the participants.

4.3 Table 7: Demographic information of the participants (n=17)

Study area	Participants	Total
A	AP1	07
	AP3	
	AP7	
	AP8	
	AP9	
	AP12	
	AP13	
B	BP2	10
	BP4	
	BP5	
	BP6	
	BP10	
	BP11	
	BP14	
	BP15	
	BP16	
	BP17	
TOTAL		17

4.4 THEMES AND SUBTHEMES

4.4.1 Major themes

Three major themes emerged during the interviews with the participants which were:

- Clinical skills laboratory environment
- Human and material resources
- Financial constraints

4.4.2 Sub-themes

Table 8 presents the sub-themes that emerged from the major themes during data analysis

Table 8 illustrates major themes and emergent sub-themes

MAJOR THEMES	SUB-THEMES
1. Clinical skills laboratory environment	1.1 Setting 1.2 Access 1.3 Capacity
2. Human and material resources	2.1 Employment of staff 2.2 Clinical expertise 2.3 Technology 2.4 Equipment
3. Financial constraints	3.1 Training of staff 3.2 Maintenance of skills laboratory equipment 3.3 Purchasing of skills laboratory equipment

4.5 PRESENTATION OF THE STUDY FINDINGS

4.5.1 Major theme 1: Clinical skills laboratory environment

From the interviews with the participants it emerged there is inadequate space in the clinical skills laboratories, which results in the environment not being user friendly for clinical teaching and learning. The issues related to the clinical skills laboratory environment included the setting, access and capacity.

Sub-theme 1.1: Setting

During the interviews, most participants stated that the way in which the clinical skills laboratories were set up was not user friendly for performing demonstrations to multiple levels of student nurses with different disciplines at the same time. There are no soundproof walls dividing the skills laboratory into rooms. This was evident in the following excerpts from the participants:

“.....eh currently we are unable to teach different levels of students with different disciplines such as psychiatry and midwifery at the same time because the skills laboratory is only divided by partitions. This makes it difficult to work as we are forced to wait for each other or used other means not teaching in the clinical skills laboratory.” AP1

“Mam, to be honest with you I don't use the clinical skills laboratory because it is not user-friendly the way it is set up, one needs to wait for another nurse educator to finish teaching before you can be able to use it as there are no walls separating the rooms.” AP7

Sub-theme 1.2 Access

Access to the clinical skills laboratories was expressed as the reason students do not use the clinical skills laboratory. This was because the clinical skills laboratories have no delegated personnel to open and close, even after hours, for students to practice clinical skills. This was what the participants had to say:

“..... at our campus we do not have any staff allocated to open and close the skills lab for student use after hours, the skills laboratory is only opened by the nurse educator only when she/he wants to use it for clinical teaching of students during working hours.” AP13

“The clinical skills laboratory is only opened by nurse educators during working hours, after hours it is closed.” AP8

Sub-theme 1.3 Capacity

Most of the participants expressed their concern about the size of the clinical skills laboratories. They are small in comparison to the number of students they have in each campus, and unable to accommodate large numbers of students at once during clinical teaching and learning. This was captured verbatim:

“... eh...Mam our clinical skills laboratory is very small compared to the number of student nurses we have per level and discipline. We are unable to accommodate all the students at the skills laboratory at the same time to do demonstrations for them.” AP9

“I teach Midwifery nursing science, I use clinical skills laboratory a lot to demonstrate procedures to students but the capacity of the skills laboratory rooms is small to accommodate all students at once. This leads to having to repeat demonstration many times as I have to bring students in smaller groups at the clinical skills laboratory.” BP2

“Mam.... The space at the clinical skills laboratory is extremely small, one must repeat one clinical skill more than five times to accommodate all students in smaller groups because of the size of the clinical skills laboratory” BP5

4.5.2 Major theme 2: Human and material resources

The participants highlighted several issues related to human and material resources as constraints hindering the effective use of the clinical skills laboratory in teaching student nurses. These issues included employment of staff, clinical expertise, technology, and equipment.

Sub-theme 2.1 Employment of staff

Most of the participants raised a concern about the unavailable posts for clinical instructors in the staff establishment of the school. They verbalised this in the following statements:

“In all the campuses, there are no vacant posts for clinical instructors that will be strictly teaching student clinical practice in the clinical skills laboratory.

Eh...this is a problem as there is very limited number of nurse educators employed here who are also expected to also teach clinical practice. They hardly use the clinical skills laboratories due to time constrains.” BP10

‘I am employed as a nurse educator teaching both theory and practice, I hardly use the clinical skills laboratory due to shortage of staff.” BP14

Other participants’ verbalized there was no support staff employed to mend the clinical skills laboratory. Their concerns were captured as follows:

“Our campuses do not have support staff such as clinical laboratory technicians, clinical skills laboratory manager nor clinical laboratory administrators who works in the clinical skills laboratory to ensure smooth running of the laboratory to support the nurse educators in using clinical skills laboratory to teach student nurses.”. BP4

“..... Eh.... you know what? We do not have support staff in our clinical skills laboratory to prepare for clinical practices of skills for us and our students. Eh.... Nurse educators do double work which is acting as support staff and as nurse educators which is time consuming. Most of us we avoid using the clinical skills laboratory based on that reason.” AP12

Sub-theme 2.2 Clinical expertise

The majority of participants were concerned about the lack of clinical expertise amongst themselves in using various teaching aids to teach clinical skills to nursing students in the clinical skills laboratory. This was what they had to say:

“When teaching clinical skills in the skills laboratory, one needs to be an expert in using the available manikins. Therefore, sometimes I become less confident in using these manikins because of lack of knowledge on how to use them correctly hence I prefer to use real life patients at the hospitals.” BP17

“..... Mam most of the manikins available in the clinical skills laboratory were not demonstrated to us by the representatives when they were purchased. Therefore, most of us we don’t know how they work which contributes to lack of the use of clinical skills laboratory in teaching student nurses.” BP6

Sub-theme 2.3 Technology

The participants raised concerns regarding the lack of knowledge in using the high-fidelity manikins in the clinical skills laboratory in teaching clinical practice to student nurses. This was their verbatim:

“There are some high-fidelity manikins available in the clinical skills laboratory but we are unable to operate them as we are not that much knowledgeable about how to use technology. This leads to us not using the clinical skills laboratory due to lack of technological knowledge to operate the high-fidelity manikins in teaching student nurses in the skills laboratory.” AP8

“...manikins that are operated by a computer in the clinical skills laboratory are a challenge... we are not technological literate to operate these manikins. Hence most of us we hardly use clinical skills laboratory in teaching clinical practice to student nurses using those manikins.” BP17

“Mam.... Eh.... Some of the manikins although not many requires one to have knowledge of how to operate them using technology, which is a common problem for most of the nurse educators here. That is why there is less use of clinical skills laboratory in teaching student nurses’ clinical practice at our campus.” BP2

Sub-theme 2.4 Equipment

It emanated from the interviews conducted with the participants that the equipment available in the clinical skills laboratory was old and dilapidated. This was what the participants stated:

“.... Using the clinical skills laboratory in teaching student nurses’ clinical practice is a challenge because the available manikins are very old and some of them are not in a good state to be used for demonstrating procedures.” AP3

“Eh... our skills laboratory has old manikins which are mostly torn and we cannot use most of them in teaching clinical skills to student nurses.” BP5

Some of the participants were concerned about inadequate equipment available in the clinical skills laboratory. This is what they had to say:

“If you want to use the clinical skills laboratory for teaching certain procedure to students such as suturing of the wound. There are no suturing materials nor the manikin design to perform suturing.” BP16

“Most of our skills laboratory have no stock For an example there are no dressing packs to demonstrate wound care to the nursing students. Therefore, Mam I see as being pointless to use the clinical skills laboratory to teach clinical practice.” AP1

4.5.3 Major theme 3: Financial constraints

Many participants indicated during the interviews that there were challenges caused by financial constraints, which affects their effective use of the clinical skills laboratory for teaching clinical practice to student nurses. This included training of staff, maintenance of skills laboratory equipment and purchasing of skills laboratory equipment.

Sub-theme 3.1 Training of staff

Staff training regarding the use of the clinical skills laboratory and its equipment were seen as a major challenge by the participants, which led to poor utilisation in teaching clinical practice to student nurses. The following quotations depict this:

“You know what? we have not been trained to use the clinical skills laboratory and the manikins in teaching clinical practice to student nurses. Basically, there is no money to send educators to short courses to equip them with knowledge and skills on how to use clinical skills laboratory.” BP11

“Our biggest challenge is that we are all not trained to use clinical skills laboratory including low and high-fidelity manikins because the department does not have money.” AP12

“None of us has done a short course on how to use simulated clinical teaching and learning in the clinical skills laboratory because of departmental financial constraints so we lack knowledge in this regard.” BP14

Sub-theme 3.2 Maintenance of skills laboratory equipment

It emanated from the interviews with the participants that the equipment used to teach student nurses clinical practice at the skills laboratory were not maintained according to the manufacturer's recommendations. This was expressed as follows:

"The manikins (High-fidelity) and other equipment in the clinical skills laboratory are out of service None of them are being serviced as they are supposed to. This is mainly because of no money to service them to keep them within its life span. Therefore, some of this equipment are no longer working which impacts negatively in using the clinical skills laboratory." AP7

"The equipment in our skills laboratory are not being serviced. Most have lost its life expectancy and are no longer functioning well. This makes it difficult to use the clinical skills laboratory." BP15

Sub-theme 3.3 Purchasing of skills laboratory equipment

Some of the participants said purchasing of new equipment for use in the clinical skills laboratory was problematic due to unavailability of funds. This was evident in the following excerpts:

"Eh.... Mam I have been teaching at this campus for 10 years, we have been using the same equipment in this clinical skills laboratory every year without getting new updated technological equipment." AP3

"We have not received new updated equipment for a long time because of unavailable funds to purchase new equipment for the clinical skills laboratory. We are using old manikins which are not functioning properly, which affects the use of clinical skills laboratory." BP16

"Buying new equipment to use in the clinical skills laboratory is a real challenge. One will order an advance technological manikin for an example.... Eh... you either get no response or that there is no money which discourages us from effectively using the clinical skills laboratory in teaching clinical practice to our students." BP10

4. 6 CONCLUSION

Chapter 4 presented the study findings gathered during interviews with participants, and the major themes and several sub-themes that emerged from data analysis. Chapter 5 will present the discussion of the findings, limitations and the recommendations of the study.

CHAPTER 5

DISCUSSION OF FINDINGS OF THE STUDY

5.1 INTRODUCTION

Chapter 4 focused on the presentation of the study findings regarding the utilisation of clinical skills laboratories in teaching student nurses by nurse educators in Free State School of Nursing. Chapter 5 discusses the findings of the study and supports them with literature and King's conceptual system as a theoretical framework guiding the study. The study explained the limitations and made recommendations based on the study findings.

5.2 OVERVIEW OF THE RESEARCH STUDY FINDINGS

The aim of this study was to explore and describe the perceptions of the nurse educators in using clinical skills laboratories in teaching of student nurses at the Free State School of Nursing. A qualitative, explorative, descriptive, and contextual design was employed, with data collected from the participants using unstructured face-to-face interviews. The discussion of the study findings was based on themes and sub-themes that emerged from data analysis. This study aimed to achieve the following objectives:

- Explore the perceptions of nurse educators regarding the use of clinical skills laboratories in teaching of student nurses.
- Describe factors contributing to the use of a clinical skill laboratory in the teaching of student nurses by nurse educators.

5.3 DEMOGRAPHIC DATA OF THE STUDY

The participants' demographic data in this study consisted of their gender, race, qualifications, experience, rank, and the programme they teach. The researcher interviewed 17 (n=17) participants. The majority of the participants were females 14 (14=n) and three (n=3) males; 14 (n=14) Blacks and three (n=3) Whites; nine (n=9) degree holders, five (n=5) Honours degrees and three (n=3) Master's degrees. The participants' working experiences ranged from 0-5 years (n=3), 10-20 years (n=11) and 25 years (n=3). All 17 (n=17) participants were nurse educators, 11 (n=11) of whom were teaching R425, three (n=3) teaching R683 and three (n=3) teaching R171 programmes.

The demographic information assisted the researcher to determine possible commonalities. Moreover, demographic data is important to determine the participants' level of maturity, experience in the profession and their understanding of the programme they are teaching. Ayo (2006: 103) supported this by stating that the nurse educators should not only possess academic and professional qualifications but also be experts in clinical practice so that they contribute positively to the skills and personal development of students in the skills laboratory.

5.4 DISCUSSION OF THE FINDINGS

5.4.1 CLINICAL SKILLS LABORATORY ENVIRONMENT

The CSL environment is regarded as a strategy to develop and support student's clinical skills (Uwimama, 2009: 6). Several sub-themes that emerged were based on the setting, access, and capacity of the CSL that were a challenge leading to the nurse educators finding the environment not user friendly. According to Haraldseid, Friberg and Aase (2015: 4), most participants indicated the clinical skills laboratory environment was not user friendly as they were unable to use the CSL for teaching students from different levels and disciplines because there were no walls dividing the rooms, only partitions, which were not sound proofed to ensure there were no disturbances during the clinical teaching. According to King's conceptual system, communication involves the exchange of information between persons, occurred through face-to-face, electronic media and through the written word (George, 1985: 237). Consequently, the nurse educators could not teach more than one group of student nurses or disciplines at the same time using face-to-face communication as a mode of teaching due to the setting of the CSL. King's conceptual system further indicates that the organisation is characterised by a structure that ordered positions, and activities, including formal and informal arrangements, of people to gain both personal and organisational goals (George, 1985: 238). Therefore, the poor setting and organisation of the CSL may have a negative impact towards the clinical teaching of skills to student nurses, which may lead to them not achieving their goals.

The findings revealed that student nurses had no access to the CSL to practice clinical skills in their own time, including after hours. Student nurses were only able to have access to the CSL during demonstrations and to practice the demonstrated skills in the presence of the nurse educators. The presence of the nurse educators in the CSL

compromises the student's opportunity to learn experientially and practice self-directed learning (Munangatire, Smuts and Dawn, 2019: 4). Students need to be free to make mistakes, practice and master the demonstrated skill on their own in the CSL with minimal supervision from the nurse educators. This promotes self-confidence, increases their experiences and makes them self-directed learners. This further promotes a feeling of awareness of being a person separate from others, with attitudes, ideas, values, and commitment in the student nurses in using the CSL independently to practice and master the demonstrated clinical skill. This is supported by King's conceptual system, by indicating self as thoughts and feelings related to one's awareness of being a person separate from others, including attitudes, ideas, values and commitment (George, 1985: 234).

The CSL must have adequate space to accommodate a large number of students at once during clinical teaching. Although there are available CSLs in the study setting, they were unable to accommodate a large number of student nurses. Amanya (2017: 8) revealed most of the CSLs had small cubicles, which makes it difficult to accommodate a large number of students comfortably. Therefore, the capacity of the CSLs have an effect on the teaching of skills to student nurses and of the nurse educators as they have to divide students into smaller groups to fit in the small CSL capacity, which was stressful and time consuming. Tenza (2015: 58) supports this and indicates that dividing students into smaller groups needs more nurse educators to demonstrate procedures to students; they also stated that achieving effective clinical demonstration is when every student is able to see the demonstration. The inadequate capacity of the CSL can induce stress in the students while waiting for their turn to access the skills laboratory, and in the nurse educator who has to demonstrate one skill many times which can be stressful and exhausting. King's conceptual system regards stress as an ever-changing condition, with an open system process of exchange of information and energy with the purpose of regulating and controlling stressors (George, 1985: 237).

5.4.2 HUMAN AND MATERIAL RESOURCES

Most of the interviewed participants agreed with the notion that although there are available human and material resources, there are some challenges caused by inadequacy of these resources in using the CSL. These challenges were employment

of staff, clinical expertise, technology, and equipment, which emerged as sub-themes during the interviews conducted with the participants. The findings of the study revealed the necessity of employing clinical staff and support staff to teach students clinical practice in the CSL and mend the use of CSL as a challenge. The participants alluded that there was no vacant post available for clinical instructors and support staff in any of the campuses. Khoza (2015: 105) agreed that shortage of clinical instructors and laboratory technicians are major factors posing challenges in the effective use of clinical skills laboratory. Adequate staffing is important for the successful use of CSLs (Abdulmohsen, *et al.*, 2007: 28). This led to nurse educators teaching both theory and clinical practice to student nurses, which can be stressful for them as they do not have enough time to use CSL in teaching clinical practice. According to King's conceptual interpersonal system, stress is an ever-charging conditioning, with an open system process of exchange of information and energy with the purpose of regulating and controlling stressors (George, 1985: 237). Hence, most of the nurse educators avoided using the CSL to prevent stress caused by doing double barreled jobs, acting as support staff as well as nurse educators when using the CSL.

Findings of the study revealed lack of clinical expertise among the nurse educators in using the available high-fidelity manikins in the CSL. It became evident from the participants' equipment that such manikins need one to be an expert to teach clinical skills to nursing students in the CSL. Abdulmohsen *et al.*, (2007: 28) supported this and revealed that the lack of expertise of those able to use and maintain the high-fidelity manikins in the CSL was problematic. Therefore, due to lack of expertise in using high-fidelity manikins made them less confident, hence they avoided using CSL preferring using real life patients. Abdulmohsen *et al.*, (2007: 28) agreed with this by stating that many teaching staff who are strong believers of bedside clinical teaching also resist change and avoid using CSL. Students need experienced nurse educators in the CSL in order to be able to apply decision-making skills in practice (Crafford, Kilian, Moore – Saayman, Dreyer and Rossouw, 2019: 6). Furthermore, lack of knowledge from nurse educators and clinical facilitators in using the CSL to teach clinical skills to student nurses causes frustration leading to poor performance in clinical practice (Khoza, 2015: 105).

Highlighted as a major challenge was the lack of technology skills and knowledge among the nurse educators, leading to non-use of the CSL in teaching clinical skills to

student nurses. Most participants revealed they were unable to use the computerised manikins as they had no knowledge or skill on how to operate them for teaching clinical skills to student nurses in the CSL. This was also evident in a study conducted by Munangatire and Naidoo (2017: 4), which revealed that poor utilisation of the CSL by nurse educators was due to inadequate training on how to operate the high-fidelity manikins. Rogers (2007: 26) supported this by stating that teaching with simulation requires a whole new set of skills, which most nurse educators do not have; besides the normal traditional techniques in teaching, technology has to be learned in order to be adequately used in teaching clinical practice in the CSL.

The study findings revealed the equipment housed in the CSL was old and dilapidated. This is a challenge when using the CSL to teach clinical skills to student nurses, as the participants highlighted that some of the available manikins were torn and dysfunctional making it difficult to demonstrate skills. This was also evident in the study conducted by Kololo *et al.* (2019: 8) as most of the equipment available in the clinical skills laboratories was either unfamiliar, old and outdated or dysfunctional. The state of the manikins and equipment used in the CSL should be in good working condition to ensure effective teaching of clinical skills to student nurses in the CSL. Torn and dilapidated state of the manikins and equipment may hinder the effective use of the CSL to teach clinical skills. Amanywa (2017: 1) agrees torn manikins cannot be used to demonstrate clinical skills and facilitate learning in the CSL. Hence most of the participants perceived the equipment as a major challenge hindering them from using the CSL in teaching clinical skills to student nurses. King's conceptual personal system explained the perception as a process in which data was obtained through the senses, and from memory are organised, interpreted and transformed (George, 1985: 234).

The study revealed shortages of equipment in the CSL as another factor contributing to the non-use of CSL in teaching clinical practice to student nurses. Kalolo, Gemuhay, Mirisho, Chipwaza and Nyangena (2019: 5) agree that lack of equipment and lack of well-equipped clinical skills laboratory are the factors that affect the clinical practice and teaching of student nurses by nurse educators. A well-equipped and fully stocked CSL encourages effective clinical teaching and learning of student nurses. Shortages of equipment, either due to unavailability or non-functioning, is a barrier to the ability of the health system to deliver quality clinical education to students (Moyimane, Matlala and Kekana, 2017: 2).

5.4.3 FINANCIAL CONSTRAINTS

The participants had mixed feelings about financial constraints as causes contributing to ineffective use of the CSL. The training of staff, maintenance of skills laboratory equipment and purchasing of skills laboratory equipment were some of the factors highlighted as contributing to the ineffective use of CSL in teaching student nurses' clinical practice. It emanated from most of the participants' responses that they lacked knowledge and skills on how to use the low- and high-fidelity manikins in the CSL to teach clinical skills to student nurses because of the lack of training. The study conducted by Powell, Scrooby and Graan (2020: 4) revealed evidence most of the nurse educators had had no exposure to and limited experience in utilising high-fidelity manikins as a teaching method for clinical practice to student nurses. This contributed negatively to the nurse educators not using the CSL due to lack of knowledge of the available equipment to teach student nurses. This was due to lack of training of nurse educators in using the advanced technology manikins available in the CSL. The World Health Organization WHO (2011: 25) indicated that training and education is not a one-time activity but a continual process. Enabling staff to see that learning is important and a constant feature of their job will improve reliability and success in future problem solving (WHO 2011: 25).

Facilities such as CSLs equipped with high-fidelity manikins are not used optimally due to 'fear of the unknown' experienced by the nurse educators because of their lack of training, and/or the lack of technological skills (Powell, Scrooby and Graan, 2020: 4). According to King's social system, decision making is regarded as a changing and orderly process through which choices related to goals are made among identified possible activities and individual or group actions taken to move towards the goal (George, 1985: 238). Therefore, most nurse educators stated they made decisions not to frequently use the CSLs in teaching student nurses clinical practice because of lack of knowledge and skills caused by lack of training on how to use low- and high-fidelity manikins. Welman and Spies (2016: 5) concur with the notion that to implement the use of high-fidelity manikins in the CSL as a teaching-learning method in a nursing curriculum, nurse educators should possess the necessary simulation-based teaching skills through workshops and skills training.

The availability of equipment in the CSL is important, but what is more important is that the equipment is regularly serviced according to the manufacturer's recommendations to ensure its optimal functioning. The participants revealed that equipment (high-fidelity manikins) used to teach student nurses in the CSL was out of service and some no longer worked properly, due to lack of funds to maintain it. Abdulmohsen *et al.*, (2007: 18) agreed that high-cost equipment and the need for maintenance, and continuous update were major barriers to the incorporation of the CSL in teaching student nurses clinical practice in various training institutions. Moreover, Moyimane, Matlala and Kekana (2017: 2) attested that some of the medical equipment was old and obsolete, while others were broken, making it difficult to be used in demonstration and teaching students critical clinical procedures. Therefore, this posed a major challenge to the effective utilisation of the CSL to teach clinical practice to student nurses. King's conceptual system implies that organisation of structure and activities are important for the achievement of goals (George, 1985: 238), therefore if the CSL equipment was not effectively functioning or serviced, this would impact negatively on the nurse educators' in reaching their goals of effectively teaching student nurses clinical practice in the CSL. The WHO (2011: 6) concurs with the notion by stating that medical equipment, including high-fidelity manikins, need regular maintenance and repairs to remain functional. This will further improve the use of CSL by nurse educators' in teaching clinical skills. Moreover, a maintenance plan prolongs the life of equipment and minimises the cost associated with buying new equipment (WHO, 2011: 5). Institutions have a responsibility to regularly maintain medical equipment, such as high-fidelity manikins, to avoid equipment malfunction or failure during the clinical teaching of student nurses in the CSL.

It emanated from the study that purchasing of new equipment for the CSL for teaching of student nurses was problematic due to financial constraints. The participants highlighted they have been using the same equipment for more than 10 years, without getting new technology updated equipment. Medical equipment has a lifecycle requiring calibration, maintenance, repair, user training and finally retirement (Moyimane, Matlala and Kekana, 2017: 2). Therefore, using the same old equipment in teaching student nurses clinical practice skills in the CSL causes a barrier to using the CSL effectively. Some of these barriers include non-functional or outdated manikins which do not feature the latest advanced technology, hence the use of the

CSL if not effective. It is imperative for the nurse training institutions to secure funds annually for the purpose of purchasing new technological advanced manikins, including the general refurbishing of the CSL to improve its use by nurse educators in teaching clinical practice to student nurses. Students get to practice skills learned in the skills laboratory and interact with patients, families, and other healthcare workers (WHO, 2011: 5). Therefore, a positive and supportive clinical practice setting should influence the integration of theory and practice (Bvumbwe, Malema and Chipeta, 2015: 927). King indicates that the growth and development process in people's lives occurs when moved from a potential for achievement to actualisation of self (George, 1985: 234). Therefore, for the student nurses to grow and develop their careers they need nurse educators who use all teaching methods in various learning environments, including the use of CSL to integrate theory to practice to equip them with knowledge required to interact with patients in the clinical environment.

5.5 CONCLUSION

This study examined the perceptions of nurse educators regarding the use of CSL in teaching clinical practice to student nurses and described the factors contributing to the use of CSL by nurse educators. Three major themes and several sub-themes emerged regarding the phenomenon. The study findings revealed several contributing factors leading to ineffective use of CSL by the participants in teaching clinical practice to student nurses. The information emanating from the participants confirmed there are various challenging barriers in using the CSL effectively to teach clinical skills to student nurses.

5.6 LIMITATIONS OF THE STUDY FINDINGS

Due to the nature of the study, the qualitative research method, the study findings are not generalisable to the entire country. The conducting of the study was at the two sub-campuses of the School of Nursing in Free State Province, which excluded the university found in this province. Furthermore, the study focused on the nurse educators as the target populations. Therefore, the study could have yielded different findings if the student nurses were included as target populations.

5.7 RECOMMENDATIONS

The following recommendations are made with special reference to nursing education, nursing school administration, policy development and implementation, and further research.

5.7.1 Nursing education

The recommendation is that the clinical skills laboratory should be designed in a manner that is user friendly for multiple teaching and learning with adequate space to accommodate a sizable number of students.

The clinical skills laboratory should be flexible in terms of times to ensure that educators and student nurses can access the clinical skills laboratory at any time to teach, learn and practice clinical skills.

The designing of the clinical skills laboratory should meet the standard of higher institutions of education by meeting all the requirements for effective teaching and learning of student nurses.

5.7.2 Nursing school administration

The study findings recommend that during budgeting, the funds for refurbishing of the clinical skills laboratory should be made available on an annual basis.

Human resources need increasing by employing enough support staff to mend the clinical skills laboratory and to ensure sufficient nurse educators are available to teach clinical practice to student nurses in the clinical skills laboratory.

Skills development funds should be budgeted for to ensure all existing nurse educators are sent for short course training, regarding clinical facilitation in the clinical skills laboratory, to increase their knowledge and skills in using low and high-fidelity manikins in teaching student nurses.

New advanced technological manikins should be purchased and the existing functional manikins regularly serviced to ensure their life expectancy is kept up to date, and non-functional dilapidated manikins should be condemned.

Material resources need securing and made available at adequate levels at all times in the clinical skills laboratory to ensure effective use by nurse educators and student nurses.

5.7.3 Policy development and implementation

Nurse education institutions' managers should consider developing and reviewing existing policies regarding the use of the clinical skills laboratory by nurse educators, support staff and student nurses to ensure effective teaching and learning of clinical skills occurs.

The nurse education institutions' managers should ensure that the developed or reviewed policies regarding the use of clinical skills laboratory are implemented by all the stakeholders effectively.

There should also be frequent in-service training held by the nurse educator managers with the staff to ensure that all the developed or revised policies are interpreted and implemented correctly regarding the use of the clinical skills laboratory.

5.7.4 Further Research

The researcher recommends the conducting of further research studies regarding the phenomenon to include a wider range of populations and to broaden the scope of the research topic.

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ANNEXURE: A

LETTER OF INFORMATION

Title of the Research Study: **UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING**

Principal Investigator/s/researcher: MVANDABA AGNES (BCUR E et A)

Co-Investigator/s/supervisor: Dr. S.T. MADLALA (D-NURSING)

Brief Introduction and Purpose of the Study: The aim of the study is to explore and describe the perceptions of the nurse educators in using clinical skills laboratories in the teaching of student nurses at the Free State School of Nursing.

Outline of the Procedures: You will be asked questions during the interview in a private room at the Free State School of Nursing. Permission is requested to use the voice recorder and take field notes during the interview. The interview will take about half an hour to one hour, and there may be some follow ups to clarify certain issues if necessary.

Risks or Discomforts to the Participant: The study and the procedure involve no foreseeable risk or discomfort to you.

Benefits: The findings of the study will be used to make recommendations regarding the use of clinical skills laboratory in teaching of student nurses in the Free State School of Nursing. Furthermore, the finding of the study will be harvested in a form of articles, which will be published in the DHET accredited journals.

Reason/s the Participant May Be Withdrawn from the Study: You are allowed to withdraw from the study as a participant at any time without bearing any negative consequences towards you as a participant.

Persons to contact in the event of any problems or queries:

Whom to contact about your rights in this research, for questions, concerns, suggestions, or complaints that are not being addressed by the researcher, or research-related harm: University of Zululand Research Ethics Committee [UZREC], Research & Innovation Office: 035 902 6887 or the Researchers Department/supervisor: Dr. S.T. Madlala, 035 902 6512 or madlalas@unizulu.ac.za.



ANNEXURE: B

PARTICIPANT INFORMED CONSENT

INFORMED CONSENT DECLARATION

(Participant)

Project Title: **UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING**

I,, declare that Agnes Mvandaba from the Department of Nursing Science, University of Zululand, has requested my permission to participate in the above-mentioned research project.

The nature and the purpose of the research project, and of this informed consent declaration have been explained in a language that I understand.

I am aware that:

1. This study aims to explore the perceptions of nurse educators regarding the use of clinical skills laboratories in the teaching of student nurses.
2. The study will describe factors contributing to the use of the clinical skill laboratory in the teaching of student nurses by nurse educators.
3. By participating in this research project, I will be contributing towards the improvement of the clinical teaching and learning of student nurses using clinical skills laboratory. (***state expected value or benefits to society or individuals that will arise from the research***).

4. I will participate in the project by.....(**state full details of what the participant will be doing**)
5. My participation is entirely voluntary and should I, at any stage, wish to withdraw from participating further, I may do so without any negative consequences.
6. I will receive no compensation for participating in the research but will receive reimbursement for my out-of-pocket expenses. (**Should there be compensation, provide details**).
7. There may be risks associated with my participation in the project. I am aware that no risk risks are associated with my participation and there is a 0% chance of risks materialising.
8. The researcher intends publishing the research results in the form of articles; however, confidentiality and anonymity of records will be maintained and my name and identity will not be revealed to anyone who has not been involved in the conduct of the research.
9. I will not receive feedback/will receive feedback in the form of regarding the results obtained during the study.
10. Any further questions that I might have concerning the research, or my participation, will be answered by.....**provide name and contact details**)
11. By signing this informed consent declaration, I am not waiving any legal claims, rights, or remedies.
12. I will receive a copy of this informed consent declaration, and the original will be kept on record.

I,, have read the above information/confirm that the above information has been explained to me in a language that I understand, and I am aware of this document's contents. I have asked all questions that I wished to, and have received satisfactory answers. I fully understand what is expected of me during the research.

I have not been pressurised in any way and I voluntarily agree to participate in the above-mentioned project.

.....

.....

Participant's signature

Date



ANNEXURE: C

ACCESS LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH

University of Zululand

PO Box X1001,

KwaDlangezwa,

3886

The Free State Department of Health Research Committee

Free State Department of Health,

Bophelo House,

2 Charlotte Maxeke Street,

Bloemfontein,

9301

Date:

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a registered Masters' student in the Department of Nursing Science at the University of Zululand. My supervisor is Dr. S.T. Madlala.

The proposed topic of my research is: **UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING**

The objectives of the study are to:

- Explore the perceptions of nurse educators regarding the use of clinical skills laboratories in teaching of student nurses.
- Describe factors contributing to the use of clinical skill laboratory in the teaching of student nurses by nurse educators.

I am hereby seeking your permission to conduct a study. To assist you in reaching a decision, I have attached the following:

- (a) A copy of an ethical clearance certificate issued by the University of Zululand.
- (b) A copy the research instruments which I intend using in my research.

Should you require any further information, please do not hesitate to contact me, or my supervisor. Our contact details are as follows:

Student: Ms. A. Mvandaba, Tel. 0785767014, Email: mvandabaagnes@gmail.com

Supervisor: Dr. S.T. Madlala, Tel. 035 902 6512, Email: madlalas@unizulu.ac.za

Upon completion of the study, I undertake to provide you with a bound copy of the dissertation.

Your permission to conduct this study will be greatly appreciated.

Yours faithfully,

Signature:

Name: Ms. A. Mvandaba



ANNEXURE: D

ACCESS LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH

University of Zululand
PO Box X1001,
KwaDlangezwa,
3886

The Free State School of Nursing
7 Arndt Street,
Bloemfontein,
9301

Date:

Dear Sir/Madam,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a registered Masters' student in the Department of Nursing Science at the University of Zululand. My supervisor is Dr. S.T. Madlala.

The proposed topic of my research is: **UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING.**

The objectives of the study are to:

- Explore the perceptions of nurse educators regarding the use of clinical skills laboratories in teaching of student nurses.

- Describe factors contributing to the use of clinical skill laboratory in the teaching of student nurses by nurse educators.

I hereby seek your permission to conduct a study. To assist you in reaching a decision, I have attached the following:

- (c) A copy of an ethical clearance certificate issued by the University of Zululand.
- (d) A copy of an approval letter from the Free State Department of Health.
- (e) A copy the research instruments I intend using in my research.

Should you require any further information, please do not hesitate to contact me, or my supervisor. Our contact details are as follows:

Student: Ms. A. Mvandaba, Tel. 0785767014, Email: mvandabaagnes@gmail.com

Supervisor: Dr. S.T. Madlala, Tel. 035 902 6512, Email: madlalas@unizulu.ac.za

Upon completion of the study, I undertake to provide you with a bound copy of the dissertation.

Your permission to conduct this study will be greatly appreciated.

Yours faithfully,

Signature:

Name: Ms. A. Mvandaba



ANNEXURE: E

RESEARCHER'S DECLARATION

I, Agnes Mvandaba, declare that:

- I explained the information in this document to
.....
- requested him/her to ask questions if anything was unclear and I have answered them as best I can.
- I am satisfied that she/he sufficiently understands all aspects of the research so as to make an informed decision on whether or not to participate.
- The conversation took place in English.
- I used/did not use an interpreter.

.....

Researcher's signature

.....

Date



ANNEXURE: F

INTERVIEW GUIDE FOR NURSE EDUCATORS

Study Title: Utilisation of a clinical skills laboratory by educators in teaching student nurses in the Free State School of Nursing

Date: _____

Participation No:

SECTION A: DEMOGRAPHIC DATA

Gender: _____

Race: _____

Level of Education: _____

Work experience: _____

Role in the Department:

In which programme do you teach:

SECTION B: INTERVIEW QUESTION

Grand tour question: Tell me more about your perceptions regarding the use of clinical skills laboratory in teaching of student nurses in the Free State School of Nursing?

N.B. Any other probing questions following the participants' response will be asked to facilitate discussion.

ANNEXURE G: UNIVERSITY OF ZULULAND ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF ZULULAND
RESEARCH ETHICS COMMITTEE
(Reg No: UZREC 17110-030)



RESEARCH & INNOVATION
Website: <http://www.uz.ac.za>
Phone: 031 961 8181
Fax: 031 961 8122
Email: research@uz.ac.za


ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 17110-030 P/06 2019/2020				
Project Title	Utilisation of clinical skills laboratory in teaching student nurses by educators in Free State Schools of Nursing				
Principal Researcher/ Investigator	A Mkhondro				
Supervisor and Co-supervisor	Dr ST Ndlovu				
Department	Nursing Sciences				
Faculty	Science & Agriculture				
Type of Risk	Low Risk - Data collection - Desktop, fieldwork or laboratory				
Duration of Project	<table border="1"> <tr> <td>Honours/1st Year</td> <td>Master's</td> <td>Doctoral</td> <td>Departmental</td> </tr> </table>	Honours/1 st Year	Master's	Doctoral	Departmental
Honours/1 st Year	Master's	Doctoral	Departmental		

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertaking contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

- Special conditions:
- (1) This certificate is valid for 1 year from the date of issue.
 - (2) Principal researcher must provide an annual report to the UZREC in the prescribed format (due date: 13 March 2021)
 - (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.
 - (4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research


Chairperson: Ms Mkhondro Gwinyi Mkhondro
Acting Chairperson: University Research Ethics Committee
Deputy Vice-Chancellor: Research & Innovation
13 March 2020

CHAIRPERSON
UNIVERSITY OF ZULULAND RESEARCH
ETHICS COMMITTEE (UZREC)
REG NO: UZREC 17110-030
13-03-2020
RESEARCH & INNOVATION OFFICE

ANNEXURE H: FREE STATE PROVINCIAL ETHICAL APPROVAL LETTER



health

Department of
Health
FREE STATE PROVINCE

05 May 2020

Ms A Mvandaba
Dept. of Nursing Science
UNIZULU

Dear Ms. A Mvandaba

Subject: Utilization of clinical skills laboratory in teaching student nurses by educators in the Free State School Of Nursing.

- Please ensure that you read the whole document. Permission is hereby granted for the above – mentioned research on the following conditions:
- Participation in the study must be voluntary.
- A written consent by each participant must be obtained.
- Serious Adverse events to be reported to the Free State department of health and for termination of the study
- Ascertain that your data collection exercise neither interferes with the day to day running of Free State School of Nursing (Northern and Southern Campus) nor the performance of duties by the respondents or health care workers.
- Confidentiality of information will be ensured and please do not obtain information regarding the identity of the participants.
- Research results and a complete report should be made available to the Free State Department of Health on completion of the study (a hard copy plus a soft copy).
- Progress report must be presented not later than one year after approval of the project to the Ethics Committee of the University of Zululand and to Free State Department of Health.
- Any amendments, extension or other modifications to the protocol or investigators must be submitted to the Ethics Committee of the University of the Zululand and to Free State Department of Health.
- **Conditions stated in your Ethical Approval letter should be adhered to and a final copy of the Ethics Clearance Certificate should be submitted to sebs@fshealth.gov.za / makemano@fshealth.gov.za before you commence with the study.**
- No financial liability will be placed on the Free State Department of Health
- **Please discuss your study with Institution Manager on commencement for logistical arrangements see 2nd page for contact details.**
- Department of Health to be fully indemnified from any harm that participants and staff experiences in the study
- Researchers will be required to enter in to a formal agreement with the Free State department of health regulating and formalizing the research relationship (document will follow)
- **As part of feedback you will be required to present your study findings/results at the Free State Provincial health research day**

Trust you find the above in order.

Kind Regards

Dr D Mutau
HEAD: HEALTH

Date: 7/05/2020

Head: Health
PO Box 227, Bloemfontein, 9300
4th Floor, Executive Suite, Siphiso House on Matieland and Harvey Road, Bloemfontein
Tel: (051) 405 1840 Fax: (051) 405 1536 e-mail: sebs@fshealth.gov.za / makemano@fshealth.gov.za / info@fshealth.gov.za

www.fs.gov.za

ANNEXURE I: FREE STATE SCHOOL OF NURSING ETHICAL APPROVAL LETTER



health
Department of
Health
FREE STATE PROVINCE

19 August 2020

Ms A. Mvandaba
Lecturer: Eastern Campus
Free State School of Nursing
Qwaqwa

SUBJECT: UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING


Dear Ms. Mvandaba

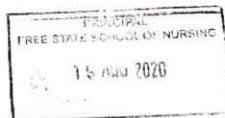
Permission is hereby granted for you to conduct research on **utilisation of clinical skills laboratory in teaching student nurses by nurse educators in Free State School of Nursing (FSSoN)**

This permission is subject to adherence your to the conditions as stated in your approval from Head of Free State Department of Health.

Wishing you all the best with your studies.

Kind regards


Mrs: NMM Ralikonyana
Acting Principal
Free State School of Nursing



Me N.M.M. Ralikonyana: Acting Principal, Free State School of Nursing, Private Bag X20520, Bloemfontein, 9300. Tel 051 403 9831 Fax 051 430 6469, e-mail ralikonynm@fshealth.gov.za

ANNEXURE J: EDITING CERTIFICATE

Gill Smithies

Proofreading & Language Editing Services

59, Lewis Drive, Amanzimtoti, 4126, KwaZulu Natal

Cell: 071 352 5410 E-mail: moramist@vodamail.co.za

Work Certificate

To	Ms. A. Mvandaba
Address	Faculty of Science and Agriculture, University of Zululand
Date	24/01/2021
Subject	Dissertation: UTILISATION OF CLINICAL SKILLS LABORATORY IN TEACHING STUDENT NURSES BY NURSE EDUCATORS IN FREE STATE SCHOOL OF NURSING
Ref	AM/gs/01

I certify that I have edited the following for language, grammar and style,

Dissertation: Utilisation of clinical skills laboratory in teaching student nurses by nurse educators in Free State Province, by A. Mvandaba, to the standard as required by the University of Zululand.

Gill Smithies