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Faculty of Community and Health Sciences

School of Nursing

PERCEPTIONS OF NURSING STUDENTS REGARDING FACTORS INFLUENCING THEIR LEARNING IN A CLINICAL SKILLS LABORATORY AT A SCHOOL OF NURSING IN THE WESTERN CAPE PROVINCE

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A thesis submitted in fulfilment of the requirements for the degree Magister Curationis in School of Nursing, Faculty of Community and Health Sciences, University of the Western Cape.

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ABSTRACT

Background: In order for a student to be clinically competent in a skill, various resources and preparation are needed. Opportunities should be available for student nurses to intentionally experience meaningful encounters that will broaden their knowledge and skills.

Aim of the study: The aim of the study was to explore and describe the perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

Methodology: The study adopted a qualitative research approach, utilising an exploratory and descriptive research design. The population of interest for this research study was nursing students registered for a four-year Baccalaureate Degree at a School of Nursing in the Western Cape Province. The population included all registered nursing students from the first to the fourth year of study. Participants were identified through purposive sampling based on specific inclusion and exclusion criteria. The researcher collected the data through ten focus group interviews across all four-year levels and analysed the data using the six steps of Braun and Clarke (2006).

Ethics: Ethical approval to conduct the study was obtained from the Humanities and Social Sciences Research Ethics Committee before the commencement of data collection. Participants were informed that participation in the study was voluntary and they could withdraw from the study at any stage with no consequences to their studies.

Findings and recommendations: The findings were linked to the framework for clinical skills learning environment of Haraldseid, Friberg and Aase (2015). The framework identified the physical, organisational, and psychosocial environmental factors that influence the learning process of nursing students in a clinical skills laboratory. The findings of this study indicate the need to implement interventions to improve certain aspects in the clinical skills laboratory to promote quality clinical learning for nursing students.

KEYWORDS

Perceptions

Nursing

Students

Learning

Simulation

Clinical skills laboratories

LIST OF ABBREVIATIONS

BN	Bachelor of Nursing
CSSS	Center for Student Support Services
CSL	Clinical skills learning
CSL's	Clinical skills laboratories
FG	Focus group
FG's	Focus groups
SANC	South African Nursing Council
HEI's	Higher Educational Institutions
OSCE	Objective Structured Clinical Examination
USA	United States of America

DECLARATION

I, Catherine Hoffman, hereby declare that this research study entitled "Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province" is my own work, that it has not been submitted before for any degree or examination to any other university, and that all resources I have used or quoted have been indicated and acknowledged in-text and as complete references in my reference list.

Name: Catherine Hoffman

Student number: 3162149

Signed: 

Date: 15 December 2022

DEDICATION

I dedicate this thesis to my late father Arthur Harry Hoffman and my late brother Cornelius Hoffman. Nearer My God to Thee!

ACKNOWLEDGEMENTS

It is with the utmost gratitude that I wish to acknowledge every individual that gave me strength, motivation, and support throughout my journey.

 God, the author of my life, who gifted me with wisdom and carried to completion. Genesis 21:22 “God is with you in everything you do”

 My supervisor Dr Juliana Willemse, for her continuous support, guidance, and encouragement. When things were slow, and I felt like giving up, she motivated me to press on. I am where I am because of her. I sincerely appreciate all that you have done.

 My mother, Margaret Hoffman, thank you for supporting and believing in me throughout the journey and allowing me to pursue my dreams without hesitation. Thank you Mamma!

 Professor Maggie Williams for editing my work and thank you for assisting me on this journey.

 The University of the Western Cape Registrar for granting me permission to conduct the study at the university

 The School of Nursing at the University of the Western Cape and my colleagues

 All my participants, without whom the study would not have been possible

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OPERATIONAL DEFINITIONS

Clinical facilitator	Refers to professional nurses, nurse educators and clinical preceptors who facilitate learning of nursing students in clinical practice (Muthathi, Thurling & Armstrong, 2017). According to Rebeiro, Edward, Chapman, and Evans (2015) a vital portion of undergraduate nursing educations takes place in a clinical setting in the manner of practicing skills.
Clinical learning	It is based in constructivism whereby a student who is actively engaged in the learning process acquires new knowledge by reflecting on clinical experience (Bruce & Klopper, 2017).
Simulation	In a simulated environment there is an imitation of the real clinical environment (Bruce & Klopper, 2017). Simulation is a method of clinical teaching and consist of low-fidelity, medium-fidelity, and high-fidelity simulators (Bruce & Klopper, 2017).
Clinical skills laboratories	These afford a safe and protected environment where the learner can practise procedures and skills for competency in a simulated environment prior to implementation in a real-life setting (McMorran, Samarasinghea, Muradoglua Chung, Williams, Liew & Ng, 2018).
Learning	This can be conscious and deliberate, such as formal education. However, it can also be unconscious. Learning occurs when experience brings about a relatively enduring change in behaviour.
Physical environment	Part of the human environment includes purely physical factors such as infrastructure, buildings, and water supply (Merriam-Webster, 2020).
Psychosocial environment	This consists of the psychological and social factors that could affect the satisfaction, health, and ability to perform (Haradlseid, Friberg & Aase, 2015).
Organisational environments	These comprise forces or institutions surrounding an institution that affect performance, operations, and resources (Russo, 2017).

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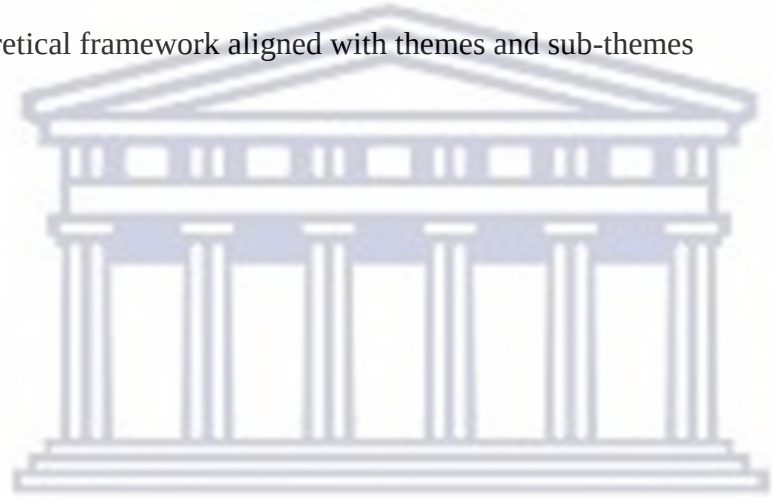

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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 Introduction

This chapter includes a synopsis of the background, problem statement, aim and objectives of this study. The research methodology chosen for this study is briefly discussed in this chapter; a detailed presentation will be included in chapter three. The significance of the study is presented including the operational definitions of key terms to ensure clarification, and a brief overview of the ethical considerations.

This study was aimed at exploring the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory (CSL) at a School of Nursing in the Western Cape Province. A brief background and literature review are provided to contextualise the concepts of undergraduate nursing students' perception of factors that influence their learning in a CSL. This chapter concludes with a summary of each chapter that will be presented in the thesis.

1.2 Background

Most educational institutions that offer qualifications in health-related professions make use of clinical skills laboratories. These clinical laboratories resemble real clinical facilities in which students are able to acquire clinical skills through simulation exercises (Jeppesen, 2017). In preparation for the clinical experience, students are taught, and are able to practise, the required nursing skills in the clinical skills laboratory under the supervision of a university clinical supervisor or facilitator (Muthathi et al., 2017). In a study conducted by Rahim (2018) in South Africa, about the perceptions of medical students on the effectiveness of a clinical skills rotation at a clinical skills laboratory, the authors were of the opinion that the principal objective of a clinical skills laboratory (CSL) is to provide a safe environment for students to

learn and practice new clinical skills before they start working on actual patients within a clinical setting. Furthermore, in a *Practical Guide* for medical education by Hodgson and Pelzer (2017) in Virginia, USA, the authors stated that the skills laboratory is an assigned area where students can practise using simulators and models.

Preparedness of clinical supervisors for clinical teaching in a clinical skills laboratory, which is set up as a clinical setting, allows clinical facilitators to demonstrate skills and allows nursing students an opportunity to practise under guidance (Hoffman & Daniels, 2020). Self- directed learning is when nursing students can practice a skill which was previously demonstrated to them. The equipment is made available for the specific clinical skill, and the nursing students can practise to improve their confidence and preparedness for clinical placement (Kerr et al., 2021).

There are four clinical skills laboratories at the university where the study was conducted used for clinical simulation. These offer visualisation of clinical skills, guided and independent practice sessions prior to assessment to establish competence. These laboratories were designed and equipped to accommodate the development of nursing students' fundamental, and advanced, clinical learning skills. Simulators that vary between low, medium, and high fidelity are used in clinical teaching sessions. Nursing students must be adequately prepared to carry out clinical skills competently and efficiently. Promotion of the theory–practice integration, educators and clinical supervisors are expected to facilitate students to improve their cognitive, psychomotor, and affective skills (Hoffman & Daniels, 2020). In semester one, from the first to fourth year nursing students complete a compulsory orientation period in the clinical skills laboratory prior to clinical placement at health facilities. These sessions enable students to become competent in skills needed prior to clinical placement. Competence is a skill obtained through experiences and learning (Fukada, 2018). During the first week of orientation, the students are orientated to the skills laboratory methodology (SLM) used in the School of

Nursing. The SLM comprises five phases as applied in the School of Nursing, presented in the table below:

Table 1.1: Phases of the skills laboratory method

Phases	**Key concepts**	**Goals**
Orientation	To focus on the rationale of the method	To gain insight into the SLM and various concepts
Visualisation	To form an image	To gain insight into nursing actions
Guided Practice	Provide critical information Opportunity to practice skills on simulated patients Clarification of concepts Feedback	Execute actions under direct supervision
Independent practice	Self-directed learning	Execute actions independently
Assessment	Demonstrate competence in the clinical skills Feedback	Guidance towards mastery of these skills

1.3 Problem statement

Various studies indicate that nursing graduates experience a sense of being ill-equipped in terms of the requisite clinical skills to perform in the real-world context (Vichittragoonthavon et al., 2020). Achieving clinical competence is of fundamental importance for a nursing graduate. Competence is a clinical outcome that should be obtained according to Regulation

R425 of 22 February 1985 of the South African Nursing Council (SANC), as amended. Successfully accomplishing the position of a trained registered nurse requires clinical competence of fundamental skills to ensure safe practise. Due to limited opportunities for clinical skills learning at clinical placement facilities during undergraduate nursing training, CSL's are an essential component of nursing education (Msosa et al., 2021). These skills are critical elements in any undergraduate nursing programme with a clinical skills component (McDonald et al., 2018). The emphasis of undergraduate nursing education should be on helping nursing students achieve a high level of competence in nursing care and identify resources to reinforce proficiency (Kunst et al., 2017). The provision of adequate resources to allow repetition of clinical skills within an authentic CSL environment is important to improve competency in the clinical skills of students **(**Laari & Dube, 2020). However, the literature reviewed did not address the gap that exist in factors influencing the learning of nursing students in a clinical skills laboratory. Being able to maximise nursing student's exposure to the clinical skills laboratory, the researcher explored the factors that could have an influence on them accomplishing competence in clinical learning.

1.4 Research questions

- What are the perceptions of nursing students regarding the *physical environmental factors* that influence their learning in a clinical skills laboratory?
- What are the perceptions of nursing students regarding the *psychosocial environmental factors* that influence their learning in a clinical skills laboratory?
- What are the perceptions of nursing students regarding the *organisational environmental factors* that influence their learning in a clinical skills laboratory?

1.5 Significance of the study

Clinical learning in a CSL provides an opportunity for students to become competent in clinical skills through learning or relearning in a dynamic and non-threatening environment (Coyne, 2021). The results of the study could address areas for improvement in the CSL to provide adequate utilisation of this environment to accomplish clinical competence and safe practice. The results of the study could inform the development of standardised guidelines regarding how to optimise the resources within a CSL to promote the clinical learning of students.

1.6 Aim of the study

This study aimed to explore and describe the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

1.7 Objectives

- To explore and describe the perceptions of nursing students regarding the *physical environmental factors* that influences their learning in a clinical skills laboratory.
- To explore and describe the perceptions of nursing students regarding the *psychosocial environmental factors* that influences their learning in a clinical skills laboratory.
- To explore and describe the perceptions of nursing students regarding the *organisational environmental factors* that influences their learning in a clinical skills laboratory.

1.8 Theoretical Framework

The theoretical framework model of Haraldseid, Friberg and Aase (2015) for the clinical skills learning environment will be utilised to explore the phenomenon. The theoretical framework guided the researcher to formulate the objectives, research questions and interview schedule

taking into consideration the physical, organisational and psychosocial environment of a clinical skills laboratory. Furthermore, it guided the formulation of the literature review in the areas of the physical, organisational and psychosocial environment of a clinical skills laboratory to explore what is known on the phenomenon. The three main factors of the theoretical framework for a clinical learning environment (Haralseid, Friberg & Aase, 2015) was applied to this study to explore how the physical, psychosocial and organisational environment influence the learning of nursing students in a CSL. Haraldseid, Friberg and Aase (2015) identified the following three main factors for a clinical learning environment: physical environment, organisational, and psychosocial environment (Figure 1.1).

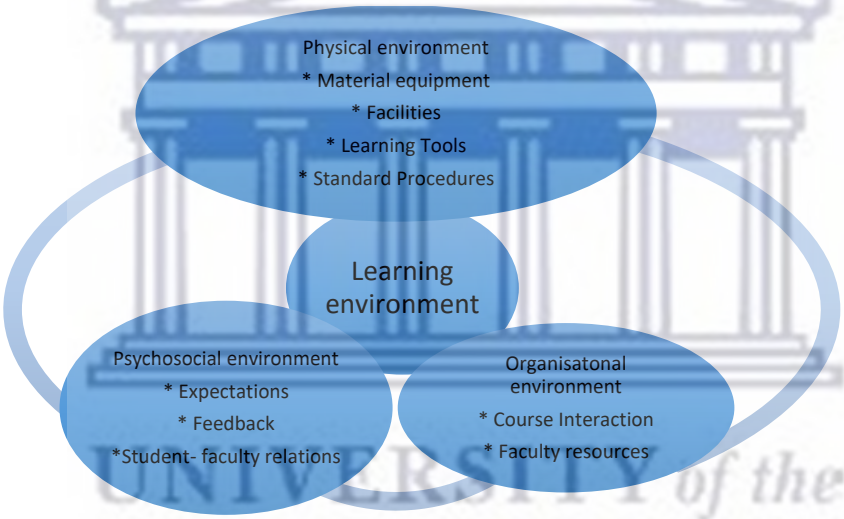

Figure 1.1 Framework for clinical skills learning environment (Haraldseid, Friberg & Aase, 2015)

The framework identifies three main factors for a clinical environment. Each factor has their own relevant sub-factors.

Physical environment: Physical equipment, facilities and standardised procedures are sub-factors of the physical environment. This will relate to the students encounters with the physical environment. Their perception when engaging with the physical environment and its sub-factors.

Psychosocial environment: psychosocial refers to the close association between psychosocial aspects of our experiences (e.g., our thoughts, emotions, and behaviour). These social conditions could affect learning within the CSL (UNESCO, 2014), specifically in relation to the student's engagement with these social conditions and their perception of whether it enhances or disturbs the quality of learning. This will further necessitate the perceptions of student expectations and feedback within the CSL.

Organisational environment: entails the course structure and institutional resources. According to Haraldseid, Friberg and Aase (2015) the organisational environment refers to the institution's facilitation, provision, and management of work. This will relate to the student's perception of the clinical facilitator within the CSL.

1.9 Literature Review: Conceptualisation of clinical skills laboratories

1.9.1 Clinical teaching in clinical skills laboratories

Regardless of an increasing emphasis on simulation as a learning strategy in nursing education, there is limited evidence regarding the transfer of simulated skills into clinical practice (Lavoie et al., 2018). Consequently, it is important to increase knowledge of how CSL can optimise students' learning for development of professional knowledge and skills, which are necessary for quality nursing practice and patient safety (Järvinen et al., 2018). Mamaghani et al. (2018) explored the experiences of students on aspects of the physical, psychosocial, and organisational factors in the CSL learning environment. Students report that creating an authentic environment, facilitating motivation, and providing resources for multiple methods and repetition during clinical skills training are all important for improving the clinical skills lab learning environment (Laari & Dube, 2020).

The challenge for nursing schools is to equip students through a quality educational experience which provides them with essential clinical skills to enable them to practise competently and

successfully as a graduate (Vichittragoonthavon et al., 2020). Fukada (2018) states that clinical competence is the composite integration of nursing knowledge, psychomotor skills, professional judgement, values, and attitudes. Furthermore, Bruce and Klopper (2017) state that competence does not only consist of knowledge and skills, but it also includes the ability to meet complex requests by mobilising resources in a particular context. For a student to be clinically competent in a skill, various resources and preparation are needed, and opportunities should be available for student nurses to intentionally experience meaningful encounters that will enable them to apply, and broaden, their knowledge and skills (Mancini et al., 2019). Competence in clinical skills are not solely based on knowledge, they are acquired over time (Bruce & Klopper, 2017).

1.9.2 The use of simulators in clinical skills laboratories

Simulation is a method of clinical teaching and consists of low-fidelity, medium-fidelity, and high-fidelity simulators; fidelity in this context refers to the extent of reality (Bruce & Klopper, 2017). Low- fidelity simulators are mannequins which are replicas of certain anatomical parts and can perform a small number of particular tasks or processes (Bruce & Klopper, 2017).

Medium-fidelity simulators are full- bodied mannequins which are linked to a computer. Facilitators can manipulate a variety of settings to create a particular learning opportunity (Bruce & Klopper, 2017).

High- fidelity simulators constitute body blocks or body part blocks with characteristics of life, which can respond to actions or interventions by the students. These body blocks or mannequins are manipulated from a distance and can display humanlike features (Bruce & Klopper, 2017).

Simulated patients are a category of human simulation who is an individual trained to act as a real patient to simulate a realistic clinical scenario. They are widely used for teaching and

assessment in nursing education, especially for communication purposes and for the acquisition of skills, and they can provide feedback when requested, usually using a set script (Koukourikos et al., 2021).

1.9.3 Clinical skills learning

To equip an undergraduate nursing student with the necessary clinical skills, a well-equipped and precise learning environment such as a CSL is needed. A graduate nurse is required to be competent in clinical skills as part of the curriculum outcomes. CSLs are a critical part of nursing education because it provides a safe environment to practise, which is needed due to the restricted opportunities for clinical skills training in clinical practice (Msosa et al., 2021).

Aldridge (2017) reviewed qualitative literature that focused on nursing students' perceptions of learning psychomotor skills and identified that the learning environment is essential for achieving competence in a skills component. The environment refers to the CSL's where the acquisition of psychomotor skills in clinical skills learning takes place. Furthermore, Aldridge (2017) reviewed and synthesised the use of emerging technologies such as simulation and the concept of deliberate practice with clinical skills learning. Staykova, Von Stewart and Staykov (2017) investigated the different strategies to implement the transition from passive knowledge from textbooks into active learning. The study concluded that in the process of a clinical demonstration, integration of knowledge and practice occurs. According to Rebeiro, Edward, Chapman, and Evans (2015) a vital portion of nursing education takes place in a clinical setting during the practicing of skills to achieve competency. Clinical learning is based on constructivism by which a student is actively engaged in the learning process and acquires new knowledge by reflecting on the clinical experience (Bruce & Klopper, 2017).

1.9.4 Preparedness for clinical placement

To equip an undergraduate nursing student with the necessary clinical skills, a well-equipped and precise learning environment such as CSL's are needed. A graduate nurse is required to be competent in clinical skills; this is part of the curriculum outcomes. Patient safety requires adequately educated and trained nurses; a lack of skills and knowledge can lead to adverse incidences. Students require an environment such as the CSL in which to practise the skills needed for competence in clinical settings (Rojo et al., 2020). According to Kerr et al. (2020) a CSL is a simulated ward environment to enhance students' preparedness for clinical placement. Clinical placements are an essential component to integrate the gap between theory and clinical practice (Patterson et al., 2017). Students are afforded the opportunity to develop clinical skills and apply problem-solving skills. Thus, it is essential to mentally prepare and equip with the necessary knowledge, skills, and attitudes to face clinical placement (Lopez et al., 2018). Kerr et al. (2020) states teaching in classroom and CSLs and in a clinical situation as three main modes in nursing education to adequately prepare the nursing student for clinical placement. Furthermore, Kerr et al. (2020) suggested that enhancing the CSL have the capacity to lead to further improvement in preparedness for clinical placement.

1.10 Operational definitions

Clinical facilitator	Refers to professional nurses, nurse educators and clinical preceptors who facilitate learning of nursing students in clinical practice (Muthathi, Thurling & Armstrong, 2017). According to Rebeiro, Edward, Chapman, and Evans (2015) a vital portion of undergraduate nursing educations takes place in a clinical setting in the manner of practicing skills
Clinical learning	It is based in constructivism whereby a student who is actively engaged in the learning process acquires new knowledge by reflecting on clinical experience (Bruce & Klopper, 2017).
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Learning	This can be conscious and deliberate, such as formal education. However, it can also be unconscious. Learning occurs when experience brings about a relatively enduring change in behaviour.
Physical environment	Part of the human environment includes purely physical factors such as infrastructure, buildings, and water supply (Merriam-Webster, 2020).
Psychosocial environment	This consists of the psychological and social factors that could affect the satisfaction, health, and ability to perform (Haradlseid, Friberg & Aase, 2015).
Organisational environments	These comprise forces or institutions surrounding an institution that affect performance, operations, and resources (Russo, 2017).

1.11 Research methodology

The study employed a qualitative research approach, using an exploratory and descriptive design to explore the unknown territory and to describe the many aspects of the phenomenon under study (Dudovskiy, 2018). Through a descriptive design, rich data were gathered regarding the perceptions of participants on the phenomenon of factors influencing learning in a clinical skills laboratory. Polit and Beck (2017) describe a research design as the overall plan for addressing a research question and includes specifications for enhancing the study's integrity. A brief outline of the research methodology will be described in this chapter and a more in-depth discussion will be presented in chapter three.

1.11.1 Population and sample

1.11.1.1 Population

Population can be defined as an entire group of people or type of element that represents the focus of the research study (Gray, Grove & Sutherland, 2016). The population of interest for

this research study was undergraduate nursing students registered at a School of Nursing in the Western Cape Province. The total population included all registered nursing students (N=693) from their first to the fourth year of study.

1.11.1.2 Sampling and sample size

A sample is defined as a subset of the accessible population that the researcher selects for participation in a research study (Gray, Grove & Sutherland, 2016). The researcher used purposive sampling as this method allowed efficient access to the targeted audience or population efficiently. Purposive or selective sampling, a type of non-probability sampling, was applied with a conscious selection of participants representing the phenomenon being studied (Polit & Beck, 2017). The accessible population served as a total sample of all registered nursing students (N=693) from their first to the fourth year of study. The sample size for each year level was determined by conducting a minimum of two (2) FGD per year level with a minimum of six (6) students per FGD. Additionally, the sample size was determined by the information needs or until data saturation was reached.

1.11.1.3 Inclusion criteria

Participants who were in their first enrolment in their current year level of study were included.

1.11.1.4 Exclusion criteria

Students who were repeating the year level were excluded from the study as their perceptions may differ due to having had more exposure in the clinical skills laboratory to enhance their clinical learning.

1.11.2 Research setting

The study was conducted at a School of Nursing at a university in the Western Cape. This university is one of four higher education institutions (HEIs) offering undergraduate nursing at the time of data collection in the Western Cape. The undergraduate programme is a four-year

Bachelor of Nursing programme. This specific research setting was chosen because it is equipped with clinical skills laboratories and it was accessible for the researcher.

1.11.3 Data collection methods

1.11.3.1 Focus group interviews

Data collection for this study was done through focus group interviews. This allowed participants to share their experiences with each other, and with the researcher. Focus group interviews were designed to obtain the participants' perceptions on a focused topic in a setting that is non-judgmental and non-threatening (Krueger & Casey, 2015; Gray, Grove & Sutherland, 2016). The advantages of using focus group interviews included flexibility and the ability to collate extensive qualitative data at once and in a short period of time (Busetto, Wick & Gumbinger, 2020). Additionally, conducting focus group interviews among participants it can assist them to express and clarify their views in ways that are less likely to occur in a one-on-one interview (Gray, Grove & Sutherland, 2016). Polit and Beck (2017) suggest that the optimal group size for focus groups is between six (6) to twelve (12) participants. Focus groups interviews were conducted with the purpose of collecting data on a specific topic from more than one research participant at the same time. In the time of Covid-19, the following was applicable: wearing of a face mask, adherence to all health protocols, and maintenance of a distance of least one and a half meters from each other, and adherence to any other health protocols and social distancing measures (Disaster Management Act, 2020). The researcher arranged suitable venues to accommodate the rule of 50% of the venue's capacity. The interviews continued in this manner until data saturation was achieved (Gray, Grove & Sutherland, 2016). Data saturation refers to information redundancy, in other words when further interviews do not provide new information (Polit & Beck, 2017).

1.11.3.2 Data collection tool

A carefully planned interview schedule containing questions to be asked during the focus group interview was prepared. The questions were linked to the research questions, research objectives and theoretical framework. Questions were limited to vital questions only, to allow adequate time for discussion (Gray, Grove & Sutherland, 2016). The theoretical framework of model of Haraldseid, Friberg and Aase (2015) for the clinical skills learning environment guided the formulation of questions for the data collection tool.

1.11.3.3 Data collection process

Permission was obtained to interview undergraduate nursing students via all the relevant university structures. All focus group interviews were arranged with the participants for a time that was convenient for them, and the researcher explained that the duration of the interview session would be approximately 60 - 80 minutes. Participants were identified based on the availability of their scheduled timetables and willingness to participate in this study. Privacy was provided using a facility that was well ventilated when closing the door ensuring that participants were also comfortable. All interviews were audio recorded with the permission of the participants, to facilitate transcription of the interviews prior to analysis.

1.11.4 Trustworthiness in qualitative research

According to Gray, Grove and Sutherland (2016), trustworthiness in qualitative research includes transparency, time, truth and transformation, leading to transferability. Trustworthiness refers to the quality of a research study and whether the findings and interpretations can be trusted (Lincoln & Guba, 2016). Furthermore, Polit and Beck (2017), define trustworthiness as the degree of confidence in data, interpretation and methods used to ensure the quality of a research study. Trustworthiness in this study was applied in terms of credibility, reflexivity, confirmability, dependability, and transferability. **Credibility** refers to establishing truthfulness in the findings and interpretations in the research study (Lincoln &

Guba, 2016). The truthfulness of the findings was judged by the participants and the supervisor of the research study (Korstjens, 2018). In this study, the researcher ensured credibility by recording the FGDs and transcribing them verbatim. The transcripts were returned to the participants for them to read and then share their interpretation of the findings, which is known as member checking. The data collection process is strengthened by member checking because the researcher and the participants view the data from a different perspective (Korstjen, 2018). In order to ensure credibility and enhancing quality during qualitative data collection the researcher incorporated prolonged engagement (Polit & Beck, 2017). Prolonged engagement in qualitative research, refers to the investment of adequate time during the data collection to ensure and in-depth understanding of the phenomenon under study has been captured thus enhancing credibility (Polit & Beck, 2017). The researcher spent time to gather data, developing relationships with participants and key informants and was immersed in the data during analysis and interpretation (Gray, Grove & Sutherland 2016). **Dependability** refers to the consistency of the data over a period of time and the conditions of the study (Polit & Beck, 2017). Dependability aims to establish an outcome of a consistent and dependable process. An audit trail is advisable to describe the research steps taken from the start of the research study to the development and reporting of findings. The supervisor will review the inquiry process to check for consistency (Lincoln & Guba, 2016). **Confirmability** is the degree to which the findings of the research study can be validated by other researchers (Korstjen, 2018). The findings and interpretations are a result of a dependable process of inquiry as well as data collection (Lincoln & Guba, 2016). In this research study, direct quotes from participants were included in the findings to provide rich description of the findings (Polit & Beck, 2017). **Transferability** refers to the degree to which the results of qualitative research can be transferred to other contexts or settings (Korstjen, 2018). Transferability is probable through thick description (Lincoln & Guba, 2016). Thick description is not limited to only behaviour

and experiences, but the context as well, to ensure the behaviour and experiences convey meaningfulness to an outsider (Korstjen, 2018). **Reflexivity** is the process of self-reflection for the researcher to ensure that bias, preferences and preconceptions are noted. A strategy to ensure reflexivity is a diary, which the researcher can use to examine her own conceptual lens, assumptions, values, and how these affect the research decisions in all phases of the study (Korstjen, 2018). The researcher should be mindful of her own preconceived opinions about the phenomenon under study (Pilot & Beck, 2017).

1.11.5 Data analysis

According to Creswell and Creswell (2018), data analysis is a continuing process in the research study. The researcher will make use of thematic analysis, which is referred to as a systematic method to analyse qualitative data. After the recordings from the focus group sessions had been transcribed verbatim the following six (6) steps of Braun and Clarke (2006) were followed when analysing the data: Step 1: become familiar with the data; Step 2: generate initial codes; Step 3: search for themes; Step 4: review themes; Step 5: define themes and Step 6: write-up the data analysis. Therefore, the data analysis involved transcribing the focus group sessions and then analysis of the transcripts. Data was coded according to themes and sub-themes. The themes and sub-themes were confirmed by an independent coder.

1.12 Ethical consideration

The researcher obtained ethical clearance from the Humanities and Social Sciences Research Ethics Committee (HSSREC). Permission to conduct the proposed study was then obtained from the Registrar, followed by permission from the Director of the School of Nursing and all relevant structures at the University being used in this study. This was to be able to enter the "field" for data collection.

Informed consent is an ethical principle that requires researchers to obtain people's voluntary participation after informing them of possible risks and benefits (Polit & Beck, 2017). Research must be conducted in the prescribed manner and with the written consent of the person after they have been informed of the objectives of the research study. **Voluntary participation** in a study should be seen as voluntary, and the researcher should explain to the participants that they could withdraw at any stage if they are not comfortable (Creswell & Creswell, 2018). **Confidentiality and anonymity** is the need to keep all personal information private, and not shared with anyone (Dhai & McQuoid-Mason, 2012). Anonymity, the most secure means of protecting confidentiality and identity of participants. Information regarding participants was not divulged to anyone and consent forms are kept safely locked to ensure the identity of participants are not revealed. In this study, audio recordings were marked with a code instead of participant's names. Focus group confidentiality binding forms were also signed prior to commencing the focus group interviews to ensure confidentiality within the interview among participants. The researcher transcribed the FGD. Transcribed interviews were coded, the participants had code name as well, and thus, when transcribed interviews were shared with a co-coder, confidentiality of participants was maintained.

Participants were assured that no names will be disclosed throughout the interviews. The files of the recording will be password protected and only the researcher has access. The researcher assessed the risk of any potential harm for the participants in the study. Participants were ensured that referral to professional support was available, if necessary, should the interviews trigger an emotional response. None of the participants were referred to professional support as none of the participants triggered an emotional response.

1.13 Outline of the study

The chapters of this study are outlined as follows:

Chapter 1: Introduction

The focus of this chapter comprises an introduction of the problem that was identified by the researcher, the background, and significance of the study, aim, objectives, theoretical framework and a brief outline of the research methodology applied in this study.

Chapter 2: Literature review

This chapter includes an exploration and discussion of appropriate literature aimed at exploring and describing the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory in a School of Nursing in the Western Cape Province.

Chapter 3: Research methodology

The appropriate research methodology identified for this study is presented in chapter 3. The research approach, research design, data collection, data analysis and ethical considerations will be included in this chapter.

Chapter 4: Findings and discussion

This chapter presents and discusses the data analysed and the research findings of this study, supported by relevant literature.

Chapter 5: Conclusion, limitations, and recommendations

This chapter presents a summary and conclusion of the identified recommendations from this research study and the limitations experienced in this study.

1.14 Summary

This first chapter of the study has outlined the background of the study and explained why the researcher felt it was necessary to conduct the study. Key concepts were explained and defined. An outline of the research methodology and design was provided. The next chapter will orientate the reader to the theoretical framework of the study and provide an outline and discussion of the literature review that was conducted for this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter offers a discussion of the literature review that was conducted for this study. In order to achieve this, it was necessary to identify current similar or interrelated studies, and to explain the theoretical framework for the study. A literature review is a written summary demonstrating knowledge and evidence about a research problem (Polit & Beck, 2017). A literature review provides an overview of the results of other studies closely associated with the study and provides a framework for establishing the significance of the study (Creswell & Creswell, 2018). According to Gray, Grove and Sutherland (2016), literature can offer reference lists of appropriate studies to discover the most recent, and most relevant, information about the study.

This chapter will focus on literature related to the factors influencing the learning needs of nursing students in a clinical skills laboratory. The literature researched will incorporate the physical, psychosocial, and organisational environmental factors that influence the learning of nursing students in a clinical skills laboratory. The literature review will identify what is known, not known, and the current knowledge about the study (Gray, Grove & Sutherland, 2016). Literature was reviewed for this research study as follows:

- Conducting the literature search
- Simulation in a clinical skills laboratory
- Clinical skills laboratory as a learning environment
- Clinical Learning
- Facilitators of clinical learning in a Clinical Skills Laboratory
- Readiness for clinical placement

- Achieving clinical competence in clinical skills
- Factors associated with a Clinical Skills Laboratory

2.2 Conducting the literature search

An initial literature review was conducted using an electronic database search including: Ebscohost, Elsevier, Google Scholar, Science Direct, and Ukwazi to determine what is known about the phenomenon under study. The literature search included all published sources relevant to the research study, and consisted of scientific journals, books, theses and dissertations (Gray, Grove & Sutherland, 2016). Literature was reviewed on the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory, both globally and in South Africa. The researcher noted a gap in literature with regards to the facets of a clinical skills laboratory that could negatively influence the achievement of clinical competence for students.

2.3 Simulation in a clinical skills laboratory

In the context of nursing education, simulation refers to an event or situation that closely resembles the real clinical setting (Bruce & Klopper, 2017). Simulation is extensively used in nursing education and has become a recognised pedagogy for enhancing learning in a clinical skills laboratory. According to Cant and Cooper (2017) clinical skills laboratories aim to replicate real-life scenarios by using high-fidelity simulators or human trained simulated patients. Simulation can make a positive contribution to the nursing students' learning experience and can bridge the gap between theory and clinical practice (Chabrera et al., 2021). According to Bruce and Klopper (2017), sequential to the utilisation of simulation in clinical nursing education, simulators are essential. Simulators range from low, medium to high fidelity. Hanshaw and Dickerson (2020) state that high-fidelity simulators are commonly used in nursing education and offer students real-life scenarios in which to practise their clinical competencies in a safe environment. Students can advance their confidence in performing

clinical skills in a controlled learning environment. Laari and Dube (2020) state that a clinical skills laboratory is intended to resemble a hospital environment to enhance the simulation of clinical learning situations. Koukourikos et al. (2021) suggest that simulation in a clinical skills laboratory is a useful teaching strategy in nursing education and creates a valuable learning opportunity for students. Strong evidence exists that simulation supports learning clinical skills, increases confidence and decision-making related to patient care for undergraduate nursing students (Kerr et al., 2019). In studies conducted by Cant and Cooper (2017), Kerr et al. (2020), Mothiba et al. (2020) and Staykova et al. (2017) it is specified that simulation outcomes in nursing education are useful in creating a learning environment that contributes to the knowledge, skills, safety, and confidence of the nursing student. Additionally, Lavoie et al. (2018) state that simulation is an active learning strategy and it is vital to understand how it contributes to the development of core nursing competencies. According to Padilha et al. (2018), the introduction of simulation has provided substantial improvements in nursing education. Nursing students consider simulation to be a vital instrument, especially high-fidelity simulators, for their clinical learning in nursing education.

2.4 Clinical skills laboratory as a learning environment

Swift et al. (2022) place emphasis on the learning environment and state that a nursing student's self-confidence in developing clinical skills is influenced by the learning environment. Mamaghani et al. (2018) refers to the clinical learning environment as a complex dynamic with various components that consists of the physical environment and people. Research has supported the idea that a positive learning environment increases the student learning ability (Kurt et al., 2022). Globally the utilisation of clinical skills laboratories using simulation to enhance clinical skills in nursing schools has become a common practice (Koukourikos et al., 2021). Mamaghani et al. (2018) describes the four characteristics of a clinical learning environment as the physical environment, interpersonal aspects, organisational culture, and

clinical teaching aspects all of which impacts clinical learning. Furthermore, Msosa (2017) found that the clinical skills laboratories provide a safe environment to correct practices when mistakes are made by students. These mistakes are then used as learning opportunities within the skills laboratory. Therefore, it is crucial for a faculty to strengthen clinical learning in the skills laboratory to enable students to develop the objectives and competencies (Msosa et al., 2020).

Heradien (2019) reports on the importance of the transfer of skills into clinical practice. The results of this study emphasise how the increase in knowledge gained in the clinical skills laboratories can optimise student learning for the development of clinical practice skills. Nakayoshi et al. (2020), focused on exploring the factors that motivate nursing students to engage in skills practise in the skills laboratory setting. While Nakayoshi et al. (2020) focused on the students' motivation for engaging in skills practise, factors of the learning environment in which the skills practise occur are vital as well. Msosa et al. (2020), conducted a qualitative study on the perspective of teaching and learning in a clinical skills laboratory. The aim of the study was to evaluate how clinical teaching and learning in the skills laboratories are experienced from the perspective of nurse educators and students. Furthermore, Msosa et al. (2020), explored students' and educators' perspectives of clinical demonstration in the skills laboratory and the findings indicate that demonstrations, return demonstrations, practise sessions and resources contribute effectively to learning. Thus, a clinical skills laboratory should be a comfortable learning environment for students to practise because students have to achieve certain objectives in the clinical skills laboratory. Msosa (2017) indicates that simulation laboratories help students to build a strong foundation of clinical competence in an environment that is stress-free.

In South Africa, Mothiba et al. (2020) explored the impact of clinical skills laboratory sessions on undergraduate nursing students. Their nursing department established a clinical skills

laboratory and explored the impact it had on students clinical learning experiences. Skills laboratory training was utilised as a teaching strategy to create a platform or environment for nursing students to develop and improve on their clinical skills. Furthermore, Mothiba et al. (2020) stated that the clinical skills laboratory as an educational intervention assists nursing students to develop expertise in clinical skills which ensure efficient and safe patient care. The findings of this study indicated that the clinical skills laboratory equipped students for their real- life clinical experiences during health facility placements (Mothiba et al., 2020).

The clinical skills laboratory is a well-established learning environment in nursing education where simulated practise enables the integration of theory to practice in a safe and risk-free environment (Saifan et al., 2021).

Msosa (2017) identified a paucity of information on the impact of simulation in nursing education institutions in developing countries and assessed how clinical learning and teaching, with the objective structured clinical examination method of evaluation, is experienced by nurse educators and students in clinical skills laboratories, within a South African context. Msosa (2017) evaluated the effect of formative assessment for learning in the clinical skills laboratory. Pertaining to the clinical skills laboratory Msosa's (2017), findings concluded that the clinical skills laboratories provided a better teaching and learning experience through demonstrations. Additionally, students benefitted from the use of the appropriate resources and the presence of a nurse educator made learning more effective.

Laari and Dube (2020) similarly looked at how learning in the clinical skills laboratory can be strengthened as a learning space for nurses. According to the South African Nursing Council Act No. 33 of 2005, Nursing Educational Institutions must have accessible, current, and relevant physical facilities as well as equipment and other resources that are sufficient, appropriate, well-maintained and accessible to staff and students. The findings of Laari and

Dube (2020) revealed that material resources that was in short supply were a challenge for nursing students. The need to increase resources and replace outdated equipment were identified to support student learning. Understanding that the clinical environment greatly influences student learning, it is crucial to investigate nursing students' experiences and perceptions of the learning environment prior to the implementation for change and improvement (Laari & Dube, 2020).

2.5 Clinical learning

Bruce and Klopper (2017) define clinical learning as the acquisition of knowledge, skills, and values in clinical practice settings or environments that simulate clinical practice. According to Ekstedt et al. (2019) a productive clinical learning environment, with satisfactory opportunities for student learning, and a focus on student learning needs, is essential to nursing education. Günaya and Kılınçb (2018) suggest that the quality of clinical training is closely interrelated with the quality of the clinical learning environment. The competency of clinical skills learning is essential to become a trained nurse, therefore training and opportunities for clinical skills training in clinical areas, and undergraduates training at CSLs, are a vital part of nursing education (Laari & Dube, 2020).

The benefits of skills laboratory sessions, such as simulations, have been discussed by other authors, and are a pivotal process for the clinical learning of students (Mothiba et al., 2022). Higher Educational Institutions (HEI's) have to implement clinical learning activities that create provisional opportunities for students to develop their practical skills and consequently incorporate patient safety principles (Mothiba et al., 2022). The study further reveals that the clinical skills laboratory has a positive and diverse impact on the clinical learning experiences of nursing students (Mothiba et al., 2022). Mothiba et al. (2022) suggest that nursing institutions must have a clinical skills laboratory as it prepares student nurses for learning in a real-life clinical setting. Msosa (2017) states that the success of nursing faculties in clinical

teaching and learning depends on their prior understanding of the theoretical foundations of the clinical nursing practicum, models of clinical nursing education and nursing students. This knowledge provides the guiding principles of methods of instruction and evaluation of clinical learning because clinical practice is defined as the heart and soul of nursing education, where nursing knowledge shapes it into professional practice (Msosa, 2017). Msosa et al. (2020) emphasises that it is imperative for nursing faculties to strengthen clinical leaning in the CSL for students to develop the necessary competencies to be a competent nurse practitioner. Arkan et al. (2018) suggest that nursing students need to practise in a clinical learning environment that assists the nursing student to develop individual and professional development. Clinical facilitators have a significant role in creating an effective clinical learning environment therefore the physical condition of the environment should be suitable to promote clinical learning (Günaya & Kılınçb, 2018).

2.6 Facilitators of clinical learning in a clinical skills laboratory

Bruce and Klopper (2017) state that facilitators of clinical learning should be experts because they need the in-depth knowledge gained through the process of developing their expertise to guide students in their reasoning processes. According to the Education and Training standards document released by SANC (2020), clinical facilitators are registered nurses with a nursing education qualification who support the students' development of knowledge, attitudes and skills necessary for practice within the clinical environment. Henderson et al. (2020) suggest that clinical facilitators are the connection between the university and the clinical learning environment, and their part is integral in teaching clinical skills. Muthathi et al. (2017) states that clinical facilitation aims to assist student nurses to integrate theory and practical skills. Clinical facilitators become a facilitator of clinical learning by means of demonstrating clinical skills and by conducting on the spot teaching. Dyar et al. (2021), describe dedicated clinical facilitators as being focused on student growth, professional development, being a role model

and responding in a student-centred manner. The role of clinical facilitators consists of various components such as facilitating the students' integration of theory and practice, monitoring students' progress including communicating and coordinating with clinical staff, and the school, to ensure the provision of support (Sweet & Broadbent, 2017). According to Bruce and Klopper (2017), the clinical facilitator needs to create a supportive learning environment, enable student's individual learning processes, develop student's professional attributes and identities, develop attainment of clinical competence, and promote integration of theory and practice. In a study conducted by Ryan and McAllister (2018) nursing students stated that they have learned more from their clinical facilitator than from any other educator or learning experience. Thus, the clinical facilitator's role is diverse and pivotal in ensuring that there is a positive learning environment where students are adequately supported and guided (Rojo et al., 2020). According to Hoffman (2019), it is required for clinical facilitators to be good educators and additionally, they frequently draw from their individual, personal and professional experiences to guide their teaching to meet the clinical demands. Ryan and McAllister (2018) identified that it is imperative that clinical facilitators are skilled and confident. However, a study done by Oprescu et al. (2019) has shown that clinical facilitators are not always proficient in the teaching and learning process. Maintaining optimal best practice in clinical facilitation ensures nursing students learn the skills and values of nursing (Muthathi et al., 2017).

2.7 Readiness for clinical placement

The South African Nursing Council (2020) stated that a clinical placement is the period spent by the student in an accredited clinical or health facility and other experiential learning sites to ensure that the outcomes of the nursing programme are achieved. Clinical placement experiences are fundamental components of nursing education as students obtain the essential knowledge and competency in clinical skills through learning in a supervised clinical environment (Rojo et al., 2020).

A study conducted in Norway by Leonardsen et al. (2021) focused on the nursing supervisors' perspective of student preparedness before clinical placement. Furthermore, Leonardsen et al. (2021) states that clinical placement and supervision is a fundamental part of nursing education, and there are substantial differences between students' expectations of clinical learning and their fulfilment. Additionally, the clinical learning environment plays an integral role in transitioning nursing students into professionals in order to fulfil their role as nurses. Nonetheless, clinical supervisors expect that students have both knowledge and clinical skills before they commence their clinical placement (Leonardsen et al., 2021).

In Australia, Davies et al. (2021) conducted a study to determine if simulation programmes improved the preparedness of undergraduate nursing students for clinical practice. Practice preparedness of graduate nurses entering the workforce continues to be a concern, for both educators and other parties, to bridge the gap between theory and practice because their experiences as a student do not reflect in clinical placement (Davies et al., 2021). According to Järvinen et al. (2018) newly graduated nurses entering the workforce can be described as a process of role transition from nursing student to a new and unfamiliar role of the registered nurse. Newly graduated nurses displayed low self-confidence in the many nursing skills they had to apply due to the limited opportunity to practise these skills (Park, 2018). In contrast, Davies et al. (2021) concluded that learning fulfilment was high among students who participated in simulated experiences, due to having had the opportunity to practise their clinical skills before being placed in real-life clinical practice facilities. Swift et al. (2022) conducted a study that aimed to identify the clinical skills that students self-identified as being pivotal for their preparation for first-year clinical placement. Furthermore, first-year clinical preparedness in an undergraduate nursing curriculum is vital for students to develop their confidence in preparation for their clinical placement experience (Swift et al., 2022). From the findings of their study, Swift et al. (2022) concluded that first-year nursing students can

articulate nursing skills that are critical for clinical practice provided that clinical laboratories were utilised in preparation for them to practice the clinical aspects of the course. Parker and Grech (2018) conducted a study on the authentic practice environment to support nursing students' readiness for hospital placement. This study focused on the preparation for the student; students were required to attend a one-hour psychomotor skills practise session in the clinical laboratory. In addition, Parker and Grech (2018) stressed integral aspects such as course materials, tutorial sessions, lecturers as well as simulation sessions, and practise of psychomotor skills, all of which provide the student with the necessary foundational skills to successfully achieve the objectives. In South Africa, Heradien (2019) conducted a study on the clinical supervisors' perception of factors that influenced students' skills transfer from the skills laboratory to the clinical practice environment. This study found that nursing students experienced challenges in transferring skills learned in the CSL to the practice environment, and indicated that there is a disengagement from what was learnt in the CSL and what they experienced in the clinical practice environment (Heradien, 2019). It is clear that clinical placements are important for students to develop clinical skills, however, various difficulties experienced by students during their clinical education can detract from them developing adequate clinical competency (Lee et al., 2018). According to Gemuhay et al, (2019) nursing students should be supported and guided to produce responsible, accountable professionals who can function in the role of a registered nurse.

2.8 Achieving competence in clinical skills

Competence refers to the overall ability of someone to perform their role effectively in a particular context, whereas competency is a narrower term and is an element of competence (Bruce & Klopper, 2017). Additionally, Fukada (2018) states that competence is a foundation for developing competency and adds that competence is developed through experience and learning. In nursing education, students are provided with opportunities to practise in university

laboratories and/or the real clinical environment to develop the requisite clinical competencies (Lee et al., 2018). Arrigoni et al. (2017) conducted a study on nursing clinical competencies and states that despite improvements in the curriculum of nursing education programmes, aimed at improving the acquisition of clinical skills and competencies, concerns remain over the competencies of newly-qualified nurses. Theory and clinical practice is the foundation of a nursing education programme and achieving clinical competence is one of the critical requirements in the nursing profession (Tohidi et al., 2019). Furthermore, nurses are required to apply their knowledge, skills and attitudes to each situation in order to adapt that knowledge and skills in various circumstances (Fukada, 2018). Raman et al. (2019) suggest that clinical training is vital for reaching of the clinical competencies required for a qualified nurse's role. According to Chabrera et al. (2020) nursing students caring for a patient without training and the development of appropriate clinical competencies can be a risk to the patients' safety. Clinical training allows the student to critically think, interact, communicate, and practise psychomotor skills (Fukada, 2018). Nursing skills can ensure patient safety and also increase a student's self-confidence while providing care, therefore it is essential for nursing students to have adequate knowledge and appropriate clinical learning before commencing clinical placement (Chuang et al., 2018). Achieving clinical competence is a crucial element in nursing education to ensure patient safety and it develops with time as nursing students' progress in their training (Wu et al., 2020). Mancini et al. (2019) conducted a study to understand the impact that simulation and traditional clinical training have on the development of clinical competence, and concluded that limitations in resources exist in the simulation laboratories, including space, time and staff. Lee et al. (2018) explored the nursing students' experiences in nursing education to identify factors influencing the clinical education students receive. They found that the clinical learning context has a profound effect on nursing students' clinical education experiences and the desire to continue with nursing (Lee et al., 2018). Furthermore,

Kang et al. (2021) suggest that the progression of clinical competency decreases the nursing students' stress and improves their clinical practice and theoretical performance. In comparison, Park (2018) found that nursing students experience severe stress in demonstrating core nursing skills because they had limited opportunities to practise the skills. The role of simulation in clinical competence is supported by Cant and Cooper (2017) who suggest that simulation encounters improve the students' knowledge and enhance clinical skills achievement, self-efficacy, confidence and competence. Msosa et al. (2021) additionally explored how competence in clinical learning is integrated by suggesting that simulated experiences in the clinical skills laboratories are essential to acquire the necessary clinical competence through regular practise and feedback.

2.9 Factors associated with a Clinical Skills Laboratory

Haraldseid, Friberg and Aase (2015), concluded that establishing an authentic environment, facilitating motivation and provision of sufficient resources for various methods and repetitions within the clinical skills training are all significant for improving the CSL learning environments from the student perspective. Aldridge (2017), identified several aspects to the CSL environment that affect student learning. Learning environments have recognised aspects of interacting with learners and educator in a social and cultural climate as well as the organisational structures and physical environment that surrounds the learning experience (Leighton et al., 2021). Adequate time is needed in the CSL to achieve competence, complex problems were solved in a safe environment, students identified CSL environment to be too relaxed therefore it did not approximate to the clinical setting (Aldridge, 2017). Furthermore, students described and recognised that inferior equipment and manikins inhibit learning and the lack thereof impairs the learning process (Aldridge, 2017). Demonstrations, return demonstrations, practise sessions and adequate resources contribute efficiently to learning whereas, swift demonstrations, limited practice opportunities and an inadequate supply of

resources negatively affects the learning progression (Msosa et al., 2022). Takase et al. (2019) investigated the students perceptions on factors that demotivate their learning in a CSL and students perceived to experience a restrictive environment refers to the physical and psychosocial aspects of the CSL which resulted in demotivating the students learning. Students identified a lack of learning sources and an environment that hinders students' concentration within the restrictive environment of the CSL. In contrast, Nakayoshi et al. (2020) explored factors that motivate the students to engage n CSL environment and of the findings students indicated a CSL learning environment that facilitates students' learning and supportive involvement of educators in the CSL to facilitate their learning.

2.10 Theoretical framework

The theoretical framework for this study was based on the model of Haraldseid, Friberg and Aase (2015) for a clinical skill learning environment, and it was utilised to explore the phenomenon under investigation. Haraldseid et al. (2015) identified the following three main factors for a clinical learning environment: physical environment, organisational environment, and psychosocial environment (Figure 2.1).

Figure 2.1: Framework for clinical skills learning environment (Haraldseid, Friberg & Aase, 2015).

Physical environment: Physical equipment, facilities, and standardised procedures are sub-factors of the physical environment. This will relate to students' encounters with the physical environment, including their perception when engaging with the physical environment and its sub-factors. According to Msosa (2017) using the correct equipment facilitates the learning process, and the availability of material resources has an impact on clinical teaching. Haraldseid et al. (2015) found that students had difficulty in accessing the equipment to practise their clinical skills. However, students were able to access learning tools and guidelines. Outdated equipment results in improvisation which can lead to a false, and inadequate, training situation (Haralseid et al., 2015).

Msosa (2017) confirms that resources and equipment constraints interfere with the student's achievement of clinical skills. The availability of resources and equipment mimic the clinical learning environment in the clinical practice sites. According to Mothiba et al., (2020) a clinical setting can be realistically simulated, and there is no harm in terms of patient safety during the simulation provided the correct equipment is used for demonstrations of practical skills. Laari (2016) states that a clinical skills laboratory should be deemed a learning environment and should be conducive to learning. According to Laari (2016), equipment accessibility is a key factor needed to encourage continuous pursuance of the regulations set out by the regulatory body, noting that the clinical skills laboratory is a requirement in every health training institution to facilitate learning. Mothiba et al. (2020) state that a clinical skills laboratory lecturer is expected to develop study materials, including study guides for skills training, to demonstrate clinical skills using standardised guidelines.

Psychosocial environment: psychosocial refers to the close association between psychosocial aspects of our experiences, such as thoughts, emotions, and behavior. These social conditions could affect learning within the CSL (UNESCO, 2014), particularly the student's engagement with these social conditions, and their perception of whether it enhances or disturbs the quality

of learning. The psychosocial environment involves the perceptions of student expectations and feedback within the CSL as well. According to Laari (2016) an effective educator can facilitate positive interpersonal relationships that will enhance learning. Laari (2016) reported communication in the skills laboratory is demotivating. The participants in the above study emphasised that there must be privacy during feedback sessions. Bruce and Klopper (2017), indicate that feedback on students' performance and learning progress is a critical aspect of teaching and learning. Furthermore, feedback should be planned, constructive, and certain guidelines should be used to implement the sessions.

Organisational environment: comprises course structure and institutional resources. According to Haraldseid, Friberg and Aase (2015) organisational environment refers to the institution's facilitation, provision, and management of work. This will relate to student's perceptions of the clinical facilitator within the CSL. According to Msosa (2017) organisational factors can affect student teaching and learning negatively or positively. According to another study conducted by Msosa et al. (2022) participants indicated that resource issues and organisational factors detract from the quality of clinical teaching and learning in a skills CSL. Furthermore, Msosa et al. (2022) state that the organisational shortfalls pertaining to staffing and CSL logistics can negatively impact on the quality of clinical teaching and learning.

Table 2.1: Application of Framework for clinical skills learning environment

Clinical Skills Laboratory Environment	**Sub-factors to investigate**
Physical Environment	Equipment, Manikins, simulation manikins
	Accessibility, booking schedules
	Learning tools: videotapes, consultations with clinical supervisors, procedure guidelines
	Standardisation of clinical procedures

Organisational Environment	Department human resources: clinical supervisors, simulated patients, clinical skills laboratory coordinator, clinical coordinator
	Challenges: training sessions group numbers per station, length of training sessions
Psychological Environment	Expectations: time, feedback, practise, facilitation
	Feedback: positive, constructive, objective
	Support provided

2.11 Summary

This chapter summarised an outline of the literature explored and highlighted the concepts associated with perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory. The theoretical framework, concepts and aspects related to the clinical skills laboratory environment were explored and explained in this chapter.

The next chapter focuses on the research design, methodology, data collection, data analysis, and the sub-factors explored in relation to the strategies utilised in this study. The ethical consideration for this study is also described in Chapter three.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a description of the research methodology and research design used to achieve the objectives of this study. The aim of the study was to understand the perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory. A qualitative research approach was adopted, using an exploratory and descriptive design. Qualitative research is an approach used to describe life experiences, cultures, and social practices from the perspective of the participants included in the study (Gray, Grove & Sutherland, 2016). A research methodology is the process through which the researcher conducts their research, demonstrating the path of the formulation of the problem, objectives, and the data collection process (Sileyew, 2019). It includes the methods employed to identify, select, process, and analyse data about the phenomenon being investigated. According to Gray, Grove and Sutherland (2016), a methodology refers to the type of research selected to answer the research question. This chapter explores the research methodology for this study, and describes the researcher's approach in answering the research question, and the methods utilised during data collection and analysis.

3.2 Aim of the study

The aim of this study was to explore and describe the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

3.3 Objectives of the study

- To explore and describe the perceptions of nursing students regarding the *physical environmental factors* that influence their learning in a clinical skills laboratory.

- To explore and describe the perceptions of nursing students regarding the *psychosocial environmental factors* that influence their learning in a clinical skills laboratory.
- To explore and describe the perceptions of nursing students regarding the *organisational environmental factors* that influence their learning in a clinical skills laboratory.

3.4 Research approach

Research approaches are plans and processes for research that encompass the steps from extensive assumptions to detailed methods of data collection, analysis and interpretation (Creswell & Creswell 2018). This plan involves several decisions with the overall decision determining which approach should be used for the topic of the study (Creswell & Creswell, 2018).

3.4.1 Qualitative research approach

A qualitative research approach was adopted for this study. A qualitative approach is used to explore and comprehend the connotation individuals or groups ascribe to a social or human problem (Creswell & Creswell, 2018). Additionally, as suggested by Gray, Grove and Sutherland (2016), qualitative research permits the researcher to explore the depth, richness, and complexity inherent in the lives of individuals.

The core characteristics of qualitative research by Creswell and Creswell (2018) are as follows:

- Natural setting: qualitative researchers are inclined to collect data in the natural setting where participants experience the issue or problem under study. The researcher collects data by talking, interacting directly with people, and seeing them behave and act within their environment (Creswell & Creswell, 2018).

- The researcher is the key instrument. The collection of data is done by the qualitative researcher by examining the documents, observing behaviour or interviewing participants. A qualitative researcher does not tend to use or depend on instruments created by other researchers (Creswell & Creswell, 2018).
- Multiple sources of data: qualitative researchers do not depend on a single data source. Characteristically, they gather multiple forms of data like interviews, observations, documents and audio-visual information. Open-ended forms of data are utilised, in which participants share their perception without limitation (Creswell & Creswell, 2018).
- Inductive and deductive data analysis: Qualitative researchers work inductively, building patterns, categories, and themes from the beginning by organising the data into increasingly more abstract units of information until a comprehensive set of themes is produced. Deductively, the researcher re-examines their data from the themes to determine if more evidence can support each theme (Creswell & Creswell, 2018).
- Participants' meaning: the researcher aims to learn the meaning that the participants hold regarding the problem or issue (Creswell & Creswell, 2018).
- Emergent design: this means that the preliminary plan for research cannot be firmly prescribed and some of the phases of the process may change after the researcher begins to collect data. The significance of qualitative research is to learn about the problem or issue from participants, and to address the research to acquire that information (Creswell & Creswell, 2018).
- Reflexivity: the researcher needs to reflect on the impact of their role in the study and their personal background, culture and experiences, which have the potential to influence their interpretations (Creswell & Creswell, 2018).

- Holistic account: Qualitative researchers try to create a complex picture of the problem or issue under study. This encompasses describing multiple perspectives, identifying the numerous factors involved in a situation, and describing the bigger picture that emerges (Creswell & Creswell, 2018).

The researcher utilised a qualitative approach to explore the views of the participants, which, in this study, are the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory. This approach allowed the researcher to speak to participants in their natural environment, which allowed participants to express their views freely and without constraint, enabling the researcher to study the lived experiences of the participants.

3.4.2 Research design

A research design is an overall plan for the implementation of a study that is selected to answer a specific research question (Gray, Grove & Sutherland, 2016). An exploratory descriptive design was adopted for this study.

3.4.2.1 Exploratory Design

The exploratory design was used to explore this unknown territory and to describe the many aspects of the phenomenon under study (Dudovskiy, 2018). The nature of the research study was exploratory since little is known about the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory. As stated by Gray, Grove and Sutherland (2016), the purpose of an exploratory design is to increase the knowledge of a field of study.

3.4.2.2 Descriptive design

The purpose of a descriptive design is to explore a phenomenon in a real-life situation, and is performed when collective knowledge about a phenomenon is incomplete, meaning either no research has been conducted, or there is limited research knowledge (Gray, Grove &

Sutherland, 2016). The phenomenon of the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory is considered incomplete, therefore the researcher adopted a descriptive design to explore the lived experiences in a real-life situation.

3.5 Research setting

The research setting is the location where the study was conducted (Gray, Grove & Sutherland, 2016). The study was conducted in a natural setting, which means that it is uncontrolled; a real-life environment. According to Grey, Grove and Sutherland (2016), conducting a study in a natural setting indicates that the researcher cannot control or influence the environment for the study. The research setting was a School of Nursing (SoN) in the Western Cape. The School of Nursing is part of the Community and Health Sciences Faculty. The School of Nursing offers both undergraduate and postgraduate programmes accredited by the SANC, and registered by the South African Qualifications Authority (SAQA).

This SoN is one of four Higher Education institutions (HEIs) offering undergraduate nursing programmes in the Western Cape. At this setting two SANC Regulatory Bachelor of Nursing programmes were offered in 2021, namely the Regulation 174 (R174) and the Regulation 425 (R425). The R174 programme is a new programme offered since 2020 that replaces the R425 programme. The R425 was a legacy nursing qualification that is being phased out in line with the requirements of the Higher Education Qualifications Sub-Framework as published in the Government Gazette by the Minister of Higher Education, Science and Innovation in July 2016. The last intake for this programme was in 2019 and is continuing being offered for pipeline students for teach-out period determined (sanc.co.za).

This specific setting was chosen because it is equipped with clinical skills laboratories and it was accessible for the researcher. An appropriate research setting was pivotal during data collection to allow participants to feel unrestricted and comfortable in expressing their feelings

and perceptions without the constraints of an unfamiliar environment. This selected SoN offered an undergraduate programme that provided the natural setting where the problem under study transpired.

3.6 Research population

The population is the set of all members of a defined group and includes all elements that share at least one characteristic (Gray, Grove & Sutherland, 2016). Furthermore, in a study, the population involves an entire group of people, or a category of elements, that represent the focus of the research (Gray, Grove & Sutherland, 2016). In this study, the population of interest was undergraduate nursing students registered in 2021 for their first, second, third and fourth year at a School of Nursing at a university in the Western Cape Province. The total population included all registered undergraduate nursing students from the first to the fourth year of study. These undergraduate nursing students were included in the study to obtain data about their perceptions regarding factors influencing their learning in a clinical skills laboratory. The portion of the population to which the researcher had fair access is called the accessible population (Gray, Grove & Sutherland, 2016).

3.6.1 Sampling

A sample is a subset of the accessible population which the researcher chooses for participation in the study (Gray, Grove & Sutherland, 2016). Purposive sampling was utilised for this study. Purposive sampling, a non-probability method, was applied for the selection of participants representing the phenomena of this study. The researcher utilised purposive sampling to guide her in selecting participants that would maximise the collection of rich data (Polit & Beck, 2017). The accessible population was the total sample of all student nurses registered in 2021 for their first, second, third or fourth year of study.

Table 3.1: Distribution of undergraduate students across the four-year levels

Year level	Number of registered students	Skills laboratory focus
Year level one	96	Fundamental of nursing
Year level two	139	General nursing science
Year level three	195	Community and Midwifery
Year level four	263	Psychiatry
Total registered students	693	Not applicable

3.6.1.1 Inclusion criteria

All first to fourth year students registered for a Bachelor of Nursing programme at a School of Nursing at a university in the Western Cape. Participants had to be in their first enrolment in the current year level to be included in the study. Participants were either in the R174 or R425 nursing programme. Although the R452 programme is in the process of being phased out, the programme is still offered at the SoN thus third- and fourth-year students met the inclusion criteria.

3.6.1.2 Exclusion criteria

Students who were repeating a year level were excluded from the study because they would have had more exposure within the clinical skills laboratory to enhance their clinical learning.

3.6.2 Sample size

In qualitative research, the emphasis is on the quality of information gathered from the person, situation, event, or document sampled, as opposed to the size of the sample (Gray, Grove & Sutherland, 2016). In qualitative studies, sample size should be determined by the information needs. Thus, a guiding principle in the sample size is data saturation, that is, sampling to the

point where no new information is attained and a point of redundancy in terms of information is achieved (Polit & Beck, 2017).

In qualitative research, the sample size should be sufficient to obtain data from the participants until data saturation is reached. Focus group interviews were conducted with undergraduate nursing students at the School of Nursing. Focus group interviews are carefully planned discussion groups in which rich information is obtained in an efficient manner (Polit & Beck, 2017). As indicated in Table 3.2, focus group interviews with the first-year students consisted of 20 participants, the second-year students 12 participants, the third-year students 19 participants and the fourth-year students 12 participants. A total of ten focus group interviews were conducted across the four-year levels. Data saturation was reached by the end of the tenth focus group interview and there was no new information that emerged thus the total sample size was 54 participants.

Table 3.2: Sample size summary

Year Level	**Focus group interviews**	**Sample size**	**Participants per focus group**
Year level one	3	20	1. 7 students 2. 7 students 3. 6 students
Year level two	2	12	1. 6 students 2. 6 students
Year level three	3	19	1. 7 students 2. 6 students 3. 6 students
Year level four	2	12	1. 6 students 2. 6 students

3.7 Data collection methods

Focus group interviews were selected as a data collection method because it allowed the researcher to pose open-ended questions, during which the views and opinions of the participants were obtained to gain an understanding of their experiences (Creswell & Creswell, 2018). The advantages of using focus group interviews included flexibility and the ability to collate extensive qualitative data at once and in a short period of time (Busetto, Wick & Gumbinger, 2020). Each of the focus group sessions conducted lasted for approximately 50 minutes.

3.7.1 Data collection tool

An interview schedule was prepared in advance of the focus group interviews and was consistently utilised with all focus group interviews (Creswell & Creswell, 2018). The focus group is constituted with the purpose of collecting data on a specific topic from more than one research participant at the same time (Gray, Grove & Sutherland, 2016). Polit and Beck (2017) suggest that the ideal group size for focus groups are between six (6) to twelve (12) participants. The interview schedule developed for this study contained nine (9) questions which were to be asked during each focus group interview. The questions in the interview schedule were linked to the research question, research objectives and theoretical framework. The development of the interview schedule was influenced by the research question: "What are your perceptions on the factors influencing your learning in a clinical skills laboratory as an undergraduate?" Furthermore, the theoretical framework and its various components, with the objective, influenced the development of the nine questions in the interview schedule. Probes were used to prompt the participants to supply richer, in-depth information (Gray, Grove & Sutherland, 2016). The researcher was non-judgemental, and actively focused on not allowing personal bias to interfere with the focus group interviews; the participants were encouraged to share their experiences freely (Gray, Grove & Sutherland, 2016). The probes that were used included,

but were not limited to, the following: “Would you like to explain further?”, “Anything additional to add?” and “How did that impact your learning?” The researcher interlaced the questions into the discussion naturally by clarifying, paraphrasing, and reflecting back to the participants to ensure the accuracy of the researcher’s understanding of what the participants had shared (Gray, Grove & Sutherland, 2016).

3.7.2 Data collection process

Permission to interview students who were registered at the School of Nursing was obtained from the relevant university structures to ensure upholding high ethical standards in this research process. Appointments were scheduled for the focus group interviews dependent on the availability of the students. A printed information sheet was given to the participants, and the researcher verbally conveyed the relevant information regarding the study. Written consent was obtained from the participants after they had read the information sheet which explained the purpose of the study. Participants were informed that participation was voluntary and that they can withdraw from the study at any stage without any negative impact on their studies.

Interviews were conducted at the research setting in a suitable venue that adhered to the rule of using 50% of the venue’s capacity due to the COVID-19 restrictions. Privacy was ensured by using a sound proof, well ventilated room with a door that was closed, which encouraged an open and relaxed environment. The interviews were audio recorded with written permission from the participants.

3.8 Trustworthiness in qualitative research

In qualitative research, trustworthiness refers to the degree to which the researcher demonstrated transparency, presented true findings, expended adequate time in the field of study, and translated the data into meaningful findings (Gray, Grove & Sutherland, 2016).

Trustworthiness in this study was applied as credibility, reflexivity, confirmability, dependability, and transferability.

3.8.1 Credibility

Credibility refers to determining the truthfulness of the findings and interpretations in the research study (Lincoln & Guba, 2016). Furthermore, credibility is confidence in the truth of the data and interpretations (Polit & Beck, 2017). The researcher endeavoured to establish confidence in the truth of the findings for the participants within the context of the research (Polit & Beck, 2017). The truthfulness of the findings was judged by the participants and the supervisor of the research study to confirm the accuracy of the findings. The researcher established credibility by recording and transcribing interviews verbatim. Transcripts were returned to the participants to share their interpretations and to verify that the researchers reported on the information as they have expressed it. This method of credibility is referred to as member checking and strengthens the data because the researcher and the participants look at the data from different perspectives (Korstjen, 2018).

3.8.2 Reflexivity

Reflexivity enhanced the researcher's awareness of personal values and experiences that can influence the study and findings (Gray, Grove & Sutherland, 2016). The researcher ensured deep introspection and reflection on how her own biases and presence in the research setting may have influenced how the data were collected, analysed, and interpreted. The researcher made reflective notes in a diary to examine the researcher's explicit and implicit assumptions, preconceptions and values, and how it affected the research study (Korstjen, 2018). The researcher was mindful of her own preconceived opinions about the phenomenon under study (Pilot & Beck, 2017).

3.8.3 Confirmability

Confirmability was obtained by developing a detailed account of the methods for data collection and analysing of the data (Gray, Grove & Sutherland, 2016). The findings and interpretations are a result of a dependable process of inquiry as well as data collection (Lincoln & Guba, 2016). In this research study, direct quotes from participants were included in the findings and shared with participants to ensure an accurate reflection of the data collected (See chapter 4).

3.8.4 Dependability

Dependability refers to the consistency of data over a period of time, and the conditions over a period of the study (Polit & Beck, 2017). The dependability was maintained by the use of in-depth focus group interviews which permitted the researcher to ask a question and change the follow-up question depending on the answer. Relevant notes, data and coding were reviewed by the supervisor to confirm the accuracy and consistency of the findings. An audit trail was conducted by a peer to review the research steps taken from the start of this research study to the development and reporting of findings (Polit & Beck, 2017). An independent coder was utilised to confirm the accuracy of the codes generated from the data analysis process (Gray, Grove & Sutherland, 2016).

3.8.5 Transferability

Reflexibility refers to the degree to which the results of qualitative research can be transferred to other contexts or settings (Korstjen, 2018). The researcher did ensure transferability throughout the thick description of the qualitative results (Lincoln & Guba, 2016). Thick description is not restricted to just behaviour and experiences, but to the context as well, to ensure the behaviour and experiences convey meaningfulness to an outsider (Korstjen, 2018). Thus, the researcher ensured transferability by providing a detailed description of the research setting, the participants, and the methods utilised for data collection and data analysis.

3.9 Data analysis

Qualitative data analysis refers to the coding and thought processes of assigning meaning to data (Corbin & Strauss, 2015; Gray, Grove & Sutherland, 2016). According to Creswell and Creswell (2018), data analysis is a continuing process in the research study. The researcher utilised thematic analysis, which is a systematic method for qualitative data analysis. Recordings from the focus group interviews were transcribed verbatim. The researcher followed the six steps of Braun and Clarke (2006) to analyse the data. The detailed process the researcher followed was:

Step 1: Becoming familiar with the data: the researcher became familiar with the data by reading and rereading notes. Transcripts were read thoroughly while recalling experiences and listening to audio recordings to ensure full immersion in the data.

Step 2: Generating initial codes: the researcher obtained a volume of data. Thus, the researcher focused on reducing the volume of data so that it was possible to efficiently examine the data. On conclusion of the manual data analysis following the six steps of Braun and Clarke (2006), the researcher used the Atlas ti version 22 research software programme to generate codes to support the findings. This was done by organising the data, bracketing and writing a word representing the category. The independent coder followed the same format, using Atlas ti version 22.

Step 3: Searching for themes: the researcher then proceeded to label all the codes that emerged then generated appropriate and relevant themes to produce a general description that repeatedly appeared in the data.

Step 4: Reviewing of themes: themes were reviewed in consultation with the supervisor and an independent coder to cross-check initial codes; this was done to ensure the trustworthiness of the findings.

Step 5: Defining the themes: a thematic map was created of the data. Thus, the researcher defined and refined the themes that will be presented as the analysis at this step.

Step 6: Writing up the data analysis: the writing up of the data analysis, the findings and discussion, is presented in the next chapter.

3.10 Research ethics

According to Creswell and Creswell (2018), the code of ethical rules and principles is drafted by the professional associations that govern scholarly research in the various disciplines. Research ethics oversees the principle of conduct of researchers. Prior to commencing this study, the research proposal was submitted and presented to the review committee at the School of Nursing at the university where the study was conducted, and was recommended for submission to the Human and Social Sciences Research Ethics Committee (HSSREC) for ethical approval. Ethical approval was obtained from HSSREC with HSSREC reference number HS20/10/58 **(Annexure D)**. Permission to conduct the proposed study was obtained from the Registrar and the Director of the School of Nursing at the University. The researcher adhered to the following to ensure the protection of the identity and rights of the participants:

3.10.1 Informed consent

Informed consent, according to the Nuremberg Code, is as follows: "the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved, as to enable him to make an understanding and enlightened decision" (Nuremberg Code, 1949; Gray, Grove & Sutherland, 2016). Each participant received an information sheet explaining the purpose of the study. The informed consent forms were signed before commencing the focus group interviews. Focus group confidentiality binding forms were also signed prior to commencing the focus group

interviews. Participants were made aware of audio recordings as stipulated on the consent form. Informed consent documents contained details about how the data will be identified, who will have access to the data, and how the findings will be reported (Sanjari, Bahramnezhad, Fomani, Shoghi, & Cheraghi, 2014; Gray, Grove & Sutherland, 2016).

3.10.2 Voluntary participation

The researcher explained to the participants that they could withdraw at any stage if they are not comfortable (Creswell & Creswell, 2018). The notion of voluntary participation was explained to the participants, both verbally and in writing. Participants were required to sign a consent form and a confidentiality binding agreement prior to the commencement of each focus group interview.

3.10.3 Anonymity

Focus group interviews did not include any information about the personal nature of the participants, and pseudonyms was assigned to each participant and included on the transcripts. Participants were informed both verbally, and on the written consent form, that all collected data will only be utilised for research purposes, and recordings and all other documentation will be destroyed after five years.

3.10.4 Confidentiality and anonymity

Anonymity is the most secure means of protecting confidentiality and transpires when the researcher cannot link participants to their data (Polit & Beck, 2017). In this study, audio recordings were marked with a code instead of the participants' name. Participants were assured that no names will be disclosed throughout the focus group interviews. The files of the recordings were password protected and only the researcher, research supervisor and independent coder had access to the data. The consent form also stipulated the guarantee of confidentiality to the participant (Creswell & Creswell, 2018).

3.10.5 Preventing harm

Research participants were informed that they had the right to protection from discomfort and harm. The participants were informed about possible risk involved in this study and the contact details of the Center for Student Support Services (CSSS) was provided to each participant. The researcher liaised with the psychologist at CSSS and informed the unit about the study and requested and obtained permission to refer participants that became distressed as a result of the study. In this study there was no indication or request that required referral to CSSS. The researcher adopted bracketing due to being mindful of preconceived beliefs and opinions about the phenomenon under study. This was of particular relevance because the researcher is employed at the School of Nursing where the study was conducted.

3.11 Summary

This chapter presented an overview of the research methods utilised in this study to answer the research question. A qualitative approach with an exploratory descriptive design was adopted for this study. Explanations were provided in detail for the selection of approaches, methods, and techniques used in this study. The next chapter will present the findings and discussion.

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter illustrates the results and findings of the analysed data collected from ten focus group interviews, with a sample of 54 participants. Focus group interviews were conducted with six to seven participants per group exploring the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory. The focus group interviews continued until data saturation was reached where no new data emerged.

The findings are presented as a discussion in concurrence with literature to contextualise the findings. Qualitative data analysis refers to the reduction and organisation of data, and the revelation of meaning derived from the data (Gray, Grove & Sutherland, 2016). Recordings from the focus group interviews were transcribed verbatim. The transcriptions were presented to the study participants to review and confirm that it was a true reflection of what was discussed. The researcher followed the six steps of Braun and Clarke (2006) to analyse the data, as follows: Step 1: become familiar with the data; Step 2: generate initial codes; Step 3: search for themes; Step 4: review themes; Step 5: define themes, and Step 6: write-up the data analysis to generate themes and sub-themes.

The data analysis produced a total of three (3) main themes and nine (9) sub-themes. A cross check of the data analysis was done in consultation with an independent coder during which the themes and sub-themes identified by the researcher were confirmed with an independent coder during a consensus meeting. The agreement in terms of themes and sub-themes ensured trustworthiness (Creswell & Creswell, 2018). The theoretical framework of Haralseid, Friberg and Aase (2015) guided the categorisation of the data and provided an explanation of the

themes and sub-themes that emerged from the study. The findings presented will endeavour to answer the following research question for this study:

"What are your perceptions on the factors influencing your learning in a clinical skills laboratory as an undergraduate nursing student?"

The semi-structured interview questions used in focus group discussion in this study are included in Table 4.1 (below):

Table 4.1: Focus group interview questions

QUESTIONS	PROBES TO GUIDE THE RESEARCHER
PHYSICAL ENVIRONMENT	
4.1.1 To what extent do you perceive the clinical skills laboratory to be equipped with equipment for your learning needs in your current year level?	• Explain more; elaborate; give examples • Manikins, equipment, simulation manikins
4.1.2 To what extent do you perceive the clinical skills lab accessible for practice purposes and self-directed learning?	• How did you experience the booking schedules
4.1.3. To what extent do you perceive the learning tools in the clinical skills lab to be accessible?	• Explain more about the videotapes, clinical consultations with clinical facilitator, procedure guidelines
4.1.4 How do you perceive the standardisation of clinical procedures?	• How to perform a clinical skill? • Standard guidelines
ORGANISATIONAL ENVIRONMENT	
4.1.5. How do you perceive the department's human resources interaction with the nursing student in the clinical skills laboratory in your year level?	• Clinical Supervisor, Simulated Patients, Clinical skills laboratory coordinator, clinical coordinator
4.1.6. What are the challenges you perceive within organisation and its relation to the clinical skills laboratory?	• Environment, training session group numbers per station, short training sessions
PSYCHOSOCIAL ENVIRONMENT	
4.1.7. What are your expectations for a clinical training session in the clinical skills laboratory?	• Time, feedback, practice, facilitation
4.1.8. How do you perceive the feedback given during clinical training sessions?	• Positive, constructive, objective
4.1.9. What is your perception on the support provided by the department to the student within the clinical skills laboratory?	• Additional skills training sessions

4.2 Operationising of data analysis and literature control

4.2.1 Focus group sessions

The research setting was the location where the study was conducted. The study was conducted in a natural setting that was controlled ensuring privacy and it was a real-life environment. The research setting was a School of Nursing (SoN) in the Western Cape. A total of ten focus group interviews were conducted consisting of six to seven participants per group. Each of the focus group sessions conducted lasted approximately 50 minutes.

4.2.2 Literature control

Electronic databases were searched to support the findings of this research study, including: Academic Search Premier, CINAHL, EBSCOHOST, Google, Google Scholar, MEDLINE, Nexus, Science Direct, Scopus, and the resources in the library of the university. The keywords that were used in the search for databases included: perceptions, nursing, students, learning, simulation, and clinical skills laboratories. The information gathered during the literature search was included in the findings and discussion.

4.3 Data analysis: Themes and sub-themes identified

Themes that emerge from the data are an abstract entity that bring meaning by capturing the nature of the experience into a meaningful summary, and subthemes share the same central concept but focus on a specific factor (Polit & Beck, 2017).

On completion of the data analysis process three main themes and nine sub-themes emerged.

This chapter will include an expansion of the themes and sub-themes that will be confirmed with literature, and supported with direct quotations from participants. The themes and their associated sub-themes are discussed in detail and are aligned to the theoretical framework utilised in this study. The participants perceptions were distinctive, and verbatim quotes were

utilised to validate the meanings that participants ascribed to their perceptions on factors influencing their learning in a clinical skills laboratory. Quotes from the actual words of participants are presented to support and provide a rich description of the analysis (Polit & Beck, 2017). The results presented as themes, and their associated sub-themes, represent the meaning the participants associated with their perceptions. The elements of the theoretical framework, themes and sub-themes are presented in Table 4.2.

Table 4.2: Theoretical framework aligned with themes and sub-themes

Theoretical framework	**Themes**	**Sub-themes**
Physical Environment **Sub-factor**s: Equipment, Manikins, simulation manikins Accessibility, booking schedules Learning tools: videotapes, consultations with clinical supervisors, procedure guidelines Standardisation of clinical procedures	1. Factors of the physical environment of the clinical skills laboratory influencing the learning of nursing students	1.1 Clinical skills laboratory is well equipped and mimics hospital environment
		1.2 Challenges with equipment which hamper procedure.
		1.3 Accessibility and operation of medium and high-fidelity mannequins for simulation
		1.4 Limited accessibility for guided practice and self-directed learning
		1.5 Difficulties with learning tools
		1.6 Standardisation of clinical procedures
Organisational Environment **Sub-factors:** Department human resources: clinical supervisors, simulated patients, clinical skills laboratory coordinator, clinical coordinator	2. Factors of the organisational environment influencing the learning of nursing students	2.1 Challenges with human resources utilised for clinical skills laboratory activities.

Challenges: training sessions group numbers per station, length of training sessions		
Psychological Environment: **Sub-factors:** Expectations: time, feedback, practice, facilitation	3. Factors of the psychosocial environment influencing the learning of nursing students	3.1 Expectations of the nursing students regarding their experience of the clinical skills laboratory 3.2 Support provisions for nursing students to meet their learning needs

4.4 Presentation and discussion of the themes and sub-themes

A discussion of the emerging themes and sub-themes supported by literature control will follow in the next sections.

4.4.1 Theme 1: Factors of the physical environment of the clinical skills laboratory influencing the learning of nursing students

Six sub-themes are related to theme one, the focus of which are the factors of the physical environment and how they influence student learning. Participants reported that in some aspects the clinical skills laboratory is well equipped, but there is a lack of necessary equipment, or the equipment is faulty, which impacts negatively on their learning needs. A lack of equipment in clinical skills laboratory impairs the learning process (Aldrigde, 2017). The findings indicate that nursing students have limited access to the clinical skills laboratory, and that they require more sessions in the clinical skills laboratory for their learning needs to attain requisite competency. In nursing education one of the vital learning needs is training of psychomotor skills in a clinical skills laboratory. Considerable time should be allocated for students to attend the clinical skills laboratory to meet their learning needs (Sheikhaboumasoudi et al., 2018). Furthermore, nursing students identified difficulties using outdated clinical learning tools, clinical procedures and demonstrations. The lack of

appropriate and updated resources in clinical skills laboratories causes confusion with what is used in clinical placement facilities. This could impact the quality of clinical learning leading offered in the clinical skills laboratory (Mbakaya et al., 2020). The clinical learning tools used in the SoN are not standardised with the procedures used in the real-life clinical settings and this has led to the student feeling confused and uncertain about the correct way to perform certain procedures when they are working with patients. Improvising by using outdated resources in a clinical skills laboratory could impact the clinical learning experience of students and could result in the provision of substandard nursing practice (Mbakaya et al., 2020).

4.4.1.1 Sub-theme 1.1: Clinical skills laboratory is well equipped and mimics hospital environment

Participants reported that the clinical skills laboratory is well equipped and mirrors the environment of a hospital setting. The clinical skills laboratory is a well-established learning environment. In order for simulation to be effective it is essential for the simulation environment to closely mimic the real-life scenarios seen in the clinical settings (Saifan et al., 2021). A participant reported the following:

> **Participant 3:** *"It's very modern and it's really wonderful because it gives us as close to a real patient working with a patient. It's very true to life. So, it give us a real idea of what we can expect with different patient."* (FG1; BN1)

The well-equipped clinical skills laboratory assists the students with the learning process in order to reach competence and to prepare the students adequately for the hospital environment. Clinical skills laboratories and simulation laboratories provide a positive learning environment and encourages the students learning process (Jeppensen et al., 2017). Participants in this study emphasised that the availability and preparation of equipment positively influenced the learning process of students.

Participant 5: *"I think the skills lab is equipped to the best ability to apply to a real-life scenario."* (FG10; BN4)

Participants commented that the clinical skills laboratory was well equipped to the point that what they do in the hospital is what reflects in clinical skills laboratory in the SoN as well. Clinical skills laboratories are designed and equipped to assist students with fundamental learning skills (Hoffman & Daniels, 2019). A participant shared the following remark:

Participant 2*: "We have real life mannequins that we can practice on…This is basically like a hospital. So, everything that we need in the hospital, we need to learn to do in the hospital we have here and we can practice."* (FG3; BN1)

Furthermore, participants stated that because the clinical skills laboratory is so well equipped, they were able to apply their experience from the clinical skills laboratory to the hospital setting. Arkan et al. (2018) indicates that every Higher Education Institution (HEI) that provides an undergraduate nursing programme must aim at bridging the gap between theoretical and clinical practice. There should also be a focus on developing clinical activities aimed at improving the collaboration between the department as the HEI and the hospital in order for it to reflect positively on the students' training (Arkan et al., 2018). The following quotation from participants reflects that their experiences in the skills laboratory reflects what they experience when in the actual clinical environment:

Participant 1*: "I think the skills lab is quite equipped because if you look at our facilities that have almost nothingl."* (FG5; BN2)

Participant 8: "*I think the skills lab is well equipped because most of the stuff that we use in our clinics, they are available here. We like to look at beds also like she said earlier also we look at the vital signs machines we also use. We also use that at the hospital, which just makes it more easy and more easy doing the things…"* (FG3; BN1)

The clinical skills laboratory is the ideal environment to learn and practise clinical skills, and is a conducive milieu to replicate working in the real clinical environment (Laari & Dube, 2020). Therefore, it is essential that the clinical skills laboratory is authentic to help minimise the reality shock that the world of clinical practice can evoke, and to ensure students are adequately prepared for the reality of the hospital environment and working with actual patients (Laari & Dube, 2020).

4.4.1.2. Sub-theme 1.2: Challenges with equipment which hamper procedure

One of the main concerns identified by participants was accessibility to the necessary equipment in the clinical skills laboratory to practise certain procedures. This concern was confirmed by the research of Moyimane et al. (2017) where nursing students were adversely impacted by physical shortages such as lack of equipment. Some participants reported on the negative impact that faulty equipment had on their ability to practise their clinical skills within the clinical skills laboratory. Lack of adequate equipment impairs effective teaching and learning of quality best practices and leads to poor clinical outcomes (Moyimane et al., 2017). It forced students to improvise to enable them to practise the skills for the procedures. One participant remarked:

> **Participant 3**: *"Some of the things are broken, so it's really hard for us to practise blood pressure in the skills because we have to swap and change the whole time"* (FG1; BN1)

Students in a study conducted by Muthathi et al. (2017) also had to improvise with procedures due to the lack of clinical equipment and other resources, which affected the quality of their clinical learning (Muthathi et al., 2017). Participants remarked on the use of mannequins which were faulty and did not allow them to practice their required clinical procedures, one of the participants explains:

> **Participant 3**: *"…all the mannequins have something wrong with them. Either the head is loose or the arm. So even if you would have washed, a practise in washing … the patient, it will be difficult because the legs will be coming of. But if you want to lift it up or practise passive exercises as to demonstrate, it would be really difficult"* (FG1; BN1)

Participants further remarked on the lack of equipment available to practise, which means that only a certain number of students can be accommodated at a time in the clinical skills laboratory. Adequate equipment should be available to create a realistic environment in the clinical skills laboratory to ensure quality of nursing skills performance (Labrague et al., 2019).

> **Participant 5**:*" …groups working in the skills lab and practising the same skill, the equipment might not be enough for everyone to go around. So, there might be three babies. Everyone wants to do baby washing practice, but then a group is left out because there's not enough equipment"* (FG1; BN1*)*

Laari and Dube (2020) identified that the availability of equipment is not necessarily a challenge, but the short supply of equipment that results due to the number of students needing to practise the same clinical procedure within the same time constraints is a concern.

Functional equipment, which provides a realistic manner for practising clinical skills is imperative, and a lack of equipment could negatively impact the learning process of students (Aldridge, 2017). Therefore, the ability to utilise the ideal equipment facilitates the teaching and learning process, because students are exposed to the actual equipment needed in the clinical skills laboratory (Msosa, 2017).

> **Participant 2**: *"…just some of the stuff. We don't have or it doesn't work. Like with suturing. There is no suture like we need to bring our own or with practicing certain stuff and the stethoscopes are broken."* (FG6: BN3)

Msosa et al. (2020) reiterates that clinical skills laboratories should be better equipped to ensure student learning. Therefore, the institution must ensure that the clinical skills laboratory is effectively equipped with the required equipment. The equipment should be sufficient and fully functional to accommodate all nursing students in order to promote the students clinical learning.

4.4.1.3 Sub-theme 1.3: Accessibility and operation of medium and high-fidelity mannequins for simulation

Higher Education Institutions utilise computerised high-fidelity simulators to facilitate clinical learning. They are able to mimic real-life scenarios in the clinical skills laboratories to facilitate the students' ability to transition from the clinical skills laboratory to the hospital environment (Mothiba et al., 2020). Participants reported that there were limited opportunities for exposure to medium and high-fidelity mannequins due to either equipment not functioning or staff being uncertain regarding how to operate the mannequins. A further challenge was staff members being overprotective of the mannequins, thus preventing students from using them to practise their skills; a participant comment:

> **Participant 3***:" …she was quite strict. We were just busy by the mannequin… she saw us and she was going on …And then we may not have pens or pencils also nearby the mannequin, which is understandable, but it was just overreaction and being too protective over the mannequins and not allowing the first year to get to know certain things... get too comfortable with the mannequin and doing certain things, especially because it's our first time. So maybe too protective because I know we've never been able to use the simulated mannequins at all." (*FG3; BN1)

Hanshaw and Dickerson (2020) describe high-fidelity simulation used in nursing education as a specific level of fidelity which is a realistic representation of an existing simulated

environment. Clinical staff working in the skills laboratory must be effective in operating these mannequins in order to ensure students benefit optimally during their learning process. Facilitators of simulation learning interact in the environment and guide the session (Hanshaw & Dickerson, 2020).

Participants in their third year were exposed to the medium and high-fidelity mannequins, but students in their first year had limited exposure to these mannequins. Although students had limited exposure to high-fidelity mannequins they recognised high-fidelity simulation as a valuable preparation for clinical practice (Bowen-Withington, 2020).

A participant in the fourth year recalled an encounter in the third year with these mannequins:

> **Participant 2**: *"Primary Health Care we had to do the jaundice, the phototherapy. Like, that was very, almost like a real-life baby. But it was very precise of how we did it in the clinic. So, I able to relate what we did in the skills lab to what we had to in the hospital."* (FG10; BN4).

However, participants did state that the medium and high-fidelity mannequins did not always function when they were needed during training sessions. Resource constraints, such as outdated high-fidelity teaching models which can simulate a clinical scenario, can interfere with the students' acquisition of clinical skills (Msosa, 2017)

> **Participant 2**: *"Sometimes the mannequins won't work… now the abdominal wouldn't work."* (FG7; BN3)

Additionally, participants emphasised the need for staff to be trained in order to operate the medium and high-fidelity mannequins. A participant reported:

Participant 7*: …what I have noticed is that even those that are working are not working properly and some other supervisors try to use them. I think maybe some of them are not orientated enough on how to use them…" (*FG7; BN3)

Hanshaw and Dickerson (2020) state that simulation is an experiential learning process which produces a safe environment for learning while preventing patient harm. Simulation is an effective method to facilitate competence and high-fidelity simulations is an effective strategy to assist with the development of clinical competence that accurately reflects a clinical setting (Bruce & Klopper, 2017; Raman et al., 2019). The main foundation of this environment is to create an interactive experience with the mannequin (Raman et al., 2019)

4.4.1.4 Sub-theme 1.4: Limited accessibility for guided practice and self-directed learning

A student nurse needs adequate knowledge, preparation, and demonstration of safe nursing practice to ensure that they develop their core competencies to ensure safe clinical practise (Kerr et al., 2020). Participants across the four-year levels have expressed how difficult it was for them to gain access to the clinical skills laboratory for self-directed learning sessions. This was due to the limited spaces available to prevent overcrowding in the skills labs during these sessions as indicated by participants:

Participant 3*: "…I would say there's not enough because there's a set amount of people that are allowed to be in the skills lab…it's very difficult for me to book a place in for next Friday because it will always be full…the same people constantly book, because I understand they want to now all fill their hours. But now then there's other students that are left with nothing. So, I would say it's not accessible because there's only a small amount of people that can go into the SDL."* (FG2: BN1)

Participant 4: *"…there's only a limited amount of spaces open to be booked."* (FG1; BN1)

Participant 6: *"We want to improve on our skills, but we don't get the chance because it's fully booked."* (FG1; BN1)

Participants across the four-year levels further elaborated on the impact that the limited access to the clinical skills laboratory had on their clinical learning process. There was an impact on their opportunities to practise clinical skills during self-directed learning, and being left with no opportunity to practise led to extending the time it took for them to become competent in the clinical skill. In a study by Msosa et al. (2022) students viewed access to simulation as the most appropriate way of transitioning theory content into clinical practice and access to the clinical skills laboratory subsequently allows the building of confidence and gaining competence. Enhancing accessibility and realism improves clinical learning (Kerr et al., 2020). Participants reported their challenges with access to the skills laboratory:

Participant 1: *"We only get self-directed learning for one day, which is a few hours. Yes, and then you got to do everything in a minute in a hurry, meaning that you're not learning quite well. Like we should."* (FG6; BN3)

Participants 5: *"We don't have time for self-directed learning… one of the issues and other thing is sometimes there is not space for everyone. So, some of us come from so we get the skills lab then it's full so we do have to go back".* (FG4; BN2)

Limited access for self-directed learning opportunities hampered the opportunity of students to improve on their clinical skills and reach a level of competency. The clinical skills laboratory provides an environment for students to correct their practises when they make mistakes, and the mistakes made can be used as learning opportunities (Msosa, 2017).

Participants in the fourth year have expressed their view of the previous years during which they utilised the clinical skills laboratory. A participant reported the following:

> **Participant 1***: "Our SDL sessions for fourth year is not as structured as other year levels will be and the reason goes back to what I said earlier about us not using the actual skills lab for it because our skills sessions is usually audio and visual. So we don't have to physically be in the skills lab or in the class room to engage with those material. So, on our laptops, we can on our phone, we can do stuff on our own because it is self-directed."* (FG9; BN4)

Practising skills in a clinical skills laboratory is essential in order for the student to develop and refine their clinical skills and allowing them to make mistakes without harming a patient, there is an opportunity to rectify mistake safely in the clinical skills laboratory. Swift et al. (2022) places emphasis on simulated nursing as a means for nursing students to develop self-confidence in psychomotor clinical skills.

4.4.1.5 Sub-theme 1.5: Difficulties with learning tools

Clinical facilitators were not always available in the skills laboratory to guide the students as they needed, due to other clinical obligations. However, demonstration videos on the various clinical skills relating to the clinical competencies that have to be achieved were available for each year level to view. The availability of the skills demonstration videos could provide the student with opportunities to repeatedly review their clinical skills at their convenience, and to practise the clinical skill should the clinical facilitator not be available (Chuang et al., 2018). Participants expressed challenges with discrepancies with regards to the leaning tools. Some participants noted that the information included on the procedure guide did not reflect on the actual steps for the procedure on the video, as pointed out by the following participant:

> **Participant 2**: *"We got orientation say now for jaundice and lymph nodes. We got orientation on that and that is according to the module, which is the tool that we learn from. Then we done it in the assessment and clinical placements. So, within the module guide there will be maybe a lymph node that is missing. And the way they describe the landmarks is different to the way the supervisors wants us to memorise it and how we should memorise it…So personally, when I done my assessment in the clinic, I got the landmarks wrong for the lymph nodes because I studied according to what they provided us in the module guide,"* (FG7: BN3)

Additionally, participants felt that the procedure guide was inconsistent in relation to the actual procedure they were expected to complete. According to Swift et al. (2022) students prepare for their clinical skills laboratory sessions by reviewing pre-reading material prior to the session in order to have the necessary pre-requisite knowledge There was not a step by step procedure guideline available for certain procedures demonstrated according to the clinical schedule, which ultimately made it difficult for the participants to practise the skills on their own:

> **Participant 4**: *"I think that for the most part, how module guides have been very inconsistent. Like, for example, we'll still have stuff that's like in the printed version that'll say to be clarified…procedures are completely different or it doesn't outline it well enough in the module guide as we are being assessed on…it's supposed to be a guide and it's ultimately not."* (FG5; BN2)

The omission of procedures from the clinical module guide had a negative impact as students needed guidance on how to perform a procedure, e.g. how do perform the last rites or how to carbolise a bed, as stated below:

Participant 6: *"…concerning the guidebook, there was one procedure I couldn't quite find the one about the last offices and the carbolising of the bed. So, I was upset about that…"* (FG2; BN1)

Participants reported that although the clinical skills-related videos were available on the e-learning platform, the videos were outdated and in certain aspects, not the current practice. The advantages of audio and video recordings in higher education enhance student-learning outcomes and reduces the anxiousness experienced by nursing students (Tohidi et al., 2019). A participant reported the following:

Participant 1: *"I also think it's outdated because sometimes the equipment in that videos is equipment we're not using anymore."*(FG4; BN2)

The experience of students is acknowledged, but Mclellan et al. (2020) identified that there is limited modern utilisation of audio-visual equipment which affects the learning of students as they had little chance to revise what was practised. Furthermore, procedure guides should be consistent and accurate so that the student can revert back as required to recall the steps of a clinical procedure. All clinical skills laboratory staff should be involved when developing study guides for skills training to ensure differences are eliminated (Msosa, 2017)

4.4.1.6 Subtheme 1.6: Standardisation of clinical procedures

Participants found it quite worrying that procedures are demonstrated differently by clinical facilitators, with some of the participants stating they feel stressed because of this. Inadequate uniformity and discrepancies in teaching clinical skills and not adhering to the guidelines to meet students learning needs can have a detrimental effect on students learning and patient care (Hoffman, 2019). One participant stated the following:

Participant 1: *"I think every supervisor is great at what they do, but everyone has a different way of doing things. So sometimes if we have visualisation, the one week we*

do it a certain way and the next week we'll have a guided practice with a different supervisor and we would be confused on certain things because they just do it differently." (FG1; BN1)

Participants also expressed how their learning was disadvantaged due to receiving demonstrations that were not standard practice among all clinical facilitators. A participant reported the following:

Participant 2*: "…some students would say, yes, the facilitator explained this, but some have no idea what's going on. I feel sometimes the level of teaching is not the same and if you are unfortunate enough to get placed with the facilitator for a very important skill and you lack some of the information, I feel like it's in our disadvantage..."*

(FG2; BN1)

Additionally, the participants experienced a degree of stress due to the expectations from clinical facilitators (Ryan & McAllister, 2019). A participant had the following to say:

Participant 5*: "…then they kind of expect you to do what they expect…but then you weren't there for the visualisation at that specific supervisor. So, it's quite stressful"*
(FG1; BN1)

Furthermore, participants noted that the learning tools in conjunction with the procedure being demonstrated by the clinical supervisor did not correlate, and there is skills variation among clinical skills laboratory staff members (Msosa, 2017). Participants noted the following:

Participant 4*: "But most of the time then its three different resources that are all saying different things. So, you don't know what is beneficial for the patient and you kind of have to use your own understanding which leaves room for error."(FG5; BN2)*

Participant 1: *"It's like when the supervisor explains the procedure and when you look at the guideline, sometimes it clashes. It's not the same thing*." (FG4; BN2)

Participants were left confused due to the discrepancies in the standardisation of clinical procedures, which negatively affected their learning because they received different information from various sources, their clinical facilitators and learning tools. Continued use of clinical facilitators should be supported with provision of adequate resources and sustained development of the clinical facilitator (Jayasekara et al., 2018). The following participant reports:

Participant 1*: "I certainly feel that supervisors should get trained the same thing because it's really frustrating because even when you do OSCE, so you do it a certain way that your supervisor told you. But then on that day you don't get your supervisor, obviously, and then that marks you down because you're not doing it according to the way they do it. So that is really unpleasant."* (FG7; BN3*)*

Students' ability to perform nursing skills is developed in the process of providing care in clinical practice, following the acquisition of the necessary knowledge and skills acquired in the clinical skills laboratory (Nakayoshi et al., 2020). The goal of the SoN is to produce competent students with the necessary knowledge, skills and attitudes. The statements indicate that student learning has been impacted by the discrepancies experienced with clinical procedures, which influenced their competence in clinical procedures.

In conclusion of the theme 1, six sub-themes emerged from theme 1 the factors of the physical environment of the clinical skills laboratory influencing the learning of nursing student. The nursing students found the CSL to be well equipped and authentic. However, nursing students experienced challenges with equipment which impacted on their ability to carry out certain procedures. Additionally students perceived there is a progression in learning from the low-

fidelity setting to the high-fidelity setting (Aldridge, 2017). Nursing students require an authentic environment that is accessible and well-resourced in order to their psychomotor skills.

4.4.2 Theme 2: Factors of the organisational environment influencing the learning of nursing students

Clinical nursing education should be delivered in an environment within an organisational culture that encourages the learning and teaching activities for the student (Dube, 2018). Msosa (2017), states that organisational factors in nursing education comprise teaching schedules, rules governing the skills laboratory, quality and quantity of staff, and the size of the clinical skills laboratories. The organisational environment influences the learning process of nursing students (Haralseid, Friberg & Aase, 2015). The human resources involved in the clinical skills laboratory activities, including the management of the clinical course structure and facilitation in the clinical skills laboratory during self-directed learning, should prevent confusion, stress, and discrepancies in clinical guidelines (Msosa et al., 2017).

4.4.2.1 Sub-theme 2.1: Human resources utilised for clinical skills laboratory activities

Participants expressed various challenges they have experienced with human resources utilised within the clinical skills laboratory for practical purpose. Participants' challenges included being allocated to different clinical facilitators for demonstrations and self-directed learning sessions in the clinical skills laboratory. Because clinical facilitators did not follow the same practical guidelines, the different methods of teaching and differences in content impacted the quality of learning students received. In the process of facilitating the clinical learning process, clinical facilitators should endeavour at all times to work towards the common goal of safe and high-quality patient care (Bruce & Klopper, 2017). A participant stated the following:

Participant 5: *"...when they reach my group, which is the last group, they (clinical supervisors) might not be as excited about the procedure or they are rushing everything along to get to the facilities, so we are not afforded the same quality as the first two groups."* (FG2; BN1)

The quality of learning in the clinical skills laboratory regulates the ability of students to transition and prepare for practice (Msosa et al., 2022). Participants have stated that there are not enough clinical facilitators allocated for their clinical training sessions which impacted their learning; they were not able to receive the necessary feedback. A participant said the following:

Participant 1: *"So we probably have a big group with one supervisor and we're not having too much information."* (FG4; BN2)

Additionally, participants stated it is quite difficult for the clinical facilitator to attend to students when the group size is large and insufficient clinical facilitators have been allocated for the training session. An adequate demonstration of skills is achieved when students are divided into small groups to increase the ability to observe, actively participate and are afforded an opportunity to practise (Muthathi et al., 2017). Working in larger groups has also been reflected on as having a negative impact on their ability to focus during the session:

Participant 2: *"...if it is a clinical skills, I think it is supposed to be a small group of student, but now we have to be like more than 60 students… in one class by one clinical supervisor. So now it is a big class. We cannot focus. Everyone cannot get a chance to talk about one thing because now is like a lot of people, they can't manage time."*

(FG9; BN4)

Participant 5: *"We only have one supervisor who will teach us. Maybe they will us to watch the video and write. Then that supervisor have to check for every student what they wrote."* (FG10; BN4)

Participant 6: *"This is how it goes. We come to class for theory and then the same class. The whole amount is going to come for the skills in one class. So, for 2 hours, one supervisor or two. So, I think it's too much for one person to deal with the whole class."* (FG10; BN4)

A characteristic of a good clinical demonstration ensures that everyone attending the demonstration can see what the educator is demonstrating, and groups are typically small in order to facilitate interaction between the clinical facilitator and the students (Bruce & Klopper, 2017). Management of the clinical course by the organisation was an issue, as mentioned by the participants. From the data collected, it was clear that there are challenges experienced in terms of booking for self-directed learning, the clinical skills laboratory programme, and the time limitations of training sessions within the clinical skills laboratory. A participant stated the following:

Participant 2: *"…it's always a hassle to actually get booked for SDL. I remember in the beginning of the year they told us we can book online, but I've tried so many times and the website doesn't work."* (FG2; BN1)

Additionally, participants found the booking quite frustrating in the sense that they either have to look for the SDL booking schedule, or it is not available at all. A participant stated the following:

Participant 1*: "…the booking is the issue because there's never the book outside."*

(FG4; BN2)

Participants stated that they had not been issued with a clinical schedule for their clinical skills laboratory activities to indicate what they need to prepare for. A participant stated the following:

Participant 3: *"The other years they will give you a clinical skills schedule. So, when you come to skills, you know what to expect. You know what to prepare. But with fourth year, you never know what you're getting. You come in, one group will do genogram and other group will do MSE. So, you don't even know what you're coming for, so you are not able to prepare for it."* (FG10; BN4)

Participants have expressed that not being able to prepare beforehand is frustrating and impacts their ability to participate because they have not done the pre-requisite reading on the skills that will be practised. A participant stated the following:

Participant 5: *"Compared to other years they used to give us and even module guides that is talking about which week are we doing this practise. We just get surprised that we are studying this topic. But they expect us to know the topic. So, we do not know. We get confused and it's affecting our learning."* (FG10; BN4)

Additionally, participants have stated the need for facilitation during their self-directed learning sessions as they feel lost, and require some form of guidance to indicate that what they are practising is correct. Self-directed learning in a clinical skills laboratory should be a reinforced practise with the assistance and insight of clinical facilitators (Kerr et al., 2020). A participant said the following:

Participant 2: *"There's sometimes not even like a supervisor present like to guide is when we have SDL."* (FG4; BN2)

Participants understood what the term self-directed learning entailed, but they required some form of facilitation to enable a consultation for clarification during these sessions (Millanzi et al., 2021). A participant stated the following:

Participant 4: *"I also think like there should be someone in the SDL like a facilitator who will be there for each station to help students, to help them train, because even though it's self-directed learning, but sometimes you not sure of the thing you did…"*

(FG2; BN1)

Participants have expressed their positive views of the utilisation of simulated patients in their training sessions. Some found it quite helpful to act out different scenarios related to the hospital environment (Chabrera et al., 2021). A participant said the following:

Participant 6: *"…the simulated patients are very good way of learning to interact with people in a setting because it's not as much as it's obviously scripted for us to sort of learn according to the scenarios, but it's better that the mannequins because the mannequins can only do so much and react to certain thing."* (FG5; BN2)

The human resources involved in the clinical skills laboratory activities, including the management of the clinical course structure and facilitation in the clinical skills laboratory during self-directed learning, should prevent confusion, stress, and discrepancies in clinical guidelines (Msosa et al., 2017).

4.4.3 Theme 3: Factors of the psychosocial environment influencing the learning of nursing students

Jaganath (2020) rightfully stipulates that the clinical learning environment should be a positive and conducive environment in which students are able to correlate theory and practice in comfort to develop and achieve competence with their practical skills. The environment should also be conducive for the development of the interpersonal skills necessary to function within the clinical environment (Jaganath, 2020). The psychosocial environment identified the experiences of students in terms of their expectations when attending the clinical skills laboratory, as well as the support provided to them to assist them to meet their learning needs

(Haralsied, Friberg & Aase, 2015). In terms of expectations participants expected feedback from their facilitators during their practise session in the clinical skills laboratory (DiMattio & Hudacek, 2020).

4.4.3.1 Sub-theme 3.1: Expectations of the nursing students regarding their experience of the clinical skills laboratory

Participants have expressed what they expect from a training session facilitated in the clinical skills laboratory. Participants expect to exit the clinical skills laboratory knowing they have learned valuable information which could assist them in their learning process (Sheikhaboumasoudi et al., 2018).

> **Participant 6**: *"I would like to leave the skills lab feeling like, you know, knowledgeable, like I've gotten enough information…"* (FG1; BN1)

Participants also expressed that a training session should equip them with the necessary set of information in order to practise clinical skills (Sheikhaboumasoudi et al., 2018). A participant said the following:

> **Participant 6**: *"I think my feedback in general is just I don't want to leave being confused or unsure about something. If I leave a session, I like to know exactly how to do the procedure."* (FG5: BN2)

Additionally, participants have expressed that they wanted to feel confident enough to practice after training sessions. Self-directed learning increases confidence and competence during clinical experiences (Kerr et al., 2020). A participant agreed:

> **Participant 4**: *"I expect to leave feeling confident in the procedure that we were practising, and or at least even if I l don't feel competent, I'd like to leave feeling like almost encouraged that I will be able to do it with some extra practise." (*FG5; BN2)

Participants are of the opinion that they need to be actively involved in the clinical skills laboratory during their training sessions (Staykova et al., 2017). A participant shared:

> **Participant 4**: *"I feel like we do get feedback, but like they said, like, if they would make us practice more, then they would actually understand and see what everyone else in the group can improve on."* (FG8; BN3)

Participants in their fourth year have expressed that they expect the same consistency from their first year up until their fourth year with regards to the clinical skills laboratory programmes (Dunbar, 2018). A participant explains:

> **Participant 6**: *"I'm expecting them in the school to carry on with the method they use from foundation one to the year of first year to third year when they dealing with the skills…"* (FG10; BN4)

Participants in their first year expressed that they expected clinical facilitators to be more understanding and patient with them because they are year students (Sweet & Broadbent, 2017). A first-year participant reported the following:

> **Participant 5**: *" I just want the supervisor to be more invested in our learning…they should understand that we are only first year and that we still need to get the hang of things so they could be more understanding and be more patients and just allow for us to learn, then that would be great."* (FG2; BN1)

Additionally, participants expressed that they expected a conducive environment to learn and practise, but they often encountered the opposite. The presence and passion of clinical facilitators, and the availability of resources, should make the clinical skills laboratory environment more conducive to the teaching and learning process (Msosa et al., 2022). A participant said the following:

> **Participant 3**: *"I remember that the group I was with, we were shouted at so badly. And I just remember, you know, thinking … is this how it's going to be? You know? I remember feeling a lot of stress and I was nervous to practice that because, you know, they can influence your confidence in certain procedures. And I think it should be rather more of an encouraging environment and that we all there to learn."* (FG1; BN1)

Facilitation of a student can strengthen the clinical facilitator- nursing student relationship to develop confidence and competence among nursing students (Gemuhay et al., 2019).

4.4.3.2 Sub-theme 3.2: Support provisions for nursing students to meet their learning needs

Participants expressed that support is provided to them. It is important to note that effective support provided by clinical facilitators' results in the improvement of clinical nursing education (Bhurtun et al., 2019). Some students mentioned how they were accommodated when they had a problem. The clinical facilitators would make provisions wherever they could to assist, as communicated by the following participant:

> **Participant 3**: *"I would say like I've been getting enough support with regards to procedures because whenever we do a procedure, they demonstrate to us then the access to the practise, then they do a guided practise, they give you a feedback… Then the supervisor explained to you, and you can always say, Ma'am, can I come again to do another guided practise? I've done guided practise like two times already. Just to know the procedure better."* (FG4; BN2)

Some participants have expressed that they were hesitant to ask for help whenever they struggled. Students value relationships and thrive on organisations that will support them, motivate and actively engage with them (DiMattio & Hudacek, 2020). A participant said the following:

Participant 1: *"I think that the support is there if we need it or if we ask for it, because I feel like it's sometimes not readily offered."* (FG5: BN2)

Participants related that the clinical facilitators are willing to assist them where needed, and they perceived this as supportive. Clinical facilitators who supported learning by being able and willing to give effective feedback were highly valued (Sweet & Broadbent, 2017). A participant shared:

Participant 6: *"The supervisor is very helpful in skills lab and you need help, they always willing to help."* (FG10; BN4)

Additionally, a participant had the following to say regarding their clinical facilitators as a source of support.

Participant 2: *"If I have a question, if I'm finding something difficult to comprehend and then our supervisor always comes on a Monday for me, so he sticks to a set time so that you can reach all the students. So, he will take us through an hour and a half, teach us the assessment that he needs to teach us. And then after that, for like 30 minutes, we would have an open session. We would also ask questions, we would ask new questions and he would provide us with more information*." (FG7; BN3)

A successful clinical skills laboratory needs to comprise an encouraging psychosocial environment team climate, active student learning experiences, and supportive supervisory interaction (Ergezen et al., 2022). These factors may determine the achievement of clinical learning competence and promote the self-confidence of students. The area where simulation is performed should provide adequate psychosocial contact and the interaction of students to be successful. (Koukourikos et al., 2021). In conclusion theme 3 identified the factors of the psychosocial environment which influences the learning of nursing students. Nursing students

require a positive and conducive environment that will motivate them to develop their psychomotor skills.

4.5 Summary

This chapter presented the data analysed with a discussion of the findings focussed on the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a SoN in the Western Cape Province. The findings were discussed within the framework of the identified three themes and nine sub-themes, indicated in Table 4.2. The findings were linked to the theoretical framework which included reference to the physical, organisational, and psychosocial environmental factors that influence the learning process of nursing students in a clinical skills laboratory. In Chapter five the limitations, conclusions and recommendations of this study will be discussed.

CHAPTER FIVE

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter four presented a summary of the study findings. The findings were supported with literature which confirmed the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a SoN in the Western Cape. Verbatim quotations were extracted from the focus group interviews to support the findings, which in turn were supported by literature. This chapter will focus on a discussion of the conclusions, limitations, and recommendations for further research.

The objectives of the study were to:

- Explore and describe the perceptions of nursing students regarding the physical environmental factors that influences their learning in a clinical skills laboratory.
- Explore and describe the perceptions of nursing students regarding the psychosocial environmental factors that influences their learning in a clinical skills laboratory.
- Explore and describe the perceptions of nursing students regarding the organisational environmental factors that influences their learning in a clinical skills laboratory.

5.2 Summary and conclusions

Three themes and nine sub-themes emerged from the ten focus group sessions through the process of data analysis to answer the research question: What are your perceptions on the factors influencing your learning in a clinical skills laboratory as an undergraduate nursing student? In conclusion to answer the research question, the findings of this study identified 3 major factors that influences the learning of nursing students in a CSL. The physical, psychosocial and organisational environment are factors that influence learning in CSL.

5.3 Theoretical framework

The theoretical framework model of Haraldseid, Friberg and Aase (2015) for the clinical skills learning environment was used to explore the phenomenon identified. Three main factors form the basis for a clinical learning environment and includes a physical, organisational, and psychosocial environment. The physical environment included physical equipment, facilities, and standardised procedures as sub-factors of the physical environment (Haraldseid, Friberg & Aase, 2015). The psychosocial environment includes the relationship between the psychosocial aspects of our experiences, e.g. our thoughts, emotions, and behaviour (Haraldseid, Friberg & Aase, 2015). The organisational environment refers to the course structure and the institutional resources which relates to each student's perception of the clinical facilitator within the CSL (Haraldseid, Friberg & Aase, 2015).

5.3.1 Concepts of the theoretical framework: Physical environment

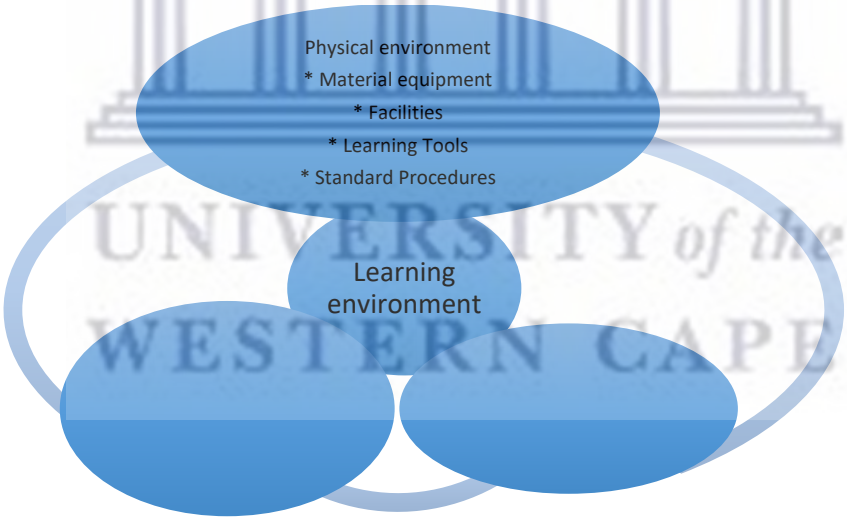

Figure 5.1 Framework for clinical skills learning environment: Physical environment (Haraldseid, Friberg & Aase, 2015)

Nursing students were of the opinion that the clinical skills laboratory was well equipped and mimicked the real-life hospital environment. Furthermore, participants indicated that the clinical skills laboratory mirrored the hospital environment because it gave students an idea of

what to expect in the hospital environment. The experiences gained in the clinical skills laboratory assisted participants in their learning process in terms of developing competence in expected clinical learning tasks.

Nursing students experienced challenges with equipment in the clinical skills laboratory which hampered the performance of procedures and the ability of students to practice certain clinical skills. Challenges experienced with equipment included faulty equipment that disrupted exposure to practice sessions aimed at improving clinical learning skills. Additionally, participants reported that the equipment available in the clinical skills laboratory was insufficient and did not accommodate large groups of nursing students to practice each procedure. It was stated that the low-fidelity mannequins were faulty and difficult to practise with, due to the arms or legs falling off, which delayed the student's ability to practise a procedure on the defective mannequins.

Nursing students reported challenges with accessibility, particularly with regards to the operation of medium and high-fidelity mannequins for simulation. Participants expressed that there were limited opportunities for exposure to medium and high-fidelity mannequins and instances where mannequins would not function for the given procedure. Additionally, participants reported occasions where the staff were uncertain on how to operate the mannequins, or they were overprotective of the mannequins and did not allow students to practise unsupervised.

Participants across the four-year levels reported the difficulties they experienced in terms of gaining access to the clinical skills laboratory for guided practice and self-directed learning due to the limited spaces available. Participants expressed that they were not all afforded equal opportunities for self-directed learning due to the limited spaces, and time constraints. This negatively impacted the opportunity for students to improve their clinical skills.

Participants experienced difficulty and discrepancies with the clinical learning tools. In some instances, participants stated that the information within the procedure guide did not correctly reflect the steps for procedures. These inconsistencies made it difficult for participants to revisit the steps of the procedure in the procedure guide. Participants also reported that the skills-related videos on the e-learning platform were accessible, however they were outdated, and did not reflect current practice in the clinical environment.

Nursing students experienced challenges with the standardisation of clinical procedures. Participants found it troublesome that procedures were demonstrated differently, and uniformity among clinical facilitators was lacking with the demonstration of procedures. Inconsistencies also exist with the procedure guides, skills-related videos, and demonstration of procedures. Participants felt disadvantaged because they could not receive adequate information or a step by step guide on how to perform a procedure. Additionally, participants noted they are becoming confused on how to perform a procedure due to the discrepancies in the standardisation of clinical procedures. This negatively affected the students' clinical learning because they were exposed to various forms of information from different resources, which were not necessarily accurate.

5.3.2 Concepts of the theoretical framework: Psychosocial environment

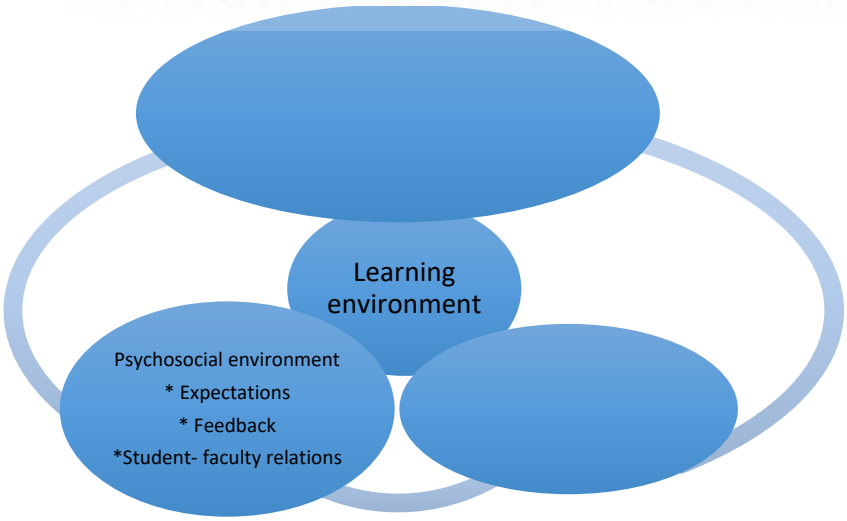

Figure 5.2 Framework for clinical skills learning environment: Psychosocial environment

(Haraldseid, Friberg & Aase, 2015)

Two sub-themes emerged from the factors of the psychosocial environment which influenced the learning of nursing students. There was an expectation from students regarding their experiences in the clinical skills laboratory, which included the necessary support provisions to meet their clinical learning needs. Students were of the opinion that they should feel knowledgeable after the CSL session and they anticipated that they would actively participate in the proceedings in the clinical skills laboratory. They also expressed the need for clinical facilitators to be more understanding of their learning needs, and that they should not expect a level of competency that the students have not acquired as yet. Clinical facilitators were viewed as a source of support, with participants affirming that clinical facilitators made provision to provide the necessary support to assist the nursing students.

5.3.3 Concepts of the theoretical framework: Organisational environment

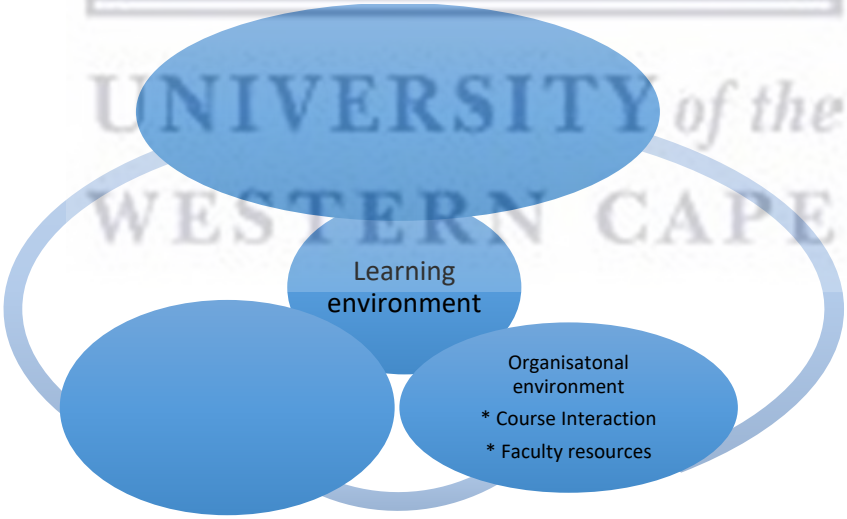

Figure 5.3 Framework for clinical skills learning environment: Organisatonal environment (Haraldseid, Friberg & Aase, 2015)

One sub-theme was generated concerning the organisational environment, specifically the human resources utilised in the clinical skills laboratory. There is a manager who oversees the clinical programme structure, and the clinical facilitators who are available in the clinical skills laboratory during self-directed, visualisation, guided practise and assessment learning sessions. The challenges experienced by participants included an inadequate number of clinical facilitators being allocated for the student group size, which impacted the quality of learning received. Furthermore, facilitation is considered by participants to be a requirement during self-directed learning, despite the term self-directed, and the expectation that students can work alone during these sessions; the participants vocalised feeling uncertain and in need of some form of guidance. A further concern raised by participants was difficulties with the booking system for self-directed learning sessions, specifically the lack of availability of the booking schedule, which led to lack of practise sessions and concurrent frustration. Basically, the online booking for self-directed learning was not adequately implemented, making it ineffective and lacking functionality according to the participants.

5.4 Limitations of this study

The following limitations were identified in this study:

- The study was conducted with a sample from one School of Nursing at a university in the Western Cape Province, thus limiting the generalisation of the findings to other HEI's offering nursing training using clinical skills laboratories.
- An additional limitation is that in the focus group interviews some participants appeared to be hesitant to participate in the discussions, despite the attempts of the researcher to encourage them to share their experiences.
- Time management was a challenge because some participants arrived late, leaving their colleagues to wait for them, which delayed the commencement of the focus group sessions.

5.5 Recommendations

The following recommendations are based on the findings of this study:

5.5.1 Recommendations for nursing education

The findings of this study indicate the need to implement interventions to improve certain aspects in the clinical skills laboratory to promote quality clinical learning for nursing students. Recommendations emerging from this study emphasise the need to address the following matters:

- **Broken equipment:** Nursing students should have access to equipment that is functioning optimally to ensure the promotion of quality clinical learning.
- **Accessibility:** Students should have access to functioning medium and high-fidelity mannequins for simulation to provide a more realistic experience when practising skills and procedures. Planning and scheduling should be reviewed to ensure that all year levels can be accommodated in the skills laboratory for both guided practise and self-directed learning sessions.
- **Outdated resources:** There should be an update of skills-related videos to ensure that they reflect current practice. The procedure guidelines should be relevant for every procedure, and should include a step by step guide on how to perform each procedure.
- **Standardisation:** High quality, standardised training should be offered to all clinical facilitators to ensure standardisation of all clinical procedures for all year levels.
- **Human resources:** Adequate human resources are required to ensure that the clinical facilitator to student ratio during clinical skills laboratory sessions is adequate and allows sufficient interaction with students, which will ensure quality in the clinical programme being offered. A collaboration with health facilities at which nursing students are placed to allow clinical facilitators to be appointed by the nursing institutions to enforce the skills learned in CSL at the health facilities.

5.5.2 Recommendations for research

- The study provided an understanding of the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province. However, the researcher recommends that future research studies be extended to other HEI's with clinical skills laboratories to gain a more comprehensive understanding on the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory.
- Furthermore, the researcher recommends an evaluation of nursing students' clinical competence after the utilisation of a clinical skills laboratory.

5.6 Summary

The aim of this study was to explore the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory. The findings of the study indicate areas for improvement within the clinical skills laboratory environment to ensure quality clinical learning is offered to achieve competence for nursing students.

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ANNEXURE A: FOCUS GROUP INTERVIEW SCHEDULE

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Title of Research Project: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

Research question: What are your perceptions on the factors influencing your learning in a clinical skills laboratory as an undergraduate nursing student?

QUESTIONS	PROBES TO GUIDE THE RESEARCHER
PHYSICAL ENVIRONMENT	
1. To what extent do you perceive the clinical skills laboratory to be equipped with equipment for your learning needs in your current year level?	• Explain more; elaborate; give examples • Manikins, equipment, simulation manikins
2. To what extent do you perceive the clinical skills lab accessible for practice purposes and self-directed learning?	• How did you experience the booking schedules
3. To what extent do you perceive the learning tools in the clinical skills lab to be accessible?	• Explain more about the videotapes, clinical consultations with clinical facilitator, procedure guidelines
4. How do you perceive the standardisation of clinical procedures?	• How to perform a clinical skill? • Standard guidelines
ORGANISATIONAL ENVIRONMENT	
5. How do you perceive the department's human resources interaction with the nursing student in the clinical skills laboratory in your year level?	• Clinical Supervisor, Simulated Patients, Clinical skills laboratory coordinator, clinical coordinator
6. What are the challenges you perceive within organisation and its relation to the clinical skills laboratory?	• Environment, training session group numbers per station, short training sessions
PSYCHOSOCIAL ENVIRONMENT	
7. What are your expectations for a clinical training session in the clinical skills laboratory?	• Time, feedback, practice, facilitation
8. How do you perceive the feedback given during clinical training sessions?	• Positive, constructive, objective
9. What is your perception on the support provided by the department to the student within the clinical skills laboratory?	• Additional skills training sessions

In conclusion: Thank you for your time and contribution. I will provide you with a date and time once I have transcribed and analysed the data so that you can verify that what I am reporting on is what you have expressed.

ANNEXURE B: INFORMED CONSENT FORM

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 829610589, Fax: 27 21-9593515

E-mail: choffman@uwc.ac.za

Project Title: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

___ I agree to be audiotaped during my participation in this study.

___ I do not agree to be audiotaped during my participation in this study.

___ I agree for the audiotaped recordings to be archived for future research within the institution under study.

Participant's name …….

Participant's signature…….

Date……

ANNEXURE C: FOCUS GROUP CONFIDENTIALITY BINDING FORM

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 829610589, Fax: 27 21-9593515

E-mail: choffman@uwc.ac.za

Project Title: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

I understand that confidentiality is dependent on participants' in the Focus Group maintaining confidentiality. I hereby agree to uphold the confidentiality of the discussions in the focus group by not disclosing the identity of other participants or any aspects of their contributions to members outside of the group.

Participant's name……..

Participant's signature……..

Date……

ANNEXURE D: ETHICAL CLEARANCE

UNIVERSITY of the WESTERN CAPE

31 March 2021

Ms C Hoffman
School of Nursing
Faculty of Community and Health Sciences

HSSREC Reference Number: HS20/10/58

Project Title: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

Approval Period: 29 March 2021 – 29 March 2024

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

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

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

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

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

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

Director: Research Development
University of the Western Cape
Private Bag X 17
Bellville 7535
Republic of South Africa
Tel: +27 21 959 4111
Email: research-ethics@uwc.ac.za

NHREC Registration Number: HSSREC-130416-049

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

ANNEXURE E: PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE

PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE

Dear Catherine Hoffman

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

Name of Researcher: Catherine Hoffman

Research topic: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

Date permission is valid till: Friday, March 29, 2024 (or as determined by the validity of your ethics approval)

Ethics reference: HS20/10/58

Reference code: 5009505301211211288

You are required to engage this office in advance if there is a need to continue with research outside of the stipulated period. The manner in which you conduct your research must be guided by the conditions set out in the annexed agreement: Conditions to guide research conducted at the University of the Western Cape.

Please be at liberty to contact this office should you require any assistance to conduct your research or require access to either staff or student contact information.

Regards
Dr Ahmed Shaikjee
Deputy Registrar Academic Administration

Approval status: **APPROVED** **1 July 2021**

To verify the authenticity of this document please contact
Dr Ahmed Shaikjee at researchperm@uwc.ac.za

UNIVERSITY OF THE WESTERN CAPE
Robert Sobukwe Road, Bellville, 7535, Republic of South Africa

ANNEXURE F: PERMISSION TO CONDUCT RESEARCH AT THE SCHOOL OF NURSING, UNIVERSITY OF THE WESTERN CAPE

2 July 2021

Dear Ms C Hoffmann

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE SCHOOL OF NURSING, UNIVERSITY *of the* WESTERN CAPE

Name of Researcher: Ms CM Hoffman
Research Topic: *Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province*
Ethics Clearance Reference No.: HS20/10/58
UWC Permission Reference Code: 5009505301211211288
Target population: 1st to 4th year B Nursing students
Validity Period: 29 March 2021 – 29 May 2024

As per your request and evidence provided, we acknowledge that you have obtained the necessary permission and ethics clearance. Permission is therefore granted for you to conduct your research as outlined in your proposal.

Please note that while permission is granted to conduct your research (i.e. interviews and surveys) staff and students at the School of Nursing are not compelled to participate and may decline to participate or withdraw should they wish to.

Should you wish to make use of or reference the School's name, spaces, identity, etc. in any publication/s, you must first furnish the School with a copy of the proposed publication/s so that the School can verify and grant permission for such publication/s to be made publicly available.

As per your letter of permission to conduct research at the UWC from Dr Ahmed Shaikjee, Deputy Registrar, assistance to access student contact information, must be done through the office of the Deputy Registrar or be facilitated by your supervisor.

We wish you success with your research.

Yours sincerely

Prof Jennifer Chipps
Director: School of Nursing
Faculty of Community and Health Sciences
UNIVERSITY *of the* WESTERN CAPE
T: +27 21 959 3024 E: jchipps@uwc.ac.za

ANNEXURE G: INFORMATION SHEET

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 829610589, Fax: 27 21-9593515

E-mail: choffman@uwc.ac.za

INFORMATION SHEET

Project Title: Perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory at a School of Nursing in the Western Cape Province.

What is this study about?

This is a research project being conducted by student Catherine Hoffman at the University of the Western Cape. We are inviting you to participate in this research project because you are a nursing student registered at the University of the Western Cape who utilises the clinical skills laboratory for learning at a School of Nursing. The purpose of this research project is to explore the perceptions nursing students' regarding factors influencing their learning in a clinical skills laboratory.

What will I be asked to do if I agree to participate?

You will be asked to participate in focus group interviews. The focus group interview will consist of at least six (6) to 12 participants. The length of the interview will be 60 to 80 minutes. The focus group interviews will take place at a School of Nursing in a suitable venue taking into consideration the regulations of the National Disaster Management Act. The focus group interview will take place at a time that is convenient for you (the research participant). An audiotape with the permission of the participants will be used to record data from the focus group interviews. Several questions will be asked in which you describe your perceptions of factors influencing your learning in the clinical skills laboratory.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, your name will not be included in the information collected, a code will be used instead and identified by the researcher using an identification key. Only the

researcher and supervisor will have access to the identification. To ensure your confidentiality, data collected will be stored in a locked cabinet with access only by researcher and supervisor. Soft copies will be stored in a controlled computer, also to be accessed by the researcher and supervisor. All collected data will be destroyed after five (5) years. If we write a report or article about this research project, your identity will be protected. This study will use focus groups therefore the extent to which your identity will remain confidential is dependent on participants' in the Focus Group maintaining confidentiality.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. At-risk undergraduate nursing student will be identified and be referred for counseling at the Center for Student Support Services (CSSS) at the identified university if the need arises.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about perceptions of nursing students' regarding factors influencing their learning in a clinical skills laboratory. We hope that, in the future, other people might benefit from this study through improved understanding of the factors that influence the nursing students' learning in a clinical skills laboratory. The results of this study could identify areas to improve the environment in a clinical skills laboratory to ensure nursing students' learning needs are met.

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

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

What if I have questions?

This research is being conducted by Catherine Hoffman at the School of Nursing at the University of the Western Cape. If you have any questions about the research study itself, please contact: Catherine Hoffman at: 56 De La Cruz, Highbury, Kuils River, 7580
Telephone Number: 0829610589
Email: choffman@uwc.ac.za

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

Dr J. Willemse (Supervisor)
jjwillemse@uwc.ac.za

Prof. P. Martin
Head of Department: School of Nursing
University of the Western Cape, Private Bag X17, Bellville 7535
pmartin@uwc.ac.za

Prof Anthea Rhoda
Dean of the Faculty of Community and Health Sciences
University of the Western Cape, Private Bag X17, Bellville 7535
chs-deansoffice@uwc.ac.za

BMREC/HSSREC
Research Development Office,
Tel: 021 959 4111
email: research-ethics@uwc.ac.za

This research has been approved by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee. (REFERENCE NUMBER): HS20/10/58

ANNEXURE H: TRANSCRIPT OF A PARTICIPANT INTERVIEW

I: Good morning, participants. My name is Ms. Hoffman or Catherine Hoffman. I'm a master's student doing my thesis in the perceptions of nursing students regarding factors influencing their learning in a clinical skills laboratory at a school of nursing in the Western Cape Province. Okay. My research question is what is your perceptions on the factors influencing your learning in a clinical skills laboratory as an undergrad nursing student? Okay. So, I'm going to start with my questions. Please feel free if you need to stop at any point or if you are uncomfortable during the interview or if you do not wish to participate in anymore. Please feel free to stop me. Okay. So, Participant one. Okay. To what extent do you perceive the skills lab to be equipped with the equipment for your learning needs in your current year level? Is it adequate? Must I rephrase the question? Is it adequately equipped for you in order for your learning needs?

P1: Yes, I think so. Adequately for my journey, because a lot of things we do in skills that we also get the chance to do in hospital. So yeah.

I: Okay. So, do you feel there is appropriate mannequins for your simulation needs when a skills is demonstrated? Do you feel there is the mannequins? There's everything that you need for a particular procedure.

P1: Yeah.

I: Participant two the same question. Do you think the Skills lab is equipped with the necessary equipment that you need for your learning needs?

P2: Yes, it is.

I: Is that okay? Can you elaborate further for me by giving examples?

P2: We have real life mannequins that we can practice on and. This is basically like a hospital. So, everything that we need in the hospital, we need to learn to do in the hospital we have here and we can practice.

I: Okay. Participant three Okay. Do you think the Skills lab is equipped with the adequate equipment that you need for your learning needs?

P3: Yes, I would definitely say so.

I: Okay. So, during your simulation activities, I would find the necessary equipment that you need to perform a procedure available for you.

P3: Yeah, it is quite similar in the hospital. It's just there's not much problems that can go wrong. Like if you compare to a hospital nowadays, a broad field and what can happen and what cannot. But in in the skills lab, it's sort of predictable. You know, it won't go completely wrong as what it would go in the hospital.

I: Okay. Thank you, sir. Participant four. To what extent do you perceive the skills lab to be equipped with the equipment for your learning needs?

P4: To a great extent. Is it so like in? We learn more and then when we go there to the Hospital, it is easy to compare cause we know everything and to discuss.

I: Okay. So, the physical environment itself in the skills lab is conducive with all the necessary equipment.

P4: Yeah.

I: Okay. Participant. Five. Do you perceive the skills laboratory to be equipped with the necessary equipment for your learning needs?

P5: Yes. Because. A reason to start with, it gives us information on what to expect. When we are on the placement in the hospital. So. I just want.

I: Okay. So, you would say that the skills lab is set up. Everything you see that will resemble what is in the hospital?

P5: Yes.

I: Okay.

I: Participant six. Okay. What do you perceive the clinical skills laboratory to be equipped with

for your learning needs? Participants six. To what extent do you perceive the clinical skills laboratory, the laboratory to be equipped for your learning needs in your current level?

P6: I think skills lab is a good environment because we learn everything that we do in hospital.

I: Okay. So, your physical environment, does it include the basic things that you will need in the in the in the hospital setting?

P6: yes

I: Can you elaborate further for me with that with examples?

P6: Yes, I think because here in skills lab we do stuff like some assessment like urinary analysis and vital signs so at the hospital we also do that.

I: Okay. Participant seven. Okay. To what extent do you perceive the clinical skills level to be equipped with equipment for your learning needs?

P7: Skills level is well equipped. Because we have. Everything that we knew within the hospital. Like we have beds. We should see extra beds here. We have files. We have also patients or mannequins that we use. And yes, we have like everything that we use in the hospital, except this is not the case in the hospital

I: Okay. Thank you. Okay. Participant eight Okay. To what extent do you perceive the clinical skills learned to be equipped with for your learning needs in your current year level?

P8: I think the skills lab is well equipped because most of the stuff that we use in our clinics, they are available here. We like to look at beds also like she said earlier also we look at the vital signs machines we also use. If you do use something once you have it. We also use that at the hospital, which just makes it more easy and more easy doing the things like we are in the skills lab. So, you know, we do everything even though we do not really know

I: Okay. So for the next question, for question two, thank you. Participant eight. So for the next question, I'm going to put the question on the floor. If you want to answer, then you can just raise your hand and say your participant number. Okay. So of course, the next question is to what is to what extent do you perceive the skills level accessible for practice purposes in self-directing?

P7: Participants seven the skills lab to accommodate us. I think because we can come for the SDL. And it also accommodates our class because it doesn't clash with our lectures and our classes. So, we do get time to come for the guided practices and for the SDL to redo whatever we want to. Make sure that.

I: Okay. And now, did you experience the booking schedules?

P7: Oh. The schedule is very hectic because I'm in the in the third group for the SDL. So I have

to come early in the morning with the first group to book for my SDL. If I come later than that, the booking is already full so I don't get the space.

I: So, there's actually minimal space.

P7: Yes. Okay.

I: Anyone else wants to elaborate? Must I repeat the question? The question is, to what extent do you perceive the skills. Accessible for practice purposes in self-directed learning? Is it accessible to you?

P3: Participant three says that is. Yeah. It's just. It's only on Fridays available because we're working on Thursdays, and it's sort of. You don't get the proper practice in, especially with the blood pressure. Now, the manual way of doing it, not the machine. I'm not sure the manuals name, but we mostly do it with the machine in the hospitals. But when we go to a more it's a poorer area. You have to do it manually. We wouldn't have we wouldn't feel confident doing it, you know, so, that's sort of difficult and something you have to overcome and adapt on your own. And yeah, the skill lab doesn't really. How, do I say it, it doesn't meet the needs accommodate us as well as we would want it to.

I: And any other participant want to add on that. Okay, The question again. Do you perceive the skills there to be accessible?

I: Is the skills lab accessible?

P3: Okay. Participant three says again. No, it's not really good because from Monday to Thursday we can't come here at all. And these are different medical students, but they should make more time and keep it open for a longer period for us to come as many times as we can, because I saw we need. 22 hours. But now they say we only need 12 hours. And 12 hours is quite a little to practice, you know, to get familiar with things that you're going to do in the hospital. I mean, not just doing a casual job. You're actually saving somebodies life. So you want to get as comfortable as you can.

P2: Participant two. We received an email saying that we need 12 hours for SDL. But the students that haven't done or I've only done one or 2 SDLs and now everyone is trying to get the hours before the end of the year. So, these never space for other students. And there's no time because there's only like. I think eight students that can be at a time for proper SDL to have their own patient and bed and everything. So, they must make more time and space for us.

I: Thank you. Does any of the other participants wants to add? Okay. So, the next question. Okay. What extent do you perceive the learning tools in the clinical skills lab to be accessible? And by learning tools, I refer to videotapes, clinical consultations with your clinical facilitator and procedure guidelines.

P3: Please repeat the question.

I: Okay. What I'm asking is, okay, so the learning tools, your learning tools would be your video recordings of a particular skill. Is that accessible to you? Do you find it easy to access?

And then the next section of the question is, are you able to have consultation sessions with your clinical supervisor? So, for instance, you do not understand a particular question or a skill and there is further things that you want to ask before you practice on your own, are you able to have that time to say so and so? Can I quickly clarify this with you?

P3: So, participant three says, For the first, the first semester with our guided practice in skills lab, our supervisor was changed many times that we probably had four or five and we couldn't really set on one supervisor and get comfortable with one and like familiarized with that person and it kept changing. And then you had to build up strength to just approach him because they all like sisters and that like also broke down your confidence to approach somebody. So, it was quite difficult to approach a supervisor. But I mean, it's not that they didn't want to interact with you because when we would ask them questions, it would be easy for them to answer directly. But it's just. That. So, like not having one supervisor, you know, for one semester, it would have been easier than having like five different ones. So, they couldn't get the work. But managing of one wasn't good. It was quite poor.

I: Any other participants wants to add. Okay. The question is the learning tools in the skills lab, for example, the recordings of the skills, the supervisors, are they accessible to you? Are you able to go to them and ask them, I need your assistance? Where do I find the tape to watch the skill?

P8: Participant 8 what we would have planned on some particular events, might be able to join with us, but for me I never bother asking them before. So, I don't know how. It's like if I asked them what I wanted them to be like, but I wish to.

I: So, you wish to ask for consultations with the supervisor. Okay. So, do you find yourself after session not understanding something, but you cannot ask the supervisor.

P8: Sometimes you need to ask questions. So, I just keep it to myself. And when I get home I would just go over my stuff again to see if I if I'm wrong this time I, you know. Yeah, but, you know, I prefer asking questions to my peers right then to the lecture is like, because I don't feel comfortable.

P5: Participant number 5 the skills lab recordings is accessible but where I see the problem, both based on me, the thing is that it is old according to me. So, if they can try to upload new recording. Maybe recordings of 2021 or 2022

I: Any other participants wants to add on that.

I: Anyone else wants to add? Participant one Do you feel the learning tools in the skills lab, for example, are you able to be, are you able to book a consultation session with, with a supervisor? Are you able to access the videos or the recordings to watch a particular skill? Are you able to access all the learning tools in the skills lab? For example, are you able to book a consultation session with a supervisor? Are you able to access the video recordings of the skills? Are you able to access that? Do you have access to it?

P1: Participant one. I think for me I am able to access it as frequently or as possible as I want it to because like. Participant two said it is only a limited amount of students that supposed to be in skills lab, and we are, a lot of students. That need to be in skills lab to learn the practices

to do in the hospital. So there's not time for us to like for everyone to get the amount of hours or amount of practices they want in skills to fully understand what they're doing in the hospital.

I: Okay, so can you openly go to a clinical supervisor and say, Ms. Can I book you for a session? I do not understand the skills, do you is the time they to do that?

P1: I don't think so, because many of us students are constantly we are constantly busy with our work. They are we are under pressure because of. The theory that we have to learn and the work that we do and we don't get much time to see our supervisors. So, we.

I: Thank you. Participant.

P2: Participant two. We do have access to videos on how to do the procedures and so on. It's uploaded on Ikamva. Yeah, but like one of the participants says, we are not comfortable asking them because they rush everything in skills lab and then whatever you don't understand, you don't understand anything. Then you have the SDL where you should practice it and on your own find a way to understand it and how to do the procedure. So, we are not comfortable going to them and asking them like, I don't understand this and this. Could you explain it to me? Because honestly, I don't think many of them will everything is rushed in skills lab.

I: Okay. Thank you. So, I just want to elaborate on that. So, with you saying that it feels rushed, okay. Do you feel that not everything is covered in order for you to complete or to be competent with a skill at the end of the day? Anyone can answer.

P2: We come here on a Friday morning. We have Skills lab. I think it's for 45 minutes that they explained the whole procedure. Next time you come to Skills Lab, you have your own guided practice where they sit and watch how you do the procedure. So, you must remember every little thing that they said about the procedure and how you must do it and this and that. And then you can go practice it in your own time. That's what I mean. It's a rush. We don't get enough time like it's one time explained, and then you do it.

I: Okay. Coming back also to the one participant that said the videos are quite outdated. Do you feel that it's not relevant to current practice and does it equip you with the skills in order to do a current skill?

I: Okay. What I'm saying is the old recordings that one of the participants mentioned of the old recordings, do you think it's relevant and applicable for you in order to do the skills currently, although it's old.

P5: Participant 5 yes it is relevant, but if they can mix because sometimes we have to learn things that we learn, we pick and mix it with things that is done now. All right.

I: Okay. Thank you. Okay. The next question is how do you perceive the standardization of clinical procedures? Okay, let me elaborate on that. So, the performing of a clinical skill, when you go from supervisor to supervisor in the skills lab, is it all standardized? Does everyone demonstrate a skill the same way?

P4: Participant number four. No supervisors that sometimes they confuse us because they say different information, so it makes us so confuse. We must have the same information. So, when they speak or they give us information to make, it makes us confused.

I: Thank you. So, to elaborate further than on that. So, the clinical procedures that he's explained. So, is that standard or not? Okay. Thank you. Anyone else wants to elaborate on that?

P8: Participant 8. I feel like it is standard. But the thing is, you're learning in different ways. Like when you speak, they speak in different ways in which are reaching to a certain point that at the end of the day, we're supposed to understand it. So

I: Do you feel the clinical skills and procedures is all demonstrated or standard? Participant Number.

P6: Six. Not really, because some of the hospitals learn in different ways. And here we learn different things. And for example, today we're learning how to officiate a patient and to carbolize. So, at the hospital we use the blue plastic. And here they use a white plastic foam.

P5: Participant number five, I think. I think we just done that in.

I: Okay. The question is the do you perceive the standard deviation of clinical procedures? Meaning by that is everything. The guidelines is followed for the procedures. Is it all standard? And when it's explained, is it all standard?

P5: Participant number five, I think the standard because or it can it can depend on the topic that the supervisor has explained or talking about. Sometimes the information we get is different. So sometimes it's the same, but it depends to the topic. That is discussed.

I: Anyone else wants to add. Yes.

P7: Participant seven. I think this is standard. Because, yeah, we can like the supervisors explain procedures like A to Z, but when you come to the clinical setting in hospitals, it's a

different story because everything they like, it's rushed. When when you do some procedures, they skip some steps and you don't do like what you learned from here in the skills lab.

I: Thank you. Anyone else wants to add?

P2: Participant two. I just want to add with what this participant just said. Here. They've explained the procedure, but how they have explained it here is different from how we do it in hospitals. And how we do it in placements is different than how we do it here.

I: Okay. Thank you. Okay. So, the next question I see is in relation with the organization organizational environment. So how do you perceive the department's human resources interaction with a nursing student in this clinical skills lab? So, by meaning human resources is there adequate supervisor, clinical supervisors? Is there adequate amount of simulated patients, is there adequate amount of is the clinical coordinator available? Okay. So, we're talking about human resources. That is what we refer to. So, the question coming back to the question, how do you perceive the department's human resources interaction with the nursing student? So, is the interaction between you and all of those different parties that I mentioned, and how do you perceive the interaction?

P5: Participant number five. Yes, there is interaction of our supervisors. Because most of the time, maybe when we're on the placement, they come to us and explain some procedure, some procedures that we need to know when we are in placement.

I: Anyone else wants to add?

P3: Participant number three. I think. Can you just say the question again?

I: The human resources that is provided? How is your interaction? How do you perceive the interaction in the human resources? Refers to your clinical supervisors, your clinical coordinator, your clinical skills lab manager, and the simulated patients.

P3: So, the clinical supervisor, I would say. They. Are my first one. I don't want to mention the clinical supervisor name, but she was very interactive, although we only had her for like two weeks, three weeks. She made me want to actually come to come ask me questions, even things I didn't understand or understand. She made me feel comfortable. Even on the first day of the hospital, she told us we had to come down and it was like everything was just overwhelming. So, we came here. She just she was like, take a breath, relax. She knows this place. We're going through everything. And that just made me feel comfortable. And then a few weeks later, we found out she's gone. So, there was also not like dead, but like, she's not a supervisor anymore. But yeah, she she was quite helpful, especially on the first day in the placement. But yeah, it's worth it.

I: Anyone else wants to add? Okay, so when you're doing a procedure in the skills lab, do you find that there is always a simulated patient available, for example, during SDL sessions?

P2: Participant two. Simulated meaning simulated patients? No, I didn't. I think we may use them during our own SDL. Shouldn't there be a clinical supervisor?

I: The simulated patients do have access to them during your SDL.

P2: We do not have access

I: Okay. Anyone else wants to add on that? Okay. The next question. Yes.

P3: Participant three. Now we don't have access. They are. I remember last week there was a I'm not sure who she was, but she's she was quite strict. We were just busy by the mannequin, just a normal mannequin. And we were doing the procedure and the procedure was mobilization. So, involve picking up the doll. I mean the mannequin. Sorry. And when you picked it up, she saw us and she was going on and us and what we were doing. And then we may not have the pens or pencils also nearby the mannequin, which is understandable, but it was just overreaction and being too protective over the mannequins and not allowing the first

year to get to know certain things, get too comfortable, get to be comfortable with the mannequin and doing certain things, especially because it's our first time. So maybe too protective because I know that we've never been able to use the the simulated mannequins at all. So, yeah.

I: And so, the next question is the challenges you perceive within the organization and in relation to the clinical skills. Okay. To you elaborate further on that, the environment itself? Okay. Do you find your training groups or in the skills lab your groups? Is there how do you perceive your groups in the amount of students that is per station and how do you find or perceive the training sessions? Is it too short or is it adequate enough time to allow you to to use the equipment and to practice your skill?

P2: Participant two. We are like four or five in that group in every room. I think there is enough time for a session. 45 minutes is enough to explain the procedure, but not just once. Like we need an explanation. Like a few days after that or before we do another guided or assessment. We need it. Explain to us again. But 45 minutes is enough to explain the procedure and ask a question. If you are comfortable asking.

I: Okay so, what you're saying is that there is enough time or 455 minutes is enough time, but you need more than one demonstration.

P2: Yes.

I: Anyone else wants to add on that? The skills group that you have, is it adequate? Is it too small? Is it too big?

P7: Participant seven. The groups we have in skills lab I think the number of us in each in each group we are fine because we have four five. So, we didn't get to be shy to answer or to ask questions. And then for the time the time in skills lab, I think, for the guided practice it’s not enough. It is enough visualisation where we try to be explaining everything. But for the guided practice, because everyone must get a chance to. Do so all the time is not enough for.

I: Any other participant. Want to add on that?

P8: Participant eight. They say that we usually clean them up when we're about four or five in a row, and that's fine. But when it comes to practice, like what I did, it was last week being with my group. We only did a good practice for one thing and one only did practice and the other the other ones, they just looking for one, that one person doing the practice. And then they said that we did practice. So, for me, we must all do a guided practice together and share the knowledge and put it to ourselves with when someone is doing it for you, you think like you you on the right direction, but at the end of the day you're not on it. So, I just want everyone to get the same. Just.

P5: Participant number five. I really think that I have. Noticed when we. Are on the SDL there is no one to guide us and how to do procedures because we don't know the procedures. So, we know how these things.

I: So. So, what you say say is that the sessions for guided practice does not allow you adequate time to practice guided practice. Can anyone elaborate further on that? Any other participant?

I: Okay. The guided practice sessions. Do you find there's enough time for you to practice for everyone to practice in your training session?

P2: No. Because I was putting myself on as because they didn't have time to practice all of us most of the time. It's only one or two when you are not.

P2: Participant Two. I just want to add that with practice we are usually or it would be better, but sometimes it does happen. If we work two, two on a patient, I do the guided with a partner. Then it would be enough time. But if we do it one one then there's not enough time and it's rushed and you do not get help from like the supervisor that's supposed to help you. So

P6: Participant six I think it depends on the supervisor, because other supervisors they group us so we have time to do the guided practice

I: Thank you. Okay, so the next question is we going to look at the psychological psychosocial environment. Okay so, what are your expectations for clinical training session in the skills lab? And to elaborate further on that. What do you expect during a training session in the skills lab? Do you expect to get adequate time? Is the feedback given to you to get adequate time to practice? Are you being assisted and facilitated by the clinical supervisor?

P1: Participant 1. I think most of the time when we do practice at the skills lab. We maybe make a mistake. Some supervises they correct us. They tell us what to do. So, they ask other students to correct the one that's doing the practicing. And yeah.

I: If anyone else wants to add. Are you provided with feedback during skills like sessions? For example, after a guided practice in the skills lab?

P1: Participant one. Not really. Because only during the practices like supervisors wil tells us what we are wrong on. But after the practice it's only sometimes that we given feedback on how we feel.

I: Any other participant want to add.

P7: Participant seven I think it depends on the procedure that we're doing because the for example, on urinalysis, we do get feedback depending on the supervisor. And then when we're doing also documentation, they will come back to you and tell you where you did wrong or what you must add on your documentation. So, I think that's all.

I: Anyone else's to add. Think so. Go on. So, the feedback that you receive. Okay. You find it to be positive or is it constructive? Objective?

P2: Participant two. That depends a lot on who your supervisor is. Some will help you and tell you where you went wrong and what you can do to be better next time. And some will just plainly tell you you are wrong.

I: That's it. Okay so, what was your experience during that time or that encounter with a supervisor that was you?

P2: It's humiliating. And it I think that's one of the reasons why a lot of us don't want to ask questions because. You will get like a snarky attitude

I: Anyone else wants to add that in another participant? The feedback that you receive? Is it? Is it positive or negative? Is it objective or subjective?

P7: Participant seven. The feedback I get, I would say, is more positive because what the clinical supervisor tell me is what we will do in the hospital. Like documentation. When you have some, you find some abnormalities from a patient, then you have to report to the PN. So I don't know that I will. I have to tell the PN actually. I thought maybe if I documented everything, everything is fine. But since the day I was told, I have to document and then go and tell the PN. Now I do that. So, it is extremely positive.

I: Anyone else wants to add on that. Anyone else wants to add.

P5: Participant number five. Sometimes the feedback that we get is positive to you because they encourage us to do better next time.

I: Okay so, to summarize everything, what are your perceptions on the support provided by the department to the students in the skills lab? So, with that, I'm asking is, do you get time for extra training sessions, extra skills sessions? Or extra sessions? Do you get that support?

P2: How do you mean?

P2: Do we get that support?

I: So, for example, you mentioned one of the participants mentioned earlier that the time for guided practice in the skills lab is not enough. So, if you raise the question, if you raise the problem, do you get support in order to resolve it with extra guided practice sessions?

P2: Participant two. I don't think anyone has asked for any help or extra time because we are given a time and that is the time you get to ask your questions and do your procedure and that is it. I also think they close at one on a Friday if I am not mistaken, so I don't think there is extra time.

I: What do you what is your perception on the support provided by the department to the student within the clinical skills laboratory? For example, if you had a problem with training sessions and your problem is you need more training sessions, is support provided to you in order to reach that goal.

P2: It's not. Because I haven't tried. To use it, so.

I: Thank you.

P1: Participant one I think not really, because many of our students haven't like brought it up that they need more guided practice.

P5: Participant 5. Not really because sometimes we book for SDL and SDL are full. So not all of them that want practical guidance will be able to get into SDL. So, we don't know if it is another day besides Friday so that we can do it, maybe Tuesday. Wednesday.

I: So, if you raise this problem before and you provide it with a solution with regards to the SDL sessions not being enough.

P8: Number eight, we did raise this issue about the session to one of our lecturers. And then they say that's the best is still going to talk with them and see what they can do.

I: Thank you. Anyone else wants to add?

P3: Participant three says. I don't think there's enough time to do SDL or guided practice. I think it's it's quite unfair because we work on Thursdays, because we are group 1. So, we work with those seven to seven, which is it's not right for my opinion for first year because you're spending all day in hospital and we only go to do the vital signs. So, we could only go to the hospital to do vital signs and just observe. And then it's not fair, especially if we do a guided practice or I would say, why not go to hospital from seven to like 7 to 4, like a clinic and then come to guided practice for just an hour afterwards and learn something different and be more effective. And when you normally go and you can only do two things, you know, so it's not. It's not right. Actually.

I: Thank you everyone I'm going to conclude the session. I thank you for your time and contribution. I will provide you with the date and time. Once I have I transcribed and analyze the data so that you can verify what I am reporting is what you have expressed. Thank you for your time.

APPENDIX I: CERTIFICATE OF EDITING

MJR
EDITORIAL CONSULTING

Date: 13 December 2022

DECLARATION OF EDITING

I, Professor Margaret Williams, hereby declare that I did the language editing on the dissertation detailed below. The manuscript for submission purposes in fulfilment of the requirements for the degree Magister Curationis in School of Nursing, Faculty of Community and Health Sciences, University of the Western Cape. The manuscript has been edited for English language, grammar, punctuation, and spelling.

TITLE

PERCEPTIONS OF NURSING STUDENTS' REGARDING FACTORS INFLUENCING THEIR LEARNING IN A CLINICAL SKILLS LABORATORY AT A SCHOOL OF NURSING IN THE WESTERN CAPE PROVINCE

AUTHOR

CATHERINE HOFFMAN

Disclaimer: The author is free to accept or reject my changes to the document after editing. However, I do not bear responsibility for revisions made to the document after my edit on **13/12/2022.**

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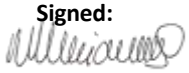

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ANNEXURE J: CERTIFICATE OF INDEPENDENT CODING

MJR
EDITORIAL CONSULTING

Date: 4 December 2022

INDEPENDENT CODING/QUALITATIVE ANALYSIS

I, Professor Margaret Williams, hereby declare that I have provided the service of independent coding for the dissertation listed below. The study is for submission purposes in fulfilment of the requirements for the degree Magister Curationis in School of Nursing, Faculty of Community and Health Sciences, University of the Western Cape.

TITLE

PERCEPTIONS OF NURSING STUDENTS REGARDING FACTORS INFLUENCING THEIR LEARNING IN A CLINICAL SKILLS LABORATORY AT A SCHOOL OF NURSING IN THE WESTERN CAPE PROVINCE

STUDENT:

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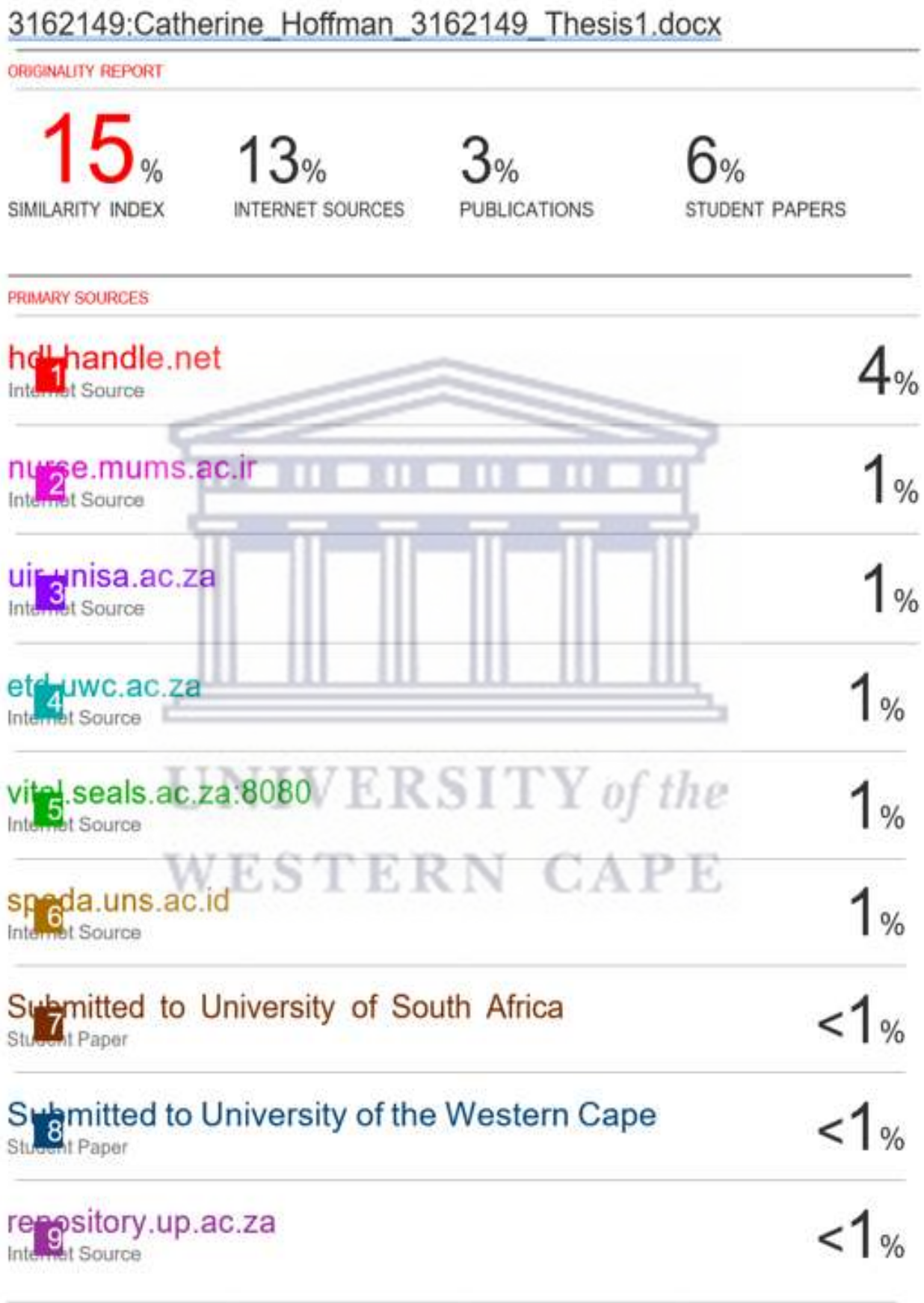
ANNEXURE K: TURNITIN REPORT



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