CHALLENGES FACING STUDENT NURSES IN THE CLINICAL LEARNING ENVIRONMENT IN LIMPOPO PROVINCE

by

TENDANI CONSTANCE MATHEBULA

submitted in accordance with the requirements for

the degree of

MASTER OF ARTS

in the subject

NURSING SCIENCE

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR TE MASANGO

NOVEMBER 2016

Student number: 32465270

DECLARATION

I declare that **CHALLENGES FACING STUDENT NURSES IN THE CLINICAL LEARNING ENVIRONMENT IN LIMPOPO PROVINCE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

21 November 2016

Tendani Constance Mathebula **Date**

CHALLENGES FACING STUDENT NURSES IN THE CLINICAL LEARNING ENVIRONMENT IN LIMPOPO PROVINCE

STUDENT NUMBER: 32465270
STUDENT: MATHEBULA TENDANI CONSTANCE
DEGREE: MASTER OF ARTS
DEPARTMENT: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
SUPERVISOR: DR TE MASANGO

ABSTRACT

The purpose of the study was to determine and understand the challenges that student nurses encounter in the clinical learning environment (CLE) in Limpopo Province, South Africa and how these challenges can be addressed.

A quantitative, descriptive, cross-sectional survey was used. The population consisted of levels 2, 3 and 4 year student nurses from three campuses of Limpopo College of Nursing. The researcher used a self- developed questionnaire for data collection. Out of 206 questionnaires, 152 were returned fully completed, yielding 74% effective response rate.

The study revealed some of the challenges which negatively affect students' education and clinical learning and strategies were devised to address these challenges.

Keywords

Challenges; clinical learning environment; student nurse.

ACKNOWLEDGEMENTS

My deepest gratitude to God, my Creator and Father, for the grace and strength to complete this study. There is an African saying, *Motho ke motho ka batho babang*, which means “a person is a person because of other people”. My sincere thanks and appreciation to the following people for making this study what it is:

- My supervisors, the late Prof MJ Oosthuizen, and Dr T Masango, for their support, encouragement and guidance, and everything I learned from them.
- Limpopo Department of Health, for permission to conduct the study.
- Limpopo College of Nursing, especially Giyani, Thohoyandou and Sovenga Campuses, for permission to conduct the study.
- My mother, Christinah Ririsa Mohali, for her unfailing belief in me, tireless inculcation of the value of education, steadfast love and continuous support.
- My husband, Giyani Jonas Mathebula, for his love, patience, support and sense of humour.
- My four wonderful children, Masingita, Nkateko, Tiyani and Matimba, for their patience, support, laughter and understanding.
- The respondents, second-year students (group 2015), third-year students (group 2014) and fourth-year students (group 2013), for their participation, time, sharing and courage.
- All the lecturers from Giyani, Thohoyandou and Sovenga Campuses, for their support, time and assistance with data collection.
- The statistician, Elvis Ganyaupfu, for his detailed statistical data analysis and making it look so easy.
- Rina Coetzer, for her patient, professional formatting and finalising of the manuscript.
- Iauma Cooper, for professionally editing the manuscript.

Dedication

To GOD, my support and comforter, who say, "Call to me, and I will answer you, I will tell you wonderful and marvellous things that you know nothing about."

Jeremiah 33v3

TABLE OF CONTENTS

CHAPTER 1 ..... **1**
ORIENTATION TO THE STUDY **1**
1.1 INTRODUCTION 1
1.2 BACKGROUND TO THE STUDY 3
1.3 RESEARCH PROBLEM 4
1.3.1 Nursing education in Limpopo Province 4
1.3.2 Source of the research problem 6
1.3.3 Study context/setting 7
1.4 PROBLEM STATEMENT 7
1.5 PURPOSE AND OBJECTIVES OF THE STUDY 7
1.5.1 Purpose 7
1.5.2 Objectives 8
1.6 RESEARCH QUESTIONS 8
1.7 DEFINITIONS OF KEY TERMS 8
1.8 SIGNIFICANCE OF THE STUDY 9
1.9 RESEACH DESIGN AND METHODOLOGY 9
1.9.1 Research design 100
1.9.2 Research methodology 100
1.9.2.1 Population 11
1.9.2.2 Sample and sampling 12
1.9.2.3 Data collection 13
1.9.2.4 Data analysis 14
1.9.2.5 Validity and reliability 144
1.10 ETHICAL CONSIDERATIONS 155
1.11 SCOPE AND LIMITATIONS 19
1.12 STRUCTURE OF THE DISSERTATION 19
1.13 CONCLUSION 19
CHAPTER 2 ..... **20**0
LITERATURE REVIEW **20**0
2.1 INTRODUCTION 200
2.2 CLINICAL LEARNING ENVIRONMENT (CLE) 211
2.3 ROLE PLAYERS IN THE CLE 233
2.3.1 Patients 233
2.3.2 Student nurses: role and attitude of students in the CLE 244
2.3.3 Nurse educator 255
2.3.3.1 Clinical accompaniment 255
2.3.3.2 Preceptors 266

2.3.4 Unit manager and unit staff 27
2.3.4.1 Mentor 277
2.3.4.2 Supervisor 29
2.3.5 Other members of multidisciplinary team 30
2.3.6 The relationship between the nursing education institution and clinical learning facilities 31
2.3.7 Theory-practice gap 32
2.3.8 Resources in the clinical learning environment 33
2.4 CONCLUSION 344
CHAPTER 3 35
RESEARCH DESIGN AND METHODOLOGY 35
3.1 INTRODUCTION 35
3.2 RESEARCH DESIGN 35
3.2.1 Quantitative 36
3.2.2 Descriptive design 36
3.2.3 Cross-sectional study 36
3.2.4 Survey 37
3.3 RESEARCH METHOD 37
3.3.1 Population 38
3.3.2 Sample and sampling 39
3.3.2.1 Sampling size 39
3.3.2.2 Sampling frame 40
3.3.2.3 Sampling criteria 40
3.3.3 Data collection 41
3.3.4 Data-collection instrument 42
3.3.5 Validity and reliability 43
3.3.6 Pre-test or pilot study 44
3.3.7 Data analysis 45
3.3.8 Ethical considerations 45
3.4 CONCLUSION 48
CHAPTER 4 49
DATA ANALYSIS AND INTERPRETATION, AND FINDINGS 49
4.1 INTRODUCTION 49
4.2 DATA MANAGEMENT AND ANALYSIS 49
4.3 RESEARCH RESULTS 49
4.3.1 Scale reliability 49
4.3.2 Statistical validity 54
4.3.3 Frequency statistics 59

4.3.3.1 Respondents' demographic profiles 59
4.3.4 Descriptive statistics 60
4.3.4.1 Exploratory factor analysis (EFA) 67
4.3.4.2 Factor loadings of retained items 73
4.4 OVERVIEW OF RESEARCH FINDINGS 80
4.5 CONCLUSION 88
CHAPTER 5 89
RESEARCH FINDINGS, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY 89
5.1 INTRODUCTION 89
5.2 RESEARCH DESIGN AND METHODOLOGY 90
5.3 SUMMARY AND INTERPRETATION OF THE FINDINGS 90
5.3.1 Respondents' demographic profile 90
5.3.1.1 Level of training and year of entry 90
5.3.1.2 Gender 90
5.3.1.3 Culture 91
5.3.2 Welcome and orientation of student nurses in the clinical learning environment 91
5.3.2.1 Orientation of clinical skills related to their level of practice 91
5.3.2.2 Skills orientation was done at campus, all skills were demonstrated at once and I was given time to practise skills before being allocated to CLE 92
5.3.2.3 Skills orientation was done at a clinical area 92
5.3.2.4 When allocated at CLE I was orientated on ward/unit surrounding, communication lines/reporting channels, tea and lunch times and duty roster 93
5.3.2.5 The ratio of nurse educators and student nurses in the CLE promoted patient safety 94
5.3.2.6 The period I was allocated in different wards was enough to promote learning in relation to my level of training 94
5.3.2.7 During placement in the CLE I was assigned duties according to my level of training 94
5.3.2.8 I experienced competition from student nurses who came from other NEIs 95
5.3.2.9 I was treated as a nurse who was undergoing training at the clinical facility 95
5.3.2.10 I was treated as a worker at CLE 96
5.3.2.11 I was used as a scapegoat for anything bad done in the CLE 96
5.3.3 Clinical accompaniment 97
5.3.3.1 I received clinical accompaniment from clinical facilitator 97
5.3.3.2 I received clinical accompaniment from nurse educator 97
5.3.3.3 I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator 98
5.3.3.4 I received support visits from nurse educators/clinical facilitator when allocated to CLE 98

5.3.3.5 I received clinical accompaniment when allocated to the clinical facility 99
5.3.3.6 Nurse educators/clinical facilitator spent enough time with me during clinical accompaniment..... 99
5.4 CONCLUSIONS..... 99
5.5 RECOMMENDATIONS..... 100
5.5.1 Recommendations for Department of Health..... 101
5.5.2 Recommendations for the NEIs..... 101
5.5.3 Recommendations for Clinical nursing facilities (Hospitals)..... 102
5.5.4 Recommendations for further study..... 102
5.6 CONTRIBUTIONS OF THE STUDY..... 102
5.7 LIMITATIONS OF THE STUDY..... 103
5.8 CONCLUDING REMARKS……..103
LIST OF REFERENCES 104

ANNEXURES..... 115
ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE, DEPARTMENT OF HEALTH STUDIES, UNISA..... 116
ANNEXURE C: PERMISSION TO CONDUCT THE STUDY: THE VICE- PRINCIPALS..... 119
ANNEXURE D: PERMISSION GRANTED TO CONDUCT THE STUDY: DEPARTMENT OF HEALTH, PROVINCIAL RESEARCH COMMITTEE..... 121
ANNEXURE E: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (GIYANI CAMPUS) 122
ANNEXURE F: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (SOVENGA CAMPUS)..... 123
ANNEXURE G: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (THOHOYANDOU CAMPUS) 124
ANNEXURE H: CONSENT FORM 125
ANNEXURE I: LETTER FROM THE EDITOR 127

LIST OF TABLES

Table 1.1: Total number of student nurses at Limpopo College of Nursing enrolled for the year 2014 5

Table 1.2: Population and sample size N=344 (50%) of 688 11

Table 3.1: Population of the study 38

Table 3.2: Sample size of the study 40

Table 3.3: Questionnaires distributed and returned 42

Table 4.1: Scale reliability of questionnaire items 51

Table 4.2: Statistical validity of disaggregated dimensions and overall Keiser-Meyer-Olkin (KMO) – Measure of Sampling Adequacy (MSA) 55

Table 4.3: Statistical validity of the survey instrument's items per dimension 58

Table 4.4: Respondents' demographic profiles 60

Table 4.5: Descriptive statistics – welcome and orientation of student nurses in the clinical learning environment 61

Table 4.6: Descriptive statistics – clinical accompaniment 62

Table 4.7: Descriptive statistics – clinical support 63

Table 4.8: Descriptive statistics – relationship between nursing education institution and clinical learning environment 65

Table 4.9: Descriptive statistics – theory and practice integration 66

Table 4.10: Descriptive statistics – resources at clinical facilities 67

Table 4.11: Total variance explained - welcome and orientation of student nurses in the clinical learning environment 68

Table 4.12: Total variance explained – clinical accompaniment 69

Table 4.13: Total variance explained – clinical support 70

Table 4.14: Total variance explained – relationship between nursing education institution and clinical learning environment 71

Table 4.15: Total variance explained – theory and practice integration 72

Table 4.16: Total variance explained – resource at clinical facilities 73

Table 4.17: Rotated factor matrix - welcome and orientation of student nurses in the clinical learning environment 74

Table 4.18: Rotated factor matrix - clinical accompaniment 75

Table 4.19: Rotated factor matrix - clinical support 76

Table 4.20: Rotated factor matrix - relationship between nursing educations institution and clinical learning environment 77

Table 4.21: Rotated factor matrix – theory and practice 78

Table 4.22: Rotated factor matrix – resources at clinical facilities 79

Table 4.23: Level of training 80

Table 4.24: Year in which training started 80

Table 4.25: Gender 80

Table 4.26: Culture 81

Table 4.27: I was orientated on clinical skills related to my level of practice 81

Table 4.28: Skills orientation was done at laboratory (campus) 81

Table 4.29: Skills orientation was done at a clinical area 82

Table 4.30: During clinical skill orientation, all skills were demonstrated at once 82

Table 4.31: After skills orientation, i was given time to practice skills before being allocated to clinical learning environment 82

Table 4.32: When allocated at clinical learning environment i was orientated on ward/unit surrounding 83

Table 4.33: When allocated at clinical learning environment i was orientated on communication lines/reporting channels 83

Table 4.34: When allocated at clinical learning environment i was orientated on tea and lunch time 83

Table 4.35: When allocated at clinical learning environment i was orientated on duty roster 84

Table 4.36: The ratio of nurse educators and student nurses in the clinical learning environment promote patient safety 84

Table 4.37: The period I was allocated in different wards was enough to promote learning in relation to my level of training 84

Table 4.38: During placement in the clinical learning environment, i was assigned duties according to my level of training 85

Table 4.39: I experienced competition from student nurses who come from other nursing education institutions 85

Table 4.40: At the clinical facility i was treated as a nurse who is undergoing training 85

Table 4.41: I was treated as a worker at clinical learning environment 86

Table 4.42: I was used as a scapegoat for anything bad done in the clinical 86

Table 4.43: I received clinical accompaniment from clinical facilitator 86

Table 4.44: I received clinical accompaniment from nurse educator 87

Table 4.45: I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator 87

Table 4.46: When allocated to clinical learning environment, I received support visits from nurse educators/clinical facilitator 87

Table 4.47: I received clinical accompaniment when allocated to the clinical facility 87

Table 4.48: Nurse Educators/clinical facilitator spend enough time with me during clinical accompaniment 88

Table 5.1: Challenges encountered by student nurses during clinical placement……100

LIST OF FIGURES

Figure 1.1: Limpopo province map displaying six districts..... 05

Figure 2.1: A model of the aspects and interaction between the role players in the clinical learning environment..... 21

Figure 5.1: Strategies to address clinical challenges 101

LIST OF ABBREVIATIONS

CLE	Clinical Learning Environment
GP	General Practitioner
ICU	Intensive Critical Units
MS	Microsoft
NEIs	Nursing Education Institutions
RSA	Republic of South Africa
SANC	South African Nursing Council
SPSS	Statistical Package for Social Science
UK	United Kingdom
UNISA	University of South Africa
US	United States

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Nursing education is based on the teaching principle of acquiring theory from lectures in the classroom and practical experience from the clinical learning environment (CLE). Adherence to these principles leads to nursing graduates who can cope with the demands of their profession (Hughes & Quinn 2013:2). Education and training of student nurses should be organised in such a way that students are trained, mentored, and provided with facilities and opportunities for learning. When student nurses follow the education and training programme they should be able to adapt to the changing clinical environment, think critically and creatively thereby becoming independent practitioners of nursing. The quality of nursing education and training should prepare students to function in different clinical areas, such as general hospitals, private homes, community clinics, and specialised units. A dynamic work environment requires that students function with responsibility and accountability. The goal of nursing education is to produce a nurse who is competent (Bruce, Klopper & Mellish 2011:14).

Nursing is a vital profession. The education and training of nurses in South Africa is regulated by the South African Nursing Council (SANC) through setting of minimum requirements for theory and practice and the registration of qualifications. According to SANC (2006: section 11[1]), student nurses have to register with SANC after enrolment at nursing education institutions. The theoretical component of nursing is taught in universities and colleges while clinical training of nurses is done in hospitals and clinics.

The clinical learning environment (CLE) is an important part of the nursing education programme providing the students with support, guidance, role models from nurse educator and clinical staff, learning resources and opportunities. Students are involved as team members and encouraged to learn from clinical staff. Mutual respect, humaneness and mutual trust are some of the challenges which the CLE should provide for students undergoing training (Meyer, Naude, Shangase & Van Niekerk 2011:100, 112).

The guidance of professional nurses and nursing unit managers is imperative in student nurses' understanding of the CLE and required clinical skills (Meyer et al 2011:91). The primary role of professional nurses at the CLE is that of patient care, but they have a moral duty to mentor, teach and supervise students when allocated at clinical facilities for clinical practice (Bruce et al 2011:256). The unit managers have to ensure that student nurses are empowered with knowledge and skills when allocated to the clinical facilities. This will equip students with skills to manage human and material resources, facilitate learning and provide comprehensive nursing care to patients (Meyer et al 2011:91).

Accreditation of a nursing education institution depends on a variety of factors. The institution should have a formal agreement with a clinical facility for the clinical practice of student nurses. The clinical facility should have control mechanisms over the quality of clinical education and training. The needs of the student nurses to be supervised, accompanied, and have clinical learning opportunities should be addressed by such clinical facility. The clinical resources and infrastructure should be sufficient for the students to meet their clinical learning objectives (SANC 2013c: section 58(1) [g]). Despite the agreement that education and training institutions have with the clinical facilities, the clinical facilities are facing drastic changes due to management and economic transformation, which could affect the quality of student nurses who graduate at these facilities.

Lack of resources in the CLE of nursing students in Limpopo Province could have a detrimental effect on the training and education of nurses in the province. Students who have to work and study in poorly resourced clinical environments might face a number of challenges. In South Africa, Magobe, Beukes and Müller (2010:525) found that student nurses were treated as workers rather than as students in clinical learning facilities because of a shortage of professional nurses.

The researcher has been a nurse educator since 2009 at the Limpopo College of Nursing, Giyani Campus, which offers a four-year comprehensive course. The researcher observed the challenges faced by students during clinical accompaniment and also took note of challenges reported in the media. These observations and various newspaper reports about shortages in hospitals and clinics in Limpopo Province motivated the researcher to study the challenges facing student nurses in the CLE in

order to make substantiated recommendations to address challenges that influence nurse training in the CLE in Limpopo Province. Consequently, the study wished to investigate challenges that could affect education and training of student nurses in the CLE in Limpopo College of Nursing, Republic of South Africa (RSA).

1.2 BACKGROUND TO THE STUDY

Nursing education institutions in South Africa are accredited by the South African Nursing Council (SANC) to ensure quality education and training of nurses (Bruce et al 2011:30, 68). The SANC (2013: section 58(1) [g]) defines a clinical learning environment (CLE) as "a continuum of services to promote health and provide care to individuals and groups, and is used to teach students". Education and training institutions have to ascertain if the clinical facilities where student nurses will be allocated provide a suitable environment for learning before submitting a report to the SANC in application for accreditation. Student nurses should perform practical procedures in real-life clinical environments (SANC 2013c: section 58(1) [g]). Exposure to the clinical facilities equips a student nurse with knowledge and skills leading to a qualified professional nurse (Bruce et al 2011:10). Student nurses should be exposed to clinical training from the first year of enrolment up to the end of the programme. At the end of the education and training programme such students should have been allocated to different clinical settings according to the requirement of the education and training programme (SANC 2013a:32).

Much research has been done on the CLE. In the South African Military Nursing College, Caka and Lekalakala-Mokgele (2010:56) found that student nurses were exposed to many learning opportunities when allocated to the clinical learning environments. In the United Kingdom (UK), Magnier, Wang, Dale, Murphy, Hammond, Mossop, Freeman, Anderson and Pead (2011:682) reported that student nurses were being trained at CLEs which were authentic for teaching and learning. In Cameroon, however, Eta, Atanga, Atashili and D'Cruz (2011:28) found that CLEs had insufficient clinical resources to train skilled and competent nurses. In the North-West Province, South Africa, Watkins (2010:15) reported that the CLE where student nurses were allocated was not conducive to learning. Moreover, they even lost compassion for nursing as it was difficult to practise in such an environment due to the great shortage of clinical resources. In Malawi, Msiska, Smith and Fawcett (2014:39) reported that

student nurses practised through “trial and error” when allocated at the CLE due to lack of human resources to provide clinical guidance to them.

The researcher worked as a nurse educator from 2009 at the Limpopo College of Nursing, Giyani Campus, and observed the challenges faced by students during clinical accompaniment and also took note of challenges reported in the media. It was found imperative by the researcher to study the challenges facing student nurses in the clinical learning environment.

1.3 RESEARCH PROBLEM

Grove, Burns and Gray (2013:68) describe a research problem as the area of interest where there is a knowledge gap about the concept under study.

1.3.1 Nursing education in Limpopo Province

South Africa is divided into nine provinces. Limpopo Province is the most rural province in South Africa and is divided into five districts: Mopani, Vhembe, Capricorn, Sekhukhune and Waterberg as shown in figure 1.1. The Province has two universities, namely Limpopo University (Turf loop Campus) and University of Venda, sixteen nursing schools, and nursing college which is understudy and its sub-campuses.
Three sub-campuses train student nurses from level 1up to level 4, while other two sub-campuses train level 1 student nurses and transfer them to other sub-campuses to complete the training programme (see table 1.1). There are 50 hospitals (2 Tertiary, 5 Regional, 3 Specialised/Psychiatric and 40 District hospitals) and 474 clinics which are spread across the five districts (Limpopo Department of Health 2015).

Figure 1.1 Limpopo province map displaying six districts

(Limpopo map 2014)

Table 1.1 Number of student nurses at Limpopo College of Nursing, 2014

Student level	Thoyandou Campus	Giyani Campus	Sovenga Campus	Waterberg Campus	Sekhukhune Campus
Level 1	50	35	63	30	50
Level 2	101	49	76	Nil	Nil
Level 3	64	85	90	Nil	Nil
Level 4	52	89	82	Nil	Nil

(Accessed from College records)

1.3.2 Source of the research problem

Since 2009 the researcher has been a nurse educator in Limpopo College of Nursing. During clinical accompaniment of student nurses the researcher found it difficult to demonstrate to and evaluate students on some of the clinical procedures (especially sterile clinical procedures) due to shortages of resources at the clinical facilities. The above information was emphasised by newspaper reports, stating that public clinical facilities in Limpopo Province, South Africa were experiencing shortages of resources such as gloves, tissue paper, antiseptic soap and bandages (Shamase 2012:8). In 2012, staff shortages in clinical facilities in Limpopo Province were so serious that some hospitals had to reduce the number of beds in order to ensure manageable nurse-patient ratios, especially in Intensive Care Units (ICU) (Herman 2012:1). Lack of student support and guidance from the registered professional nurses at the CLE was evident.

Clinical facilities should be well equipped and have enough resources (SANC 2013a:25). The validity of a student nurse's assessment is put at risk when the CLE is not well resourced (Bruce et al 2011:273).The Northern Province College of Nursing (1997: 1) states that registered nurses in the clinical area are expected to guide the student nurses and sign their clinical workbook. The registered professional nurses at the CLE have a moral duty to supervise, mentor and teach the students. Student nurses who are not supported and guided by registered professional nurses at the CLE render poor quality patient care (Bruce et al 2011:256).

The allocation of high numbers of students at CLE presents a challenge (see table 1.1). The nurse educator student nurse ratio in the CLE should promote the best possible results for students' clinical learning and patient care safety (SANC 2013a:98). Mongwe (2007:235) found that the CLE in Limpopo Province was unconducive to clinical learning due to high student nurse allocation. This is evidence that student nurse to nurse educator ratio in hospitals in Limpopo Province does not promote the best possible clinical learning results, including patient care. Bruce et al (2011:273) state that if student nurses are allocated in high numbers at CLEs, clinical resources are put under pressure and patients are exposed to clinical procedures by large numbers of students. Mellish, Brink and Paton (2000:210) indicate that nurse educator student ratio should be 12 to 18 student nurses.

1.3.3 Study context/setting

The study was conducted at Thohoyandou Campus situated in Vhembe District, Sovenga Campus situated in Capricorn District, and Giyani Campus situated in Mopani District (see figure 1.1). The study wished to determine the current state of clinical facilities by exploring challenges faced by student nurses when allocated in the CLE.

1.4 PROBLEM STATEMENT

Clinical facilities are being affected by management and economic constraints which could affect students' clinical training and learning. These occur irrespective of the guidelines on Education and Training of a Nurse (General, Psychiatric and Community) and Midwife leading to Registration, college curricula, nursing education and training standards as well as SANC monitoring and support visits. Shortages of human resources and equipment, limited clinical learning opportunities and inadequate support from professional nurses could hamper students' clinical training.

The clinical learning environment (CLE) should be favourable to equip nursing students with basic clinical skills. It should prepare them to function independently and provide safe and effective nursing care in any clinical environment. This is not possible in an environment that is not conducive to learning and developing. From newspaper reports and studies conducted in Limpopo Province it seems as if nursing students face numerous challenges in the CLE that could impede their training and competence.

1.5 PURPOSE AND OBJECTIVES OF THE STUDY

1.5.1 Purpose

A research purpose is the aim of the study originating from the basis of the research problem and is a short and clear statement (Grove et al 2013:74). The purpose of the study was to identify and describe challenges encountered by student nurses that could affect their CLE in hospitals that provide clinical learning and devise strategies to address these challenges and challenges.

1.5.2 Objectives

To achieve the purpose, the objectives of the study were to:

- Determine challenges that affect education and training of student nurses in the CLE in Limpopo College of Nursing.
- Devise strategies to address the challenges that affect nurse education and training in the CLE in Limpopo College of Nursing.

1.6 RESEARCH QUESTIONS

The study wished to answer the following questions:

- What are the challenges at the CLE in Limpopo Province, South Africa that affect the clinical education and training of nursing students?
- How can the challenges that affect nurse education and training in the CLE be addressed to enhance the clinical learning experience of students?

1.7 DEFINITIONS OF KEY TERMS

For the purposes of this study, the following terms were used as defined below.

Challenges

Challenges refer to something that tests someone's ability and needs a great physical and mental effort in order to be done successfully (*Cambridge Advanced Learner's Dictionary* 2013:239).

In the context of this study, challenges refer to difficulties which student nurses encounter while allocated in CLEs to acquire clinical skills and competencies.

Clinical learning environment (CLE)

A clinical learning environment/facility means a continuum of services to promote health and provide care to individuals and groups used to teach students/learners (SANC 2013c: section 58(1) [g]).

In this study, the CLE refers to hospitals in the Limpopo Province where student nurses from Limpopo College of Nursing are accommodated and trained to develop clinical skills.

Student nurse

A student/learner nurse means a person registered as such in terms of section 32 of Nursing Act, 33 of 2005 (South Africa 2005).

In this study, the researcher used “student nurse” to refer to a student who is registered for the comprehensive four-year programme regulated by R.425 of 22 February 1985, as amended (SANC 2005).

1.8 SIGNIFICANCE OF THE STUDY

The knowledge acquired from conducting this study should enable the researcher to devise strategies to assist nursing education institutions and student nurses cope with shortcomings in the CLE. Education and training facilities will have access to the findings of the study and the strategies to address identified issues and shortcomings that could impede clinical training of nurses.

1.9 RESEACH DESIGN AND METHODOLOGY

A research design refers to “the process of focusing on the end product and all the steps in the process to achieve the outcome anticipated” (De Vos, Strydom, Fouché & Delport 2011:142). The researcher chose a quantitative approach in order to determine and describe challenges encountered by student nurses that could affect their CLE in hospitals that provide clinical learning. This enabled the researcher to obtain general to specific information about the phenomenon under study.

Quantitative research explains and examines the relationship between the variables in order to determine their cause and effect of interactions (Grove et al 2013:717; LoBiondo-Wood & Haber 2010:584). Brink, Van der Walt and Van Rensburg (2010:10) describe quantitative research as a study which is based on logical positivism and aimed at measurable aspects of people's behaviour.

1.9.1 Research design

A quantitative, descriptive, cross-sectional survey was conducted. A descriptive design allows the researcher "to collect full descriptions of variables under study and utilise the collected information to assess and justify present practices and conditions or to make more plans to improve the standard of health care practices" (LoBiondo-Wood & Haber 2010:198).

In a cross-sectional study the researcher obtains data from various subjects at a particular time and studies it at one point in time instead of obtaining data from the same subjects at different times (Brink et al 2010:105).

A descriptive cross-sectional design was used to collect data from levels 2, level 3 and level 4 student nurses from the three (3) sub-campuses which offer all four levels of study, because they were more exposed to the CLE.

1.9.2 Research methodology

Polit and Beck (2012:273) describe research methodology as "steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data". The research methodology includes the population; sample and sampling; data collection and analysis, and validity and reliability (see chapter 3 for detailed discussion).

1.9.2.1 Population

According to Polit and Beck (2012:273), a population is “the entire aggregate of cases in which a researcher is interested”. Grove et al (2013:44) state that a population includes all people that meet certain criteria to be included in the study.

In the context of this study, the population referred to student nurses in levels 2, 3 and 4 registered for the programme regulated by Regulation R.425 of 1985 (SANC 2005), also referred to as the four-year integrated programme at Limpopo College of Nursing, Limpopo Province, South Africa as indicated in table 1.2.

Table 1.2 Population and sample size (N=344) 50% of 688

Students level	**Level 1**	**Level 3**	**Level 4**	**Population**	**Sample size N=344 (50%)**
Thoyandou Campus	101	64	52	217	109 (32%)
Giyani Campus	49	85	89	223	112 (32%)
Sovenga Campus	76	90	82	248	124 (36%)
Total				**N=688**	**N=344 (100%)**

A distinction is made between the target and the accessible population (Polit & Beck 2012:273). The accessible population is a portion of a target population to which the researcher has reasonable access (Grove et al 2013:686; Brink et al 2010:123). LoBiondo-Wood and Haber (2010:574) describe the accessible population as a population that is easily found and meets the criteria for the study.

In this study, the accessible population consisted of students at Limpopo College of Nursing enrolled for second, third and fourth year of study at Giyani, Thohoyandou and Sovenga Campuses.

1.9.2.2 Sample and sampling

A sample refers to a subset of a population (individuals, elements or objects) or a group selected to act as representatives of a population as a whole (Polit & Beck 2012:275). Sampling is the process of choosing part of the selected population to stand on behalf of the rest of population (LoBiondo-Wood & Haber 2010:224).

The sample size is the number of subjects who have given consent after recruited to be involved in the study (Grove et al 2013:708). According to De Vos et al (2011:224), if the population under study is big, the percentage of the sample should be relatively small and if the population is small the sample percentage should be large. The population will be well represented if the sample is large and the researcher will be better able to make recommendations and conclusions than if the sample is small. Accordingly, the researcher randomly selected 50% of the respondents in each level being studied, to ensure that the sample size was not too small or very large (De Vos et al 2011:224).

A sampling frame is a complete list of the sampling elements of the chosen population (Brink et al 2010:124). A sampling frame is the documented names of all members of the population where membership is described by criteria of sampling (Grove et al 2013:709; LoBiondo-Wood & Haber 2010:585). The researcher used class lists of all second-, third- and fourth-year student nurses at Limpopo College of Nursing at Giyani, Thohoyandou and Sovenga Campuses as a sampling frame for the study.

Sampling refers to the "process of selecting the sample from a population in order to obtain information regarding the phenomenon in a way that represents the population of interest" (Brink et al 2010:124). Polit and Beck (2012:275) describe sampling as "a process of selecting a portion of the population to represent the entire population so that inferences can be made".

A sampling approach is a method of choosing elements, groups of individuals or behavioural events that stand on behalf of the population being studied, and includes probability and non-probability sampling (Grove et al 2013:709).

The researcher chose probability sampling, specifically stratified random sampling, in the study. In stratified random sampling, the population is grouped in small groups in relation to variables important to the study, and by so doing each population element will belong to one small group (Brink et al 2010:130). The population is grouped into small homogeneous groups in stratified random sampling (LoBiondo-Wood & Haber 2010:231).

In the study the researcher used the students' level of study (levels 2, 3, and 4) as strata/subgroups where 50% of the respondents were randomly selected from each level. By randomly obtaining a stratified sample (50% of each level), the sample size was approximately 344 students.

1.9.2.3 Data collection

Data collection is "the systematic collection of data relevant to the research objectives, purpose and question of the study" (Grove et al 2013:523).

A self-developed questionnaire with open-ended and closed questions was used for collecting data. A questionnaire is a method that requires respondents to give written or verbal replies to a set of questions (Polit & Beck 2012:265). A questionnaire can be used to collect information on attitudes, perceptions, knowledge and experience.

The questionnaire was written in English for the respondents to understand questions and to provide the correct information needed for the study. The questionnaire consisted of seven sections:

Section A: Biographical data
Section B: Welcome and orientation of student nurses in the CLE
Section C: Clinical accompaniment
Section D: Clinical support
Section E: Relationship between Nursing Education Institution and CLE
Section F: Theory and practice correlation
Section G: Resources at clinical facilities

1.9.2.4 Data analysis

Polit and Beck (2012:379) define data analysis as the systematic organization and synthesis of research data. Data analysis is conducted to put data in order and give meaning to the data (Grove et al 2013:691).

In this study, data was analysed by means of descriptive and inferential statistics. Inferential statistics are used to make inferences about the population (Polit & Beck 2012:404). Descriptive statistics put collected data in order and give a summary of numerical data obtained from populations and samples (Brink et al 2010:201). Descriptive statistics were used to analyse the data collected and the results were presented in tables and graphs. A statistician analysed the data using the Statistical Package for Social Science (SPSS) software program version 21

1.9.2.5 Validity and reliability

The quality of a research instrument is determined by its validity and reliability. In quantitative studies, *validity* and *reliability* are two of the most important concepts used to evaluate the rigour with which studies are carried out (Polit & Beck 2012:336). .

The validity of the instrument refers to the measurement standard which the instrument is expected to measure (Polit & Beck 2012:336). The researcher designed the questionnaire in relation to the topic under study and ensured content and face validity.

- *Content validity*. Brink et al (2010:160) define content validity as the examination of all parts of the instrument in order to check if all the features of the variables to be measured have been included in the instrument.

  The researcher ensured content validity by constructing the instrument based on the literature review in order to include the variable aspects necessary in the content. The researcher also presented the instrument to experts in the field for evaluation of the content validity.
- *Face validity.* Face validity means the ability of the instrument to measure what it is meant to measure (Brink et al 2010:160). The researcher ensured face validity by relying on the experts' intuitive judgment.

The reliability of the instrument is the consistency with which it measures the target attributes (Polit & Beck 2012:331). Brink et al (2010:205) describe reliability as “the extent to which measures are consistent or repeatable over time”. Reliability of a questionnaire refers to its ability to yield the same data when it is re-administered under the same conditions. According to De Vos et al (2011:177), reliability means that the instrument will give the same or nearly the same results if repeated under the same conditions.

The researcher ensured the reliability of the questionnaire by pre-testing it with a group of levels 2, 3 and 4 student nurses at Giyani Campus. The students who participated in the pre-test or pilot study were not involved in the main study.

Reliability and validity of the study are discussed in detail in chapter 3.

1.10 ETHICAL CONSIDERATIONS

Ethics refer to the moral principles which show the rules and expected behaviour of the researcher during the study (De Vos et al 2011:114). Ethical considerations are essential to the design of any research involving human subjects in order to protect the rights of the research respondents. The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities (Pera & Van Tonder 2009:154).

Accordingly, when conducting the study, the researcher upheld the ethical principles of autonomy, justice, beneficence and non-maleficence with regard to the institutions, respondents, and the scientific integrity of the research (Brink et al 2010:235; Polit & Beck 2012:335).

- **Permission to conduct the study**

Before commencing the study, the researcher applied for and obtained written ethical clearance from the Higher Degrees Committee of the University of South Africa, Department of Health Studies (see Annexure A) and written permission from the provincial research committee of the Department of Health (see Annexures B & D) and Limpopo College of Nursing granting permission to conduct a study (see Annexures C,

E, F and G). The researcher ensured that the data collected was not linked to the specific institution where the study was conducted.

- **Protecting the rights of the institutions**

According to Pera and Van Tonder (2009:154), it is very important that the same ethical principles applied to the research respondents be applied to the institution. The researcher requested and obtained permission in writing to conduct the research and attached the approved proposal and ethical clearance certificate obtained from the Higher Degrees Committee and the Department of Health Studies of the University of South Africa UNISA ((see Annexure A), to the research committee functioning under the Provincial Department of Health (see Annexures B & D) and also Limpopo College of Nursing (see Annexures C, E, F and G).

- **Protecting the rights of the respondents**

The researcher's first interest should be on the respondents by maintaining their dignity and respect and conducting the research ethically (Pera & Van Tonder 2009:151). The respondents' rights were protected by informed consent, autonomy, justice, beneficence and non-maleficence.

Informed consent

The respondents had the right to decide whether to participate in the study or not. Informed consent is the ethical principle research subject give consent to participate in the study out of their free will, after obtaining information from the researcher on the written document (Brink et al 2010:234). The researcher provided the participants with written information about the study which was clear and comprehensive so that they could give informed consent. The information about the study was in the information leaflet and included informed consent forms for them to sign. The respondents were informed that participation was voluntary and they could withdraw from the study at any time if they so wished.

Autonomy

In respecting the respondents' right to autonomy, the researcher gave the respondents information about the study so that they could take a decision based on the way they understood the information given (Mellish & Paton 2010:122).

The respondents were given the choice of participating in the study or not without any external pressure or control. Signing the consent form indicated their willingness to participate. It was acknowledged that the researcher is a lecturer at the college and that students may feel obliged to participate due to the "power relationship". However, respondents were informed that should they feel uncomfortable to provide information, they could withdraw from the study at any time without any negative consequences.

Anonymity

The researcher ensured that the respondents' responses remained anonymous by not asking them to write their names on the questionnaire. Consequently, even the researcher was not able to link respondents with data provided. The institution's anonymity was maintained by making sure that obtained data was not linked to the particular institution.

Confidentiality

This is the researcher's responsibility to keep the collected data from being seen by any other people (Brink et al 2010:235). The questionnaires were stored in a safe place for the ethical quality of the study (De Vos et al 2011:117). Confidentiality was ensured during the study by making sure that completed questionnaires are kept in a safe and secure place.

Non-maleficence

Mellish and Paton (2010:122) define non-maleficence as the principle which requires that the researcher do not harm the respondents voluntarily due to carelessness or knowledge deficit. The researcher behaved professionally to avoid causing any harm to the respondents.

Beneficence

Beneficence means avoiding harm and performing good to the subjects or respondents. (Mellish & Paton 2010:122). The principle of beneficence means “to do well and not to harm”. Beneficence imposes a duty on researchers to minimize harm and to maximize benefits. Human research should be intended to produce benefits for respondents themselves or for other individuals or society as a whole (Polit & Beck 2012:152). The principle was adhered to by securing the well-being of the respondents, who had the right to protection from discomfort and harm.

The respondents were exposed to some degree of psychological risk when participating in the study. A debriefing session was offered to the respondents to ask questions and express their feelings. If necessary, the researcher would refer the respondents concerned for further professional intervention (LoBiondo-Wood and Haber 2010:253).

Justice

Justice refers to equal treatment, avoiding unfavourable treatment based on prejudice and taking advantage of the subjects/respondents (Mellish & Paton 2010:122). Justice includes the right to fair treatment and the right to privacy. Researchers should ensure that respondents’ privacy is maintained throughout the study (Polit & Beck 2012:155).

The respondents had the right to fair selection and treatment. The researcher used random selection when selecting the respondents and ensured that they received equal treatment. In upholding privacy, the data collected was kept safely locked and only the researcher, statistician and supervisor had access to it. Confidentiality and anonymity were observed during data collection, analysis and publication of results. Confidentiality ensured that all data gathered during the study could not be linked to any respondent or be divulged (Brink et al 2010:235). The researcher ensured that the questionnaires were kept safe and no other person could gain access to the data. Anonymity refers to the identities and names of the respondents not being known even to the researcher (Brink et al 2010:235).This was ensured by separating the consent forms from the questionnaires, not allowing the respondents to write their names on the questionnaires, and not indicating the names of the campuses, thereby ensuring fair treatment and the right to privacy (Grove et al 2013:162).

- **Scientific integrity of the research**

According to Pera and Van Tonder (2009:157), the researcher's scientific integrity should be unquestionable and indisputable. The researcher avoided unprofessional behaviour such as forging and fraudulent altering of the design and methods and data, including plagiarism.

1.11 SCOPE AND LIMITATIONS

The study focused on challenges and issues that could affect student nurses in the CLE in Limpopo Province, South Africa. The findings of the study could not be generalised to other Provinces as it was conducted at the three sub- Campuses of Limpopo College of Nursing.

1.12 STRUCTURE OF THE DISSERTATION

The study consists of five chapters:

Chapter 1 is an orientation to the study.
Chapter 2 discusses the literature review conducted for the study.
Chapter 3 describes the research design and methodology.
Chapter 4 discusses the data analysis and interpretation, and the findings.
Chapter 5 presents the conclusion and makes recommendations for practice and further research.

1.13 CONCLUSION

This chapter introduced the study and discussed the research problem, purpose and objectives, research design and methodology of the study. The ethical considerations upheld in the study were also discussed; key terms defined, and an outline of the dissertation provided.

Chapter 2 discusses the comprehensive literature review undertaken for the study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 discussed the research problem and context of the study. The clinical learning environment (CLE) that directly involves student nurses and nurtures them to critically think like professional nurses will empower student nurses and enhance their satisfaction (Lovecchio, Dimattio & Hudacek 2015:252-254). This chapter discusses the literature review conducted for the study, which covered clinical nursing education and challenges that could affect the education and training of student nurses in the CLE. A review of literature helps researchers to easily understand the meaning and nature of the identified research problem (De Vos et al 2011:134). LoBiondo-Wood and Haber (2010:580) describe a literature review as systematically and critically appraising imperative literature on a topic. According to Grove et al (2013:97), a literature review is a written and well organized presentation of what has been published about a research topic by scholars.

In this study, the literature review covered national and international studies on the challenges facing student nurses in the CLE and stimulated the researcher to conduct this study in order to determine the current situation in the CLE in Limpopo Province. The researcher was assisted in the literature review by the librarians of the University of South Africa (UNISA). Science direct, Ebsco, Google search, Africa wide and Sabinet and other data bases were sourced using the key words: challenges, student nurses, and clinical learning environment.

The review was guided mainly by Meyer et al's (2011:113) model of the aspects and interaction between the role players in the CLE.

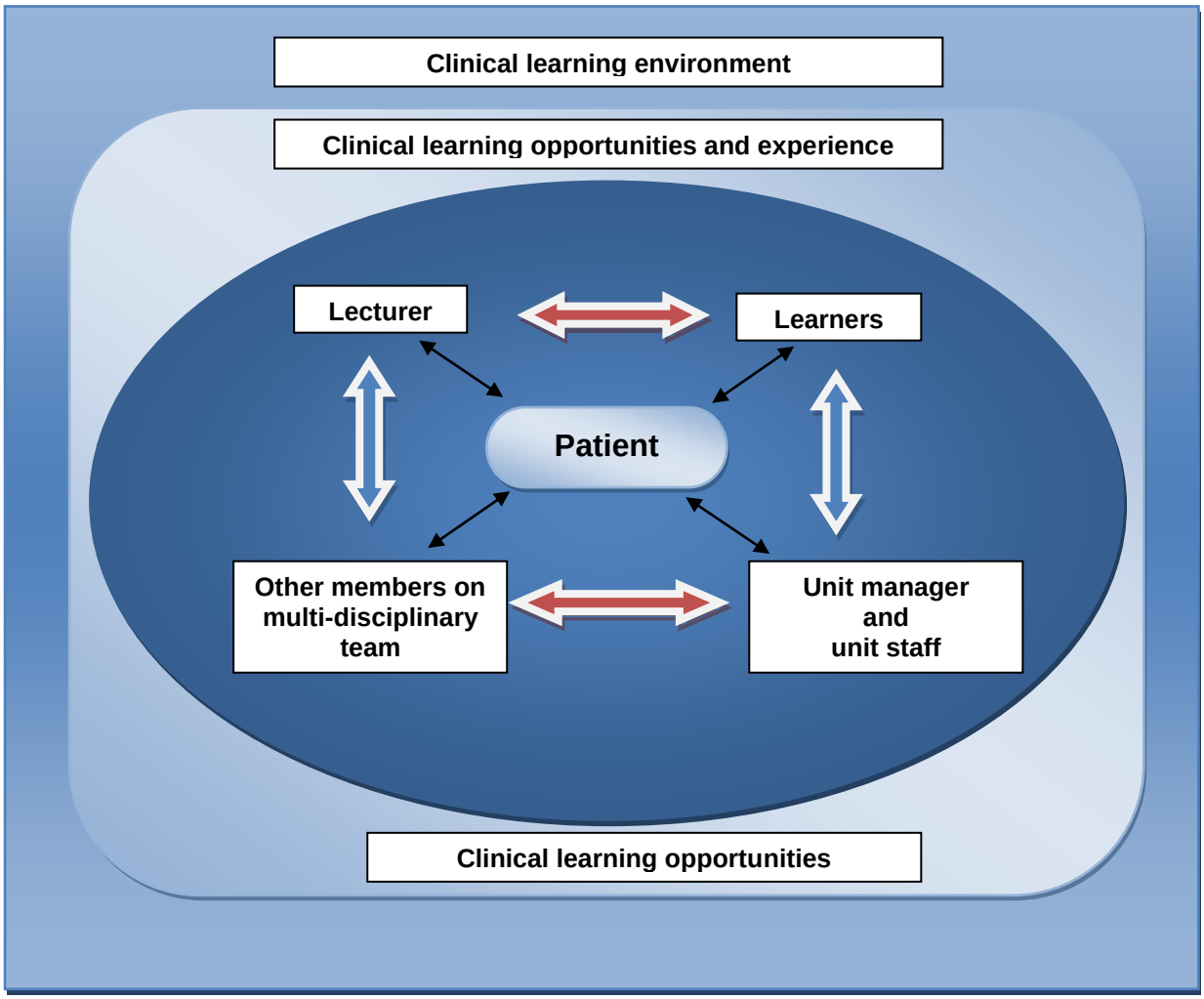


Figure 2.1 A model of the aspects and interaction between the role players in the CLE

Source: Meyer et al (2011:113)

2.2 CLINICAL LEARNING ENVIRONMENT (CLE)

The SANC (2013: section 58(1) [g]) defines the CLE as the environment where the health of individuals and groups is promoted and care is rendered including the training of student nurses. Bruce et al (2011:255) refer to the CLE as a “practice setting”, which means an environment where student nurses can safely learn and develop clinical nursing skills. There are different clinical settings where student nurse education can take place, including hospitals, both public and private, university departments of nursing, prisons, nursing homes, clinics, general practitioner (GP) surgeries and patients’/clients’ homes (Hughes & Quinn 2013:2).

According to the SANC (2013: section 58(1) [g]), the CLE is very important because no nursing education institution (NEI) can be accredited by the SANC without the accredited CLE. Students acquire skills, knowledge and clinical values in the CLE. They also correlate what they have learned in the classroom and what they practise in the CLE. In the CLE they learn from clinical encounters with patients, communities and families (Bruce et al 2011:253, 254). Nursing personnel who are responsible for teaching student nurses include clinical and community practitioners, students themselves, university lecturers, lecturer/practitioners, mentors and non-nursing personnel, such as professions allied to medicine and medical practitioners (Hughes & Quinn 2013:2). Teaching in the CLE can be formal or informal where teachable moments are used (Bruce et al 2011:256).

For learning to take place, the CLE needs to be conducive to learning. CLEs that are conducive to learning have clinical teachers who consider students' feelings and go out of their way to help student nurses who in turn look forward to coming to the CLE, and carefully planned allocation of clinical work in the ward (Ali, Banan & Seraty 2015:5). Masakona (2013:26) emphasises that for a CLE to be encouraging and beneficial to learning, student nurses should receive a thorough orientation on the first day of their clinical practice. This orientation should include the physical layout of the clinical facility; communication lines; tea and meal times; clinical duty roster; reporting channel and clinical rotation programme of student nurses that considers their clinical learning objectives in relation to their level of practice. According to Meyer et al (2011:112), challenges which constitute a CLE conducive for learning include: student nurses being involved as team members, supported and guided by clinical staff; role model observation at the CLE; feedback about their performance being received at regular intervals; learning opportunities and learning aids available, and students should feel free to ask questions.

The CLE can sometimes be unconducive to clinical learning. Unconducive CLEs have a negative impact on the training of student nurses and the nursing profession as a whole. According to Msiska et al (2014:39) there are three challenges which shows that CLE is unconducive for learning which are: impersonal approaches of clinical teaching which some nurse educators employ, unwillingness to teach which some nurses demonstrate and lack of supplies.

2.3 ROLE PLAYERS IN THE CLE

In Meyer et al's (2011:113) model, the role players in the CLE include the patient as the main role player, student nurses, unit managers and unit staff, other multidisciplinary team members, and nurse educators. The researcher, therefore, used these terms in the literature review.

2.3.1 Patients

Berman and Snyder (2012:13) describe a patient as "a person who is waiting to undergo care and medical treatment". Patients are the main role players in the CLE as they are regarded as the source of learning, including their records. Five challenges are important in a patient as a source of learning, namely ensuring a good patient relationship; the patient's attitude; becoming familiar with the patient; having a well-informed patient, and reciprocation between student nurses and patient. Student nurses should have access to patients' files for learning to take place (Hughes & Quinn 2013:361).

Elcigil and Sari (2011:69, 70) found that when students were allocated to the CLE they had access to the patients' files, which promoted learning. Patients at the CLE allowed the student nurses to provide nursing care to them thereby increasing their motivation to learn. The students gained more experience and were prepared for professional life when they were allowed to render nursing care to severely ill patients.

Student nurses sometimes encounter challenges when using patients as a source of information. In the North West province, South Africa, Du Toit (2013:57) found that students missed personal interaction with patients because of the limited time they spent with patients when allocated to theatre, which negatively affected their learning. The study done in Iran by Nasrin, Soroor and Soodabeh (2012:1-7) found that student nurses were not motivated to learn when allocated to the CLE because the clinical nurses did not respect the patients' rights. In rural nurse-managed clinics in the United States (US), however, Richards, O'Neil, Jones, Davis and Krebs (2011:27) reported that patients benefitted from being nursed by students in the CLE. The literature review shows that student nurses should have enough clinical periods and be allowed to have

access to the patients and their bed letter since they are the main source of information for clinical learning to take place.

2.3.2 Student nurses: role and attitude of students in the CLE

The role and attitude of student nurses in the clinical environment is important because it directly affects their readiness to learn. Walker, Dwyer, Broadbent, Moxham, Sander and Edwards (2014:94-103) state that confidence, critical thinking abilities, peer support, belonging, and positive role models give student nurses a professional identity. Hughes and Quinn (2013:361) stress that clinical staff must try very hard to treat student nurses with kindness and make them feel part of the clinical team. In resource-poor clinical settings in Malawi, Msiska et al (2014:39) found that a lack of clinical supplies, professional nurses who were not willing to teach students, and nurse educators who displayed an impersonal approach to the students negatively affected their clinical experience.

The reason for the presence of student nurses at clinical environments should be that of learning but they should be treated as part of the health team (Bruce et al 2011:284). Yet this is not always the case. In the Western Cape, Daniels, Linda, Bimray and Sharps (2014:1756) and in KwaZulu-Natal Sibiya and Sibiya (2014:1950) reported that students were treated as workers and with the CLE being busy it was impossible for them to practise clinical skills. In Limpopo Province, Mothiba, Lekhuleni, Maputle and Nemathanga (2012:201) found that students were “used as scapegoats” for anything done badly at the CLE. Furthermore, in Gauteng Province, South Africa, Kgafela (2013:143) reported that professional nurses at the CLE left the wards with students thus treating them as part of the work force, which exhausted the students and made it difficult for them to study. In Australia, Koch, Everett, Philips and Davidson (2014:21) found that during clinical placements students were treated badly by the clinical facilitator and professional nurses because of their “ethno-cultural background”. This implies that during clinical allocation students should be part of the health care providers and be treated as students undergoing training irrespective of their transcultural differences.

At the same time, however, students are responsible for their behaviour during their clinical practice. In the Western Cape, Klerk (2010:29) reported that students did not

respect professional nurses at the CLE in terms of letting them know about their movements, for example when they took their tea or lunch breaks. In Ghana, Awuah-Peasah, Sarfo and Asamoah (2013:24) found that student nurses came on duty late when allocated to the CLE, thus missing the learning opportunity to learn (taking and giving of reports). When students are allocated at the clinical learning environment they should have the responsibility on punctuality and reporting their activities to the clinical staff and to have working relationship with them.

Clinical teaching time is also sometimes limited because large groups of student nurses are allocated to CLEs for short periods (Eta et al 2011:28; Mampunge & Seekoe 2014:58, 66). In the Western Cape, Daniels, Linda, Bimray and Sharps (2014:1759) found that because of limited learning opportunities at the CLE students experienced competition with students from other health educational institutions. Lekalakala-Mokgele and Caka (2015:1263, 1264) found that student nurses were unable to practise clinical procedures because of limited learning opportunities. In Gauteng Province, South Africa, Kgafela (2013:132) reported that student nurses were not exposed to clinical learning because they were allocated to work night duty during their clinical exposure. Clinical periods and number of students should be considered to avoid negative impact on the clinical learning opportunities of student nurses

2.3.3 Nurse educator

Nurse educators play a very important role in the CLE because they are responsible for providing a link between theory and practice and also ensuring co-operation between NEIs and clinical learning facilities (Borrageiro 2014:20). Nurse educators have different roles to fulfil at CLEs including doing clinical accompaniment and being preceptors.

2.3.3.1 Clinical accompaniment

Clinical accompaniment is “a process structured by NEIs to facilitate support and direct assistance to student nurses by nurse educators to ensure achievement of the learning outcomes at the clinical facility” (SANC 2013c: section 58(1) [g]). Student nurses should receive support visits from nurse educators when allocated to the CLE in order to encourage them in clinical practice (D’Souza, Venkatesaperumal, Radhakrishnan &

Balachandran 2013:39). Nursing education and training institutions should have a clinical model for supporting students during clinical practice (SANC 2013a:15).

The literature review revealed different findings on clinical accompaniment. In their study in Limpopo Province, Mothiba et al (2012:201) found that students were accompanied by nurse educators during their clinical practice. In a public hospital in the Capricorn district, Limpopo Province, Mogale (2011:71) reported that although clinical accompaniment was done by nurse educators, they did not spend enough time with student nurses. In East London, South Africa, Senti and Seekoe (2014:83) found that students were accompanied by unfamiliar nurse educators who had negative attitudes towards them. In Lesotho, Makhakhe (2010:41), in KwaZulu-Natal, Masakona (2013:41) and in Limpopo Province, Sibiya and Sibiya (2014:1953) found that students were not being accompanied by nurse educators during their clinical practice. Borrageiro (2014:20) found that student nurses in Western Cape were accompanied by the clinical facilitator but their schedule was infrequent and unplanned.

In Saudi Arabia, Wafaa Gameel, Sahar Hassan and Wafaa Hassan (2015:4) reported that a clinical facilitator at the CLE helped students with their clinical work and took the students' feelings into consideration. The literature review shows that it is important for the nurse educators to be known to the students in order to have good interpersonal relationship with them and to have pre-planned clinical visits which meet the clinical needs of the student nurses.

2.3.3.2 Preceptors

A preceptor refers to a qualified nurse educator who acts as a role model and makes sure student nurses gain from their clinical allocation (Bruce et al 2011:255). In Canada, Sedgwick and Harris (2012:1-6) found the use of preceptors at CLEs helped the students to develop knowledge, skills, confidence and professional socialization. Ma, Li, Liang, Bai and Song (2014:42) maintain that for learning to occur, CLEs must have preceptors, caring nurse educators and a caring learning environment.

In some cases, preceptors were available at CLE but were not specifically trained for clinical work therefore students did not receive clinical feedback (Eta et al 2011:28; Magobe, Beukes & Muller 2010:525-531). Some CLEs did not have preceptors to assist

student nurse's consequently clinical learning and teaching became difficult or did not occur (Mothiba et al 2012:1990; Mampunge & Seekoe 2014:63). This shows that preceptors should be prepared and have responsibility over the students when allocated for clinical learning.

2.3.4 Unit manager and unit staff

The unit manager and unit staff are some of the role players at the CLE to supervise and mentor the student nurses allocated for clinical practice. When students are allocated to the CLE, professional nurses and the operational manager of the unit have a responsibility to supervise and teach the student nurses allocated for clinical practice in order to make sure they integrate into the health team (SANC 2013a:9). The personality and leadership style of the unit manager are imperative determinants of a beneficial clinical environment (Hughes & Quinn 2013:360).

2.3.4.1 Mentor

The unit manager and unit staff should be regarded as mentors to the students who are allocated to the CLE. A mentor is a colleague who is experienced and knowledgeable about the profession (Bruce et al 2011:352). A mentor should give students praise and constructive criticism, share their good and bad clinical experiences, and ensure good communication (Dale, Leland & Dale 2013:1-7). NEIs and clinical facilities should make sure that teaching and leadership in the CLE is of high quality (Emmanuel 2013:37).

In a study in the US, Jones (2010:25) found that the presence of student nurses at the CLE was not appreciated by the unit managers of certain units and this made the students feel unwanted or a burden to the clinical staff. In Gauteng Province, South Africa, Kgafela (2013:140) found that the clinical manager had a negative attitude towards the students, blamed students for things they did not do, and found it difficult to compliment students for work well done. The literature shows that the unit manager should have good interpersonal relationship with student nurses in order to promote clinical learning.

In Durban, KwaZulu-Natal, Mhlaba (2011:67) found that student nurses in the CLE were mentored by the ward staff. Regarding facilitative and obstructive challenges in the

CLE, Lekalakala-Mokgele and Caka (2015:1264) found that students were supervised and guided by doctors and clinical staff. In the Free State, however, Tshabalala (2011:38) reported that student nurses received mentorship mostly from their peers and lower categories (staff nurses). In Limpopo Province, South Africa, Mothiba et al (2012:199) found that professional nurses at the CLE were not happy to work with student nurses because student nurses delayed their duties. In East London, South Africa, Mampunge and Seekoe (2014:62) reported that students at the CLE were prevented by professional nurses from doing managerial tasks. Clinical staff should take into consideration the procedure manual which guide the students on different clinical procedures in order to avoid health hazards in the clinical

Magobe et al (2010:525-531) reported that the busy clinical schedule of clinical staff at the CLE resulted in insufficient clinical supervision and guidance of student nurses. In the Western Cape, South Africa, Daniels et al (2014:1757) found that the main priority of professional nurses in the CLE was total patient care therefore student clinical teaching was not done. In KwaZulu-Natal, South Africa, Sibiya and Sibiya (2014:1943-1958) similarly reported that clinical staff were not eager to supervise and guide students because of staff shortages at the CLE. Teachable moments for students can be formal or informal therefore clinical staffs have responsibility to ensure that students are being taught whether the ward is busy or not

Student culture also sometimes has a negative impact on student clinical practice. In Norway, Dale et al (2013:1-7) reported that clinical professional nurses and facilitators treated student nurses from diverse ethno cultural backgrounds unfairly for no reason. In Limpopo Province, South Africa, Rikhotso, Williams and De Wet (2014:1164-1170) revealed that the students who were of the same culture as the professional nurse at the CLE were mentored, which indicated ethnocentrism. In Gauteng Province, South Africa by Beukes, Nolte and Arries (2010:485, 7) reported that clinical staff used medical terms not known by the student nurses without translating their conversation with patients for the students, which made them feel unwelcome. Student nurses should be treated as human beings who deserve respect from the clinical staff regardless of their ethnic group.

Seekoe (2014:6) emphasises that the role of the mentor is to ensure that the mentee is capacitated, empowered and competent academically. Okoronkwo, Onyia-Pat, Agbo,

Okpala and Ndu (2013:63-70) state that to be effective, clinical staff should be good role models, good supervisors and good communicators; listen attentively; be honest and be motivated to teach.

In the Free State, Tshabalala (2011:40) found that the majority of professional nurses displayed a negative attitude towards student nurses. The study done in Iran by Nasrin et al (2012:1-7) found that professional nurses at the CLE did not respect patient's rights and consequently de-motivated student nurses. In a study of New Zealand nursing students' experiences of ethical issues in clinical practice, Sinclair (2013:68) found that professional nurses at the CLE were not trustworthy. In addition, clinical staff and nurse educators "bullied" student nurses (Sinclair 2013:66). The way the clinical staff interacts with patients and students nurses should be of good standard in order to promote clinical learning of student nurses.

2.3.4.2 Supervisor

Supervision is another clinical role which the unit manager and unit professional nurse should fulfil for the proper training of student nurses. Supervision is "the active process of guiding, directing and influencing the individual's performance outcome" (Meyer et al 2011:224). A good supervisor-student relationship should be welcoming, supportive, friendly, confident and enthusiastic, and students should be involved in patient care and be given opportunities for carrying out procedures (Dale et al 2013:1-7). Caka and Lekalakala-Mokgele (2013:611, 11) and Nxumalo (2011:122) found that when students were allocated to the CLE, the professional nurses were always available to guide and supervise them when doing clinical practice. In Sweden, Bos (2014:49) reported that students were welcomed and orientated to the unit by the supervisors at the CLE.

However, Tshabalala (2011:40) found that professional nurses at a CLE displayed a negative attitude to student nurses and were not willing to utilize teachable moments to teach the students. Kgafela (2013:143) reported that professional nurses at a CLE allowed students to do non nursing duties and were not prepared to teach them. These means that the professional nurses and the unit managers should display professional behaviour at the clinical learning environment this will make them to be assertive towards the students thus allowing clinical learning will take place.

2.3.5 Other members of multidisciplinary team

The role payers found at the clinical learning environment include other members of multidisciplinary team. Multidisciplinary team includes the non-nursing professionals such as dieticians, physiotherapists, doctors and chaplains. The ward manager have the role to ensure that the multidisciplinary team feel as part of the health team in relation to clinical learning so they are resourceful for student's clinical learning (Hughes & Quinn 2013:361). Student nurses should be guided by the unit manager in order to function as a coordinator of the multidisciplinary team when allocated to the clinical learning environment. They should be given an opportunity when allocated to the clinical learning environment to accompany unit manager and doctors on their rounds especially on their advanced level of training (Meyer et al 2011:95).

According to the study done Du Toit (2013:56) in South Africa, North-West Province student had positive experience when working with doctors where they reported that they were more helpful than nursing personnel. In the same line the study done by Kgafela (2013:108) in Gauteng Province, South Africa, students were receiving guidance and support from doctors and ward clerks assisted them with documents to be used on patients' file. This is not always the case as according to the study done by Mlek (2011:98) in Canada, reported that students experienced a difficulties and stressful relationship with medical team as they were not valuing the opinion of student nurses because of their inexperience and poor knowledge. Students should be treated as nurses undergoing training therefore the health care providers have responsibility to teach them during clinical exposure.

Sometimes the students' commitments to clinical learning have impact on the relationship with other multidisciplinary team. In the study done by Awuah-Peasah et al (2013:24, 25) in Ghana reported that student nurses were not interacting with medical staff to show interest in clinical learning during general ward rounds. The health care providers at the clinical learning environment helps the students to gain more clinical knowledge from the interaction with them and the students have a responsibility in such interaction.

2.3.6 The relationship between the nursing education institution and clinical learning facilities

Nursing education and training Institutions should have “collaborative meetings” with clinical facilities. Education and Training Institution should notify the clinical facilities about their needs and any changes that occur over time. High communication should be maintained between Nurse Education and training institution and clinical facilities in order to make sure that the available clinical facilities are well used. The partnership between the Nursing education institutions and clinical facilities should be maintained through communication and sharing information (SANC 2013a:105). The liaison and collaboration between educational institution and clinical facilities is needed in order to link the theoretical and practical of training (Bos 2014:51).

In their study done in Norway, Dale et al (2013:1-7) found the clinical staffs were appropriately and sufficiently notified in advance about the clinical programme/ schedule of student nurses. Because of this, good communication student were warmly welcomed in the clinical learning environment and they were addressed by their names and clinical staff knew student level of training. There was a discrepancy on the study done by Mampunge and Seekoe (2014:65) in East London, South African who revealed that communication between the nursing education institution and clinical learning environment was not up to standard because the nursing education institution did not even supply the clinical learning facilities with the clinical objectives of students. In the study done by Rikhotso, Williams and De Wet (2010:1164-1170) in Limpopo Province, South Africa reported that communication between the NEIs and CLEs was so poor that the staffs at CLEs were not aware of the travelling days and even the clinical allocation of student nurses. In the same line the study done by Padayachee (2014:48) in Kwazulu-Natal reported that during assessment and supervision students were performing badly because the professional nurses at the CLE did not have procedure manuals to guide the students due to poor communication between the NEIs and clinical facilities. These shows that communication is very important between the Nursing education institution and clinical learning facilities to inform each other about the student activities and their academic progress.

2.3.7 Theory-practice gap

The Nursing Education Institution has the role to ensure that student nurses receive good correlation of theory and practice in order to meet their learning outcomes as indicated on their programme (Bruce et al 2011:284). Theory and practice should be congruent when teaching the student nurses (SANC 2013a:38).

According to Mothiba et al (2012:201) nurse educators were doing demonstration of clinical skills in a real life clinical environment and students were able to correlate theory and practice. In contrary, the study done by Senti and Seekoe (2014:79-88) reported that student were not having confidence when performing clinical skills simulated by nurse educators. Because of their level of competency, real patients refuse when students want to perform clinical skills on them. During clinical practice student experience problem in recalling how clinical skill were demonstrated to them because nurse educator demonstrated all clinical skills at once. Clinical skills in relation to their level of training were not available at allocated unit; therefore clinical practice was difficult to take place. The findings differ from the study done in Cameroon by Eta et al (2011:28) who reported that student were not having basic knowledge of common procedure and not orientated before allocated to clinical learning environment. The literature reviews highlight that student's gain knowledge and have courage to carry out their clinical learning objectives if the demonstration of skills had carried out on real clinical environment.

According to the study by Senti and Seekoe (2014:86), the procedure manual which guides students on how to perform skills at the clinical learning environment was out-dated, old and different from the one at clinical learning environment thus causing confusion to students. This concur with the study done in Iran by Rafiee, Moattari, Nikbakht, Kojuri and Mousavinasab (2014:41, 49) who revealed that the clinical assessment tools were not reliable because they were not measuring the student achievement and progress. In the same respect the study done by Bray (2013:23) reported that students were experiencing challenges when applying theory into practice because of the examination technique taught by clinical tutor was not similar with what is done at the clinical learning environment. Furthermore the study done by Dlamini (2010:88, 89) in KwaZulu-Natal reported that the main problem which cause student to

experience difficulties in applying theory into practice was the communication between Nursing Education Institution and clinical learning environment which was poor and unavailability of the clinical tutor, mentors and preceptor in the teaching and learning model. The study done by Dale et al (2013:4) in Norway indicated that student nurses were being included in a challenging and stressful situation without considering their level of training, thus causing theory and practice gap. The discussion shows that good collaboration between nursing education institution and clinical learning environment is imperative thus ensuring that the clinical staffs and students have updated procedure manual and clinical tools.

2.3.8 Resources in the clinical learning environment

All role players at the clinical learning environment need resource in order to play their role adequately. The accredited clinical facilities should have adequate clinical resources for the student to achieve their clinical learning outcome as reflecting on their programme (SANC 2013c: section 58(1) (g)). According to the study done in Iran by D'Souza et al (2013:30), when student nurses are supported by multidimensional resources at clinical learning environment their involvement is adequate. These resources include human resources, clinical equipment, supplies, libraries and others.

Mampunge and Seekoe (2014:58-66) stated that at the clinical learning environment there was neither computer nor the library to be used by student nurses. This is always the case because in the study done by Killam and Carter (2010:1523, 8) student nurses did not have access to internet or other resources such as libraries in the clinical learning environment. Demonstration of skills by nurse educators at clinical learning environment was affected negatively by use of out dated equipment and shortage of supplies. This concur with study done in Cameroon by Eta et al (2011:28) who reported shortage of working and teaching material at clinical learning environment negatively affected clinical teaching of student nurses. Similarly, the study done by Naranjee (2012:39) reported that student nurses failed to perform procedures according to the way they have been taught because of shortage of equipment and supplies at the clinical learning environment. In New Zealand, Sinclair (2013:63) found that CLEs were "unsafe" and the health care was at risk due to lack of clinical resources. Kgafela (2013:122) reported that due to a shortage of equipment in the CLE, some students were using their own equipment in order to ensure proper patient care. These

discussion shows that the availability of clinical resources is very much important because once they are not enough the demonstration of clinical skills, clinical learning objective of student nurses will be affected negatively thus leading to clinical environment being exposed to health hazards.

2.4 CONCLUSION

This chapter discussed the literature review conducted for the study. The literature review revealed that nursing students throughout the world encounter different clinical challenges. The CLE is very important for students' clinical practice, thereby determining the quality of students being trained.

Chapter 3 covers the research design and methodology in detail.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This study investigated challenges faced by student nurses in the CLE in Limpopo Province, South Africa (RSA). The literature review covered national and international studies on the challenges facing student nurses in the CLE.

This chapter discusses the research design and methodology used in the study, including the population, sampling technique; data collection, data-collection instrument, data analysis, pre-testing, and ethical considerations.

3.2 RESEARCH DESIGN

A research design is an overall plan for conducting a research study and obtaining answers to research questions (Polit & Beck 2012:273; LoBiondo-Wood & Haber 2010:577). Grove et al (2013:692) refer to a research design as “a blueprint or plan for conducting a study that maximizes control over challenges that could interfere with the validity of the findings”. The research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal (Grove et al 2013:692). A research design focuses on the end product and all the steps in the process to achieve the outcomes anticipated (De Vos et al 2011:142).

In this study, the researcher selected a quantitative, descriptive, cross-sectional design to identify and describe challenges that student nurses encounter in the CLE in Limpopo College of Nursing that could affect their clinical learning experience, as well as to make recommendations for strategies to address these challenges.

3.2.1 Quantitative

Quantitative research explains and examines the relationships between variables in order to determine the cause and effect of their interactions (Grove et al 2013:706). Brink et al (2010:10) describe quantitative research as research "based on logical positivism and aimed at measurable aspects of people's behaviour". LoBiondo-Wood and Haber (2010:584) define quantitative research as a series of examining relationships, differentiating, and determining the causal relationship of variables.

The researcher selected a quantitative design as it was appropriate for obtaining measurable data from the respondents involved and statistical analysis of the data obtained (De Vos et al 2012:142). In addition, a quantitative design was used because it uses formal instruments and structured procedures during data collection and analysis, and emphasises objectivity (Brink et al 2010:11).

3.2.2 Descriptive design

Descriptive designs allow researchers to collect full descriptions of variables under study and utilize collected information to assess and justify present practices and conditions, or to make more plans to improve the standard of health care practices (LoBiondo-Wood & Haber 2010:584). Descriptive designs answer the research questions by describing the variables and cause-effect relationship is not established (Brink et al 2010:102). According to Grove et al (2013:692), a descriptive design is used to identify the phenomenon, in which the researcher is interested; identify variables within the phenomenon, and develop and describe operational and conceptual definitions of variables.

The researcher used a descriptive design in this study because it allows the researcher to gather information about the situation under study as it naturally happen (Grove et al 2013:215)

3.2.3 Cross-sectional study

In a cross-sectional study, the researcher obtains data from various subjects at a particular time and studies it at one point in time instead of obtaining data from the

same subjects at different times (Brink et al 2010:105). According to Grove et al (2013:220), cross-sectional studies describe the changes in the phenomenon across stages where the groups of subjects are examined in their various stages of development. LoBiondo-Wood and Haber (2010:576) state that a cross-sectional study "looks at the immediate present data at one point and is non-experimental".

The researcher chose a cross-sectional design to collect data from levels 2, 3 and 4 student nurses. A cross-sectional design enables the researcher to obtain important information about the subjects even though the same subjects are not monitored throughout the entire process and it is economical (Grove et al 2013:221; Polit & Beck 2012:186).

3.2.4 Survey

A survey collects descriptions of existing variables in detail and uses them to make plans for improving health care practices or to assess and justify the current conditions (LoBiondo-Wood & Haber 2010:587). According Brink et al (2010:208), surveys determine the characteristics of a population through data collected from the sample through the self-report. Surveys collect data from the identified population by using personal interviews or questionnaires as a data-collection technique (Grove et al 2013:711).

Survey was chosen by the researcher because it a very important source of data (Grove et al 2013:224). Furthermore it can be used in a large population (Polit and Beck (2012:265). In this study, the researcher used a self-designed questionnaire to obtain data from the respondents.

3.3 RESEARCH METHOD

Polit and Beck (2012:273) describe research methodology as steps, procedures and strategies taken to investigate the problem being studied and to analyse the collected data. According to Grove et al (2013:707), research methodology refers to the plan or the process for conducting the specific research steps of the study. The research methodology includes the population, sampling, sample, data collection and analysis, and validity and reliability.

3.3.1 Population

A research population is the entire aggregation of cases in which a researcher is interested. It is all the elements (individuals, objects, events, or substances) that meet the sample criteria for inclusion in a study (Polit & Beck 2012:273).

Grove et al (2013:44) state that a population includes all the people that meet certain criteria to be included in the study. A population is a complete set of objects or people with common characteristics in which the researcher is interested (Brink et al 2010:206).

In this study, the population consisted of levels 2, 3 and 4 student nurses who are registered for the programme regulated by Regulation 425 of 1985 (South Africa 1985), also referred to as the four-year integrated programme, at the nursing college under study , Limpopo Province, South Africa (see table 3.1).

Table 3.1: Study population

Students level	Level 2	Level 3	Level 4	Population
Thoyandou Campus	68	76	78	222
Giyani Campus	76	78	44	198
Sovenga Campus	62	74	54	190
TOTAL				**610**

A target population is the entire set of individuals or elements that meet the sampling criteria and about which the researcher would like to generalise (Polit & Beck 2012:273; LoBiondo-Wood & Haber 2010:574). The accessible population is the portion of the target population to which the researcher has reasonable access (Polit & Beck 2012:274; Grove et al 2013:686; Brink et al 2010:123). LoBiondo-Wood and Haber (2010:574) define the accessible population as a population that is easily found and meets the criteria of the population.

In this study, the accessible population were the second-, third- and fourth-year student nurses at nursing college under study who enrolled at two sub-campuses offering all level of study. The second-, third- and fourth-year students at the other sub-campus were used for pre-testing; therefore it was not included in the study.

3.3.2 Sample and sampling

A sample is a selected subset of the population which represents the population (Brink et al 2010:207). Sampling is the process of selecting a portion of the population to represent the entire population (Polit & Beck 2012:274).

Sampling is a process of choosing part of the selected population to represent the rest of the population (LoBiondo-Wood & Haber 2010:583). According to Brink et al (2010:124), sampling refers to the process of choosing the sample from the population in order to obtain information on the phenomenon under study.

Probability stratified random sampling was used to select respondents from the accessible population. Probability sampling chooses sample units using random selection methods (LoBiondo-Wood & Haber 2010:583). In stratified random sampling, the population is grouped into small groups in relation to variables important to the study, and by so doing, each population element will belong to one small group (Brink et al 2010:130).

In the study, the researcher used the students' level of study (levels 2, 3, and 4) as strata/subgroups where 50% of the respondents were randomly selected from each level.

3.3.2.1 Sampling size

The sampling size is the number of subjects who have given consent after being recruited to participate in the study (Grove et al 2013:708). According to De Vos et al (2011:224), if the population under study is big, the percentage of the sample should be relatively small and if the population is small, the sample percentage should be large. The population will be well represented if the sample is large and the researcher will be better able to make recommendations and conclusions than if the sample is small.

The researcher randomly selected 50% of the respondents in each level of study, which resulted in a sample size of 206 students, to ensure that the sample was not too small or too large (De Vos et al 2011:224). Table 3.2 presents the sample size.

Table 3.2: Sample selected for the study

Students level	Level 2	Level 3	Level 3	Population	Sample size
Giyani Campus	76	78	44	198	99 (used for pre-test)
Thoyandou Campus	68	76	78	222	111
Sovenga Campus	62	74	54	190	95
Total					206 (excluding from pre-test)

3.3.2.2 Sampling frame

A sampling frame is "a complete list of the sampling elements of the chosen population" (Brink et al 2010:124). Grove et al (2013:709) define a sampling frame as a list of names of all members of the population where membership is described by criteria of sampling. LoBiondo-Wood & Haber (2010:585) described sampling frame as the documented names of all the eligible population.

The researcher used class lists of all second-, third- and fourth-year student nurses at the nursing college under study and its three sub-campuses which offers all four study levels as a sampling frame for the study. Every second student on each list was chosen and included in the study.

3.3.2.3 Sampling criteria

According to Grove et al (2013:709), sampling criteria, also known as eligibility criteria, refer to essential characteristics of a target population for membership. To be included in the study, the respondents had to be:

- Student nurses at Limpopo College of Nursing who are registered for the four-year comprehensive nursing course regulated by R.425 of 22 February 1985, as amended (SANC 2005)
- Student nurses at Giyani, Thohoyandou and Sovenga Campuses in levels 2, 3 and 4, because of their long exposure in training.

There was no restriction in terms of age, religion, race, social status, marital status or creed.

3.3.3 Data collection

Data collection is the precise, systematic collection of data or information that is relevant to the purpose, objectives and question of the study (Grove et al 2013:523).

After obtaining permission to collect data from the Head of Thohoyandou Campus and Sovenga Campus, the researcher started data collection. Data was collected from the level 3 respondents on 12, 13, 17 and 18 May 2016 and from the level 4 respondents on 06, 07, 20 and 21June 2016 during Block. The researcher made appointments with lecturers from both campuses for the collection of data. The researcher travelled to both campuses on different occasions (dates) where a classroom was used to assemble students for data collection during the last period as requested in order to avoid interrupting other periods. The researcher informed the students of the purpose of the study, which was to identify and describe challenges encountered by student nurses that could affect their clinical learning experience in hospitals that provide clinical learning, as well as devise strategies to address these challenges and challenges. The researcher clarified the two concepts of clinical facilitator and preceptor since some students were not familiar with and did not understand the difference between the two. Class list obtained from the lecturers was used as a sampling frame and selected every second student to participate, thus ensuring a sample of 50% of the students. The selected student nurses were given consent forms and questionnaires to complete after going through them for submission the following day in order to limit any possible research bias. The lecturers assisted the researcher with the collection of completed questionnaires from the students the following day and the researcher collected the completed questionnaires from the lecturers. Before collecting the questionnaires from the lecturers, the researcher asked to see the respondents to assess whether they had been exposed to any psychological or emotional risk when participating in order to make referrals for professional intervention. No respondents were exposed to such risk. Table 3.3 indicates the number of questionnaires distributed and returned.

Table 3.3: Questionnaires distributed and returned

Name of campus	Level of study	Questionnaire issued	Questionnaire completed and returned	Across %
Thohoyandou Campus	Level 1	34	27	79
	Level 2	38	32	84
	Level 3	39	20	51
Sovenga Campus	Level 2	31	24	77
	Level 3	37	32	86
	Level 4	27	17	63
Total		**206**	**152**	**74**

Out of 206 questionnaires distributed, 152 were returned fully completed, and 54 were spoiled (not fully completed) and therefore not utilised for the study. The researcher destroyed those. The returned questionnaires were kept in a safe and secure place to which only the researcher, statistician and supervisor had access in order to ensure confidentiality. The average time spend by the respondents to complete the questionnaire was 45 minutes.

3.3.4 Data-collection instrument

The researcher used a questionnaire for data collection. A questionnaire is “a formal, written document in which respondents complete the instrument themselves in a paper-and-pencil format” (Polit & Beck 2012:105). Grove et al (2013:706) defined a questionnaire as a printed self-report to obtain information from subjects through written responses. LoBiondo-Wood and Haber (2010:275) describe a questionnaire as a paper-and-pencil instrument designed to obtain information about knowledge, attitudes, beliefs, and feelings of the subjects.

The researcher developed the questionnaire based on the literature review with the guidance of the supervisor and nursing education experts. The questionnaire was written in English, consisted of open-ended and closed questions, and contained seven (7) sections.

Section A: Biographic data
Section B: Welcome and orientation of student nurses in the CLE
Section C: Clinical accompaniment
Section D: Clinical support
Section E: Relationship between NEI and CLE
Section F: Theory and practice gap
Section G: Resources at clinical facilities

3.3.5 Validity and reliability

The quality of research is determined by its validity and reliability. In this study, the researcher adhered to the principles of validity and reliability.

Internal validity refers to the degree to which the findings of the study are a true reflection of reality rather than the result of extraneous variables (Grove et al 2013:697; De Vos et al 2011:152). During the study data was collected as planned and only fully completed questionnaires were analysed. The researcher did not tamper with the results of the study.

Polit and Beck (2012:302) maintain that a study is externally valid to the extent that the sample is representative of the broader population and the study setting. In addition, external validity is the extent to which findings can be generalised to the population beyond the sample.

Validity of the instrument refers to the measurement standard which the instrument is expected to measure (Polit & Beck 2012:336). The researcher designed the questionnaire in relation to the topic under study and observed face and content validity.

- **Face validity.** Face validity refers to the ability of the instrument to measure what it is meant to measure (Brink et al 2010:160; Polit & Beck 2012:336). LoBiondo-Wood and Haber (2010:585) add that face validity also determines the readability and clarity of the content.
- **Content validity.** Brink et al (2010:160) define content validity as the examination of the instrument in order to check if the all features of variables to be measured have been included in the instrument. The researcher ensured

content validity by conducting a literature review on the area of study and presenting the questionnaire to the supervisor for evaluation.

In this study, the research objective, theoretical framework and literature review was taken into consideration when developing the questionnaire. The researcher submitted the developed questionnaire to the supervisor and the statistician to evaluate relevance and adequacy of questions. Inputs from the colleagues, supervisor and statistician were implemented to ensure face and content validity of the instrument.

Reliability means that the instrument will give the same or nearly the same measurement when measuring the same variables under the same conditions (De Vos et al 2011:177). The reliability of a data-collection instrument is concerned with stability and consistency (Polit & Beck 2012). The stability of a questionnaire is the degree to which it produces similar results on being administered twice. If the same variable is measured under the same conditions, a reliable instrument produces identical measurement and the measuring instrument is able to yield consistent numerical results each time it is applied (Grove et al 2013:523).

The questionnaire was phrased accurately and carefully to avoid ambiguity.The statistician tested the instrument's reliability by means of the Cronbach's alpha criterion (Cronbach 1951) (see chapter 4 for full discussion

3.3.6 Pre-test or pilot study

A pre-test is a trial run to determine whether the instrument is clearly worded and free from major biases and whether it solicits the desired information (Brink et al 2010:211). According to LoBiondo-Wood and Haber (2010:525), pre-testing identifies problems in the design and sequencing of questions, and determines the instrument's reliability and validity.

The researcher pre-tested the questionnaire at Giyani Campus with a group of 198, levels 2, 3 and 4 students at Giyani Campus (see table 3.2). The main reason for pre-testing of questionnaire was to check any ambiguity or if questions were clearly understood and interpreted as the researcher meant them to be, and to eliminate any

confusing aspects that could affect data collection. The students who participated in the pre-test were not involved in the main study. The results from the pre-test indicated that some of the respondents were not familiar with and did not understand the concept “clinical facilitator” and “preceptor”.

Consequently, the researcher explained the two concepts to the respondents in the main study before data collection commenced.

3.3.7 Data analysis

Polit and Beck (2012:379) define data analysis as “the systematic organization and synthesis of research data”. Data analysis is conducted to put data in order and give meaning to the data (Grove et al 2013:691).

In this study, the data was analysed by means of descriptive and inferential statistics. Descriptive statistics put collected data in order and give a summary of numerical data obtained from populations and samples (Brink et al 2010:201). Inferential statistics are used to make inferences about the population (Polit & Beck 2012:404). Descriptive statistics were used to analyse the data collected and the results were presented in tables and graphs. The statistician analysed the data using the Statistical Package for Social Science (SPSS) software program version 21 and the results presented in tables and graphs.

3.3.8 Ethical considerations

Protecting the rights of the institutions

Pera and Van Tonder (2009:154) emphasise that it is very important to protect the rights of the institutions. Accordingly, the researcher requested and obtained permission in writing to conduct the study and attached the approved proposal and ethical clearance certificate obtained from the Higher Degrees Committee of the Department of Health Studies, University of South Africa (UNISA) (see Annexure A), to the research committee functioning under the Provincial Department of Health (see Annexures B and D) and also Limpopo College of Nursing (see Annexures C, E, F and G). In addition, the researcher ensured that no information could be linked the specific institutions.

Protecting the rights of the respondents

The respondents' rights were protected by informed consent, autonomy, justice, beneficence and non-maleficence.

- **Informed consent**

The researcher explained the purpose and objectives of the study; that participation was voluntary; that they could refuse to participate, and that they had the right to withdraw from the study at any time should they so wish (Brink et al 2010:234). The information about the study was in the information leaflet and included informed consent forms for them to sign (see Annexure H). The respondents, who wished to participate, signed informed consent forms then.

- **Autonomy**

The researcher gave the respondents information about the study so that they could make an informed decision (Mellish and Paton 2010:122). The respondents were given a choice to participate in the study or not without any external control. The researcher informed the respondents that participation was voluntary and that they had the right to withdraw from the study at any time should they so wish. It was acknowledged that the researcher was a lecturer at the college and that the respondents might feel obliged to participate due to the "power-relationship", therefore they were informed that, should they feel uncomfortable about providing information, they could withdraw from the study at any time without any negative consequences.

- **Anonymity**

Brink et al (2010:234) define anonymity as the action of the researcher of maintaining the subjects' identity secluded about their involvement in the study.

In order to ensure anonymity of the respondents and institutions, the researcher did not request the respondents' identification and even the name of the institutions on the questionnaires thus making it difficult to link the collected data to any of the respondents or particular institution.

- **Confidentiality and anonymity**

The researcher treated the respondents with respect and dignity. The respondents were assured of confidentiality and anonymity (Brink et al 2010:235; De Vos et al 2011:117). The researcher explained that the information given was confidential, no names would be mentioned nor could any information be linked to any particular respondent (see Annexure H).

- **Non-maleficence**

Mellish and Paton (2010:122) emphasise the principle of non-maleficence requires that the researcher does not harm respondents voluntarily due to carelessness or knowledge deficit. The researcher behaved professionally when explaining the purpose and nature of the study to avoid causing any psychological, emotional, and physical or social harm to the respondents (Brink et al 2012:236).

- **Beneficence**

Beneficence means avoiding harm and doing good to the respondents (Mellish & Paton 2010:122). The researcher upheld beneficence by discussing the benefits of the study with the respondents and ensuring that the benefits of the study are maximized and risk minimised. During the study no respondents was exposed to psychological or emotional risk therefore no referrals were made for professional intervention (Brink et al 2012:236).

- **Justice**

Justice refers to equal treatment, avoiding unfavourable treatment based on prejudice and taking advantage of the respondents (Mellish & Paton 2010:122).

The researcher used random sampling to select the respondents and they all received equal treatment. The respondents' personal information and the institution where the research was conducted were not linked to the data collected because no names of respondents or institutions were provided. The data collected was kept confidential and securely locked and stored.

- **Scientific integrity of the researcher**

According to Pera and Van Tonder (2009:157), the researcher's scientific integrity should be unquestionable and indisputable. During the study, the researcher avoided unprofessional behaviour such as forging and fraudulent altering of data, including plagiarism, and altering of the design and methods.

3.4 CONCLUSION

This chapter discussed the research design and methodology including the population, sample, data collection and analysis, and ethical considerations.

Chapter 4 describes the data analysis and interpretation, and results.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION, AND FINDINGS

4.1 INTRODUCTION

Chapter 3 discussed the research design and methodology of the study. This chapter presents the data analysis and interpretation, and findings on the challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College.

4.2 DATA MANAGEMENT AND ANALYSIS

The researcher collected data from level 3 respondents on 12, 13, 17 and 18 May 2016 and level 4 respondents on 06, 07, 20 and 21June 2016 during block. Data analysis is conducted in order to organise and give meaning to the data (Grove et al 2013:691). Descriptive statistics put collected data in order and give a summary of numerical data obtained from populations and samples (Brink et al 2010:201).

The unprocessed data were coded and entered into a Microsoft (MS) Excel (Windows 2010) spreadsheet, which a statistician analysed using the Statistical Package for Social Sciences (SPSS) software program. Frequencies and variations for each variable were calculated quantitatively. Descriptive statistics were used and the results presented in tables and graphs.

4.3 RESEARCH RESULTS

4.3.1 Scale reliability

Cronbach's alpha criterion (Cronbach 1951) was used to examine the internal consistency of the items. Technically, the scale reliability test was undertaken to statistically determine the degree to which the questionnaire items measured a single one-dimensional latent construct. Cronbach's alpha coefficient was statistically measured to assess the extent to which if the same set of questions were to be asked

to the same respondents several times under similar conditions, identical responses could be obtained. Table 4.1 presents the disaggregated scale and the overall scale reliability results on the six sections of the questionnaire. The six sections were welcome and orientation of student nurses in the CLE; clinical accompaniment, clinical support, relationship between nursing education institution and CLE; theory and practice correlation, and clinical resources.

Table 4.1 Scale reliability of questionnaire items

Section	Items	Number of Items	Cronbach's alpha (α) value
Welcome and orientation of student nurses in the CLE	B01. I was orientated on clinical skills related to my level of practice B01.1 Skills orientation was done at campus B01.2 Skills orientation was done at a clinical area B02. During clinical skill orientation, all skills were demonstrated at once B03. After skills orientation, I was given time to practise skills before being allocated to CLE B04. When at CLE, I was orientated on wards B04.1. When allocated at CLE, I was orientated on communication lines/reporting channels B04.2. When allocated at CLE, I was orientated on tea and lunch time B04.3. When at CLE, I was orientated on duty roster B04.4. The ratio of nurse educators and student nurses in the CLE promotes patient safety B05.0 The period I was allocated in different wards was enough to promote learning in relation to my level of training B06. During placement in the CLE, I was assigned duties according to my level of training B07. I experienced competition from student nurses who come from other nursing education institutions B08. At the clinical facility I was treated as a nurse undergoing training B09. I was treated as a worker at the CLE B10. I was used as a scapegoat for anything bad done in the CLE	16	0.618
Clinical accompaniment	C01. I received clinical accompaniment from clinical facilitator C01.1. I received clinical accompaniment from nurse educator C02. I was given the clinical schedule about clinical accompaniment by nurse educator/clinical facilitator C03. When allocated to CLE, I received support visits from nurse educator/clinical facilitator C04. I received clinical accompaniment when allocated to the clinical facility C05. Nurse educator/clinical facilitator spent enough time with me during clinical accompaniment C06. I knew the nurse educator who came for clinical accompaniment C07. The nurse educator had a good attitude towards me during clinical accompaniment C08. I was bullied by the nurse educator/facilitator during clinical accompaniment C09. I received constructive feedback from the nurse educator/clinical facilitator during accompaniment	11	0.722

Section	Items		Number of Items	Cronbach's alpha (α) value
	C10.	Student-nurses ratio in clinical learning environment promoted learning		
Clinical support	D01.	I was treated as part of health team by clinical staff	26	0.836
	D02.	When in the CLE, I was supported by preceptor		
	D02.1.	When allocated in the CLE, I was supported by clinical facilitator		
	D03.	Registered nurses were able to find teachable moments and teach me		
	D04.	I was mentored by registered professional nurses in the clinical environment		
	D04.1.	I was mentored by peers at the clinical environment		
	D04.2.	I was mentored by lower category staff at the clinical environment		
	D05.	I had a good relationship with the clinical staff		
	D06.	Clinic staff had a good attitude towards me		
	D07.	When at the CLE, I felt free to ask questions		
	D08.	I had access to patients' files		
	D09.	I was guided on the use of patients' files as a source of learning information		
	D10.	I was allowed to render patient care to ill patients under supervision		
	D11.	Because of my culture, I was discriminated against during clinical practice		
	D12.	Medical terms were explained to me by clinical staff		
	D13.	I was respected as a student nurse by clinical staff		
	D13.1.	I was allowed to go for clinical assessment by ward staff		
	D14.	I was bullied by the clinical staff		
	D15.	Professional nurses were trustworthy		
	D16.	The leadership style of the operational manager was democratic		
	D17.	Operational manager introduced me to the multidisciplinary team		
	D18.	Multidisciplinary team was involved in my clinical learning		
	D19.	I was given a chance to accompany doctors during ward rounds		
	D20.	My opinion on patient care was valued by doctors during ward rounds		
	D21.	The operational manager ensured that I was taught during allocation		
	D22.	The operational manager knew my learning objectives		
Relationship between NEI and CLE	E01.	The clinical staff were aware of my allocation to the facility in advance	8	0.825
	E02.	I was warmly welcomed by clinical staff		
	E03.	Clinical staff were happy about my presence in the clinical environment		
	E04.	Clinical staff addressed me by my name		
	E05.	Clinical staff knew my level of training		

Section	Items	Number of Items	Cronbach's alpha (α) value
	E06. Clinical staff knew my clinical learning objectives E07. Clinical staff new my travelling day in advance E08. When I arrived in the clinical facility, off-duties were written before I arrived		
Theory and practices correlation	F01. What I was taught in class is similar to what I practised at clinical environment F02. I was exposed to a combination of experienced staff and newly qualified professional nurses F03. In CLE, there is a relationship between services rendered and teaching and learning of students F04. I had confidence when practising in the clinical environment F05. Clinical skills in relation to my level of training were available at the clinical facility F06. Procedure manuals were available in CLE F07. Clinical staff used procedure manual to guide me as student nurse F08. Procedure manual was in line with what is done in clinical environment F09. Clinical learning objectives were available at clinical environment F10. I was delegated clinical duties in relation to my clinical learning objectives F11. I was allocated to work night duty where learning opportunities were limited	11	0.778
Clinical resources	G01. Human resources are sufficient G01.1. Clinical equipment is sufficient G01.2. Clinical supplies (e.g., gloves, syringes, wound dressings, etc.) are sufficient G02. I used my own equipment to ensure proper patient care G03. The CLE was well equipped with up-to-date technology G04. There was a library at the CLE G05. I had access to the library at the CLE G06. There was a computer in the CLE G07. I had access to use a computer in the CLE	9	0.695
Overall scale reliability		**81**	**0.921**

The Cronbach's alpha coefficient value (α=0.921) for the final 81 items was above the minimum acceptable (α=0.700) scale reliability score. The results reveal that the items used measured a single unidimensional latent construct.

4.3.2 Statistical validity

The exploratory factor analysis (EFA) data reduction technique was used to assess the statistical validity of the questionnaire items. In concurrence with the assessment of sampling adequacy, exploratory factor analysis was performed to measure the underlying structure, patterns and hidden dimensions within the data set. Correspondingly, EFA was conducted to focus on a set of challenges that accounted for most of the observed variance in the data set with regard to the challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College. In the analysis, the sampling adequacy of the questions was measured based on the Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) criterion. Table 4.2 presents the aggregated statistical validity results on challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College.

Table 4.2 Statistical validity of disaggregated dimensions and overall Keiser-Meyer-Olkin (KMO) - Measure of Sampling Adequacy (MSA) criterion

Section	Items	No. of Items	KMO-MSA value
Welcome and orientation of student nurses in the CLE	B01. I was orientated on clinical skills related to my level of practice B01.1. Skills orientation was done at campus B01.2. Skills orientation was done at a clinical area B02. During clinical skill orientation, all skills were demonstrated at once B03. After skills orientation, I was given time to practise skills before being allocated to clinical learning environment B04. When at CLE, I was orientated on wards B04.1. When allocated at the CLE, I was orientated on communication lines/reporting channels B04.2. When allocated at CLE, I was orientated on tea and lunch time B04.3. When at the CLE, I was orientated on duty roster B04.4. The ratio of nurse educators and student nurses in the CLE promotes patient safety B05. The period I was allocated in different wards was enough to promote learning in relation to my level of training B06. During placement in the CLE, I was assigned duties according to my level of training B07. I experienced competition from student nurses who come from other nursing education institutions B08. At the clinical facility I was treated as a nurse undergoing training B09. I was treated as a worker at the CLE B10. I was used as a scapegoat for anything bad done in the CLE	16	0.681
Clinical accompaniment	C01. I received clinical accompaniment from clinical facilitator C01.1. I received clinical accompaniment from nurse educator C02. I was given the clinical schedule about clinical accompaniment by nurse educator/clinical facilitator C03. When allocated to the CLE, I received support visits from nurse educator/clinical facilitator C04. I received clinical accompaniment when allocated to the clinical facility C05. Nurse educator/clinical facilitator spent enough time with me during clinical accompaniment C06. I knew the nurse educator who came for clinical accompaniment C07. The nurse educator had a good attitude towards me during clinical accompaniment C08. I was bullied by nurse educator/facilitator during clinical accompaniment	11	0.753

Section	Items	No. of Items	KMO-MSA value
	C09. I received constructive feedback from nurse educator/clinical facilitator during accompaniment C10. Student-nurses ratio in the CLE promoted learning		
Clinical support	D01. I was treated as part of health team by clinical staff D02. When in the CLE, I was supported by preceptor D02.1. When allocated in the CLE, I was supported by clinical facilitator D03. Registered nurses were able to find teachable moments and teach me D04. I was mentored by registered professional nurses at the CLE D04.1. I was mentored by peers at the clinical environment D04.2. I was mentored by lower category staff at the clinical environment D05. I had a good relationship with the clinical staff D06. Clinical staff had a good attitude towards me D07. When at the CLE, I felt free to ask questions D08. I had access to patients' files D09. I was guided on the use of patients' file as a source of learning information D10. I was allowed to render patient care to ill patients under supervision D11. Because of my culture, I was discriminated against during clinical practice D12. Medical terms were explained to me by clinical staff D13. I was respected as student nurse by clinical staff D13.1. I was allowed to go for clinical assessment by ward staff D14. I was bullied by the clinical staff D15. Professional nurses were trustworthy D16. The leadership style of the operational manager was democratic D17. The operational manager introduced me to the multidisciplinary team D18. Multidisciplinary team was involved in my clinical learning D19. I was given a chance to accompany doctors during ward rounds D20. My opinion on patient care was valued by doctors during ward rounds D21. The operational manager ensured that I was taught during allocation D22. The operational manager knew my learning objectives	26	0.831
Relationship between NEI and CLE	E01. The clinical staff were aware of my allocation to the facility in advance E02. I was warmly welcomed by clinical staff E03. Clinical staff were happy about my presence in the clinical environment E04. Clinical staff addressed me by my name	8	0.822

Section	Items	No. of Items	KMO-MSA value
	E05. Clinical staff knew my level of training E06. Clinical staff knew my clinical learning objectives E07. Clinical staff new my travelling day in advance E08. When I arrived in the clinical facility, off-duties were written before I arrive		
Theory and practice correlation	F01. What I was taught in class is similar to what I practised at the clinical environment F02. I was exposed to a combination of experienced staff and newly qualified professional nurses F03. In the CLE, there is a relationship between services rendered and teaching and learning of students F04. I had confidence when practising in the clinical environment F05. Clinical skills in relation to my level of training were available at the clinical facility F06. Procedure manual were available in clinical learning environment F07. Clinical staff used procedure manual to guide me as student nurse F08. Procedure manual was in line with what is done in clinical environment F09. Clinical learning objectives were available at clinical environment F10. I was delegated clinical duties in relation to my clinical learning objectives F11. I was allocated to work night duty where learning opportunities are limited	11	0.779
Clinical resources	G01. Human resources are sufficient G01.1. Clinical equipment is sufficient G01.2. Clinical supplies (e.g., gloves, syringes, wound dressing, etc.) are sufficient G02. I used my own equipment to ensure proper patient care G03. The CLE was well equipped with up-to-date technology G04. There was a library at CLE G05. I had access to the library at the CLE. G06. There was a computer in the CLE G07. I had access to use a computer in the CLE.	9	0.647
Overall KMO-MSA value		**81**	**0.690**

The Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) criterion was applied to determine the suitability of sampling adequacy. Given the statistically acceptable minimum KMO-MSA value of 0.600, the computed overall KMO-MSA value (= 0.690) for the 81 questionnaire items assessing challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College confirms adequacy of the sample of items explored under all the given dimensions. Similarly, the KMO-MSA values for the disaggregated dimensions (welcome and orientation of student nurses in clinical learning environment; clinical accompaniment; clinical support; relationship between NEI and CLE; theory and practice integration, and resources at clinical facilities) also exceeded the minimum acceptable 0.60 score, indicating the presence of sampling adequacy. Table 4.3 presents the results on statistical validity of the questionnaire's distinct overall dimensions.

Table 4.3 Statistical validity of the questionnaire's items per dimension

Section	Number of items	Measure		
		Determinant	Bartlett's Test of Sphericity	Keiser-Meyer-Olkin Test of Sampling Adequacy (KMO-MSA)
Welcome and orientation of student nurses in CLE	16	0.042	χ^2=460.402 p < 0.05	0.681
Clinical accompaniment	11	0.083	χ^2=363.888 p < 0.05	0.753
Clinical support	26	0.000	χ^2=1259.953 p < 0.05	0.831
Relationship between NEI and CLE	8	0.068	χ^2=396.086 p < 0.05	0.822
Theory and practice integration	11	0.055	χ^2=425.593 p < 0.05	0.779
Resources at clinical facilities	9	0.042	χ^2=464.840 p < 0.05	0.647

The determinants of the correlation matrices for all sections approximately equalled zero, indicating that the matrices were singular in nature; hence the matrices could not be explained by linear combinations. To provide more complex measures for evaluating the strength of the relationships and suggesting factorability of the items, the Bartlett's Test of Sphericity and Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy

(MSA) were computed. The null hypothesis of the Bartlett's test at 5 percent significance level stated that the observed correlation matrix is equal to the identity matrix, suggesting that the observed matrix was not factorable. The computed results on the Bartlett's test were statistically significant, with p-values for all six sections being lower than 5 percent significance level. The null hypothesis was therefore rejected, indicating that the observed correlation matrices were statistically different from singular matrices, and confirming the existence of linear combinations. Thus, the Bartlett's test results revealed validity and suitability of the responses collected by the questionnaire. The computed KMO-MSA values above 0.600 for all six sections therefore indicated the presence of sampling adequacy.

4.3.3 Frequency statistics

4.3.3.1 Respondents' demographic profiles

This section presents the results of frequencies of the respondents' demographic profiles to assess challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College. Of the total n=206 questionnaires distributed, 152 were fully completed, yielding an effective 73.7% response rate.

Table 4.4 Respondents' demographic profile

	Frequency (n)	Proportion (%)
Gender		
Male	37	24
Female	115	76
Culture		
Shangaan	21	14
Sotho	83	55
Venda	17	11
Other	31	20
Level of training		
Level 2	51	34
Level 3	64	42
Level 4	37	24
Year in which training started		
2011	46	30
2012	53	35
2013	40	26
2014	11	7
2015	2	2

The frequency statistics on the respondents' demographic profiles indicate that of the respondents, 76% (n=115) were females and 24% (n=37) were males. With regard to the respondents' culture, 55% (n=83) were Sotho; 20% (n=31) were of other cultures; 14% (n=21) were Shangaan, and 11% (n=17) were Venda. In terms of the respondents' level of training, 42% (n=64) were at level 3; 34% (n=51) were at level 2, and 24% (n=37) were at level 4. Of the respondents, 35% (n=53) had started training in 2012; 30% (n=46) had started in 2011; 26% (n=40) had started in 2013; 7% (n=11) had started in 2014, and only 2% (n=2) had started in 2015.

4.3.4 Descriptive statistics

This section provides and discusses descriptive statistics on the respondents' responses regarding the challenges that they encountered in the CLE that affected their learning experiences in Limpopo Nursing College. The questions under each section were answered on a 5-point Likert scale: strongly disagree (SD=1), disagree (D=2), neutral (N=3), agree (A=4) and strongly agree (SA=5). Table 4.5 to 4.10 present the arithmetic mean statistics for the questions.

- **Welcome and orientation in the CLE**

Table 4.5 Respondents' welcome and orientation in the CLE

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
I was orientated on clinical skills related to my level of practice	1	5	4.33	.065	.804
Skills orientation was done at campus	1	5	4.16	.088	1.086
Skills orientation was done at a clinical area	1	5	3.70	.087	1.074
During clinical skill orientation, all skills were demonstrated at once	1	5	3.22	.114	1.401
After skills orientation, I was given time to practise skills before being allocated to CLE	1	5	3.54	.113	1.390
When allocated at CLE I was orientated on ward/unit surrounding	1	5	4.22	.090	1.109
When allocated at CLE I was orientated on communication lines/reporting channels	1	5	3.36	.113	1.393
When allocated at CLE I was orientated on tea and lunch time	1	5	4.25	.077	.944
When allocated at CLE I was orientated on duty roster	1	5	4.00	.090	1.104
The ratio of nurse educators and student nurses in the learning environment promoted patient safety	1	5	3.59	.105	1.299
The period I was allocated in different wards was enough to promote learning in relation to my level of training	1	5	3.45	.115	1.413
During placement in the CLE, I was assigned duties according to my level of training	1	5	3.32	.114	1.408
I experienced competition from student nurses who came from other NEIs	1	5	3.51	.115	1.419
At the clinical facility I was treated as a nurse who is undergoing training	1	5	3.07	.117	1.441
I was treated as a worker at the CLE	1	5	3.59	.105	1.289
I was used as a scapegoat for anything bad done in the CLE	1	5	3.51	.122	1.505
Valid N (list-wise)	152				

The descriptive statistics results in Table 4.5 reveal that the minimum (min=1) and maximum (max=5) statistics indicate the scales within which responses were provided to the questionnaire items. Based on the computed approximate mean statistics, respondents (n=152) surveyed generally agreed (mean ≈ 4) that they were orientated on clinical skills related to their levels of practices, duty rosters, tea and lunch times. The respondents also generally agreed that skills orientation was done at campuses and clinical areas, where they were treated as workers and used as scapegoats for anything bad done in the CLE.

- **Clinical accompaniment**

Table 4.6 Respondents' clinical accompaniment

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
I received clinical accompaniment from clinical facilitator	1	5	2.84	.124	1.527
I received clinical accompaniment from nurse educator	1	5	3.72	.105	1.294
I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator	1	5	2.76	.115	1.419
When allocated to the CLE, I received support visits from nurse educators/clinical facilitator	1	5	3.83	.088	1.084
I received clinical accompaniment when allocated to the clinical facility	1	5	3.54	.093	1.144
Nurse educators/clinical facilitator spent enough time with me during clinical accompaniment	1	5	2.59	.099	1.215
I knew the nurse educator who came for clinical accompaniment	1	5	4.16	.087	1.070
The nurse educator had a good attitude towards me during clinical accompaniment	1	5	3.85	.094	1.161
I was bullied by the nurse educators/clinical facilitator during clinical accompaniment	1	5	1.98	.095	1.176
I received constructive feedback from nurse educator/clinical facilitator during accompaniment	1	5	3.86	.081	.997
The ratio of student nurses in the CLE promoted learning	1	5	3.34	.107	1.318
Valid N (list-wise)	152				

The arithmetic mean statistics in table 4.6 reveal that the majority of the respondents generally remained neutral (neither agreed nor disagreed – mean ≈ 3) on whether or not they received clinical accompaniment from clinical facilitators and nurse educators. The respondents further generally neither agreed nor disagreed that nurse educators or clinical facilitators spent enough time with them during clinical accompaniment; nurse educators had good attitudes towards them during clinical accompaniment, and that they were bullied by nurse educators or clinical facilitators during clinical accompaniment. The respondents also generally remained neutral on whether or not they received constructive feedback from nurse educators or clinical facilitators during accompaniment as well as whether or not the ratios of students to nurses in the CLE promoted learning.

- **Clinical support**

Table 4.7 Respondents' clinical support

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
I was treated as part of the health team by clinical staff	1	5	3.53	.097	1.190
When allocated in the CLE, I was supported by preceptor	1	5	2.72	.107	1.319
When allocated in the CLE, I was supported by clinical facilitator	1	5	3.20	.108	1.329
Registered nurses at the CLE were able to identify teachable moments and teach me	1	5	3.45	.103	1.275
I was mentored by registered professional nurses	1	5	3.97	.092	1.130
I was mentored by peers at the clinical environment	1	5	3.63	.093	1.144
I was mentored by lower group staff at clinical environment	1	5	3.74	.101	1.243
I had a good relationship with the clinical staff	1	5	4.05	.081	1.002
Clinical staff had good attitudes towards me	1	5	3.38	.098	1.206
I felt free to ask questions	1	5	3.66	.088	1.080
I had access to patients' files	1	5	4.67	.046	.561

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
I was guided on how to use patients' files as a source of information for learning	1	5	4.11	.095	1.171
I was allowed to render patient care under supervision	1	5	3.72	.102	1.263
Due to my culture, I was discriminated against in clinical practice	1	5	2.25	.123	1.519
Medical terms were explained to me by clinical staff	1	5	3.63	.096	1.184
I was respected as a student nurse by clinical staff	1	5	3.12	.101	1.250
I was allowed to go for clinical assessment by ward staff when my assessor was around	1	5	4.38	.081	1.003
I was bullied by the clinical staff	1	5	2.41	.105	1.299
Professional nurses were trustworthy	1	5	3.60	.085	1.044
Leadership style of operational manager was democratic	1	5	3.18	.106	1.303
Operation manager introduced me to multidisciplinary team	1	5	2.16	.104	1.287
Multidisciplinary team was involved in my clinical learning	1	5	3.20	.110	1.352
I had chances to accompany doctors during ward rounds	1	5	3.61	.100	1.235
My opinion with regard to patient care was valued by doctors during ward rounds	1	5	2.49	.097	1.190
The operational manager ensured that I was taught during clinical allocation	1	5	2.85	.106	1.311
The operational manager knew my learning objectives	1	5	3.47	.105	1.292
Valid N (list-wise)	152				

Based on the arithmetic mean statistics in Table 4.7, the majority of the respondents generally agreed (mean ≈ 4) that they had good relationships with clinical staff; had access to patients' files, and were guided on how to use patients' files as a source of information for learning. The respondents further generally agreed that that they were allowed to go for clinical assessments by ward staff when their assessors were around; they were mentored by both lower category staff and registered professional nurses at the clinical environments. The respondents also generally indicated that they felt free to ask questions, and were allowed to render patient care to very ill patients under supervision.

- **Relationship between NEI and CLE**

Table 4.8 Respondents' relationship between NEI and CLE

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
The clinical staff were aware of my allocation to the clinical facility in advance	1	5	3.84	.092	1.128
I was warmly welcomed by clinical staff	1	5	3.63	.083	1.027
Clinical staff were happy about my presence in the clinical environment	1	5	3.66	.093	1.151
Clinical staff addressed me by my name	1	5	3.06	.112	1.382
Clinical staff knew my level of training	1	5	3.91	.082	1.012
Clinical staff knew my clinical learning objectives	1	5	3.45	.097	1.195
Clinical staff knew my travelling day in advance	1	5	3.41	.112	1.378
When I arrived in the clinical facility the off-duties were written before I arrived	1	5	2.74	.116	1.432
Valid N (list-wise)	152				

The computed mean statistics in table 4.8 reveal that the majority of the respondents generally agreed (mean ≈ 4) that the clinical staffs were aware of their allocations to the clinical facilities in advance. The respondents further indicated that they were warmly welcomed by clinical staff, and the respective clinical staffs were happy about their presence in the clinical environment. The respondents further generally agreed that clinical staff knew their levels of training. Nonetheless, the respondents generally neither agreed nor disagreed (mean ≈ 3) that clinical staff addressed them by their names, and knew their clinical learning objectives and travelling days in advance.

- **Theory and practice integration**

Table 4.9 Respondents' theory and practice integration

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
What I was taught in class is similar to what I practised at clinical environment	1	5	3.61	.105	1.298
I was exposed to a combination of experienced staff and newly qualified professional nurses	1	5	4.25	.067	.824
In the CLE, there is a relationship between services rendered and teaching and learning of students	1	5	3.65	.087	1.069
I had confidence when practising in the clinical environment	1	5	3.91	.085	1.051
Clinical skills in relation to my level of training were available at the clinical facility	2	5	4.01	.071	.876
Procedure manuals were available in the CLE	1	5	3.29	.116	1.426
Clinical staff used procedure manuals to guide me as student nurse	1	5	2.37	.107	1.316
Procedure manual was in line with what is done in clinical environment	1	5	2.90	.113	1.399
Clinical learning objectives were available at clinical environment	1	5	3.73	.085	1.042
I was delegated clinical duties in relation to my clinical learning objectives	1	5	2.95	.117	1.444
I was allocated to work night duty where learning opportunities are limited	1	5	2.48	.122	1.500
Valid N (list-wise)	152				

Based on the mean statistics in table 4.9, the majority of the respondents generally agreed (mean ≈ 4) that what they were taught in class was similar to what they practised at the clinical environments. The respondents also generally agreed that they were exposed to combinations of experienced staff and newly qualified professional nurses. In respect of the CLE, the respondents generally agreed that there was a relationship between services rendered and teaching and learning of students, which led them to have confidence when practising in clinical environments with regard to their level of training in clinical skills.

- **Resources at clinical facilities**

Table 4.10 Respondents' resources at clinical facilities

Items	Mini-mum	Maxi-mum	Mean		Std Devia-tion
			Statis-tics	Std error	
Human resources were sufficient	1	5	3.21	.103	1.274
Clinical equipment was sufficient	1	5	2.89	.102	1.258
Clinical supplies (e.g., gloves, syringes, wound dressing, etc.) were sufficient	1	5	3.13	.111	1.365
I used my own equipment to ensure proper patient care	1	5	2.29	.089	1.102
The CLE was well equipped with up-to-date technology	1	5	2.64	.096	1.187
There was a library at the CLE	1	5	1.97	.094	1.162
I had access to the library at the CLE	1	5	1.79	.086	1.059
There was a computer in the CLE	1	5	2.82	.125	1.546
I had access to the library at the CLE	1	5	1.61	.083	1.023
Valid N (list-wise)	152				

The approximate mean statistics in table 4.10 indicate that the majority of the respondents generally disagreed (mean ≈ 4) that they used their own equipment to ensure proper patient care. Moreover, the majority generally disagreed that there was a library at the CLE; hence they had no access to the library at the CLE. The respondents generally remained neutral (neither agreed/disagreed) that human resources, clinical equipment and clinical supplies, such as gloves and syringes, were sufficient at facilities.

4.3.4.1 Exploratory factor analysis (EFA)

Following measurement of scale reliability and statistical validity, exploratory factor analysis (EFA) was conducted to retain items with high loadings in assessing challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College. The latent root criterion was applied to examine how much the variance was evenly distributed across extracted challenges prior to the extraction of challenges based on alpha factoring Varimax rotation. The results on rotated factor analysis are presented in table 4.11 to table 4.16.

- **Welcome and orientation of student nurses in the CLE**

Table 4.11 Respondents' welcome and orientation in the CLE

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.279	20.491	20.491	2.670	16.689	16.689	1.964	12.275	12.275
2	1.985	12.407	32.898	1.467	9.170	25.859	1.408	8.799	21.074
3	1.413	8.834	41.732	.757	4.730	30.589	1.331	8.320	29.393
4	1.295	8.095	49.827	.662	4.139	34.728	.723	4.521	33.914
5	1.158	7.236	57.063	.549	3.430	38.157	.679	4.243	38.157
6	.943	5.892	62.955						
7	.866	5.413	68.368						
8	.825	5.158	73.526						
9	.757	4.734	78.260						
10	.687	4.293	82.553						
11	.594	3.713	86.266						
12	.562	3.510	89.776						
13	.498	3.115	92.891						
14	.433	2.708	95.600						
15	.419	2.617	98.217						
16	.285	1.783	100.000						
Extraction Method: Alpha Factoring									

The computed results from the final iteration indicated the presence of five initial Eigen values greater than 1; hence five challenges were extracted from the selected items in the dataset for "welcome and orientation of student nurses in the CLE". Based on the **rotated sums of squared loadings**, approximately 38% of total variance in the entire dataset was accounted for by five factors. Of the total 38% variance, factor 1 individually accounted for 12.275%; factor 2 accounted for 8.799%; factor 3 accounted for 8.320%; factor 4 accounted for 4.521%, and factor 5 accounted for the remaining 4.243% variance in the retained dataset. Given that more than one factor was extracted in the solution of the final iteration, the pattern of factor loadings was examined to detect if there were retained items that demonstrated complex structure in line with the statistical condition that variables with high loadings or correlations ($r \geq 0.5$) on more than one

factor should be removed from the analysis. Similarly, items that loaded upon only one factor via the Varimax rotation with Keiser Normalization were retained.

- **Clinical accompaniment**

Table 4.12 Respondents' clinical accompaniment

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.292	29.924	29.924	2.732	24.841	24.841	1.788	16.256	16.256
2	1.607	14.611	44.534	1.055	9.593	34.434	1.372	12.473	28.730
3	1.262	11.475	56.010	.668	6.071	40.505	1.295	11.775	40.505
4	.918	8.343	64.352						
5	.834	7.577	71.930						
6	.654	5.946	77.876						
7	.635	5.774	83.651						
8	.530	4.822	88.473						
9	.478	4.349	92.822						
10	.426	3.872	96.693						
11	.364	3.307	100.000						
Extraction Method: Alpha Factoring									

Based on Table 4.12, the results from the final iteration reveal the presence of three initial Eigen values greater than 1, hence three challenges were extracted from the selected items in the dataset for the dimension "clinical accompaniment". As shown by the **rotated sums of squared loadings**; approximately 41% of total variance in the entire dataset was accounted for by three factors. From the approximate total 41% variance, factor 1 individually accounted for 16.256%, factor 2 accounted for 12.473%, while factor 3 accounted for the remaining 11.775% variance in the retained dataset. Given that more than one factor was extracted in the solution of the final iteration, the pattern of factor loadings was examined to detect if there were retained items that exhibited complex structure in line with the statistical condition that variables with high loadings or correlations ($r \geq 0.5$) on more than 1 factor should be removed from the analysis. Correspondingly, items that loaded upon only one factor via the alpha factoring-based Varimax rotation with Keiser Normalization were retained.

- **Clinical support**

Table 4.13 Respondents' clinical support

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.808	26.185	26.185	6.304	24.245	24.245	2.503	9.627	9.627
2	1.849	7.112	33.297	1.324	5.091	29.336	2.445	9.406	19.033
3	1.728	6.648	39.945	1.187	4.566	33.902	2.013	7.743	26.776
4	1.581	6.082	46.027	1.044	4.016	37.918	1.373	5.280	32.056
5	1.332	5.124	51.151	.824	3.170	41.088	1.291	4.965	37.021
6	1.166	4.486	55.637	.671	2.579	43.667	1.104	4.247	41.268
7	1.055	4.059	59.696	.549	2.110	45.777	1.098	4.225	45.493
8	1.023	3.934	63.630	.511	1.965	47.742	.585	2.249	47.742
9	.944	3.630	67.260						
10	.879	3.382	70.642						
11	.802	3.084	73.726						
12	.697	2.681	76.407						
13	.679	2.613	79.020						
14	.628	2.416	81.436						
15	.567	2.181	83.618						
16	.531	2.042	85.659						
17	.483	1.859	87.519						
18	.468	1.800	89.319						
19	.455	1.749	91.067						
20	.414	1.594	92.661						
21	.395	1.519	94.180						
22	.362	1.394	95.574						
23	.347	1.333	96.907						
24	.320	1.232	98.138						
25	.258	.992	99.130						
26	.226	.870	100.000						
Extraction Method: Alpha Factoring									

Computed results from the final iteration indicated the presence of eight initial Eigen values greater than 1, hence eight challenges were extracted from items in the dataset for the dimension "clinical support". Based on the **rotated sums of squared loadings**; approximately 48% of total variance in the entire dataset was accounted for by eight factors. Of the total 48% variance, factor 1 individually accounted for 9.627%; factor 2 accounted for 9.406%; factor 3 accounted for 7.743%; factor 4 accounted for 5.280%;

factor 5 accounted for 4.965%; factor 6 accounted for 4.247%; factor 7 accounted for 4.225%, and factor 5 accounted for the remaining 2.249% variance.

- **Relationship between NEI and CLE**

Table 4.14 Respondents' relationship between NEI and CLE

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.694	46.177	46.177	3.192	39.898	39.898	2.033	25.412	25.412
2	1.108	13.850	60.027	.694	8.678	48.576	1.853	23.164	48.576
3	.749	9.357	69.383						
4	.713	8.910	78.293						
5	.613	7.664	85.957						
6	.424	5.297	91.254						
7	.397	4.957	96.211						
8	.303	3.789	100.000						
Extraction Method: Alpha Factoring									

Table 4.14 shows presence of only two initial Eigen values greater than 1, therefore two challenges were extracted from the questionnaire items in the dataset for the dimension "relationship between nursing education institution and clinical learning environment". Based on the **rotated sums of squared loadings**, approximately 49% of total variance in the entire dataset was accounted for by two factors. Of the approximate total 49% variance, factor 1 accounted for 25.412%, and factor 2 accounted for the remaining 23.164% variance in the retained dataset. Given that more than one factor was extracted in the solution of the final iteration, the pattern of factor loadings was examined to detect if there were retained items that exhibited complex structure in line with the statistical condition that variables with high loadings or correlations ($r \geq 0.5$) on more than one factor should be removed from the analysis. Congruently, items that loaded upon only one factor via the Varimax rotation with Keiser Normalization were retained.

- **Theory and practice integration**

Table 4.15 Respondents' theory and practice integration

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.700	33.633	33.633	3.081	28.007	28.007	2.185	19.859	19.859
2	1.325	12.046	45.679	.823	7.483	35.491	1.554	14.126	33.986
3	1.097	9.972	55.651	.421	3.831	39.322	.587	5.336	39.322
4	.987	8.977	64.628						
5	.903	8.211	72.839						
6	.745	6.771	79.610						
7	.623	5.661	85.272						
8	.534	4.855	90.126						
9	.433	3.935	94.061						
10	.342	3.105	97.167						
11	.312	2.833	100.000						
Extraction Method: Alpha Factoring									

Regarding the computed results from the final iteration, Table 4.15 illustrates the presence of three initial Eigen values greater than 1, hence three challenges were extracted from the selected items in the dataset for the dimension "clinical accompaniment". As shown by the **rotated sums of squared loadings**, approximately 39% of total variance in the entire dataset was accounted for by three factors. Of the approximate total 39% variance, factor 1 individually accounted for 19.859%; factor 2 accounted for 14.126%, and factor 3 accounted for the remaining 5.336% variance in the retained dataset. Given that more than one factor was extracted, the pattern of factor loadings was examined to detect if there were retained items that exhibited complex structure in line with the statistical condition that variables with high loadings or correlations ($r \geq 0.5$) on more than one factor should be removed from the analysis.

- **Resources at clinical facilities**

Table 4.16 Respondents' resource at clinical facilities

Total Variance Explained									
Factor	Initial Eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.763	30.696	30.696	2.272	25.245	25.245	2.257	25.082	25.082
2	2.200	24.445	55.141	1.874	20.826	46.071	1.491	16.572	41.654
3	1.090	12.106	67.247	.558	6.201	52.272	.956	10.618	52.272
4	.826	9.176	76.423						
5	.649	7.215	83.639						
6	.590	6.555	90.194						
7	.464	5.155	95.349						
8	.220	2.441	97.789						
9	.199	2.211	100.000						
Extraction Method: Alpha Factoring									

Table 4.16 reveals the presence of three initial Eigen values greater than 1, hence three challenges were extracted for the dimension "clinical accompaniment". As shown by the **rotated sums of squared loadings**, approximately 52% of total variance in the entire dataset was accounted for by three factors. Of the approximate total 52% variance, factor 1 individually accounted for 25.082%; factor 2 accounted for 16.572%, and factor 3 accounted for the remaining 10.618% variance in the retained dataset. Since more than one factor was extracted in the solution of the final iteration, the pattern of factor loadings was examined to detect if there were retained items that exhibited complex structure in line with the statistical condition that variables with high loadings or correlations ($r \geq 0.5$) on more than one factor should be removed from the analysis.

4.3.4.2 Factor loadings of retained items

This section provides results on retained items with high loadings (factor score ≥ 0.5) statistically deemed to have had significance in assessing challenges that the respondents encountered in the CLE that affect their learning experiences in Limpopo Nursing College. Table 4.17 to Table 4.22 present the results of the rotated factor matrix showing retained items under each distinct dimension.

- **Welcome and orientation of student nurses in the CLE**

Table 4.17 Respondents' welcome and orientation in the CLE

Rotated Factor Matrix[a]					
Item	**Factor**				
	1	**2**	**3**	**4**	**5**
I was orientated on clinical skills related to my level of practice				.595	
During clinical skill orientation, all skills were demonstrated at once		.625			
When allocated at the CLE, I was orientated on tea and lunch times	.707				
When allocated at the CLE, I was orientated on duty roster	.795				
The period I was allocated in different wards was enough to promote learning in relation to my level of training		.597			
During placement in the CLE, I was assigned duties according to my level of training			.527		
I experienced competition from student nurses who came from other nursing education institutions					.569
At the clinical facility, I was treated as a nurse who was undergoing training			.608		
Extraction Method: Alpha Factoring. Rotation Method: Varimax with Kaiser Normalization					
a. Rotation converged in 5 iterations					

Table 4.17 indicates that upon final iteration, none of the retained items demonstrated complex structure hence there was no rationale to eliminate them from the remaining dataset. The results show that two items under factor 1 had the highest loadings, indicating that when the respondents were allocated at the CLE, they were orientated on duty roster (loading=0.795), as well as on tea and lunch times (loading=0.707). In moderate terms, all skills were demonstrated at once during clinical skills orientation (loading=0.625), and the respondents were treated as nurses who were undergoing training (loading=0.608). On the least of the clinical environmental conditions, the respondents were assigned duties according to their levels of training during placement in the CLE.

- **Clinical accompaniment**

Table 4.18 Respondents' clinical accompaniment

Rotated Factor Matrix[a]			
Item	**Factor**		
	1	**2**	**3**
I received clinical accompaniment from clinical facilitator			.509
I received clinical accompaniment from nurse educator	.569		
I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator			.560
I received clinical accompaniment when allocated to the clinical facility	.692		
I knew the nurse educator who came for clinical accompaniment		.674	
The nurse educator had a good attitude towards me during clinical accompaniment		.526	
The ratio of student nurses in the CLE promoted learning			.600
Extraction Method: Alpha Factoring. Rotation Method: Varimax with Kaiser Normalization			
a. Rotation converged in 14 iterations			

Table 4.18 illustrates that none of the items retained exhibited a complex structure; therefore there was no basis to eliminate them from the remaining dataset. The results depict that the respondents received clinical accompaniments when allocated to clinical facilities (loading=0.694), and they also knew the nurse educators who came for clinical accompaniment (loading=0.674), as well as on tea and lunch times (loading=0.707). Moreover, the respondents emphasised that the ratio of student nurses in the CLE environment promoted learning (loading=0.600). Moreover, nurse educators had good attitudes towards the respondents during clinical accompaniment (loading=0.526), and the respondents received clinical accompaniment from clinical facilitators (loading=0.509).

- **Clinical support**

Table 4.19 Respondents' clinical support

Rotated Factor Matrix[a]								
Item	**Factor**							
	1	2	3	**4**	**5**	**6**	**7**	**8**
When allocated in the CLE, I was supported by preceptor				.581				
When allocated in the CLE, I was supported by clinical facilitator				.503				
Registered nurses at the CLE were able to identify teachable moments and teach me		.703						
I was mentored by registered professional nurses at the CLE		.548						
I was mentored by peers at the CLE						.618		
I was mentored by lower category staff at the CLE						.604		
I had a good relationship with the clinical staff			.646					
Clinical staff had a good attitude towards me			.557					
I had access to patients' files							.583	
I was allowed to render patient care to a very ill patient under supervision					.699			
Medical terms were explained to me by clinical staff to promote understanding		.502						
I was respected as a student nurse by clinical staff		.505						
The operational manager introduced me to the multidisciplinary team	.519							
The multidisciplinary team was involved in my clinical learning	.641							
The operational manager ensured that I was taught during clinical allocation	.630							
Extraction Method: Alpha Factoring Rotation Method: Varimax with Kaiser Normalization								
a. Rotation converged in 13 iterations								

Table 4.19 shows that upon final iteration, none of the retained items demonstrated complex structure; therefore there was no foundation to eliminate them from the remaining dataset. The results showed that the registered nurses at clinical environments were able to identify teachable moments and teach the respondents (loading=0.703); the respondents were allowed to render patient care to very ill patients under supervision of doctors (loading=0.699), and had good relationships with the clinical staff (loading=0.646). In view of that, the multidisciplinary teams were involved in

the respondents' clinical learning (loading=0.641) and the operational managers ensured that the respondents were taught during clinical allocations.

- **Relationship between NEI and CLE**

Table 4.20 Respondents' relationship between NEI and CLE

Rotated Factor Matrix[a]		
Item	**Factor**	
	1	**2**
I was warmly welcomed by clinical staff		.742
Clinical staff were happy about my presence in the clinical environment		.809
Clinical staff knew my level of training	.640	
Clinical staff knew my clinical learning objectives	.735	
Clinical staff new my travelling day in advance	.676	
Extraction Method: Alpha Factoring Rotation Method: Varimax with Kaiser Normalization		
a. Rotation converged in 3 iterations		

Table 4.20 shows that two items under factor 1 had the highest loadings: clinical staff were happy about the respondents' presence in the clinical environment (loading=0.809), and the respondents were warmly welcome by clinical staff (loading=0.742). Retained items in factor 1 revealed that the clinical staff knew the respondents' clinical learning objectives (loading=0.735), and also knew about the respondents' travelling days in advance (loading=0.676) as well as levels of training (loading=0.640).

- **Theory and practice integration**

Table 4.21 Respondents' theory and practice

Rotated Factor Matrix[a]		
Item	**Factor**	
	1	**2**
I was exposed to a combination of experienced staff and newly qualified professional nurses		.564
In the CLE, there was a relationship between services rendered and teaching and learning of students		.548
I had confidence when practising in the clinical environment		.596
Procedure manuals were available in the CLE	.533	
Clinical staff used procedure manuals to guide me as student nurse	.759	
Procedure manuals were in line with what was done in clinical environment	.812	
I was delegated clinical duties in relation to my clinical learning objectives	.540	
Extraction Method: Alpha Factoring Rotation Method: Varimax with Kaiser Normalization		
a. Rotation converged in 5 iterations		

Table 4.21 reveals that none of the items retained exhibited a complex structure therefore there was no basis to eliminate them from the remaining dataset. The results show that procedure manuals were in line with what was done in clinical environments (loading=0.812); the respondents knew the nurse educators who came for clinical accompaniment (loading= 0.674), and the clinical staff used procedure manuals to guide respondents as student nurses (loading=0.707). Furthermore, the respondents had confidence when practising in clinical environments (loading=0.596); were exposed to combinations of experienced staff and newly qualified professional nurses (loading=0.564), and there was a relationship between services rendered and teaching and learning of students (loading=0.548).

- **Resources at clinical facilities**

Table 4.22 Respondents' resources at clinical facilities

Rotated Factor Matrix[a]			
Item	Factor		
	1	2	3
Human resources were sufficient	.821		
Clinical equipment was sufficient	.930		
Clinical supplies (e.g., gloves, syringes, wound dressing, etc.) were sufficient	.674		
There was a library at the CLE		.587	.583
I had access to the library at the CLE		.522	.572
There was a computer in the CLE		.545	
I had access to use a computer in the CLE		.664	
Extraction Method: Alpha Factoring Rotation Method: Varimax with Kaiser Normalization			
a. Rotation converged in 7 iterations			

Table 4.22 shows that only two items, namely "there was a library at the CLE", and "I had access to the library at the CLE" demonstrated complex structure, hence they were eliminated from the dataset. The results for the remaining items without complex structures show that clinical equipment (loading=0.930), human resources (loading=0.821) and clinical supplies (loading=0.674) were sufficient. The respondents also had access to computers in clinical learning environments (loading=0.664).

4.4 OVERVIEW OF RESEARCH FINDINGS

The findings are summarised below (see tables 4.23-4.48).

Total variation of each section: descriptive statistics

- **Respondents' biographical data**

Table 4.23 Respondents' level of training

		Frequency	%	Valid %	Cumulative %
Valid	Level 2	51	33.6	33.6	33.6
	Level 3	64	42.1	42.1	75.7
	Level 4	37	24.3	24.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.24 Respondents' year in which training started

		Frequency	%	Valid %	Cumulative %
Valid	2011	46	30.3	30.3	30.3
	2012	53	34.9	34.9	65.1
	2013	40	26.3	26.3	91.4
	2014	11	7.2	7.2	98.7
	2015	2	1.3	1.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.25 Respondents' gender

Gender					
		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Male	37	24.3	24.3	24.3
	Female	115	75.7	75.7	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.26 Respondents' culture

Culture					
		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Shangaan	21	13.8	13.8	13.8
	Sotho	83	54.6	54.6	68.4
	Venda	17	11.2	11.2	79.6
	Other	31	20.4	20.4	100.0
	Total	**152**	**100.0**	**100.0**	

- **Respondents' welcome and orientation in the CLE**

Table 4.27 I was orientated on clinical skills related to my level of practice

		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Strongly disagree	2	1.3	1.3	1.3
	Disagree	4	2.6	2.6	3.9
	Neutral	8	5.3	5.3	9.2
	Agree	66	43.4	43.4	52.6
	Strongly agree	72	47.4	47.4	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.28 Skills orientation was done at campus

		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Strongly disagree	7	4.6	4.6	4.6
	Disagree	9	5.9	5.9	10.5
	Neutral	10	6.6	6.6	17.1
	Agree	53	34.9	34.9	52.0
	Strongly agree	73	48.0	48.0	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.29 Skills orientation was done at the clinical area

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	5	3.3	3.3	3.3
	Disagree	19	12.5	12.5	15.8
	Neutral	30	19.7	19.7	35.5
	Agree	61	40.1	40.1	75.7
	Strongly agree	37	24.3	24.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.30 During clinical skills orientation, all skills were demonstrated at once

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	20	13.2	13.2	13.2
	Disagree	41	27.0	27.0	40.1
	Neutral	10	6.6	6.6	46.7
	Agree	47	30.9	30.9	77.6
	Strongly agree	34	22.4	22.4	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.31 After skills orientation, I was given time to practise skills before being allocated to the CLE

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	16	10.5	10.5	10.5
	Disagree	32	21.1	21.1	31.6
	Neutral	5	3.3	3.3	34.9
	Agree	52	34.2	34.2	69.1
	Strongly agree	47	30.9	30.9	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.32 When allocated to the CLE, I was orientated on ward/unit surrounding

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	8	5.3	5.3	5.3
	Disagree	9	5.9	5.9	11.2
	Neutral	5	3.3	3.3	14.5
	Agree	50	32.9	32.9	47.4
	Strongly agree	80	52.6	52.6	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.33 When allocated to the CLE, I was orientated on communication lines/reporting channels

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	22	14.5	14.5	14.5
	Disagree	26	17.1	17.1	31.6
	Neutral	17	11.2	11.2	42.8
	Agree	50	32.9	32.9	75.7
	Strongly agree	37	24.3	24.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.34 When allocated to the CLE, I was orientated on tea and lunch time

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	5	3.3	3.3	3.3
	Disagree	5	3.3	3.3	6.6
	Neutral	8	5.3	5.3	11.8
	Agree	63	41.4	41.4	53.3
	Strongly agree	71	46.7	46.7	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.35 When allocated to the CLE, I was orientated on duty roster

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	5	3.3	3.3	3.3
	Disagree	17	11.2	11.2	14.5
	Neutral	11	7.2	7.2	21.7
	Agree	59	38.8	38.8	60.5
	Strongly agree	60	39.5	39.5	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.36 The ratio of nurse educators and student nurses in the CLE promoted patient safety

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	16	10.5	10.5	10.5
	Disagree	19	12.5	12.5	23.0
	Neutral	18	11.8	11.8	34.9
	Agree	57	37.5	37.5	72.4
	Strongly agree	42	27.6	27.6	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.37 The period I was allocated in different wards was enough to promote learning in relation to my level of training

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	17	11.2	11.2	11.2
	Disagree	36	23.7	23.7	34.9
	Neutral	5	3.3	3.3	38.2
	Agree	49	32.2	32.2	70.4
	Strongly agree	45	29.6	29.6	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.38 During placement in the CLE, I was assigned duties according to my level of training

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	23	15.1	15.1	15.1
	Disagree	26	17.1	17.1	32.2
	Neutral	20	13.2	13.2	45.4
	Agree	45	29.6	29.6	75.0
	Strongly agree	38	25.0	25.0	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.39 I experienced competition from student nurses who came from other nursing education institutions

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	20	13.2	13.2	13.2
	Disagree	25	16.4	16.4	29.6
	Neutral	12	7.9	7.9	37.5
	Agree	47	30.9	30.9	68.4
	Strongly agree	48	31.6	31.6	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.40 At the clinical facility I was treated as a nurse who was undergoing training

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	28	18.4	18.4	18.4
	Disagree	37	24.3	24.3	42.8
	Neutral	15	9.9	9.9	52.6
	Agree	41	27.0	27.0	79.6
	Strongly agree	31	20.4	20.4	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.41 I was treated as a worker at the CLE

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	10	6.6	6.6	6.6
	Agree	31	20.4	20.4	27.0
	Neutral	16	10.5	10.5	37.5
	Agree	49	32.2	32.2	69.7
	Strongly agree	46	30.3	30.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.42 I was used as a scapegoat for anything bad done in the CLE

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	26	17.1	17.1	17.1
	Disagree	18	11.8	11.8	28.9
	Neutral	16	10.5	10.5	39.5
	Agree	36	23.7	23.7	63.2
	Strongly agree	56	36.8	36.8	100.0
	Total	**152**	**100.0**	**100.0**	

- **Section: Clinical accompaniment**

Table 4.43 I received clinical accompaniment from clinical facilitator

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	45	29.6	29.6	29.6
	Disagree	27	17.8	17.8	47.4
	Neutral	15	9.9	9.9	57.2
	Agree	37	24.3	24.3	81.6
	Strongly agree	28	18.4	18.4	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.44 I received clinical accompaniment from nurse educator

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	18	11.8	11.8	11.8
	Disagree	11	7.2	7.2	19.1
	Neutral	13	8.6	8.6	27.6
	Agree	64	42.1	42.1	69.7
	Strongly agree	46	30.3	30.3	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.45 I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	35	23.0	23.0	23.0
	Disagree	47	30.9	30.9	53.9
	Neutral	13	8.6	8.6	62.5
	Agree	34	22.4	22.4	84.9
	Strongly agree	23	15.1	15.1	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.46 When allocated to the CLE, I received support visits from nurse educators/clinical facilitator

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	9	5.9	5.9	5.9
	Disagree	13	8.6	8.6	14.5
	Neutral	11	7.2	7.2	21.7
	Agree	81	53.3	53.3	75.0
	Strongly agree	38	25.0	25.0	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.47 I received clinical accompaniment when allocated to the clinical facility

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	13	8.6	8.6	8.6
	Disagree	18	11.8	11.8	20.4
	Neutral	18	11.8	11.8	32.2
	Agree	80	52.6	52.6	84.9
	Strongly agree	23	15.1	15.1	100.0
	Total	**152**	**100.0**	**100.0**	

Table 4.48 Nurse Educators/clinical facilitator spent enough time with me during clinical accompaniment

		Frequency	%	Valid %	Cumulative %
Valid	Strongly disagree	28	18.4	18.4	18.4
	Disagree	63	41.4	41.4	59.9
	Neutral	14	9.2	9.2	69.1
	Agree	38	25.0	25.0	94.1
	Strongly agree	9	5.9	5.9	100.0
	Total	**152**	**100.0**	**100.0**	

4.5 CONCLUSION

This chapter discussed the data analysis and the results of the challenges that the respondents encountered in the CLE that affected their learning experiences in Limpopo Nursing College. Statistical validity and scale reliability tests were performed prior to computation of descriptive statistics and factor analysis. Based on the Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA), most items were retained in the analysis. Furthermore, the same items were retained in the factor analysis performed via the Varimax rotation with Keiser Normalization.

Chapter 5 presents the conclusions and limitations of the study, and makes recommendations for practice and further research.

CHAPTER 5

RESEARCH FINDINGS, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

5.1 INTRODUCTION

This chapter presents the conclusions and limitations of the study and makes recommendations for nursing education, clinical nursing practice and further research.

The purpose of the study was to identify and describe challenges encountered by student nurses that could affect their CLE in hospitals that provide clinical learning and devise strategies to address these challenges and challenges. To achieve the purpose, the objectives of the study were to:

- Determine challenges that affect education and training of student nurses in the CLE in Limpopo College of Nursing.
- Devise strategies to address the challenges that affect nurse education and training in the CLE in Limpopo College of Nursing.

Accordingly, the study wished to answer the following questions:

- What are the challenges at the CLE in Limpopo Province, South Africa that affect the clinical education and training of nursing students?
- How can the challenges that affect nurse education and training in the CLE be addressed to enhance the clinical learning experience of students?

Chapter 1 described the background to and purpose and significance of the study. Chapter 2 discussed the literature review conducted for the study while chapter 3 covered the research design and methodology. Chapter 4 presented the data analysis and interpretation, and the findings. This chapter summarises the findings, presents the conclusions and limitations of the study, and makes recommendations for nursing education, practice and further research.

5.2 RESEARCH DESIGN AND METHODOLOGY

A quantitative, descriptive, cross-sectional design was used to identify and describe the challenges that the respondents encountered in the CLE in Limpopo College of Nursing that could affect their clinical learning experience, as well as devise strategies to address these challenges.

5.3 SUMMARY AND INTERPRETATION OF THE FINDINGS

The study found that during clinical placement the respondents encountered different clinical challenges which made the CLE unconducive to learning and practice.

5.3.1 Respondents' demographic profile

5.3.1.1 Level of training and year of entry

Out of n=152 respondents, 34% (n=51) were in level 2; 42% (n=64) were in level 3, and 24% (n=37) were in level 4. Of the respondents, 35% (n=53) started training in 2012; 30% (n=46) started in 2011; 26% (n=40 started in 2013; 7% (n=11) started in 2014, and only 2% (n=2) started in 2015. The results indicated that all the respondents had adequate exposure to the CLE and answered the questionnaire with insight into the topic.

5.3.1.2 Gender

Of the respondents, 76% (n=115) were females and 24% (n=37) were males, indicating more female than male student nurses at the selected Public Nursing College training to become registered professional nurses. The findings are congruent with the national trends that the profession is dominated by the female. According to the SANC (2015:2), a total of 21 303 of student nurses in South Africa were registered for the four-year comprehensive nursing diploma and of these, 16 086 were females and 5217 were males. Out of a total of 1 951 students registered for the four-year comprehensive nursing diploma, 1442 were females and 509 were males. In 2013, Men in nursing occupations: an American community survey (2013:2) reported that out of 3.5 million

nurses employed in 2011, 3.2 million were females and 330,000 were males. This indicates that the shortage of future nurses could be resolved if men are part of the equation (Male nurses break through barriers to diversify profession 2011).

5.3.1.3 Culture

Regarding their culture, of the respondents 55% (n=83) were Sotho; 20% (n=31) indicated “other”; 14% (n=21) were Shangaan, and 11% (n=17) were Venda. This fact was highlighted mainly for demographic purposes. According to the results, the majority of the respondents who had registered at Limpopo College of Nursing training to become professional nurses were Sotho in culture. The results are in line with figure 1.1 which shows that the three Districts (Waterberg, Sekhukhune and Capricorn) are occupied by Sotho people therefore their numbers are higher than the Shangaan and Venda people who occupy only one District each (Vhembe and Mopani). This shows that Limpopo College of Nursing takes into consideration the educational needs of people residing in Limpopo Province.

During data analysis responses under "agree" and "strongly agree" were summed as "agree" and indicated positive views while "disagree" and "strongly disagree" were summed as "disagree" and indicated negative views. In the findings, views of 50% and more implied respondents’ positive perceptions and views below 50% implied respondents’ negative perceptions. Related items will be discussed together.

5.3.2 Welcome and orientation of student nurses in the clinical learning environment

5.3.2.1 Orientation of clinical skills related to their level of practice

Of the respondents, 90% (n=138) agreed that they were orientated on clinical skills related to their level of practice; 4% (n=6) disagreed, and 5% (n=8) were neutral (see chapter 4, table 4.27). Skills orientation is essential to student nurses because it shows how procedures are done step by step. Briefing occurs before skills are demonstrated and followed by discussion after demonstration to ensure that students understand the procedure well. Orientation of clinical skills is done to show students how the nursing

technique is carried out and how patient relationships are formed (Bruce et al 2011:266).

The results of this study differ from Eta et al's (2011:28) finding in Cameroon that student nurses at CLE encountered difficulties in performing clinical skills because of a lack of clinical skills orientation.

5.3.2.2 Skills orientation was done at campus, all skills were demonstrated at once and I was given time to practise skills before being allocated to CLE

Of the respondents, 83% (n=126) agreed that skills orientation was done at laboratory (campus), 11% (n=16) disagreed, and 7% (n=10) remained neutral (see table 4.28). In terms of all skills being demonstrated at once, 54% (n=81) agreed that during clinical skill orientation, all skills were demonstrated at once; 40% (n=61) disagreed, and 7% (n=10) remained neutral (see table 4.30). Regarding time to practice orientated skills after demonstration, 65% (n=99) agreed that after skills orientation, they were given time to practise skills before being allocated to CLE; 32% (n=48) disagreed, and 3% (n=5) were neutral. Laboratory sessions are very important because that is a low-risk environment for students to practise clinical skills. One of the essential aspects of good demonstration is that students must be given the opportunity to practise and master the demonstrated skills (Bruce et al 2011:267).

The findings of this study concur with Nxumalo (2011:156) who reported that skills orientation was done at the laboratory (campus) and students were given enough time to practise before clinical placement. However, Motsilanyane (2015:81) found that although skills orientation was done at clinical laboratory some of the equipment was not working properly and was old.

5.3.2.3 Skills orientation was done at a clinical area

Of the respondents, 64% (n=98) agreed that skills orientation was done at CLE; 16% (n=24) disagreed, and 20% (n=30) were neutral. Hughes and Quinn (2013:356) emphasise that the CLE is very important for students' experiential clinical learning. Clinical skills orientation occurring in real-life situations where procedures are done on

patients as part of nursing care is an essential aspect of demonstration (Bruce et al 2011:267).

In North West Province, Motsilanyane (2015:71) reported that skills orientation was done at CLE, but there were so many students that some were unable to see the demonstrated skills. In their study, Kgafele, Coetzee and Heyns (2015:s234) revealed that skills orientation was not done in CLE.

5.3.2.4 When allocated at CLE I was orientated on ward/unit surrounding, communication lines/reporting channels, tea and lunch times and duty roster

Of the respondents, 86% (n=130) agreed that when allocated at CLE they were orientated on ward /unit surrounding; 11% (n=17) disagreed, and 3% (n=5) were neutral (see table 4.32). With regard to orientation on communication lines/reporting channels at CLE, 57% (n=87) of the respondents agreed that they received orientation; 32% (n=48) disagreed, while 11% (n=17) were neutral (see table 4.33). In terms of orientation on tea and lunch times at CLE, 88% (n=134) agreed; 6% (n=10) disagreed, while 5% (n=8) remained neutral (see table 4.34). Of the respondents, 79% (n=119) agreed that when allocated at CLE they were orientated on duty roster; 14% (n=22) disagreed, while 7% (n=11) were neutral (see table 4.35). Generally, the study found that at CLE, the majority of the respondents were orientated on ward /unit surrounding, communication lines/reporting channels, tea and lunch times, and duty roster.

Setati (2013:49), Kgafele et al (2015:s234) and Mothokoa (2015:72) reported that student nurses received clinical orientation during their clinical placement. However, Xaba (2015:92), Letswalo and Peu (2015:358) found that student nurses did not receive clinical orientation or induction during clinical placement. De Swart (2012:64) found that due to the high demands of daily activities at the CLE, it was not possible to orientate student nurses on their first day of clinical practice. In North West Province, Shezi (2014:48) revealed that students were not orientated at the CLE but only received induction, even though it was not of a good standard since some of their questions were left unanswered. In Limpopo Province, Setumo 2013:55) reported that although midwifery students received orientation at the CLE vital aspects were omitted (daily programmes and protocols).

5.3.2.5 The ratio of nurse educators and student nurses in the CLE promoted patient safety

Of the respondents, 66% (n=99) agreed that the ratio of nurse educators and student nurses in the CLE promoted patient safety; 24% (n=35) disagreed, while 12% (n=18) remained neutral (see table 4.36). These findings show that there is smooth control over how practical periods are distributed for student nurses' clinical learning. NEIs should ensure that during clinical placement student nurses are distributed according to practical periods to ensure a clinical environment which is conducive for both clinical teaching and patient care (Bruce et al 2011:284).

In Australia, Sengstock (2009:112) reported that a high level of students at CLE did not promote patient safety. Similarly Xaba (2015:91) reported that large numbers of students made it difficult for nurse educators to accompany them.

5.3.2.6 The period I was allocated in different wards was enough to promote learning in relation to my level of training

Of the respondents, 62% (n=94) agreed that the period they were allocated in different wards was enough to promote learning in relation to their level of training; 35% (n=53) disagreed, and 3% (n=5) were neutral (see table 4.37). This finding implied that the respondents had enough time to integrate what they learned into practice.

In a study in Gauteng, Mothokoa (2015:77) reported that student nurses' practical exposure was not enough to promote learning.

5.3.2.7 During placement in the CLE I was assigned duties according to my level of training

Of the respondents, 55% (n=83) agreed that during placement in the CLE, they were assigned duties according to their level of training; 32% (n=49) disagreed, while 13% (n=20) remained neutral (see table 4.38). Meyer et al (2011:228) maintain that the skill, experience, knowledge, scope of practice, and professional and personal maturity should be analysed during delegation of duties.

The results of this study concur with Setati's (2013:49) finding that student nurses were delegated according to their level of practice and were supervised. However, Setumo (2013:57) and Mothokoa (2015:73) found that student nurses were not delegated according to their clinical learning objectives. Moreover, Sengstock (2009:109) found that students' learning opportunities were blocked by delegating menial tasks to them.

5.3.2.8 I experienced competition from student nurses who came from other NEIs

Of the respondents, 63% (n=95) agreed that they experienced competition from student nurses from other NEIs; 29% (n=45) disagreed, while 8% (n=12) were neutral (see table 4.39). This implied that of many of the respondents' learning opportunities were negatively affected during clinical placement.

Stenberg and Carlson (2015) found that student nurses experienced competition among themselves since they were competing for the preceptor's attention. In North West Province, Motsilanyane (2015:84) revealed that students experienced favouritism between college and university students during clinical placement where more attention was given to college students.

5.3.2.9 I was treated as a nurse who was undergoing training at the clinical facility

Of the respondents, 47% (n=72) agreed that they were treated as nurses who were undergoing training at the clinical facility; 42% (n=65) disagreed, while 10% (n=15) remain neutral (see table 4.40). These findings show that the respondents neither agreed nor disagreed that they were treated as nurses who were undergoing training at the clinical facility since their views were below 50% for both "agree/disagree". According to the SANC (2013), when students are undergoing training, their status should be that of full students instead of being treated as employees at CLE.

This contrasted with Sengstock's (2009:93, 94) finding that student nurses' role was not clear as they were treated as "volunteers", "extra bodies on the floor" or unpaid helpers. In Tabriz, India, Rahmani, Zadeh, Abdullah-Zadeh, Lotfi, Bani and Hassanpour

(2011:253-256) reported that when student nurses were allocated to the CLE their clinical task was not clear. In a specialist forensic mental health setting, Rani, Brennan and Timmons (2011:17.11) found that student nurses were treated well and were satisfied with their clinical allocation. Student nurses' education and training consists of theory and practice since nursing is a "hands on" profession. For practical practice, students should be sent to clinical areas so they are able to integrate theory into practice, therefore they should be considered learner not workers. Gaberson and Oermann (2010:09, 60) emphasise that when student nurses are in clinical placement their primary position should be that of a learner, not a nurse and they should be actively involved in their clinical learning

5.3.2.10 I was treated as a worker at CLE

Of the respondents, 62% (n=95) agreed that they were treated as workers at the CLE; 27% (n=41) disagreed, while 11% (16) remained neutral (see table 4.41). This clearly indicated that the respondents' "status" was not respected by clinical staff when they were allocated in the CLE thereby affecting their opportunity to learn.

The finding concurred with Killam and Carter (2010:8), Mogale (2011:68), Kgafele et al (2015:s236), Letswalo and Peu (2015:357), Karabulut, Aktas and Alemdar (2015:12), Dale et al (2013:1-7) and Motsilanyane (2015:79) who reported that student nurses were treated as workers. Similarly, Volschenk (2009:7) reported that it was difficult for the student nurses to get permission from clinical staff to attend clinical skills assessment when clinical facilitator was around because they were treated as workers.

5.3.2.11 I was used as a scapegoat for anything bad done in the CLE

Of the respondents, 61% (n=92) agreed that they were used as a scapegoat for anything bad done in the CLE; 28% (n=44) disagreed, and 11% (n=16) remained neutral (see table 4.42). Professional nurses in the CLE should be positive role models and set a good example to student nurses (Bruce et al 2011:257). Hughes and Quinn (2013:371) emphasise that the role model should be trustworthy, kind and supporting towards student nurses. In nursing practice, the role model should remain accountable for her acts and omissions (Searle, Human & Mogotlane 2013:54). Student nurses

should be treated in a holistic manner since they are also unique human beings (Meyer et al 2011:101).

5.3.3 Clinical accompaniment

5.3.3.1 I received clinical accompaniment from clinical facilitator

Of the respondents, 48% (n=72) disagreed that they received clinical accompaniment from clinical facilitator; 42% (n=65) agreed that they did receive clinical accompaniment, while 10% (n=15) were neutral (see table 4.43). This finding indicates that the respondents neither disagreed nor agreed that they received clinical accompaniment from clinical facilitators since their views were below 50% for both. Bruce et al (2011:257) define a clinical facilitator as a professional nurse found in CLEs who facilitate and co-ordinate the clinical education of student nurses.

In their studies, Tiwaken, Caranto, and David (2015:70) and Borrageiro (2014:20) found that student nurses received clinical accompaniment from clinical facilitator who helped them with clinical work and took their feelings into consideration

5.3.3.2 I received clinical accompaniment from nurse educator

Of the respondents, 72% (n=110) agreed that they received clinical accompaniment from nurse educators; 19% (n=29) disagreed, while 9% (n=13) were neutral (see table 4.44). The role of the nurse educator should extend beyond the classroom where they spend enough time on clinical teaching and clinical accompaniment (Bruce et al (2011:284).

Bos, Silén and Kaila (2015) reported that nurse educators were never seen by clinical staff doing clinical accompaniment to student nurses during their placement. Similarly, Xaba (2015:98) reported that nurse educators felt clinical accompaniment was not their duty. Furthermore, Kgafele et al (2015:s232), Setati (2013:59) and Setumo (2013:62) reported that the nurse educators were available at the CLE only during formative assessment of student nurses. Mogale (2011:74) reported that student nurses' clinical accompaniment was negatively affected because there were not enough nurse educators. In resource-poor clinical settings in Malawi, Msiska et al (2014:39) reported

that students felt abandoned at the CLE because clinical accompaniment was not done by nurse educators.

5.3.3.3 I was given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator

Of the respondents, 53% (n=82) disagreed that they were given the clinical schedule about clinical accompaniment by nurse educators/clinical facilitator; 37 % (n=57) agreed that they were given the clinical schedule, and 9% (n= 13) were neutral (see table 4.45). These results indicate that the respondents did not know in time when the nurse educator/clinical facilitator would be visiting them for clinical accompaniment.

Motsilanyane (2015:74) reported that there was no clinical schedule from clinical facilitators. Similarly, Mogale (2011:73) reported that although the clinical schedule was available, the nurse educators did not follow it. Xaba (2015:73) found that students were informed in time by nurse educators before clinical assessment, but not clinical accompaniment.

5.3.3.4 I received support visits from nurse educators/clinical facilitator when allocated to CLE

Of the respondents, 78% (n=119) agreed that they received support visits from nurse educators/clinical facilitator when allocated to CLE; 15% (n=22) disagreed, and 7% (n=11) were neutral (see table 4.46). Students are usually overwhelmed by their own feelings when they are allocated to the CLE due to the emotional impact of facing clinical nursing. Student nurses should receive support visits from nurse educators when allocated to the CLE to encourage them in clinical practice (D'Souza et al 2013:39). Nursing Education and Training Institutions should have a clinical model for supporting student during clinical practice (SANC 2013b:37).

Regarding mentoring in North West Province, Tshabalala (2011:36) found that nurse educators supported student nurses when allocated to the CLE though they did not schedule enough time. However, in KwaZulu-Natal, Xaba (2015:95) found that there was a lack of student clinical support (including work-related issues and social problems which students did not feel free to talk about to clinical staff) due to the poor relationship

between the training institution and clinical facilities. This led to student nurses' not being taken seriously by clinical facilitators.

5.3.3.5 I received clinical accompaniment when allocated to the clinical facility

Of the respondents, 68% (n=103) agreed that they received clinical accompaniment when allocated to the clinical facility; 21% (n=31) disagreed, while 12% (n=18) were neutral (see table 4.47). This finding indicated that the respondents (student nurses) received support and guidance based on their unique needs.

In their studies, however, Xaba (2015:93) and Motsilanyane (2015:74) reported that student nurses who were allocated night duty did not receive clinical accompaniment.

5.3.3.6 Nurse educators/clinical facilitator spent enough time with me during clinical accompaniment

Of the respondents, 59% (n=91) disagreed that nurse educators/clinical facilitator spent enough time with them during clinical accompaniment; 31% (n=47) agreed that they did, and 9% (n=14) remained neutral (see table 4.48). According to this finding, the clinical time allocated by nurse educators for clinical accompaniment did not meet the respondents' clinical needs. The SANC (2013) stipulates that there should be adequate clinical accompaniment of students.

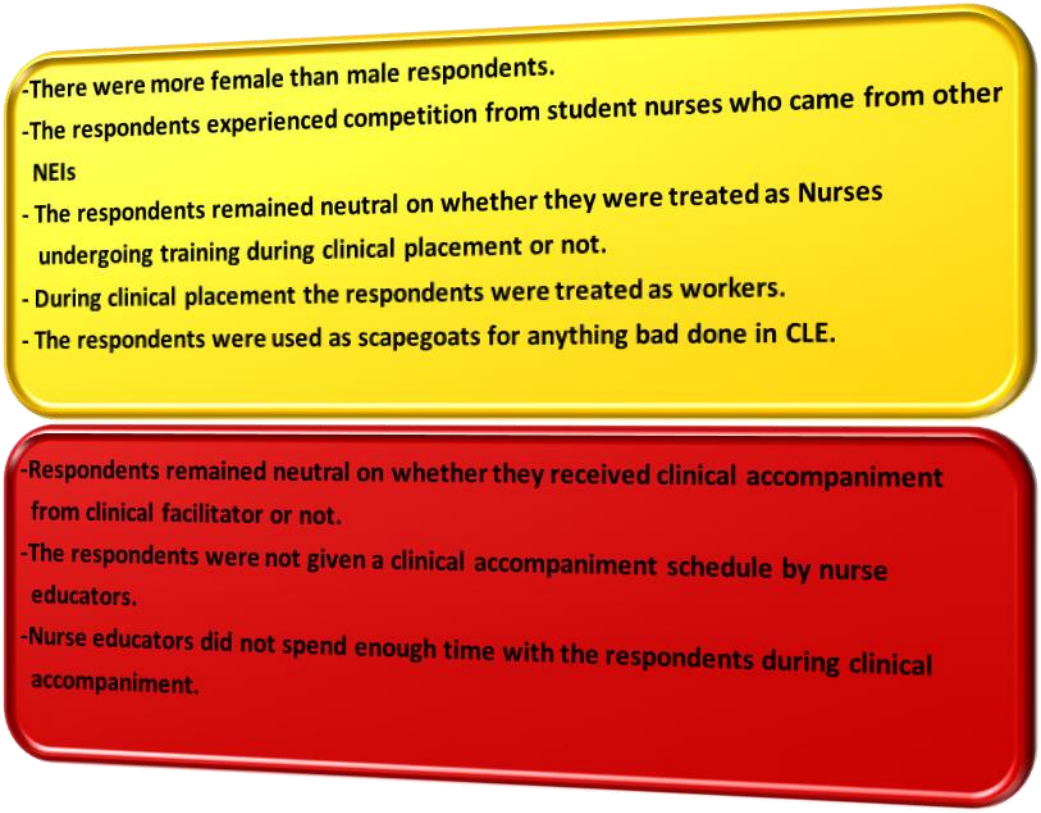
Xaba (2015:96) and Sengstock (2009:112) reported that during clinical accompaniment not all students received enough clinical accompaniment time due to the large number of students compared to clinical facilitators. Similarly, Mogale (2011:72) and Motsilanyane (2015:74) found that nurse educators did not spend enough time with students during clinical accompaniment.

5.4 CONCLUSIONS

The purpose of the study was to identify and describe challenges encountered by student nurses that could affect their CLE in hospitals that provide clinical learning and devise strategies to address these challenges and challenges.

This study revealed that during clinical placement the respondents (student nurses) encountered different challenges which made the CLE not conducive for student clinical learning as indicated in Table 5.1.

Table 5.1 Challenges encountered by the respondents during clinical placement



The NEI and nursing practice need to understand the current clinical challenges which negatively affect the clinical learning practice of student nurses and consider improving the CLE by implementing the strategies suggested in this study.

5.5 RECOMMENDATIONS

Based on the findings (see section 5.3.2.8, 5.3.2.10, 5.3.3.1, 5.3.3.3 and 5.3.3.6) of the study, the researcher makes the following recommendations for the NEI, nursing practice and Limpopo Department of Health, and for further research. Figure 5.1 depicts strategies to address clinical challenges.

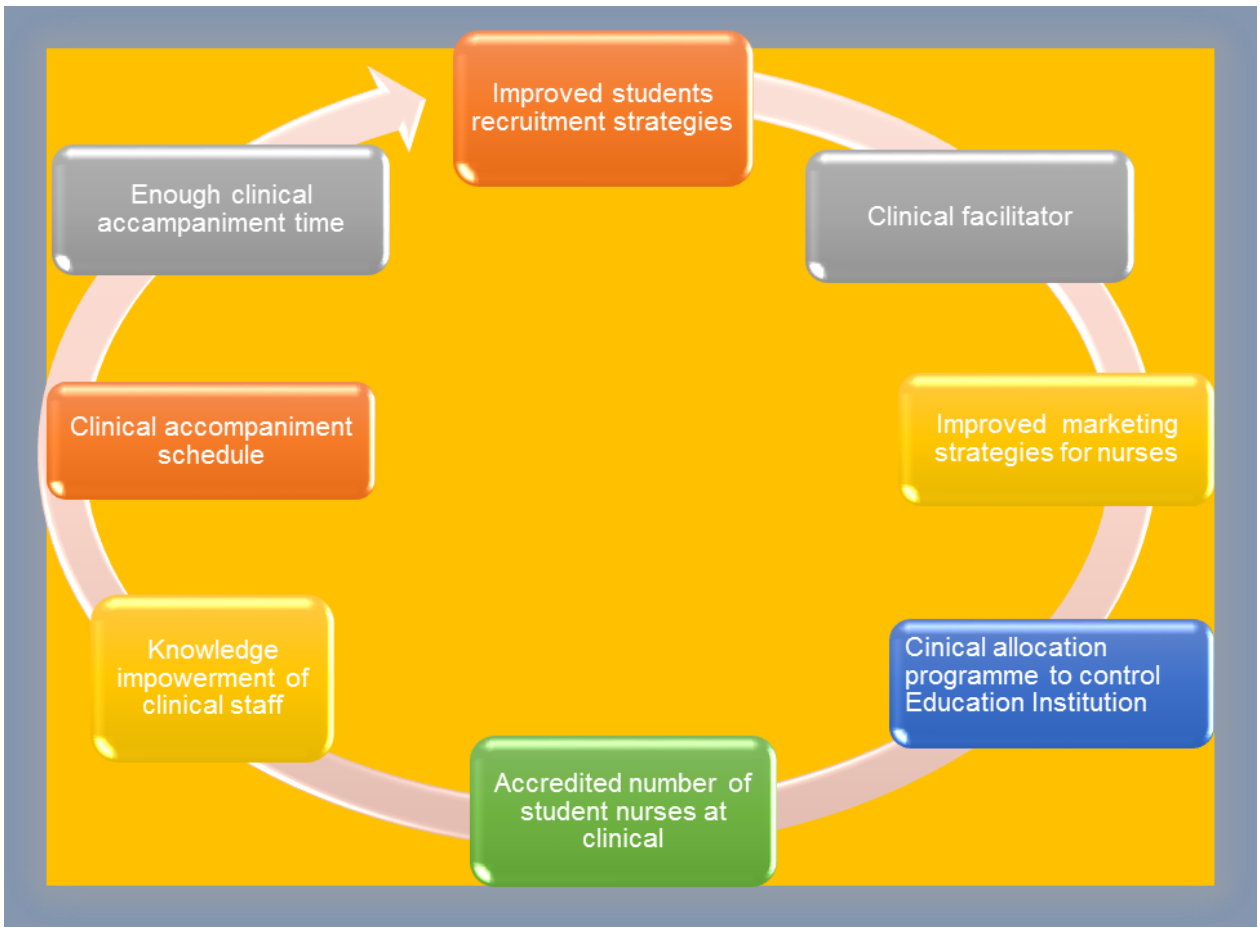


Figure 5.1 Strategies to address clinical challenges

5.5.1 Recommendations for Department of Health

- Improve nursing marketing strategies in order to attract more nurses so that there are more trained and employed professional nurses.
- Academic hospitals should be adequately staffed to avoid a situation where students are used as workers instead of ensuring that their learning needs are met.

5.5.2 Recommendations for the NEIs

The NEIs should:

- Ensure that nurse educators draw up individual clinical accompaniment programmes which are accessible to students and the component head to oversee their implementation.

- Make sure that the SANC requirement for the duration spent during clinical accompaniment is implemented by nurse educators, while the component head reinforces and monitors the progress.

5.5.3 Recommendations for Clinical nursing facilities (Hospitals)

Clinical nursing facilities should:

- Ensure that NEIs comply with the total number of students accredited by the SANC at particular clinical facilities (hospitals).
- Explore the possibility of having clinical facilitators in order to help student nurses during clinical practice.
- Ensure that NEIs collaborate with the accredited clinical facilities (hospitals) when allocating student for clinical practice.

5.5.4 Recommendations for further study

Further studies should be conducted on the following topics:

- Challenges encountered by student nurses that could affect their CLE in hospitals that provide clinical learning and strategies to address these challenges and challenges (in other provinces)
- The clinical learning experience of male student nurses
- Empowerment of clinical staff in relation to student clinical learning
- Nurse educators' perceptions of experience with clinical accompaniment.

5.6 CONTRIBUTIONS OF THE STUDY

This study has provided information regarding challenges encountered by the respondents (student nurses) that could affect their clinical learning experience in hospitals that provide clinical learning. The recommendations aim to equip NEIs and CLEs with information to ensure that they are conducive for student clinical practice.

5.7 LIMITATIONS OF THE STUDY

The following limitations were identified during the study:

- The exclusion of first-year student nurses from the study due to their limited clinical exposure.
- The study was limited to student nurse who had registered for the comprehensive four-year programme regulated by R.425 of 22 February 1985, as amended.
- The study was further limited to Giyani Campus, Thohoyandou and Sovenga Campus due to unavailability of levels 2, 3 and 4 students at Sekhukhune Campus and Waterberg Campus (which is under Limpopo College of Nursing).
- The use of structured questionnaire which limited the students from elaborating on responses which could possibly result in a superficial view of the problem.

Notwithstanding its limitations, the study has provided important information regarding the current state of CLEs which have an impact on student clinical learning.

5.8 CONCLUDING REMARKS

The study achieved its purpose of identifying and describing challenges encountered by student nurses that could affect their clinical learning experience in hospitals that provide clinical learning, as well devising strategies to address these challenges. CLEs conducive to learning have clinical facilitators who help students to cope with clinical work, consider student nurses' feelings, motivate them to enjoy clinical placement, try their best to assist students, and ensure that clinical duties are delegated in relation to their learning objectives (Wafaa Gameel et al 2015:5). CLEs that lack rich learning experience discourage students from seeking experience and result in the loss of many opportunities for professional growth.

LIST OF REFERENCES

Ali, WG, Banan, SHA & Seraty, WHAL. 2015. Effective clinical learning environment as perceived by nursing students at AL Dawadmi, applied medical sciences college: Actual versus preferred characteristics. *International Journal of Nursing DIDACTICS* 5:5.

Awuah-Peasah, D, Sarfo, LA & Asamoah, F. 2013. The attitudes of student nurses toward clinical work. *International Journal of Nursing and Midwifery* 5(2):22-27.

Berman, A & Snyder, SJ. 2012. *Fundamentals of nursing concepts process and practice*. 9th edition. Philadelphia: Alexander.

Beukes, S, Nolte, AGW & Arries, E. 2010. Value-sensitive clinical accompaniment in community nursing science. *Health SA Gesondheid* 15(1):485, 7.

Borrageiro, F. 2014. Clinical learning environment and supervision: Student nurses experiences within private health care settings in the Western Cape. MPh in Health Professions Education. Stellenbosch: Stellenbosch University.

Bos, E. 2014. A good learning environment for nursing students in primary health care. Stockholm, Sweden: Karolinska Institutet.

Bos, E, Silén, C & Kaila, P. 2015. Clinical supervision in primary health care, experiences of district nurses as clinical supervisors - a qualitative study. *BMC Nursing* 14:39. From: http://www.biomedcentral.com/1472-6955/14/39 (accessed 02 September 2016).

.

Bray, F. 2013. *Student views on their early clinical learning experiences*. Mini thesis M PH. Western Cape: Stellenbosch University.

Brink, H, Van der Walt, C & Van Ransburg, G. 2010. *Fundamentals of research methodology for health care professionals*. 2nd edition. Cape Town: Juta.

Bruce, JC, Klopper, HC & Mellish, JM. 2011. *Teaching and learning the practice of nursing*. 5th edition. Cape Town. Heinemann.

Caka, EM & Lekalakala-Mokgele, S. 2013. 'The South African Military Nursing College pupil enrolled nurses' experiences of the clinical learning environment. *Health SA Gesondheid* 18(1): 611, 11. From: http://dox.doi.org/10.4102/hsag.v18i1.611 (accessed 02 June 2014).

Cambridge Advanced Learner's Dictionary. 2013. 4th edition. Cape Town: Cambridge University Press.

Dale, B, Leland, A & Dale, JG. 2013. What Factors facilitate good learning experiences in clinical studies in nursing: Bachelor students' perceptions? *International Scholarly Research Notices* (*ISRN) Nursing* 2013:1-7.

Daniels, FM, Linda, NS, Bimray, P & Sharps, P. 2014. Effect of increased student enrolment for a Bachelor of nursing programme on health care service delivery. *South African Journal of Higher Education* (*SAJHE)* 28(6):1750-1761.

De Swart, HC. 2012. Guidelines for professional socialization of student nurses. Unpublished D Litt et Phil. Pretoria: UNISA.

De Vos, AS, Strydom, H, Fouché, CB & Delport, CSL. 2011. *Research at grass roots for the social sciences and human service professions*. 2nd edition. Pretoria: Van Schaik.

Dlamini, CP. 2010. Perceptions of students and nurse educators on the integration of theory and practice in nursing education in Swaziland: An exploratory descriptive study. Unpublished master's dissertation. KwaZulu-Natal: University of KwaZulu-Natal.

D'souza, MS, Venkatesaperumal, R, Radhakrishnan, J & Balachandran, S. 2013. Engagement in clinical learning environment among nursing students: Role of nurse educators. *Open Journal of Nursing* 3:25-32.

Du Toit, EF. 2013. Nursing students' exposure to the clinical learning environment and its influence on their specialization choice. Unpublished master's dissertation. Potchefstroom: North West University.

Elcigil, A & Sari, HY. 2011. Facilitating Factors in clinical education in nursing. *Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi (DEUHYO ED)* 4(2):67-71.

Emmanuel, V. 2013. Creating supportive environments for students. *Nursing Times* 109:37. From: www.Nursingtimes.net (accessed 02 June 2014).

Eta, VEA, Atanga, MBS, Atashili, J & D'Cruz, G. 2011. Nurses and challenges faced as clinical educators: a survey of a group of nurses in Cameroon. *Pan African Medical Journal* 8:28.

Gaberson, KB & Oermann, MH. 2010. *Clinical teaching strategies in nursing*. 3rd edition. New York: Springer.

Grove, SK, Burns, N & Gray, JR. 2013. *The practice of nursing research appraisal, synthesis, and generation of evidence*. 6thedition. Saunders: Elsevier.

Herman, D. 2012. *Nursing shortage forces more ICU closures*. Health System Trust. From: F:\NEWS DOWN LOADS\Nursing shortage forces more ICU closures Health Systems Trust.mht (accessed 15 May 2013).

Hughes, SJ & Quinn, FM .2013. *Quinn's principles and practice of nurse education*. 6th edition. London: North Way.

Jones, SH. 2010. Nursing students' perceptions of working with staff nurses. Unpublished doctoral theses. Montana: Montana State University Bozeman.

Karabulut, N, Aktas, YY & Alemdar, DK. 2015. The relationship of clinical learning environment to nursing students' academic motivation. *Ošetřovatelství* 17(1): 9-15.

Kgafele, NS, Coetzee, I & Heyns, T. 2015. Clinical accompaniment: let the voice of the pre-graduate students count. *Africa Journal of nursing and Midwifery* 17 (supplement):s222–s241.

Kgafela, NS. 2013. Views of pre-graduate students regarding clinical accompaniment at a Nursing Institution in Gauteng. Unpublished master's dissertation. Pretoria: University of Pretoria.

Killam, LA & Carter, LM. 2010. Challenges to the student nurse on clinical placement in the rural setting: a review of the literature. *Rural and Remote Health* 10:1523, 14. From: http://www.rrh.org.au (accessed 20 May 2013).

Klerk, K. 2010. Clinical supervision in selected hospital, Cape Town: Reflection on registered nurses lived experiences. Unpublished master's dissertation. Cape Town: University of Western Cape.

Koch, J, Everett, B, Philips, J & Davidson, PM. 2014. Diversity characteristics and the experiences of nursing students during clinical placements: A qualitative study of student, faculty and supervisors' views. *Contemporary Nurse* 49:1:15-26.

Lekalakala-Mokgele, E & Caka, EM. 2015. Facilitative and obstructive Factors in the clinical learning environment: experiences of pupil enrolled nurses'. *Curationis* 38(1):1263-1267. From: http://dx.doi.org/10.4102/curationis (accessed 05 June 2014).

Letswalo, LO & Peu, MD. 2015. Perceptions of student nurses regarding accompaniment in the clinical environment in Gauteng Province, South Africa. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)* (Supplement 1:2):351-368.

Limpopo Department of Health. 2015. *Limpopo hospitals and clinics*. From: http:// www.dhsd.Limpopo.gov.za (accessed 26 May 2014).

Limpopo Map. 2014. *The council for health service accreditation of South Africa*. From http://www.cohsasa.co.za (accessed 26 May 2014).

LoBiondo-Wood, G & Haber, J.2010. *Nursing research methods and critical appraisal for evidence-Based practice*. 7th edition. Mosby: Elsevier.

Lovecchio, CP, Dimattio, MK & Hudacek, S. 2015. Predictors of undergraduate nursing student satisfaction with clinical learning environment: A secondary analysis. *Nursing Education Perspectives* 36(4):252-254.

Ma, F, Li, J, Liang, H, Bai, Y & Song, J. 2014. Baccalaureate nursing students' perspectives on learning about caring in China: A qualitative descriptive study. *BMC Medical Education* 14:42. From: http://www.biomedcentral.com/1472-6920/14/42 (accessed 26 May 2014).

Magobe, NBD, Beukes, S & Müller, A. 2010, Reasons for students' poor clinical competencies in the Primary health care: Clinical nursing, diagnosis treatment and care programme. *Health SA Gesondheid* 15(1):525-531.

Magnier, K, Wang, R, Dale, VHM, Murphy, RA, Hammond, RA, Mossop, L, Freeman, SL, Anderson, C & Pead, MJ. 2011. Enhancing clinical learning in the workplace: A qualitative study. *Journal of the British Veterinary Association (BVA)* 169(26):682.

Makhakhe AM. 2010. Nurses' experience of the transition from student to professional practitioner in a public hospital in Lesotho. Unpublished master's dissertation. Potchefstroom: North-West University.

Male nurses break through barriers to diversify profession. 2011. *Robert Wood Johnson Foundation (RWJF)*, 28 September, 1. From: H:\Male Nurses Break through Barriers to Diversify Profession - Robert Wood Johnson Foundation.mht (accessed 20 September 2016)

Mampunge, F & Seekoe, E. 2014. Preparedness of final year nursing students regarding clinical practice. School of Nursing Science, University of Fort Hare, East London, South Africa. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)* (Supplement 3):58-66.

Masakona, R. 2013. Enhancement of clinical teaching for undergraduate students in primary health care facilities. Unpublished master's dissertation. Potchefstroom: North West University.

Mellish, JM, Brink, HIL & Paton, F. 2000. *Teaching and learning the practice of nursing*. 4th edition. Sandton: Heinemann.

Mellish, JM & Paton F. 2010. *An introduction to the ethos of nursing: a text for basic student nurses*. 2nd edition. Sandton: Heinemann.

Men in nursing occupations: an American community survey. 2013. Washington, DC: US Census Bureau, February: 1-7. From https://www.census.gov (accessed 28 September 2016).

Meyer, SM, Naude, M, Shangase, NC & Van Niekerk, SE. 2011. *The nursing unit manager a comprehensive guide.* 3rd edition. Cape Town: Paarl Media.

Mhlaba, GT. 2011. Exploring Clinical mentoring of the students in the clinical settings as perceived and experienced by the student nurses and clinical mentors in a selected nursing college campus in Durban. Unpublished master's dissertation. Durban: University of KwaZulu-Natal.

Mlek, M. 2011. Nursing students' learning experiences in clinical settings: Stress, anxiety and coping. Unpublished master's thesis. Montreal: Concordia University Montreal, Quebec.

Mogale, LC. 2011. Student nurses' experiences of their clinical accompaniment. Unpublished master's dissertation. Pretoria: University of South Africa.

Mongwe, RN. 2007. Student nurses' experiences of the clinical field in the Limpopo Province as learning field: a phenomenological study. Unpublished doctoral thesis. Pretoria: University of South Africa.

Mothiba, TM, Lekhuleni, ME, Maputle, MS & Nemathanga LH. 2012. University of Limpopo student nurses' clinical learning experiences in a public hospital at the Capricorn district, Limpopo Province, South Africa. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)* (Supplement 2):195-204.

Mothokoa, NT. 2015. The experiences of recognition of prior learning nursing candidates related to the four year comprehensive nursing training programme at a nursing education institution in Gauteng. Unpublished master's dissertation. Pretoria: University of South Africa.

Motsilanyane, PT. 2015. Exploring the clinical accompaniment challenges second-year students experience at nursing education institution in North West. Unpublished master's dissertation. Pretoria: University of Pretoria.

Msiska, G, Smith, P & Fawcett, T. 2014. The "life world" of Malawian undergraduate student nurses: the challenges of learning in resource poor clinical settings. *International Journal of Africa Nursing Science* 1:35-42.

Naranjee, P. 2012. Bridging programme graduate's perceptions of their preparedness to manage a nursing unit. Unpublished master's dissertation. Pretoria: University of South Africa.

Nasrin, H, Soroor, P & Soodabeh, J. 2012. Nursing challenges in motivating nursing students through clinical education: a grounded theory study. *Nursing Research and Practice* 2012:1-7.

Northern Province College of Nursing. 1997. *Curriculum for education and training of nurses (general, psychiatric and community) and midwife leading to registration* (R.425, 22 February 1985, as amended). Limpopo Province: Giyani Campus.

Nxumalo, SJ. 2011. Factors that affect theory-practice integration of student nurses at a selected Campus of Nursing College in Limpopo Province. Unpublished master's dissertation. Pretoria: University of South Africa.

Okoronkwo, IL, Onyia-Pat, JL, Agbo, MA, Okpala, PU & Ndu, AF. 2013. Students' perception of effective clinical teaching and teacher behaviour. *Open Journal of Nursing* 3:63-70.

Padayachee, P. 2014. The role of the clinical preceptor in enhancing nursing education at a Nursing College. Unpublished doctoral thesis. Western Cape: Stellenbosch University.

Pera, SA & Van Tonder, S. 2009. *Ethics in health care*. 2nd edition. Lansdowne: Juta.

Polit, DF & Beck, CT. 2012. *Nursing research general and assessing evidence for nursing practice*. 9th edition. Philadelphia: Wolters Kluwer Lippincott.

Rafiee, G, Moattari, M, Nikbakht, AN, Kojuri, J & Mousavinasab, M. 2014. Problems and challenges of nursing students' clinical evaluation: a qualitative study. *Iranian Journal of Nursing and Midwifery Research* 19(1):41-49.

Rahmani, A, Zadeh, Z, Abdullah-Zadeh, F, Lotfi, M, Bani, S & Hassanpour, S. 2011. Clinical learning environment in viewpoint of nursing students in Tabriz University of Medical Sciences. *Iranian Journal of Nursing and Midwifery Research* 16(3):253-256.

Rani, S, Brennan, M & Timmons, D. 2011. Clinical learning environment in a specialist forensic mental health setting: perception of Irish Student Nurses*. All Ireland Journal of Teaching and Learning in Higher Education (AISHE-J)* 3(2):17.

Richards, EL, O'Neil, E, Jones, C, Davis, L & Krebs, L. 2011. Role of nursing students at rural nurse-managed clinics. *Journal of community Health Nursing* 1:23-28.

Rikhotso, SR, Williams MJS & De Wet, G. 2014, 'Student nurses' perceptions of guidance and support in rural hospitals', *Curationis* 37(1):1164-1170. From: http://dx.doi.org/10.4102/ (accessed 26 May 2013).

SANC see South African Nursing Council.

Searle, C, Human, S & Mogotlane, SM. 2013. *Professional practice: A Southern African nursing perspective*. 5th edition. Johannesburg: Heinemann.

Sedgwick, M & Harris, S. 2012. A critique of the undergraduate nursing preceptorship model. *Nursing Research Practice* 2012:1-6.

Seekoe, E. 2014. A model for mentoring newly-appointed nurse educators in nursing education institutions in South Africa. *Curationis* 37(1):132.

Sengstock, BJ. 2009. A grounded theory study of nursing students' experiences in the off campus clinical setting. Unpublished master's thesis. Queensland: Central Queensland University

Senti, NI & Seekoe, E. 2014. Psycho-social constraints affecting clinical skills of nursing students at Lilitha College of Nursing, East London, South Africa. *African Journal for Physical, Health Education, Recreation and Dance (AJPHERD)* (supplement 3):79-88.

Setati, MC. 2013. The perceptions of professional nurses on student mentorship in clinical areas: a study in Polokwane Municipality hospitals, Limpopo Province. Unpublished master's dissertation. Pretoria: University of South Africa.

Setumo, LJ. 2013. Midwifery students' experiences of clinical teaching at Sovenga Campus (Limpopo College of Nursing), Limpopo Province. Unpublished master's dissertation. Pretoria: University of South Africa.

Shamase, N. 2012. Limpopo hospitals in dire state. News National. From: F:\NEWS DOWNLOADS X2\Limpopo hospitals in dire state News National *Mail & Guardian.*mht (accessed 07 March 2013).

Shezi, BE. 2014. The needs of community service nurses with regard to supervision and clinical accompaniment. Unpublished mini dissertation. Potchefstroom: North-West University.

Sibiya, NE & Sibiya, MN. 2014. Work integrated learning experiences of primary health care post-basic nursing students in clinical settings: a university of technology context. Durban, South Africa. *South African Journal of Higher Education* (*SAJHE)* 28(6):1943-1958.

Sinclair, JM. 2013. New Zealand Nursing student's experiences of ethical issues in clinical practice: a descriptive study. Unpublished master's thesis. Taradale, New Zealand: Eastern Institute of Technology.

South Africa (Republic). 2005. *Nursing Act, no.33, 2005*. Pretoria: Government Printer.

South African Nursing Council (SANC). 2005. *Regulation relating to the approval of and the minimum requirements for the education and training of a nurse (General, Psychiatric and Community) and Midwifery R.425 leading to registration in terms of section 45(1) of the Nursing Act 50 of 1985 (as amended)*. Pretoria: Government Printer.

South African Nursing Council (SANC). 2006. *Regulations regarding registers for students. Regulation R.3735, in terms of section 11 (1) of the Nursing Act, 69 of 1957.* Pretoria: Government Printer.

South African Nursing Council (SANC). 2013a. *Nursing education and training standards, under the provision of Nursing Act, 2005*. Pretoria: Government Printer.

South African Nursing Council (SANC). 2013b. *The national strategic plan for nurse education, training and practice*. Pretoria: Government Printer.

South African Nursing Council. 2013c. *Regulations Relating to the accreditation of institutions as nursing education institutions. Regulation R.173, in terms of section 58 (1) (g) of Nursing Act, 33 of 2005 (as amended)*. Pretoria: Government Printer.

South African Nursing Council (SANC). 2014. *Competencies for a nurse educator under the provisions of the Nursing Act, 2005*. Pretoria: Government Printer.

South African Nursing Council (SANC). 2015. *Provincial distribution of nursing manpower versus the population of the Republic of South Africa as at December 2014.* Pretoria: Government Printer.

Stenberg, M & Carlson, E. 2015. Swedish student nurses' perception of peer learning as an educational model during clinical practice in a hospital setting: an evaluation study. *BMC Nursing* 14:48. From: http://www.biomedcentral.com/1472-6955/14/48 (accessed 20 September 2016).

Tiwaken, SU, Caranto, LC & David, JJT. 2015. The real world: lived experiences of student nurses during clinical practice in Benguet, Philippines. *International Journal of Nursing Science* 5(2):66-75.

Tshabalala, RN. 2011. Experiences of a group of student nurses regarding mentoring in the clinical practice. Unpublished master's dissertation. Potchefstroom: North-West University.

Volschenk, M. 2009. All in a day's work: Student nurses' perceptions of their clinical learning experiences in a corporate workplace context. Unpublished master's dissertation. Stellenbosch: Stellenbosch University.

Wafaa Gameel, A, Sahar Hassan, AEL, B & Wafaa Hassan, AIS. 2015. Effective clinical learning environment as perceived by nursing students at AL Dawadmi, Applied Medical Sciences College: actual versus preferred characteristics. *International Journal of Nursing Didactics (IJND)* 15(5):1-6. From: http://dx.doi.org/10.15520/ijnd.2015.vol5.iss05.94.01-06 (accessed 19 September 2016).

Walker, S, Dwyer, T, Sander, T, Moxham, L, Broadbent, M & Edwards, K. 2014. Mature aged "baby boomer" students' contributions to understanding nursing education. J*ournal of Nursing Education and Practice* 4(2):94-103.

Watkins, K. 2010. An exploration of personal, relational and collective well-being in nursing students during their training at tertiary education institution. Unpublished master's dissertation. Potchefstroom: North-West University.

Xaba, NP. 2015. The assessment of the facilitation of the clinical training component of an undergraduate nursing programme at a University of Technology. Unpublished master's dissertation. Durban University of Technology: Durban.

ANNEXURES

ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE, DEPARTMENT OF HEALTH STUDIES, UNISA

UNISA university of south africa

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-012714-039

HSHDC/413/2015

Date:	18 March 2015	Student No:	3246-567-0
Project Title:	Challenges facing student nurses in the clinical learning environment in Limpopo Province South Africa.		
Researcher:	Tendani Constance Mathebula		
Degree:	MA in Nursing Science	Code:	MPCHS94
Supervisor:	Prof MJ Oosthuizen		
Qualification:	D Litt et Phil		
Joint Supervisor:	-		

DECISION OF COMMITTEE

Approved [√] **Conditionally Approved** [ ]

pp
Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

for **Prof MM Moleki**
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES

ANNEXURE B: PERMISSION TO CONDUCT THE STUDY: PROVINCIAL RESEARCH COMMITTEE

To: The Provincial Research Committee

PERMISSION TO CONDUCT THE STUDY

I am a nurse educator at Limpopo College of Nursing. I am part time student at University of South Africa presently engaged in a research project entitled:

Challenges facing student nurses in clinical learning environment in Limpopo Province.

My supervisor is Prof MJ Oosthuizen at the Department of health studies. The objective of the study is to identify challenges that affect education and training of student nurses and to device strategies to address the problems in the clinical learning environment in Limpopo Province.

In order to complete the study I need to collect data from the student nurses who enrolled for Comprehensive programme (R.425) at Limpopo College of nursing at Giyani, Thohoyandou and Sovenga Campus and only level two (2),level three (3) and level four (4) are chosen for the study. The identity of the institution and of students will not be used and only the researcher and statistician will have access to the completed questionnaire. There is no harm associated with the study.

All respondents reserve the right to withdraw from the study at any stage without any obligation. Student will need only 45 minutes to complete the questionnaire. The direct benefit to the students is that they will have had opportunity to share their difficulties in the clinical facilities with the researcher. Through the recommendation which will be recommended future student nurses will be able to complete clinical work books according to the College requirements. Education and training facilities will benefit as they will be able to produce a quality trained student nurses. Patients and community at large will be nursed by professional nurses who are competent. Department of health will benefit since they will be reduced lawsuits for nurses. The summary of the research findings will be availed on request.

My contact details are:

Cell number: 0826998409

Email address: tendanimathebula@webmail.co.za

…….. ……

Signature of the researcher Date

ANNEXURE C: PERMISSION TO CONDUCT THE STUDY: THE VICE- PRINCIPALS

To: The Vice-Principal (Giyani, Sovenga and Thohoyandou Campus)

PERMISSION TO CONDUCT THE STUDY

I am a nurse educator at Limpopo College of Nursing – Giyani Campus. I am part time student at University of South Africa presently engaged in a research project entitled:

Challenges facing student nurses in clinical learning environment.

My supervisor is Prof MJ Oosthuizen at the Department of health studies. The objective of the study is to identify challenges that affect education and training of student nurses and to device strategies to address the problems in the clinical learning environment in Limpopo Province Mopani District.

In order to complete the study data was collected from the student nurses who enrolled for Comprehensive programme (R.425) at Limpopo College of nursing-Giyani Campus and only level two (2), level three (3) and level four (4) are chosen for the study. The identity of the institution and of students will not be used and only the researcher and statistician will have access to the completed questionnaire. There is no harm associated with the study.

All respondents reserve the right to withdraw from the study at any stage without any obligation. Student will need only 45 minutes to complete the questionnaire. The direct benefit to the students is that they will have had opportunity to share their difficulties in the clinical facilities with the researcher. Through the guideline developed student will be able to meant 80% of clinical procedures as required by Limpopo College of Nursing. Education and training facilities will benefit as they will be able to produce a quality trained student nurses. Patients and community at large will be nursed by professional nurses who are competent. Department of health will benefit since they will be reduced lawsuits for nurses. The summary of the research findings will be availed on request.

My contact details are:

Cell number: 0826998409

Email address: tendanimathebula@webmail.co.za

…….. ……

Signature of the researcher Date

ANNEXURE D: PERMISSION GRANTED TO CONDUCT THE STUDY: DEPARTMENT OF HEALTH, PROVINCIAL RESEARCH COMMITTEE

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Latif Shamila

Ref:4/2/2

Mathebula TC
UNISA

Greetings,

RE: Challenges facing student nurses in the clinical learning environment in Limpopo Province, South Africa.

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
   - Research must be loaded on the NHRD site (http://nhrd.hst.org.za) by the researcher.
   - Further arrangement should be made with the targeted institutions.
   - In the course of your study there should be no action that disrupts the services.
   - After completion of the study, a copy should be submitted to the Department to serve as a resource.
   - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
   - The above approval is valid for a 3 year period.
   - If the proposal has been amended, a new approval should be sought from the Department of Health.

Your cooperation will be highly appreciated.

Head of Department

30/04/2015
Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: http/www.limpopo.gov.za

ANNEXURE E: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (GIYANI CAMPUS)

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING: GIYANI CAMPUS

04-05-2016

MRS. T.C MATHEBULA
GIYANI CAMPUS

PERMISSION TO CONDUCT A RESEARCH STUDY

Permission is hereby granted to research the topic "challenges facing student nurses in clinical learning environment".

Please ensure that classes are not interrupted and adhere to ethical principles.

Yours Truly

Vice Principal

E.T Rikhotso

Private Bag X9658 GIYANI, 0826
Tel: (015) 812 0330/1/2 or (015) 812 0123/0213 Fax: (015) 812 0123
Website: http/www.limpopo.gov.za

The heartland of Southern Africa – Development is about people!

ANNEXURE F: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (SOVENGA CAMPUS)

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

LIMPOPO COLLEGE OF NURSING:

SOVENGA CAMPUS

To: TC Mathebula

From: The Acting Vice Principal

Date: 9/5/2016

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

The above matter has reference:

Permission to conduct a research study on **challenges facing students nurses in the clinical learning environment** is hereby granted.

Sovenga campus as a targeted institution to conduct the study has no objection, provided your presence does not disrupt or compromise students learning activities.

Your cooperation in this regard would be appreciated

TJ Gwangwa

.....

Acting Vice Principal

Private Bag X1122, SOVENGA, 0727
Houtbosdorp Road behind Mankweng Hospital, Sovenga, 0727 Tel: 015 267 1114 Fax: 015 267 9372
Website: http/www.dhsd.limpopo.gov.

The heartland of Southern Africa –Development is about people!

ANNEXURE G: PERMISSION GRANTED TO CONDUCT THE STUDY: VICE-PRINCIPAL (THOHOYANDOU CAMPUS)

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
LIMPOPO COLLEGE OF NURSING: THOHOYANDOU CAMPUS

Enquiries: Tshiswaise MI

Tel No.:015 9641567

Date: 2016 .05.10

Ms Mathebula TC

RE: PERMISSION TO COLLECT DATA ON CHALLENGES FACING STUDENT NURSES IN THE CLINICAL LEARNING ENVIRONMENT IN LIMPOPO PROVINCE SOUTH AFRICA

The above matter refers:

The above matter refers:

1. Permission to collect data on the above mention study has been granted as it has been permitted by the Provincial Ethics committee.
2. You are also requested arrange on when to collect data.
3. Hoping that you will find this in order.

Thank you

Tshiswaise

Acting Vice Principal (Thohoyandou Campus)

Private Bag X919, SHAYANDIMA, 0945, Vhembe District
Next to Tshilidzini Hospital along Punda Maria Road
Tel: (015) 964 1516/8 . Fax: (015) 964 1517
Website; http/www.limpopo.gov.za

ANNEXURE H: CONSENT FORM

Title of the research project: challenges facing student nurses in the clinical learning environment in Limpopo province Mopani District.

Name of the researcher: Mathebula T.C Contact number: 0826998409

Dear: student

My name is Mathebula Tendani Constance I am a nurse educator at Limpopo College of nursing Giyani Campus. I would like to invite you to participate in a research project that aims to investigate on **challenges facing student nurses in the clinical learning environment in Limpopo province South Africa.**

Please take some time to read the information presented here, which will explain the details of the project and contact me if you require further explanation or clarification of any aspect of the study. Your participation is **entirely voluntary** and you are free to decline to participate. If you want to participate to the study, it will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Research Ethic Committee at University of South Africa (UNISA), Department of Health in Limpopo Province and will be conducted ethically. The study will be conducted at Limpopo College of Nursing at Giyani, Thohoyandou and Sovenga Campus. Only level two (2), three (3) and four (4) will be included in the study. The aim of the study is to investigating challenges facing student nurses in the clinical learning environment in Limpopo province. The reason for conducting the study is to devise strategies to address issues that affect nurse education and training in the clinical learning environment in Limpopo Province.

50% of the subjects from the chosen study levels will be included in the study to ensure that the population is not small and it is not large. Questionnaire will be handed over to the respondents to complete.

You're chosen to be a respondent for the study because you are a correct candidate for the information needed. Your responsibility during the study is to provide information concerning the research topic by completing a questionnaire which will be handed over by the researcher and ensure that all questions are filled. The people who will benefit from the study are the future student nurses, patients /clients, education and training institution and Department of health. There are minimum psychological risks involved with the study as the subjects will be expected to share their clinical experienced. Debriefing session will be done after completion of questionnaire and referral for further professional help will be done. The only people who will have access to the questionnaire are the researcher, supervisor and the statistician. There is no payment for participating in the study.

Declaration by the respondent

By signing below, I……agree to take part in a research study entitled challenges facing student nurses in clinical learning environment in Limpopo Province, South Africa. I declare that:

- I have read the information provided and consent form and it is written in a language with which I am fluent and comfortable
- I understand that taking part in this study is voluntary and I have not been pressurized to take part
- I may choose to leave the study at any time and will not be penalized in any way

Signed at (place) ……..on (date)…….2016

……. …….

Signature of respondent signature of witness

Declaration by the researcher…….declare that: I explained the information in the document and I am satisfied that the subjects understands all aspects of the research, as discussed above and no interpreter was used.

ANNEXURE I: LETTER FROM THE EDITOR

Cell/Mobile: 073-782-3923

53 Glover Avenue
Doringkloof
0157 Centurion

23 November 2016

TO WHOM IT MAY CONCERN

I hereby certify that I have edited Tendani Constance Mathebula master's dissertation, **Challenges facing student nurses in the clinical learning environment in Limpopo Province**, for language and content.

IM Cooper

Iauma M Cooper
192-290-4