# Enhancement of clinical teaching for undergraduate students in Primary Health Care facilities

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Dissertation submitted in fulfillment of the requirements for the degree *Magister Curationis* in Health Science Education at the Potchefstroom Campus of the North-West University

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It all starts here ™

NORTH-WEST UNIVERSITY
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POTCHEFSTROOM CAMPUS

# DECLARATION

I, Reginah Masakona, student number 12609927, declare that:

Enhancement of clinical teaching for undergraduate students in Primary Health Care facilities is my own work and all the sources that I used are acknowledged in the reference list.

The study has been approved by the Ethics Committee of the Institutional Office of the North-West University (Potchefstroom Campus), Directorate Research, Policy and Planning of Limpopo Province, as well as public health institutions involved in the study.

The study complies with the research ethical standards of the North-West University: Potchefstroom Campus.

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Mrs R Masakona

September 2013

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I feel that this Magister Curationis Degree in Nursing Education will add value to other postgraduate qualifications I already possess (BCur in Health Service Management and Health Science Education) obtained at the North-West University in 2004. In addition, it will largely enrich my research capabilities to be able to further my other intended postgraduate studies.

**I DEDICATE THIS STUDY TO:**

- The memory of my dear father, I will always remember you.

- My dearest mom, Thabitha: your sense of responsibility and hard work matured me to be the person I am today.

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- My lovely children, Kulani, Makwarela and Dakalo.

- My brother Sydney, my sister, Margareth – I appreciate your support**.**

# ABSTRACT

**Key concepts**: undergraduate students, positive practice environment, primary health care facilities, operational manager, supervisor, nurse educator

The study comprises an investigation of the quality of the clinical teaching environment of undergraduate students in the accredited Primary health care ( PHC) facilities used by a provincial nursing college in Limpopo.

The researcher, who is employed full time in one of the accredited PHC facilities to which undergraduate students are admitted for clinical practice, became aware of the tension between the undergraduate students and professional nurses working in the PHC facility during the performance of clinical practice. Undergraduate students accused the professional nurses of neither supervising them properly during the execution of their clinical practice, nor assessing them on the prescribed practical outcomes. On the other hand, the professional nurses working in the PHC facility complained that undergraduate students were placed at the PHC facilities in large numbers with no clinical accompanist accompanying them.

The research objectives were to determine the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located working in a PHC facility in a district of Limpopo Province, and to formulate recommendations for the professional nurses in PHC districtmanagement to incorporate supervision for undergraduate students in order to enhance clinical teaching for undergraduate students in Primary health care facilities.

The researcher used a quantitative, descriptive, explorative and contextual design. An all-inclusive sampling method was used to select research participants. Participants were undergraduate students of a provincial nursing college in Limpopo. Informed consent was obtained. Ethical approval was obtained from the relevant authorities. Data was collected

by using an internationally validated Clinical Learning Environment Supervision and Nurse Teacher Instrument (Saariskoki & Leino-Kilpi, 2008:259-267)..

Data analysis was done by using descriptive statistics and revealed that the clinical practice environment was not conducive to enhancing practical skills development in the real practical PHC practice.

Evaluation of study, limitations and recommendations for education, research, practice and policy were discussed.

# OPSOMMING

**Sleutelbegrippe:** voorgraadse studente, positiewe praktykomgewing, primêre gesondheidsorg fasiliteite, bedryfsbestuurder, toesighouer, verpleegopvoeder

Die studie behels ’n ondersoek van die gehalte van die kliniese onderrigomgewing van voorgraadse studente in die geakkrediteerde PGS fasiliteite wat deur ’n provinsiale verpleegkollege in Limpopo gebruik word.

Die navorser, wat ’n voltydse pos beklee by een van die geakkrediteerde geriewe waar voorgraadse studente vir kliniese praktyk toegelaat word, het bewus geraak van die spanning tydens die kliniese praktyk tussen die voorgraadse studente en professionele verpleegkundiges wat in die PGS fasiliteite werk. Voorgraadse studente het die professionele verpleegkundiges daarvan beskuldig dat hulle nie behoorlike toesighouding verskaf tydens die uitvoering van hulle kliniese praktyk nie, en hulle ook nie ten opsigte van die voorgeskrewe praktiese uitkomste evalueer nie. Aan die ander kant het die professionele verpleegkundiges wat in die PGS fasiliteite werk, gekla dat die voorgraadse studente in groot getalle by die PGS fasiliteite geplaas word, met geen kliniese begeleier wat hulle begelei nie.

Die navorsingsdoelwitte was om die gehalte van PGS fasiliteite leer te bepaal soos dit gegradeer word deur voorgraadse studente wat in ’n PGS fasiliteite in ’n distrik van Limpopo werk, en om aanbevelings te formuleer vir die distriksbestuur om toesighouding vir voorgraadse studente te inkorporeer.

Die navorser het ’n kwantitatiewe, deskriptiewe, eksploratiewe en kontekstuele ontwerp gebruik. ’n Alles-insluitende steekproefnemingsmetode is gebruik om deelnemers te kies. Deelnemers was voorgraadse studente van ’n provinsiale verpleegkollege in Limpopo. Ingeligte toestemming is verkry. Etiese goedkeuring is van die betrokke owerhede verkry. Data is met behulp van ’n internasionaal-gevalideerde CLES + T-instrument ingesamel.

Data-ontleding is gedoen met behulp van deskriptiewe statistiek en dit het getoon dat die kliniese praktykomgewing nie vir die verbetering van praktiese vaardigheidsontwikkeling in die werklike praktiese PGS fasiliteite bevorderlik was nie.

Die evaluering van die studie, beperkings en aanbevelings vir onderrig, navorsing, praktyk en beleid is bespreek.

# LIST OF ABBREVIATIONS

| | |
|---|---|
| **CLES** | Clinical Learning Environment and Supervision |
| **CLES + T** | Clinical Learning Environment Supervision and Nurse Teacher Instrument |
| **CPAS** | College Principles Association |
| **CTA** | Clinical Teaching Associates |
| **FUNDISA** | Forum of University Nursing Deans in South Africa |
| **IMCI** | Integrated Management of Childhood Illness programme |
| **M** | Mean |
| **MSA** | Kaiser's Measure Sample Adequacy |
| **N** | Target population for the research study |
| **n** | Actual population participating in the research study |
| **NEA** | Nursing Education Association |
| **NEI** | Nursing Education Institution |
| **PEPSA** | Private Health Education Providers of South Africa |
| **PHC** | Primary health care |
| **PPE** | Positive practice environment |
| **SANC** | South African Nursing Council |
| **SAS** | Statistical Analysis System |
| **SD** | Standard deviation |
| **WHO** | World Health Organisation |

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# CHAPTER 1
# OVERVIEW OF STUDY

## 1.1 INTRODUCTION

The study comprised an investigation of the quality of the clinical teaching environment for the undergraduate students in primary health care (PHC) facilities used by a provincial nursing college in Limpopo. This chapter offers an overview of the study. The overview included the introduction and background to the study, which assisted the researcher in formulating the research statement, research question and objectives for this study. The departure point for this research study was outlined in the researcher's meta-theoretical assumption and the theory that underpin this study. The research design and method are discussed, followed by the ethical considerations. This chapter concludes with a summary.

## 1.2 BACKGROUND AND RATIONALE FOR THE STUDY

PHC is essential health care service based on practical, scientific and social methods and technology with the ultimate aim of ensuring that health services are universally accessible to all community members. PHC services are underpinned by community involvement and the rendering of a health service at a cost the country can afford (Dennill *et al*. 1999:2). Meyer *et al. (*2004:22) indicate that PHC services are the first level of contact with health services in the national health system and bring health care as close as possible to where people live and work. This constitutes the first element of an on-going heatlh care process.

The provincial nursing college in which the study took place is located in one of the districts of Limpopo and offers nursing training as stipulated in Regulation 425 of the South African Nursing Council (SANC) Act 33 of 2005 (SANC, 2005). This training is a diploma course in nursing that leads to registration as a professional nurse in general, community and psychiatric nursing science and midwifery after completion of the theory and practical components. Undergraduate students placed in the accredited PHC facilities are the second, third and fourth-year undergraduate students. The second-year undergraduate students are allocated to the practical environment to acquire competency

in caring for the sick and healthy child. The third-year undergraduate students are allocated to PHC-accredited facilities to provide pregnant women with antenatal, birth or postnatal care and care for new-born babies. Lastly, the fourth-year undergraduate students are allocated to obtain clinical skills in managing the psychiatric conditions of members in the community.

The researcher was appointed in one of the accredited PHC facilities where undergraduate students were allocated. This enabled the researcher to notice that the operational manager and professional nurses of the PHC facilities did not have time to see if the undergraduate students were competent in their expected practical outcomes (Bell, 2008:47). This problem was furthermore aggravated by large numbers of undergraduate students being placed in PHC facilities (Hathorn *et al*., 2009:767-769).

This problem is experienced globally as well, as Marshburn *et al*. (2009:426) and Cannon and Boswell (2010:65) indicated that nursing shortages is one of the greatest challenges affecting health care delivery. Internationally, the supply of adequate numbers of nurses to the health services has always been a challenge (McCarthy *et al*., 2007:24), and the provision of appropriate clinical supervision of undergraduate students is acknowledged to be problematic.

Lekhuleni *et al*. (2004:16-23) indicated that undergraduate students' reflective journals portrayed their perceived dissatisfaction with their learning experiences, indicating that neither nurse educators nor PHC operational managers and professional nurses provided adequate support in the clinical learning environment during undergraduate students' clinical placements in Limpopo Province. The clinical learning environment refers to the environment in which undergraduate students employ skills relating to the needs of patients (Klopper, 2008:62). The ideal situation is that undergraduate students should be accompanied and supervised in the clinical situation by professional nurses to ensure facilitation of clinical learning and to master the practical skills required to be able to work in PHC facilities (Muller 2002:102; Ehlers, 2006:650). Muller (2002:106) emphasised that undergraduate students are in the process of developing professionally. Therefore, the professional nurse who supervises undergraduate students in the PHC facilities should be aware of the specific learning outcomes stated by the nursing education institution (NEI) and should ensure that the undergraduate students develop and master the acquired

clinical skills to be competent professional practitioners after their training (Farkhonden & Masoumi, 2005:412).

Furthermore, nursing is a practice-based profession. Clinical education is therefore an essential part of the undergraduate nursing curriculum. The quality of nursing education depends largely on the quality of clinical experience. These experiences are central to the undergraduate students' preparation for entering the workforce as a competent and independent practitioner (Badgett, 2003:32; Kilminster & Jolly, 2005:574).

Some barriers identified with the literature search regarding the supervision and accompaniment of nursing students in the clinical practice environment indicated that the shortage of professional nurses in the PHC clinics was one of the greatest challenges affecting heatlh care delivery and the supervision of undergraduate students (Marshburn *et al.,* 2009:426; Frankel, 2009:1-5). The PHC professional nurses have a dual role, namely to supervise undergraduate students and to render high quality care for patients visiting the PHC facilities (Newton *et al*., 2010:1372). This double function has been highlighted as both demanding and frustrating for the professional nurse, due to the pressure of clinical commitments and a lack of time to supervise undergraduate students (Lindgren & Athlin, 2009:363). The on-going shortage of professional nurses in PHC facilities to supervise undergraduate students necessitates a re-evaluation of supervision and accompaniment system and the quality of the clinical teaching environment in PHC facilities (McNeal *et al*., 2006:10; Severinson, 2002:1272). It is, however, also a fact that in an era of nursing shortages, professional nurses should support, encourage and teach students to provide quality care (Marshburn *et al*., 2009:427).

Another barrier is that professional nurses practising in PHC clinics in rural areas often experience greater flexibility in planning the delivery of quality patient care, but frequently do not have enough resources such as drugs, transport for specimens taken from patients, ambulance services for emergency referrals and telephones (Bos *et al*., 2011:1785). All these barriers undermine the effective supervision of undergraduate students and will affect the quality of the clinical teaching environment for undergraduate students in PHC facilities. Quality of clinical teaching is crucial to the professional development of undergraduate students (Bruce *et al.,* 2011:256).

Farkhonden and Masoumi (2005:412) indicate that the existence of the theory-practice gap in nursing education has been an issue of concern as a barrier for many years and it reduces learning opportunities for undergraduate students. This emphasises the problem, as PHC clinical practice and supervision of students forms an integral part of nursing education to ensure the integration of theory and practice (Beukes *et al.,* 2010:2, Spouse, 2008:514). The theoretical knowledge gained in the classroom should be applied in the practical situation and undergraduate students should practice skills under the supervision of a professional nurse, who is affected by the barriers mentioned above (Du Plessis, 2004:67; Elcigil & Yildirim, 2006:118).

The researcher observed that the undergraduate students were placed in the PHC facilities where the professional nurses were expected to supervise and accompany them. These professional nurses were of the opinion that undergraduate students only increased their already high workload (Mochaki, 2001:35-54). The SANC requires undergraduate students to be supervised by professional nurses, yet this responsibility is taken for granted by NEIs. According to Matsumura *et al*., (2004:10), educators do not consider the workload, time, monetary, and other nursing perspectives of professional nurses working in PHC facilities. This study is a sub-study of the research programme: leadership and governance as medominicisms towards excellence in South African health systems.

## 1.3 PROBLEM STATEMENT

The researcher, who is was employed full time in one of the accredited PHC facilities to which undergraduate students were allocated for clinical practice, became aware of the tension between the undergraduate students and the professional nurses during the performance of clinical procedures under supervision at the PHC facility. The undergraduate students accused the professional nurses of neither supervising them properly during the execution of their clinical practice, nor assessing them on the prescribed practical outcomes (Spouse, 2008:515). On the other hand, the PHC professional nurses complained that undergraduate students were placed at the PHC facilities in large numbers with no clinical accompanist accompanying them. The abovementioned discussion of the barriers experienced by professional nurses in the clinical supervision of undergraduate students in the PHC facilities urged the researcher to

describe the quality of the PHC clinical learning environment of accredited facilities as rated by undergraduate students

PHC is considered to be the foundation of nursing and health care in many countries and is an accepted setting for the clinical training of undergraduate students (Lofmark *et al*., 2008:362). Poor PHC focused clinical teaching is of concern to nurses in the PHC context and policy makers, as this is the first contact of a patient with health services in our country. As a result it is pivotal that district management must ensure sure that the PHC professional nurses provide quality clinical teaching for undergraduate students allocated in PHC facilities. Undergraduate students are placed in accredited PHC facilities on the basis of the assumption that these PHC facilities will provide the required quality clinical learning environment to bridge the gap between theory and practice. On the basis of the background the following research questions were posed:

- What is the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province?
- What recommendations can be formulated for the professional nurses in PHC district management to assist them to incorporate supervision for undergraduate students?

## 1.4 OBJECTIVES OF THE STUDY

The objectives of the study are:

- To determine the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province.
- To formulate recommendations for the professional nurses in PHC district management to assist them to incorporate supervision for undergraduate students.

## 1.5 RESEARCHER'S ASSUMPTIONS

In the following section the meta-theoretical and theoretical assumptions are discussed, as they were the departure point for this research study.

### 1.5.1 Meta-theoretical assumptions:

The meta-theoretical assumptions referred to the researcher's beliefs regarding man's origin and the world in which he lives (Botes, 2002:9). The researcher supports the Christian philosophy that is centred in the Bible as the source of truth, and the Holy Trinity, the union of Father, Son and Holy Spirit as only God, our Father, and the Creator of the universe and everything it entails; the Son of God and our Saviour who died on the cross for man's sins and acts as mediator between us and the Father, our God; and the Holy Spirit as helper and consolation in faith, and forever with man. Galatians 5:22-23 explains that God required man to live a life of excellence, holiness and obedience to Him, and to grow on a daily basis in the character of Christ, displaying his love, joy, peace, patience, kindness, faithfulness, goodness, gentleness and self-control in thoughts and actions towards all people (Bible, 1996).

**Man**

Man refers to a total being, indivisibly body-psyche-spirit in inseparable dynamic involvement with God, the self, fellow man, time and the world at large. In this study, man refers to the undergraduate students and professional nurses working at the PHC facilities serving patients who are all God-created, and unique, created in His image. Every human being is called by God to love others as much as he loves himself and to love God with all his heart, mind, soul and strength.

The **professional nurses** working in the PHC facility with an obligation according to God's love to allow undergraduate students to grow by grooming them in the profession. The professional nurses should guide and support the undergraduate students in their learning process through accompaniment and supervision. The **undergraduate students** have the obligation to practise their clinical skills, to be educated and grow professionally (Meyer *et al*., 2004:28).

**Environment**

The clinical environment as meta-theoretical concept refers to the action taken to achieve the determined goal, which is to deliver competent undergraduate students who should master the clinical skills required to work in a PHC facility. In this study the action was to ensure an optimal PHC clinical learning environment for undergraduate students to ensure effective clinical learning. The undergraduate students needed to be motivated to achieve the goal of clinical competence with guidance, support and encouragement from

motivated professional nurses who create a quality clinical environment for undergraduate students in the PHC facilities.

**Nursing**

According to the Nursing Act No. 33 of 2005 (SANC, 2005), nursing is a caring profession practised by a professional nurse. Nursing is an interactive, interpersonal process between the professional nurse and the patient. In this study, nursing was seen as a goal-directed service that is rendered to patients visiting the PHC facility for care. The nurse is there to nurture the patient and to ensure that all services provided are of a high standard. By allowing undergraduate students to conduct clinical practice under supervision of the professional nurses, the undergraduate students also learn the "Batho Pele" principles, which focus on developing a nurturing attitude, which is essential to patient care.

**Health**

The researcher agrees with the World Health Organisation's (WHO) definition of health (WHO, 1948). Health is a status of complete physical, mental and social well-being and not merely the absence of disease. In this study the professional nurses in the PHC facility should allow the undergraduate students to conduct their clinical practice in such a way that it enhances all aspects of the patient's health.

### 1.5.2 Theoretical assumptions

Saarikoski (2002:259) did a study on how undergraduate students experienced their clinical learning environment and the supervision they received from professional nurses working in a hospital environment. The other aim of the abovementioned author's study was to develop and test a quantitative instrument to measure the effectiveness of the Clinical Learning Environment and Supervision (CLES) as perceived by undergraduate students. This instrument was tested and validated in a hospital environment. For this study the researcher adapted the instrument for use in the PHC context.

The adapted Clinical Learning Environment, Supervision and Nurse Teacher instrument (CLES + T) by (Saariskoski & Leino-Kilpi, 2008: 259-267) instrument consists of background variables (six main headings with related questions/statements under each main heading). The main headings of the instrument are:

PPE (Positive Practice Environments) that enhance good clinical learning.

- Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities.
- Quality service delivery rendered in the PHC facility providing ample opportunity to conduct patient case studies.
- The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision.
- The ability of nurse educators (employed at the nursing college) to bridge the gap between theory and practice.
- The relationship between PHC operational managers and nurse educators during practical accompaniment (Saarikoski & Leino-Kilpi, 2008: 259-267).

The instrument was self-explanatory to the undergraduate students and they completed it by themselves. A Likert-scale instrument was used to indicate their opinion of the questions stipulated under the main headings as they perceived it. The alternatives of the Likert scale are:

1 fully disagree,

2 disagree to some extent,

3 neither agree nor disagree,

4 agree to some extent,

5 fully agree (Saarikoski & Leino-Kilpi, 2008:259; Dominic, 2003:519).

## 1.6 DEFINITION OF CONCEPTS

**Undergraduate students**

Undergraduate student is a person who is in training process at a nursing college or university according to the Nursing Act 33 of 2005 (SANC, 2005). In this study

undergraduate students needs to be supervised by professional nurses in the PHC facilities in order to integrate theory and practice.

**Professional nurse**

The SANC (SANC, 2005) refers to the professional nurse as "a person who is registered as a nurse or midwife in terms of the Nursing Act 33 of 2005, under section 31(a). A professional nurse is qualified and competent to practise independently and provide comprehensive nursing services. For the purpose of this study the **professional nurse** works in a PHC facility and acts as supervisor of undergraduate students to assist them in obtaining the necessary clinical skills and conducting the prescribed procedures that had to be signed off under the supervision of the professional nurse.

**Clinical learning environment**

The clinical learning environment is the environment in which undergraduate students perform skills and procedures relating to the needs of the patients (Klopper, 2008:62). An optimal clinical learning environment is expected to provide the undergraduate students with relevant learning opportunities. Interaction and support from supervisors and educators empower these undergraduate students with the relevant knowledge, skills and a professional maturity that contribute positively to quality health care. The quality of the clinical learning environment is where learning opportunities facilitate undergraduate students' learning through real-time experience and learning (Hosoda, 2006:482).

According to the SANC 2013, Circular No. 8 of 2013, the clinical learning environment is defined as credit-bearing, experiential learning in which undergraduate students work with patients, but they do not form part of the official staff that renders services at the PHC facilities. Undergraduate students have the opportunity to be exposed to expert PHC clinical practice in these facilities. Expert clinical practice includes increased intuitive links between seeing and experiencing clinical practice procedures and consultation of patients in PHC facilities and ways to respond to them (Benner *et al.,* 2009:137).

**Primary health care**

PHC is essential care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible at a cost that the community and the country can afford in order to maintain health at every stage of development in the

spirit of self-reliance and self-determination (Meyer *et al*., 2004:2; Dennill *et al*., 2012:4). In this research study, the PHC facilities are the clinical learning environment for the students.

**Supervisor**

For the purpose of this study a supervisor refers to a professional nurse who guides, supports and assesses undergraduate students doing their clinical practice in a PHC facility (Jooste, 2009:26). Supervision can be individual or in a group (Saarikoski & Leino-Kilpi, 2002:259). Supervision refers to the PHC professional nurses' contribution to the growth and development of the undergraduate students in this study (Harris, 2007:51). Supervisors' attitudes, experience and knowledge influence undergraduate students and can either assist or inhibit them to complete their clinical practice with success (Elcigil & Yildirim, 2006:119).

**Operational manager**

In the PHC facility an operational manager is a PHC trained professional appointed to manage and control all the functions of the PHC facility. They are responsible for quality nursing care in the PHC facility. Their duties are hands-on and role-modelling. They are also responsible for managing their personnel, as well as all other resources in the PHC facility. One of their duties is to ensure that the objectives of the clinical practice of undergraduate students are achieved by the end of their period of training. Therefore it is important that they inform all the professional nurses in their facility about the learning outcomes of the clinical practice of undergraduate students (Muller, 2002:103; Jooste, 2009:15).

**Nurse educator**

In the South African context nursing education institutions (NEI) do not refer to a nurse as a teacher but as a nurse educator. A nurse educator is a person who is employed by the nursing college and who is responsible for theoretical training that involves scientifically based clinical facilitation by using simulation as a teaching aid, and accompanying undergraduate students in PHC facilities. A nurse educator's accompaniment provides the opportunity to assist undergraduate students to bridge the theory-practice gap (Bruce *et al*., 2011:107; Saarikoski, 2002:256).

## 1.7 RESEARCH DESIGN AND METHOD

An overview of the research design and method is provided to orientate the reader to the study.

### 1.7.1 Research design

Burns and Grove (2009:362) view the research design as a blueprint for conducting a study that maximises control over extraneous variables. Such control intensifies the probability that research outcomes will be a true reflection of reality. The research design implies an explicit structure and systematic plan of how a research plan and research procedures will be carried out to find answers to the research question (Brink, 2006:11). A **quantitative research design with descriptive, explorative and contextual strategies was** used in this study in order to describe the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province.

**The descriptive design** is used in studies where information is required in a particular field through the provision of a picture of the phenomenon as it occurs naturally (Brink *et al*., 2006:219; Creswell, 2009:149). This study comprised a description of undergraduate students' rating of a clinical learning environment and supervision received from professional nurses working in PHC facilities, and the role of the nurse educator.

**Exploratory design** explores the dimensions of a research study (Polit & Beck, 2006:5). This exploration assisted the researcher to gain a better understanding of the quality of the clinical teaching environment of undergraduate students in the PHC facilities.

This study was **contextual** and was conducted in a district of Limpopo. The sample of the study was the undergraduate students (N=300; n=294) of a nursing college in Limpopo completing their clinical practice and procedures in accredited PHC facilities under the supervision of professional nurses.

### 1.7.2 Research methods

The research methods provide an overview of the population, sampling, data collection, and data analysis, reliability and validity (Klopper, 2008:69).

#### 1.7.2.1 Population

The concept, population, refers to the entire group of persons (N) that met the criteria the researcher was interested in investigating (Brink *et al*., 2006:123; Creswell, 2009:147). The target population in this study comprised all undergraduate students affiliated to a nursing college who completed their clinical practice and procedure in an accredited PHC facility. Therefore, the target population of this study was 300 undergraduate students (N = 300) (Burns & Grove, 2009:344; Creswell, 2009:147-148). The actual population of n = 294) completed the CLES + T instrument (Saarkoski & Leino-Kilpi, 2008:259-267). The population included second, third and fourth year undergraduate students of the nursing college.

#### 1.7.2.2 Sampling

Sampling refers to the process of selecting a sample, or a part/fraction of the study population, in order to obtain information regarding the phenomenon being studied in a way that represents the population (Brink *et al*., 2006:123).

This study made use of all-inclusive sampling because all the students of the college were allocated to the accredited PHC facilities.

### 1.7.3 Sample size

Sample size refers to the number of participants selected from the population and from whom data was collected. The sample size should be determined before the study is conducted (Burns & Grove, 2009:357). The target population of this study was 300

undergraduate students (N = 300), and the actual population who participated was (n = 294).

### 1.7.4 PILOT STUDY

A pilot study is defined as a smaller version of a proposed study conducted to refine the methodology. It is developed much like the proposed study, using similar participants, the same setting, the same treatment, the same data collection and analysis techniques (Burns & Grove, 2009:44). The purpose of a pilot study is to investigate the feasibility of the proposed study and to detect possible flaws in the data-collection instruments, such as ambiguous instructions or wording, inadequate time limits, as well as whether variables defined by operational definitions can actually be observed and measured.

A pilot study was conducted by using the CLES + T (Saariskoski & Leino-Kilpi, 2008:259-267) instrument in order to identify pitfalls and errors that may be costly so that they can be avoided. Participants in the pilot study comprised ten (n = 10) undergraduate nursing students studying at another provincial nursing college. They were approached to obtain consent and requested to complete the CLES + T instrument voluntarily (Brink *et al*., 2006:101). The pilot-study participants did not form part of the actual sample of this study.

## 1.8 DATA COLLECTION

According to Burns and Grove (2009:441) and Maree (2008:156-170), data collection can be defined as the process of selecting participants and gathering data from these participants. The actual steps of collecting the data are specific to each study and depend on the research design and methods of measurement. In this study, the CLES + T instrument (Saariskoski & Leino-Kilpi,2008:259-267) was adapted and therefore used to obtain data from the undergraduate students to determine the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province.

## 1.9 DATA ANALYSIS

Data was analysed by using descriptive statistics. Descriptive statistics are used to describe various characteristics of data and summarise the data so that it will be manageable (Brink *et al*., 2006:117; Creswell, 2008:151). A descriptive statistical analysis was done with the assistance of the Statistical Consultation Services of the North-West University.

## 1.10 VALIDITY AND RELIABILITY OF THE CLES + T INSTRUMENT

Rigour is striving for excellence in research and it is characterised by the researcher's constant achievement of results with the aid of more precise methods of measurement, structured and validated instruments, representative samples and a controlled study design (Burns & Grove, 2009:34; Rossouw, 2005:178; Welman *et al.,* 2005:132-161).

The instrument that was used in this study is the Clinical Learning Environment Supervision and Nurse Teacher (CLES + T) instrument (Saariskoski & Leino-Kilpi, 2008:259-267). This instrument was validated in a Finnish study (n = 549) that was conducted in 2007 by Saarikoski (2002). After that the instrument has been used by many countries, including South Africa, but not in the PHC facility learning environment. In the original validation of the instrument Cronbach's alpha values of the constructs of the instrument ranged from high (0, 96) to marginal (0, 77). In the sample (n = 1 903) of the study conducted in nine European countries by Warne, Johansson, Papastavrou, Tichelaar, Tomieto, Van den Bossche, Moreno and Saarikoski (2009:595), the reliability coefficients of the sub-dimensions varied between 0,96 and 0,83. The researcher could therefore be assured that the instrument used in this study had been validated. However in this study the adapted instrument also had a high validity and reliability because the Cronbach alpha ranged between (0.60) to (0, 85). (See Chapter 4, Table 4, 7).

## 1.11 ETHICAL CONSIDERATIONS

Ethics involves a set of moral principles regarding expectations of behaviour towards participants, employers, sponsors, other researchers, assistants, educators and undergraduate students (Brink *et al*., 2006:57). This study investigated undergraduate

students rating the quality of clinical learning environment in PHC facilities where they practised their clinical skills. The following ethical considerations as described by Brink *et al*., (2006:30-42) and Burns and Grove (2009:185-206) were taken into account during the planning of this study: (See table1.1.)

Ethical approval for the study was obtained from the following authorities:

- The Ethics Committee of the North-West University (Potchefstroom Campus). Ethical approval number **NWU-00050-12-S1** (see Appendix A).
- The Ethics Committee of the Limpopo Provincial Government (see Appendix B).
- The Ethics Committee of the district involved (see Appendix C).
- Permission from undergraduate students to complete the CLES + T instrument voluntarily (see Appendix D).
- Permission from the college (see Appendix E).

**Table 1.1 Ethical principles adhered to in this study**

| | |
|---|---|
| **Principle of respect for persons** | According to Brink *et al.* (2006:30-33) this principle implies that individuals are autonomous (they have the right to self-determination). The recruited undergraduate students decided themselves whether they wanted to participate in this study without the risk of penalty or prejudice should they refuse. If any form of penalty is applied it could indicate coercion by the researcher, and could therefore interfere with the rights of the participant. The researcher did inform the participants that they may refuse participation and/or withdraw from the study at any point without explaining their reasons for doing so (Burns & Grove, 2009:196). The researcher provided a PowerPoint presentation on the study and the educators at the college then acted as fieldworkers who distributed the questionnaires and ensured that voluntary informed consent was obtained from all participants prior to data collection (Burns & Grove, 2009:196). |
| **Principle of justice** | This principle implies that each participant should be treated fairly and has an equal opportunity to participate in the research (Brink *et al*., 2006:33). The researcher adhered to this principle in this study by making sure that all participants were treated fairly and equally, by ensuring that all the fieldworkers thoroughly understood and applied this principle. The data was collected at the college during the theoretical block therefore; all the second, third, and fourth year undergraduate students were available to participate. They were treated fairly and equally. |
| **The right to fair treatment** | The research received approval from the Ethics Committee of the NWU, the province and the district. The researcher conducted the research project with integrity and in a scientifically honest manner.<br><br>The participants were selected for reasons directly relating to their experiences in the teaching and learning environment in a PHC facility and not because they were available or manipulated by the researcher (Brink *et al.,* 2006:33). |

**Table 1.1 Ethical principles adhered to in this study (continue)**

| | |
|---|---|
| **Principle of beneficence** | There was no direct beneficence for the participants themselves from their participation in this study, but it can assist in improving the clinical learning environment in PHC facilities for future undergraduate students. There was therefore an indirect benefit (Burns & Grove, 2009:200). |

## 1.12 LAYOUT OF DISSERTATION

Chapter 1: Overview of study

Chapter 2: Research design and method

Chapter 3: Literature review

Chapter 4: Research results

Chapter 5: Evaluation of the study, limitations and recommendations for district management, education, research and policy.

## 1.13 CHAPTER SUMMARY

The study comprised an investigation of the quality of the learning and teaching environment for the undergraduate students in PHC facilities. A background was given to explain to the reader why the researcher chose this topic to be investigated. From the background, the problem statement, research question and objectives were formulated. The research design and method were discussed, as were the ethical considerations. In Chapter 2 the researcher elaborates on the research design and method used in this study.

# CHAPTER 2
# RESEARCH DESIGN AND METHOD

## 2.1 INTRODUCTION

The previous chapter dealt with the introduction, background and rationale for the study, the problem statement, research questions and objectives, the paradigmatic perspectives as well as a brief orientation to the research design and method. Chapter 2 focuses on a detailed discussion on the research design and method, pilot study, data collection, data analysis and reliability and validity procedures followed by the researcher to accomplish the aim of this study.

## 2.2 RESEARCH DESIGN

Burns and Grove (2009:362) define research design as a blueprint for conducting a study that maximises control over extraneous variables. Such control intensifies the probability that research outcomes will be an accurate reflection of reality. The research design implies an explicit structure and systematic plan of how the research procedures will be carried to find answers to the research question. The purpose of this section is to give the reader a clear indication of the plan followed by the researcher in order to achieve the objectives of the research study (Bak, 2004:24-25).

The researcher adopted a **quantitative design with descriptive, explorative and contextual strategies** (see 1.7.1) to answer the research objectives (see 1.4) that were outlined in Chapter 1 and to attain the stated research objectives.

### 2.2.1 The quantitative research design

Burns and Grove (2009:22) describe **quantitative** research design as a formal, objective, systematic process in which numerical data is used to obtain information about the world (Burns & Grove, 2009:22; Creswell, 2009:145; De Vos, 2005:132).

In this study the researcher investigated the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province and thereafter formulated recommendations for the district management to assist them to incorporate supervision for undergraduate students.

### 2.2.2 The descriptive strategy

**A descriptive strategy** is used when more information is required in a particular field and involves the provision of a written or visual picture of the phenomenon as it occurs naturally. These designs describe the variables in order to answer the research questions, and there is no intention of establishing a cause-effect relationship. It may be used to theorise, identify problems with current practice, justify current practice, make judgements, or determine what others in similar situations are doing. A descriptive study is usually conducted when little is known about a phenomenon of interest (Burns & Grove, 2009:237-239; Brink *et al.,* 2006:102-104). In this study the researcher identified a gap in the quality of clinical practice in the clinical learning environment in PHC facilities. In order to address this gap the researcher employed the CLES+ T instrument was used to describe the quality of clinical teaching in the PHC facilities as rated by the undergraduate students allocated by a Provincial nursing college located in a district of the Limpopo Province.

### 2.2.3 The explorative strategy

The **explorative** strategy of this research study offered the opportunity to uncover the quality of the clinical teaching for undergraduate students allocated to PHC facilities (Burns & Grove, 2009:22). This was being measured by using the CLES+ T Instrument (Saarikoski & Leino-Kilpi, 2008:259:267).

### 2.2.4 The contextual strategy

This study was **contextual** and conducted in the Vhembe district of the Limpopo Province. The Vhembe district is a rural area where most of the community members are farmers and others work in mines. There is one border gate, Beit Bridge, between South Arica and Zimbabwe. Vhembe district consists of four sub-districts and thirty local areas, with one hundred and seven clinics. There are nine accredited PHC facilities where undergraduate students are allocated for their clinical practice, and these clinics provide a twenty-four-hour service. The researcher held a post in one of these accredited PHC facilities in the Vhembe district to which undergraduate students were allocated. The district consists of five sub-district hospitals and one level two hospital. The total number of professional nurses working in PHC facilities is six hundred and forty-two (Mathuba, 2013).

The nursing college where the study was undertaken is in the Vhembe district. The nursing college offers an R425 diploma in nursing (general nursing science, community nursing science, psychiatric nursing science) and midwifery. The college has twenty-seven nurse educators and four hundred and thirteen undergraduate students This included all first, second, third and fourth year undergraduate students. There are about forty-seven undergraduate students completing their diploma course in the fourth year (Makhuvha, 2013).

The first year undergraduate students are not working in the PHC facilities and where therefore not included in the study sample.

The map below (Figure 2.1) shows the Limpopo Province and identifies the area where the researcher conducted the study

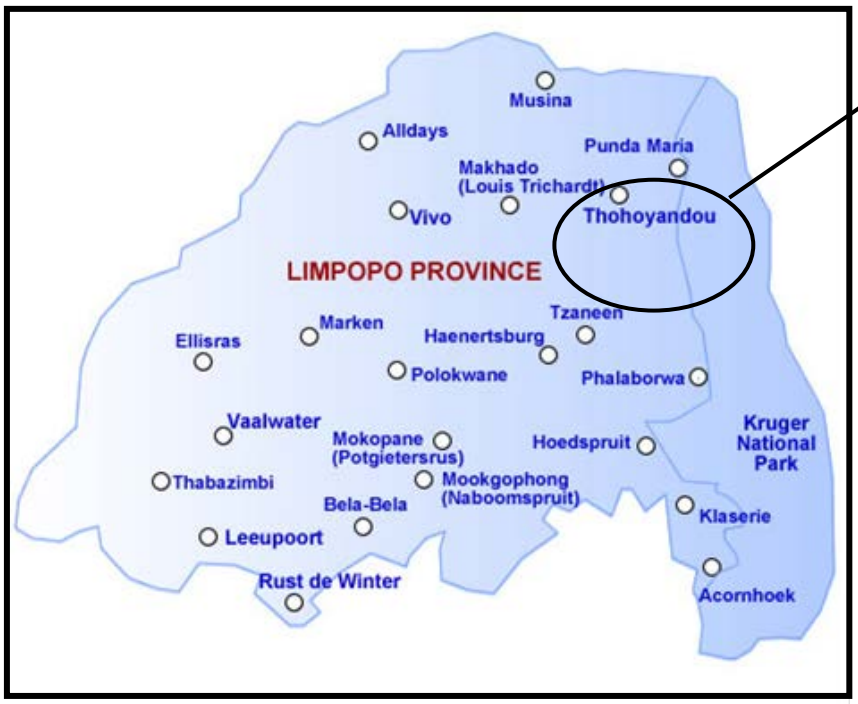


**Figure 2.1** **Map of Limpopo province that identified the area where the researcher conducted the study (http:// www.places.co.za // mamps // limpopo-map.html)**

## 2.3 RESEARCH METHOD

The research method refers to the population and sampling, pilot study, data collection and data analysis.

### 2.3.1 Choice of participants for the research study

The choice of participants is discussed by referring to the population, sampling methods and the sample size (Burns & Grove, 2009:343-348; Brink *et al*., 2006:123-127; Creswell, 2009:147-148; De Vos *et al*., 2005:192-193).The researcher provided a PowerPoint presentation on the study and the educators at the college then acted as fieldworkers who distributed the questionnaires and ensured that voluntarily informed consent was obtained from all participants prior to data collection (Burns & Grove, 2009: 196). The researcher adhered to the principle of justice in this study by making sure that all participants were treated fairly and equally, and ensuring that all field workers thoroughly understood and applied this principle (Brink *et al*., 2006: 33).

### Population

The concept, population, refers to the entire group of persons (N) that meets the criteria the researcher is interested in investigating (Brink *et al*., 2006:123; Creswell, 2009:147). Burns and Grove (2009:343-344) define target population as the entire set of individuals or elements who meet the sampling criteria. The target population in this study comprised all undergraduate students affiliated to a nursing college who were doing their clinical practice in an accredited PHC facility. Therefore the target population for this study was 300 undergraduate students (N = 300) (Burns & Grove, 2009:344; Creswell 2009:147-148).The study sample comprised of all the second, third and fourth year undergraduate students. The first year students were excluded in the study sample due to the fact that they are not placed for practica in the PHC facilities.

### Sampling method

Sampling is defined as process of selecting a sample, or a part or fraction of the study population in order to obtain information regarding the phenomenon under study in a way that represents the population (Brink *et al*., 2006:123; Burns & Grove, 2009:35; De Vos *et al*,. 2005:194). In this study all-inclusive sampling of second, third and fourth year of undergraduate students was used because these year groups are placed in the placed in the PHC facilities for practical.

### Sampling size

The actual population participating in this study was known after the CLES + T instrument had been received back and included an actual sample of (n = 294). Although the response rate was 98%, with data analysis it was clear that respondents did not complete all sections of the questionnaire. The high response rate could be substantiated by the researcher, as the undergraduate students were motivated to complete the questionnaire as it could reveal information that could lead to the improvement of their clinical practice in PHC facilities.

## 2.4 PILOT STUDY

A full discussion of how the pilot study was conducted was given in Chapter 1 (see 1.8).

## 2.5 DATA COLLECTION

Burns and Grove (2009:441) describe data collection as the process of selecting participants and gathering of data from these participants. The actual steps of collecting the data are specific to each study and depend on the research design and methods of measurement. In this study, the CLES + T (Saarikoski & Leino-Kilpi, 2008: 259-267) instrument was used to obtain data from the undergraduate students to determine the quality of clinical teaching environment for undergraduate students in PHC facilities in Limpopo Province.

The CLES + T instrument (see Appendix F) is an evaluation instrument in the form of a self-report, and is a more precise means of measuring phenomena. The questions ask participants to report their attitudes or feelings on each construct. The instrument consists of a number of declarative statements about the topic, and five responses for each statement. The respondents responded by agreeing or disagreeing, strongly agreeing or strongly disagreeing, neither agreeing nor disagreeing. This may mean that the respondents were neutral or undecided or indifferent (Burns & Grove, 2009: 410-411; Brink *et al*., 2006:153-154). The Likert instrument was very convenient as the researcher wanted to measure a construct as perceived by undergraduate students (Maree, 2007:167-168). The total number of three hundred copies of the CLES + T instrument Saarikoski & Leino-Kilpi, 2008:259-267) was distributed to the second, third and fourth year undergraduate students to complete as discussed in the above mentioned paragraphs.

## 2.6 DATA ANALYSIS

Data was analysed by using descriptive statistics. Descriptive statistics are used to describe and summarise data (Brink *et al.,* 2006:173; Creswell, 2009:151; Mouton, 2001:108). Descriptive statistics analysis was done with the assistance of the Statistical Consultation Services of North- West University by using Excel and the Statistical Analysis Software (SAS) program (SAS Institute Inc. 2011).

Data analysis is the systematic organisation and synthesis of research data (Polit & Beck, 2006:498). Burns and Grove (2009:464-465) state that the process of data analysis is conducted to reduce, organise and give meaning to data. Data was analysed by using

descriptive statistics. Descriptive statistics are used to describe and summarise data (Brink *et al*., 2006:173; Creswell, 2008:151).

## 2.7 RELIABILITY AND VALIDITY

Reliability refers to the consistency of scores obtained by the researcher if an instrument is used repeatedly by other researchers in a similar context (Maree, 2007:215), whereas the validity of an instrument is concerned with whether the instrument measures what it is intended to measure (Welman *et al.,* 2005:145-148).

The Clinical Learning Environment Supervision and Nurse Teacher (CLES+ T) instrument was tested for reliability in this study (see 4.3). The CLES+ T instrument was validated in a Finnish study (n=549) that was conducted by Saariskoski (2008) in 2007. The instrument has been used by many countries, including South Africa, in hospitals, but not in the PHC facility learning environment. It has been translated into various languages and this translation was assessed by the instrument's author to confirm content validity. In the original validation of the instrument Cronbach's alpha values of the sub-dimensions of the instrument ranged from high (0, 96) to marginal (0, 77). In the sample (n = 1 903) of the study conducted in European countries, the reliability coefficient of the sub-dimensions varied between 0, 96 and 0, 83 (Saariskoski, 2009:3). In this study the researcher adapted and used the instrument in the PHC facility. It is also reliable as the original version because the Cronbach's alpha of this instrument for all constructs ranged between 0.60 and 0.90. (see Table 4.7).

## 2.8 CHAPTER SUMMARY

In Chapter 2 the researcher described the research design and method, pilot study, data collection, data analysis and reliability and validity. Chapter 3 focuses on a literature review conducted to understand the constructs applicable in this study.

# CHAPTER 3
# LITERATURE REVIEW

## 3.1 INTRODUCTION

In Chapter 3 the researcher discusses a literature review performed in order to describe the constructs measured by the CLES + T instrument. The CLES + T instrument measured the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a Provincial nursing college located in a -district of the Limpopo Province.

Previous research highlighted the importance of (PPE) to enhance learning experience for undergraduate students (Saarikoski, 2002; Saarikoski & Leino-Kilpi, 2002; Saarikoski *et al*., 2007). The clinical learning environment is described by Dominic (2001:518) as an interactive network of forces within the clinical setting – in this study the PHC facility that influenced undergraduate students' clinical experience. An optimal clinical learning environment is expected to provide the undergraduate students with relevant clinical learning opportunities. Interaction and support from professional nurses as supervisors and educators empower undergraduate students with the relevant knowledge, skills and a professional attitude that contribute positively to quality health care. The quality of the clinical learning environment refers to learning opportunities facilitating undergraduate students' learning through real-time experience and learning (Hosoda, 2006:482).

## 3.2 CONSTRUCTS APPLICABLE IN THIS RESEARCH STUDY

The CLES + T instrument (Saarikoski & Leino-Kilpi, 2008: 259-267) used for data collection guided the headings of the literature review, as it was the theoretical departure point of this research study. The constructs used in the analysis of data are therefore explained to the reader before the research results follow in Chapter 4.

### 3.2.1 Construct 1: PPE that enhance good clinical learning

This construct that was measured, PPE enhances good clinical **l**earning, consisted of nine questions: question 1 to question 9 (see Appendix F

A conducive and supportive learning environment for undergraduate students depends on the availability of support systems after clinical placement, for example supervision, mentorship and relationships between the undergraduate students, professional nurses, operational manager and nurse educators (Mabuda *et al*., 2008:21). Mochaki (2001:10) revealed that the PHC learning environment and the professional nurses play a pivotal role in creating a positive facility atmosphere that is conducive to learning. The professional nurses should be available and approachable. Undergraduate students should be able to approach them without fear of unprofessional behaviour such as shouting. The creation of supportive relationships and a non-threatening learning environment is characterised by shared enthusiasm for the undergraduate students' growth. This increases undergraduate students' confidence in clinical evaluation and increases self-esteem (McNeal, 2008:2).

In order to establish a good learning environment, undergraduate students should undergo a thorough orientation phase when starting with their clinical practice in the PHC facilities. This orientation should include the following aspects: the physical layout of the facility, lines of communication, meal and teatimes, duty rosters, method of reporting and an undergraduate student rotation programme considering all learning objectives provided by the nursing college to ensure they are achieve at the end of their clinical practice. The orientation programme should also include professional nurse allocation and their specialty in order to ensure all students get exposed to all the programmes the PHC facility provides. It is also important for policies, procedure manuals and other regulations such as the code of conduct to be outlined to the undergraduate students (Saariskoski & Leino-Kilpi, 2008:345).

Undergraduate students must be introduced to all professional nurses working in the PHC facilities and each of these nurses' area of expertise must be explained to the student. It is also important for the professional nurses to know the undergraduate students by their names (Mochaki, 2001:10). Another important factor is that undergraduate students must know their scope of practice, therefore knowing what to do or what not to do.

Consequently, the value of the orientation programme can be assessed by professional nurses working in the PHC facilities. Professional nurses can therefore assess the undergraduate students by asking them questions about the orientation programme or giving them a questionnaire to complete. Thus, the assessment of the orientation programme can assist the operational manager to improve or adapt the current orientation programme (Mochaki, 2001:11).

It is also important for the operational manager to know the level of training of undergraduate students and their past experiences with professional nurses in order to ensure maximum support in clinical training. The learning experiences that the undergraduate students are exposed to should be in line with their level of training and previous experiences. Undergraduate students should therefore be encouraged to feel free to talk about areas in which they need improvement (Meyer & Van Niekerk, 2008:107-108).

### 3.2.2 Construct 2: Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities

The construct consists of four questions, question 10 to question 13 (Saariskoski *et al*., 2008) (see Appendix F). This construct assessed the operational manager's ability to demonstrate that they utilised their professional nurses as a key resource in the clinical training of undergraduate students. The operational manager is a team member and she is therefore able to identify teachable moments for all undergraduate students. The operational manager also has the ability to praise undergraduate students for their good effort (Sharif & Masoumi, 2005:6).

The operational manager is also in a position to answer questions posed by undergraduate students. This should be done within the scope of practice of the level of undergraduate students, as well as their training and learning needs. Apart from sharing information with undergraduate students, the operational manager acts as a role model by demonstrating her own knowledge-based skills in everyday practice (Saarikoski & Leino-Kilpi, 2002:260).

The managerial style of the operational manager should support learning. Operational managers should adopt a humanistic approach towards undergraduate students. They should be approachable and respectful in order for undergraduate students to feel free to ask questions. All professional nurses as well as undergraduate students should be encouraged to work as team members within the multidisciplinary team (Bos, 2011:1786; Wentzel, 2008:5).

Transformational leadership style therefore promotes participation and flexibility and can influence professional nurses and undergraduate students towards the achievement of learning goals through motivation and support. Good interpersonal relations, support and feedback have a positive impact on the clinical learning outcomes (Saarikoski & Leino-Kilpi, 2002:260).

### 3.2.3 Construct 3: Quality service delivery rendered in the PHC facility providing ample opportunity to undergraduate students to conduct patient case studies

This construct consisted of four questions; number 14 to 17 (see Appendix F). A PHC facility with a strong focus on quality service delivery supports learning and assists undergraduate students to conduct case studies on patients to understand the theoretical basis that relates to clinical practice. Professional nurses by virtue of their abilities and respect are able to apply and make sure the organisational philosophy, objectives and mission are visible and that professional nurses translate these principles into practical actions (Saarikoski *et al.,* 2007:408). Shift reporting as part of nursing care documentation is one of the situations undergraduate students regularly encounter when doing clinical practice. For undergraduate students night and day shift handover reporting may assist with education, social interaction, emotional support and socialisation in the professional nursing role. Patient-centred shift reporting may also promote learning (Lofmark *et al*., 2008:35; Du Plessis, 2004:10).

Task-orientated documentation helps undergraduate students to have a clear understanding of the importance of findings and interventions. Direct contact with patients where quality PHC services are rendered is an important element in learning nursing in clinical practice (Mochaki, 2001:45).

### 3.2.4 Construct 4: The interaction between professional nurses working in the PHC facility and undergraduate students, with the focus on supervision

Construct 4 consists of eight questions, questions 18 to 33 (Saarikoski & Leino-Kilpi, 2008:259- 267)) (see Appendix F).

It is important that professional nurses interact with groups and individual undergraduate students to enable a close relationship to develop between professional nurses working in the PHC facility and undergraduate students. Through this interaction, ideas and knowledge are shared and undergraduate students receive feedback on their behaviour. The development of a positive relationship with undergraduate students requires commitment from professional nurses to conduct clinical supervision in a caring manner (Mochaki, 2001:47; Saarikoski & Leino-Kilpi, 2002:260).

The supervision of undergraduate students by the professional nurses working in PHC facilities promotes positive attitudes towards professional development and assists undergraduate students in realising the need for lifelong learning. It also contributes to the recognition of the essential elements of nursing. Finally, it promotes self-evaluation among undergraduate students and presents ideas on how to develop it. This boosts a positive image of the PHC clinical practice (Haggman *et al*., 2006:382; Matsumura *et al*., 2004:112).

### 3.2.5 Construct 5: The ability of nurse educators (employed at the nursing college) to bridge the gap between theory and practice

This construct focuses on the integration of theory and practice consists of ten questions, questions 34 to 43 (Saarikoski & Leino-Kilpi, 2008: 259-267) (see Appendix F). Nurse educators rely greatly on professional nurses working in PHC facilities to ensure that undergraduate students obtain the necessary clinical skills. However, it is primarily the task of the nurse educator to accompany the undergraduate students in the clinical practice to bridge the theory-practice gap (Meyer & Van Niekerk, 2008:107; Elcigil & Yildirim, 2006:119). The following are the responsibilities of the nurse educator (Meyer & van Niekerk, 2008: 107):

- The Nurse educators should be knowledgeable, clinically competent, and skilful and committed to accompany undergraduate students in the PHC practice facility to enhance learning;

- Nurse educators should encourage undergraduate students to be critical thinkers in order to be able to solve clinical problems patients experience and evaluate situations independently and with self-reliance. This empowers learning and the professional development of undergraduate students;

- Undergraduate students should be encouraged to explore, question and argue about subject content and cases in the clinical setting. They must be able to apply concepts and theories in practice, and to implement new modalities of care;

- Nurse educators should make sure that undergraduate students have the necessary demonstration of procedures that are required at the relevant level of development. The operational managers and professional nurses should also be aware of skills that undergraduate students require to ensure that they obtain the opportunity to practice these skills under supervision;

- Nurse educators must make sure that undergraduate students know their scope of practice

- Nurse educators should provide undergraduate students with general objectives for the year of study, the clinical objectives for the specific clinical setting, the requirements associated with the clinical experience, and the methods of clinical evaluation and grading criteria in writing;

- Nurse educators need to make sure that formal and informal evaluation results are discussed with undergraduate students on a regular basis in order to ensure insight into their progress.

### 3.2.6 Construct 6: The relationship between PHC operational managers and nurse educators during practical accompaniment

This construct measures the relationship between the operational manager of the PHC facility and the nurse educator. The construct consists of three questions, question 44 to 46 (Saariskoski & Leino-Kilpi, 2008:259-267 ) (see Appendix F).

The quality of undergraduate students' development in the clinical setting is crucial for the future practice of the professional nurse. A collaborative relationship between nurse educators and PHC operational managers is therefore essential, as they can enhance undergraduate students' learning by creating a positive attitude and enhancing good participation and learning. Nurse educators should plan the clinical training programme in collaboration with PHC operational managers (Meyer & van Niekerk, 2008:108). Nurse educators should accompany undergraduate students several times during their clinical practice in the PHC facilities to assess if their objectives were met (Pillay & Mtshali, 2008:47).

Nursing and midwifery educators often assume that there are high quality and adequate learning opportunities for students to master the required learning outcomes (Mongwe, 2007:9). However, this appears not to be the case. Clinical placement at accredited facilities has to provide for a variety of students from medical schools, nursing schools and students from the allied health professions, often resulting in overcrowding of the facilities. The researcher observed frustration and dissatisfaction among the undergraduate students who had to compete for the limited learning opportunities and resources to the extent that some undergraduate students could not complete their practical requirements in time to graduate.

Over and above the crisis in health care in South Africa and the overcrowding of facilities by students from various institutions of higher education, studies conducted in Malawi (Kachiwala, 2006:3) and South Africa (Mabuda, 2006:4; Mongwe, 2001:36) report a multitude of problems in the clinical learning environment that do not support effective learning. These factors include a lack of support and supervision of undergraduate students and poor interaction between the undergraduate students and professional nurses as their supervisors. There is, however, no recent empirical data to describe the

scope and nature of the problem, resulting in limited focused action to improve undergraduate students' learning in practice.

## 3.4 CHAPTER SUMMARY

In this chapter the researcher conducted a literature review to understand the constructs measured by the CLES + T instrument applicable in this study. The instrument measured the quality clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a Provincial nursing college located in a district of the Limpopo Province. In Chapter 4 the research results of this study is discussed.

# CHAPTER 4
# RESEARCH RESULTS

## 4.1 INTRODUCTION

The previous chapter dealt with the literature review conducted to understand the constructs applicable in this study. Chapter 4 describes data analysis, and a literature control was conducted to clarify the results. The reliability and validity of the data were also established to determine whether this research study findings were reliable and valid. Data was analysed and descriptive statistics was obtained by Statistical Consultation Services of the North-West University (NWU) by using Excel and the Statistical Analysis System (SAS) statistical software program.

## 4.2 RESULTS AND DISCUSSION

### 4.2.1 Descriptive statistics

**Descriptive statistics** are statistics used by the researcher to describe and summarise data. These statistics convert and condense a collection of data into an organised, visual presentation or picture in a variety of ways, so that the data has some meaning for the readers of the research study (Polit & Beck, 2006:498).

To be able to understand the descriptive statistics in this study, the mean score was used.

**Mean** (M) score refers to the average score for a group (in this study undergraduate students) that is equal to the total score divided by the number of scores. The **standard deviation** (SD) is a measure of the spread of scores about the mean. The larger the spread, the further the scores are spread from the mean (Welman *et al*., 2005:130-133).

**Table 4.1 Construct 1: PPE that enhance good clinical learning**

| Construct of CLES +T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **PPE that enhance good clinical learning** | **287** | **3,13** | **0,78** |
| Item 1: The PHC professional nurses were easy to approach | 287 | 3,34 | 1,01 |
| Item 2: I felt comfortable going to the PHC facility where i was allocated | 287 | 3,51 | 1,07 |
| Item 3: During staff meetings (e.g. before shifts) I felt comfortable taking part in the discussions | 287 | 2,17 | 1,25 |
| Item 4: There was a positive atmosphere in the PHC facility | 287 | 3,18 | 1,12 |
| Item 5: The PHC professional nurses were generally interested in undergraduate student nurse supervision | 287 | 2,94 | 1,14 |
| Item 6: The PHC professional nurse learned to know the undergraduate student nurse by their personal name | 287 | 2,46 | 1,43 |
| Item 7: There were sufficient meaningful learning situations in the PHC facility | 287 | 3,37 | 1,11 |
| Item 8: The learning situations were multi-dimensional in terms of content | 287 | 3,43 | 1,05 |
| Item 9: The PHC facility can be regarded as a good learning environment | 287 | 3,63 | 1,21 |

In the construct of **PPE enhances good clinical learning**, the mean score (M) was 3,13, and the standard deviation (SD) was 0,78. The conclusion can be drawn that the mean score of 3,13 in the CLES + T instrument, which was determined with the Likert instrument, the students neither agreed nor disagreed. The undergraduate students may have had indifferent feelings, neither positive nor negative. Clinical learning plays a crucial role in nursing education programmes, and this result indicated that nursing undergraduate students did not get adequate supervision because it was assumed by lecturers that the undergraduate students knew the theory and practice applicable in the PHC environment (Mtsali, 2011:46). Their learning needs were neglected, as many undergraduate students are allocate to PHC clinics and the number of professional nurses available to oversee these undergraduate students are limited to four. Therefore, the undergraduate students had indifferent feelings about asking permission to conduct a procedure under supervision because they were left alone performing duties without supervision by professional nurses.

**Table 4.2 Construct 2: Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities**

| Construct of CLES + T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities.** | **289** | **3,25** | **0,88** |
| **Item 10: The operational manager regarded the staff in her /his clinic as a key resource** | **289** | **3,70** | **1,09** |
| **Item 11: The operational manager was a team member** | **289** | **3,50** | **1,23** |
| **Item 12: Feedback from the operational manager could easily be considered** | **289** | **2,93** | **1,25** |
| **Item 13: The effort of undergraduate student nurses was appreciated** | **289** | **2,80** | **1,19** |

The construct **leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities** had a mean (M) of 3,25 and SD of 0,88. The mean score of the CLES + T indicated that the undergraduate students neither agreed nor disagreed, according to the Likert instrument. The undergraduate students may have had indifferent feelings, neither positive nor negative, towards the leadership style of the operational manager. The undergraduate students felt that the operational manager's contribution to the practical learning was neither constructive nor limiting. In PHC clinics the operational manager are not always present due to attending meetings, additional training, statistics and to make sure that the clinic deliver the service up to standard. The operational manager in most of the time is not available to assist students to conduct their clinical practice. Therefore the conclusion can be made that clinical learning cannot be enhanced for undergraduate students by the operational manager of the PHC clinic.

Studies conducted by several researchers indicated that the operational manager's operational role had increased, that they had become less concerned with direct clinical supervision and teaching. (Saarikoski & Leino-Kilpi, 2001: 261) They did not supervise the undergraduate students individually; instead they supervised them in groups (Bos *et al*., 2011:1785). The ratio of undergraduate students to one operational manager was too high to allow undergraduate students to receive supervision in the PHC facility (Monareng *et al*., 2009:114). Saariskoski *et al*. (2002:341) indicated that some of the clinical operational managers did not have a nursing education qualification; therefore their knowledge on the training of students could sometimes be limited. They displayed defensive feelings and dominating authoritative behaviour towards undergraduate students.

**Table 4.3** **Construct 3: Quality service delivery rendered in the PHC facility provides ample opportunity to undergraduate students to conduct patient case studies**

| Construct of CLES + T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **Quality of service delivery rendered in the PHC facility provides ample opportunity to undergraduate students to conduct patient case studies** | **289** | **3,61** | **0,74** |
| Item 14: The PHC service delivery philosophy was clearly defined | 289 | 3,76 | 1,22 |
| Item 15: Patients received individual care according their needs /reasons for visiting the PHC facility | 289 | 4,11 | 1, 0 |
| Item :16: There were no problems in the information flow related to patient's care | 289 | 3, 76 | 0, 94 |
| Item 17: Documentation of service delivery was clear and could be utilised for patient study cases which undergraduate nursing students need to submit to nurse educator | 289 | 2, 81 | 1, 27 |

The construct **quality of service delivery rendered in the PHC facility provides ample opportunity to undergraduate students to conduct patient case studies** had a mean score (M) of 3,61 and SD of 0,74. The mean score was above 3,5 and closer to 4 on the CLES+ T instrument, which meant agreement to some extent, according to the Likert scale. Undergraduate students agreed that the patients visiting PHC clinics provide them with the opportunity to conduct patient case studies; however these patient case studies cannot be presented or reviewed by professional nurses due to shortages and number of

patients that need to be seen by the professional nurses. (Saarikoski & Leino-Kilpi, 2008:259)

The study conducted by Bos *et al*., (2011:1785) revealed that the PHC facilities' learning environment differed from the hospital as a clinical learning environment for undergraduate students. In PHC facilities, undergraduate students have the opportunity to learn with patients in their communities and independently assess the patients' general health status by providing personal care. This personal care is holistic and includes health promotion, prevention measures, curative treatment and, if necessary, rehabilitative care, therefore this is the ideal opportunity to conduct a patient case study (Hattingh *et al*., 2012:7).

**Table 4.4 Construct 4: The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision**

| Construct of CLES + T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision** | **281** | **2,94** | **0,89** |
| Item 20: My supervisor showed a positive attitude towards supervision | 281 | 3,32 | 1,09 |
| Item 21: I felt that i received individual supervision | 281 | 2,40 | 1,27 |
| Item 22: I continuously received feedback from my supervisor | 281 | 2,74 | 1,13 |
| Item 23: Overall I am satisfied with the supervision i received | 281 | 2,56 | 1,37 |

**Table 4.4 Construct 4: The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision (continue)**

| Construct of CLES + T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| Item 24: The supervision was based on a relationship of equality and promoted my learning during clinical skills practice | 281 | 3,04 | 1,05 |
| Item 25: There was a mutual interaction in the supervisory relationship | 281 | 3,07 | 0,09 |
| Item 26: Mutual respect and approval prevailed in the supervisory relationship | 281 | 3,16 | 1,03 |
| Item 27: The supervisory relationship was characterised by a sense of trust | 281 | 3,14 | 1,04 |

Construct 4 elicited **interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision** had a mean score (M) of 2,94 and the SD was 0,89. The mean score was above 2,5 and closer to 3 on CLES + T instrument, indicating they neither agreed nor disagreed. This conclusion for this meant that the undergraduate students had indifferent feelings, neither positive nor negative, about the integration between professional nurses working in the PHC facility and undergraduate students with the focus on supervision. The researcher is of opinion that constructive supervisory interaction with undergraduate students is not good due to large number of students allocated for clinical practice in relation with the number of professional nurses available. Therefore clinical accompaniment is limited.

Mtsali (2011:47) indicated that the method of supervisory relationship is a very important issue in the clinical area as the clinical staff fails to serve as exemplary role models. Interpersonal relationships between professional nurses and undergraduate students were a problem. Undergraduate students at times were called names and used as

scapegoats for wrongdoings. Because of these negative attitudes, undergraduate students had a poor clinical learning experience. Bos *et al*. (2011:1786) indicated that nursing undergraduate students often learn in groups of two or more and have one supervisor in a PHC facility. Lack of quality control in PHC clinical practice leads to lack of continuing education, lack of feedback, lack of appropriate qualifications and lack of adequate staffing, leading to burnout of nurses (Nomasonto *et al*., 2010:9).

**Table 4.5 Construct 5: The ability of nurse educators (employed at the nursing college) to bridge the gap between theory and practice**

| Construct of CLES + T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **The ability of nurse educators (employed at the nursing college) to bridge the gap between theory and practice** | **294** | **3,37** | **1,00** |
| Item 28: In my opinion, the Nurse Educator was capable to integrate theoretical knowledge and everyday practice of nursing when accompany undergraduate nursing student in PHC facility | 294 | 3,42 | 1,09 |
| Item 29: The nurse educator was capable to operationalize the learning goals for clinical placement in a PHC facility | 294 | 3,66 | 1,07 |
| Item 30: The Nurse Educator assist me to reduce the theory-practice gap | 294 | 3,33 | 1,06 |

The construct **ability of nurse educators (employed by the nursing college) to bridge the gap between theory and practice** had a mean score (M) of 3,37 and an SD of 1,00. The undergraduate students' mean score was below 3,5 on the CLES + T instrument, which meant the undergraduate students neither agreed nor disagreed according to the Likert scale. The conclusion can be drawn that undergraduate students had indifferent

feelings – neither positive nor negative – towards this construct. The conclusion can be made that nurse educators may have the ability to bridge the theory-practice gap but they are not present in the PHC clinics to accompany their students and therefore the researcher is of opinion that theory-practice gap cannot be bridged in theoretical classes alone.

Lekheleni *et al*. (2004:16) indicated that undergraduate students experienced dissatisfaction with their learning experiences, indicating that neither nurse educators nor professional nurses working in the PHC facility provided adequate support in the clinical learning environment during undergraduate students' clinical placements. These findings were supported by Saariskoski *et al*. (2002:343), who indicated that nurse educators had minimal contact with undergraduate students during their clinical placements, or no contact at all.

**Table 4.6 Construct 6: The relationship between PHC operational managers and nurse educators during practical accompaniment**

| Construct of CLES +T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| **The relationship between PHC operational managers and nurse educators during practical accompaniment** | **278** | **2,70** | **0,85** |
| Item 31: The nurse educator allocated me and was not at all part of my practical skills and procedure which will be conducted during period of practice | 278 | 2,28 | 0,98 |
| Item 32: Nurse educator was like a member of the nursing team | 278 | 2,68 | 1,22 |
| Item 33: Nurse educator was capable to give his or her theoretical expertise to the clinical professional team in PHC facility | 278 | 2,70 | 1,32 |

**Table 4.6 Construct 6: The relationship between PHC operational managers and nurse educators during practical accompaniment (continue)**

| Construct of CLES +T instrument | n = number of participants who completed section correctly | Mean score (M) | Standard deviation (SD) |
|---|---|---|---|
| Item 34: The nurse educator and the clinical team worked together in supporting my learning | 278 | 2,85 | 1,25 |
| Item 35: The common meetings between myself, professional nurse, supervisor and nurse teacher were comfortable experience | 278 | 2,79 | 1,29 |
| Item 36: In our common meetings I felt that we are colleagues | 278 | 2,66 | 1,22 |
| Item 37: Focus of the meetings was on my learning needs | 278 | 2,23 | 1,23 |

Construct 6 concerning **the relationship between the PHC operational managers and the nurse educators during practical accompaniment** had a mean score (M) of 2,70 and an SD of 0,85. The nursing undergraduate students' mean score was above 2,5, closer to 3 on the CLES+ T instrument. They neither agreed nor disagreed according to the Likert instrument. Therefore, the conclusion was that undergraduate students had indifferent feelings – neither positive nor negative – about the relationship between the PHC operational manager and the nurse educator during their clinical accompaniment. According to this study there was therefore no collaboration between the nurse educators and the clinic PHC operational managers. Lack of effective communication between nurse educators and PHC operational managers contributed to negative and indifferent feelings among undergraduate students.

## 4.3 RELIABILITY AND VALIDITY

In the next section the researcher discusses the reliability and validity of the CLES + T instrument's results in this study.

### 4.3.1 Reliability of the study

The **reliability** of an instrument refers to the consistency of scores obtained by the researcher if it is used again by another researcher in a similar context (Maree, 2007:215). The **validity** of an instrument concerns what the test measures and how well it measures what it is supposed to measure (Welman *et al.,* 2005:145-148). In the two paragraphs the researcher describes the reliability and validity as measured with the assistance of the Statistical Consultation Services of the North-West University.

Cronbach's alpha coefficient is a widely used reliability index that estimates the internal consistency or homogeneity of a measure composed of several constructs (Polit & Beck, 2006:498). Ideally, a Cronbach's alpha coefficient of 0,60 and larger is regarded as reliable. On the other hand, if the internal consistency was low, the alpha coefficient would have been close to 0, meaning that the answers do not strongly correlate with each other.

The following rules are followed to understand the the Cronbach's alpha coefficient:

- A Cronbach's alpha coefficient of 0.90 indicates high reliability
- A Cronbach's alpha coefficient of 0.80 indicates moderate reliability
- A Cronbach's alpha coefficient of 0.70 indicates acceptable reliability

If the reliability estimates are 0.80 and above, the reliability of the questionnaire is seen as reliable , and when under 0.60, reliability is unacceptable (Maree *et al*., 2008:215-216), but according to Field (2005:668), when measuring psychological constructs, values below 0.70 are acceptable due to the variability of constructs measured. The reliability for this research study is outlined in Table 4.7.

**Table 4.7 Reliability of constructs measured by the CLES + T instrument**

| Constructs of CLES + T instrument | n = number of participants who completed section correctly | Cronbach's alpha coefficient |
|---|---|---|
| PPE that enhance good clinical learning | 287 | 0,85 |
| Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities | 289 | 0,73 |
| Quality service delivery rendered in the PHC facility providing ample opportunity to undergraduate students to conduct patient case studies | 289 | 0,60 |
| The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision | 281 | 0,90 |
| The ability of nurse educators (employed by the nursing college) to bridge the gap between theory and practice | 294 | 0,80 |
| The relationship between PHC operational managers and nurse educators during practical accompaniment | 278 | 0,85 |

The constructs used in the abovementioned table were discussed in Chapter 3. The Clinical Learning Environment Supervision and Nurse Teacher (CLES + T) evaluation instrument consists of six constructs with 32 questions. According to Table 4.7 the questionnaire used in this study was reliable because Cronbach's alpha readings of all constructs were higher than 0,6, ranging between 0,60 and 0,90. For this study the questionnaire used was reliable, as only one construct have a cronbach alpha of 0,60.. (Maree, 2007:215-216*)*

### 4.3.2 Validity of the study

The validity of a research instrument concerns what the instrument measures and how well it does this. The results expressed in the following table give an overview of the constructs, which is synonymous with a concept or a theoretical construction. Different, related questions were grouped together to form a construct, thus a construct indicated related questions (Rossouw, 2005:123). During this research study an internationally validated questionnaire was used, but it was important to ensure that the instrument was

applicable to the South African context. The instrument was adapted to the PHC context. In Table 4.8 the validity of the instrument for the study is outlined by using the Kaiser's Measure of Sampling Adequacy as it reveals that all questions under a specific construct intercollerate with other questions under the construct as well as with the construct itself.

**Table 4.8 Validity of CLES + T instrument used in the study**

| Constructs of CLES + T instrument | N = number of participants who completed section correctly | Number of factors retained | Kaiser's Measure of Sampling Adequacy |
|---|---|---|---|
| PPE that enhance good clinical learning | 287 | 2 | 0,83 |
| Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities | 289 | 2 | 0,60 |
| Quality of service delivery rendered in the PHC facility provides ample opportunity to undergraduate students to conduct patient cases | 289 | 2 | 0,64 |
| The interaction between professional nurses working in the PHC facility and undergraduate students with focus on supervision | 281 | 1 | 0,91 |
| The ability of nurse educator (employed at the nursing college) to bridge the gap between theory and practice | 294 | 1 | 0,60 |
| The relationship between PHC operational managers and nurse educators during practical accompaniment | 278 | 2 | 0,83 |

The Kaiser's Measure of Sampling Adequacy (MSA) is used to determine whether a factor analysis may be appropriate. Kaiser's Measure of sampling Adequacy gives an indication of the inner correlations among variables and whether the variable is related to the specific construct or not. MSA index ranges from 0 to 1, reaching 1 when each variable is related to the other variables and to the overall construct meaning that the validity of the questionnaire is proved as all the variables relate with the constructs of the questionnaire.

- The measurement should be at least above 0,60 to assume that the questions and the applicable construct are related thus contributing to validity of the questionnaire. According to Table 4.8 all the MSA measurements were between the ranges of 0,60 and 0,83. Therefore the instrument can be accepted as valid for this research study.

## 4.4 CHAPTER SUMMARY

In this chapter the researcher discussed the research results of this study, which consisted of the six constructs of the CLES + T instrument. In this study Cronbach's alpha values of all the constructs ranged between 0,60 and 0,90 and were therefore regarded as reliable. The next chapter discusses the evaluation of the study, including the objectives achieved, the limitations and recommendations for district management, education, research and policy.

# CHAPTER 5

# EVALUATION OF STUDY, LIMITATIONS AND RECOMMENDATIONS FOR DISTRICT MANAGEMENT, EDUCATION, RESEARCH AND POLICY

## 5.1 INTRODUCTION

This chapter offers an evaluation of the research study, with specific reference to the research objectives. The preceding chapters' contributions towards the enhancement of the clinical teaching for undergraduate students in PHC facilities are identified and explained. PHC operational managers, professional nurses and nurse educators are expected to engage themselves in the supervision of undergraduate learners to enhance quality clinical learning in PHC facilities. The limitations of the study and recommendations are provided to district management to assist them in incorporating supervision for undergraduate students.

The following objectives were explored during this study to evaluate the effectiveness of the clinical teaching environment for undergraduate students in PHC facilities:

- To determine the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province.
- To formulate recommendations for the district management to assist them to incorporate supervision for undergraduate students.

According to the literature review and empirical data, the researcher reached the objectives of the study. If the recommendations made are implemented, the quality of clinical learning environment in the PHC facilities will be enhanced for the undergraduate students.

## 5.2 EVALUATION OF THE STUDY

The study was evaluated in terms of its objectives. Chapter 1 provided an overview of the study, and Chapter 2 focused on the research design and method. Chapter 3 consisted of a literature review to understand the constructs of this study, and Chapter 4 provided a data analysis of the CLES + T instrument. Lastly, Chapter 5 contains an evaluation of the study, its limitations and recommendations for district management, education, research and policy. Objective 1 of this study, which was to determine the quality of clinical practice in the PHC clinical learning environment as rated by undergraduate students allocated by a provincial nursing college located in a district of the Limpopo Province, was therefore achieved. The results indicated that the clinical learning environment was neither conducive to enhancing quality clinical practice in PHC clinical learning environments for the undergraduate students. After objective 1 the researcher achieved objective 2 which was the formulation of recommendations for the district management to assist them in incorporating adequate supervision for undergraduate students.

## 5.3 LIMITATIONS OF THE STUDY

The researcher identified some specific limitations:

- The researcher struggled to obtain permission to conduct the research study from the Limpopo Province Department of Health. This delayed data collection.

- A comparison of the ages, sex and year of study of the participants was not possible due to the omission of collection of biographical data had been provided. This limited the researcher in comparing different year groups.

## 5.4 RECOMMENDATIONS FOR DISTRICT MANAGEMENT

Based on lliterature review and findings the researcher made following recommendations for the district management.The recommendations aimed to assist the district management in promoting quality clinical practice in the PHC clinical learning environment for undergraduate students allocated by a Provincial nursing college located in a district of the Limpopo Province.:

- The PHC operational managers should be acquainted with the objectives and clinical practice expected from the undergraduate students in order to explain these objectives to professional nurses in the PHC facility when receiving undergraduate students. This will ensure that undergraduate students are exposed to the necessary clinical procedures they need to master under supervision, they will also be able to achieve the set objectives.

- The PHC operational manager and professional nurses should ensure that they provide quality care to patients visiting the PHC facility by showing spirit of caring, this will help undergraduate students to learn core concepts of nursing through caring experiences..

- Professional nurses should also have the acquired skills and competence to assist students with clinical practice and procedures that need to be conducted under supervision.

- Students should not be allowed to consult patients on their own, or be seen as only part of the workforce, but they should be seen as experiential learners.

- Interpersonal relations between the operational manager, the professional nurses and the undergraduate learners need to be enhanced. Undergraduate learners should be orientated towards service delivery, not call professional nurses by their names, and should have the necessary respect. It is also important for professional nurses to know that respect is not given but is earned. By being a role model and acting in a professional manner, the professional nurses will earn the respect they deserve.

- The PHC operational manager must ensure as far as possible that the facility is fully equipped with resources such as equipment, drugs, transport for collecting specimens and telephones to enhance communication with other multidisciplinary teams.

- It would be ideal if the clinical practice area (PHC facilities in this study) employed clinical accompanists in the accredited PHC facilities to accept responsibility for the accompaniment and coordination of clinical training in practice.

- The Department of Health could appoint professional nurses with the required nursing education qualifications to specifically assist with the supervision of undergraduate students in the PHC facilities

## 5.5 RECOMMENDATIONS FOR NURSING PRACTICE

In the next section the research presents recommendations for education, research and policy.

### 5.5.1 Recommendations for education

The following recommendations aim to assist nurse educators employed by the nursing college in their clinical accompaniment of undergraduate students:

- Nurse educators should accompany undergraduate students doing their clinical practice in a PHC facility at least twice a month to bridge the gap between theory and practice.

- Professional nurses appointed in PHC facilities should be given the opportunity to obtain the qualification in nursing education. This will provide the professional nurses with the necessary knowledge and skills to supervise undergraduate students.

- The PHC operational managers should be included in the curriculum development of undergraduate students. They should be provided with learning objectives according to the level of education of undergraduate students.

- The Department of Health should provide for workshops and in-service training on the maintenance of quality patient care at PHC level for PHC operational managers and professional nurses. This would also address professional nurses who are appointed in rural areas in particular and who often feel they are neglected in the development of their capacity.

- The nursing college can form a colloquium where experts can offer updated information to PHC facilities on new evidence-based information, as nurse educators are involved in research programmes.

### 5.5.2 Recommendations for research

The researcher makes the following recommendations with regard to research:

- A qualitative study should be conducted to explore and describe the lived experience of undergraduate learners completing their clinical practice in the PHC facilities and to compare the difference between the findings when interviews are conducted.
- A similar study should be conducted to determine the quality of PHC clinical learning as rated by professional nurses working in PHC facilities.
- A qualitative study should be conducted to explore and describe the lived experience of operational managers and professional nurses supervising undergraduate students completing their clinical practice in the PHC facilities.

### 5.5.3 Recommendations for policy

The researcher makes the following recommendations for policy:

The Department of Health, SANC and further education training institutions currently training undergraduate students could collaborate and debate critically how to address the gap between theory and practice, as there were many undergraduate students allocated to a PHC facilities compared to the number of professional nurses to ensure quality clinical supervision in the clinical practice.

## 5.6 CHAPTER SUMMARY

This chapter provides an overview of the research objectives as set for this research study. The conclusion was drawn that PHC operational managers, professional nurses

and nurse educators should supervise undergraduate students who are completing their clinical practice in PHC facilities to enhance quality PHC clinical learning. A description was given of the limitations of the study, and recommendations specifically relating to nursing district management, education, research and policy were made to the District Manager of the Vhembe District.

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# APPENDIX A:
# NWU ETHICAL

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOMKAMPUS

Privaat sak X6001, Potchefstroom
Suid-Afrika, 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Aan wie dit mag aangaan

**AUTHeR**
Tel: 018 2994237
Faks: 018
E-pos: 10055355@nwu.ac.za

13 Augustus 2012

Geagte Prof./Dr./Mnr./Me.

**Etiekaansoek: NWU-00050-12-S1**

**"Leadership and governance as mechanisms towards ecxellence in South African health systems"**

Die komitee is tevrede dat die kommentaar van die paneel voldoende aangespreek is en etiese goedkeuring word aanbeveel.

Vriendelike groete

Prof. H.H. Vorster
Voorsitter

1

# APPENDIX B:
# THE ETHICS COMMITTEE OF LIMPOPO PROVINCIAL GOVERNMENT

DEPARTMENT OF HEALTH
VHEMBE DISTRICT

*The heartland of Southern Africa – development is about people*

# APPENDIX C
# THE ETHICS COMMITTEE OF THE DISTRICT

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH
VHEMBE DISTRICT

Memo

REF: S8/4/9

TO: SENIOR MANAGER: HOSPITAL SERVICES, MR MAKHWANYA T.E

FROM: ACTING DISTRICT EXECUTIVE MANAGER

DATE: 06/06/2013

SUBJECT: ACTING AS DISTRICT EXECUTIVE MANAGER

1. The above matter has reference
2. Kindly note that you are appointed to act as Acting District Executive Manager on the 06/06/2013
3. During the acting process you are entitled to run the District affairs and you are shouldered with full responsibilities in managing all programs and Hospital services in the District.
4. Hoping you will get the assistance you need for the sake of delivery of health services.

ACTING DISTRICT EXECUTIVE MANAGER

Old Parliamentary Building Tel: (015) 962 1000(Health) (015) 962 4958(Social Dev) Fax (015) 962
Private Bag X5009 THOHOVANDOU 0950
he heartland of Southern Africa – development is about people!

DEPARTMENT OF HEALTH
VHEMBE DISTRICT

*The heartland of Southern Africa – development is about people*

# APPENDIX D:
# PERMISSION FROM THE COLLEGE

# APPENDIX E:
# INFORMED CONSENT

I_____ hereby give consent to participate in the research project titled; The effectiveness of the clinical teaching environment for undergraduate student in PHC facilities of Limpopo.

The informed pertaining to the research project has been explained to me and I understand the implication thereof.

Signature of participant _____Date _____

Signature of researcher _____Date_____

# APPENDIX F
# CLINICAL LEARNING ENVIRONMENT, SUPERVISION (CLES+T) EVALUATION SCALE

## (Saarikoski & Leino-Kilpi 2008)

The following statements concerning the learning environment and supervision are grounded into main areas, each with their own title. For each statement, please choose the option that best describes your own opinion. ***Evaluation scale**:*

**1 = fully disagree**
**2 = disagree to some extent**
**3 = neither agree nor disagree**
**4 = agree to some extent**
**5 = fully agree**

***The learning environment***

**Positive practice environment that enhance good clinical learning:**

| | | | | | |
|---|---|---|---|---|---|
| The PHC professional nurses were easy to approach | 1 | 2 | 3 | 4 | 5 |
| I felt comfortable going to the PHC facility where I was allocated | 1 | 2 | 3 | 4 | 5 |
| During staff meetings (e.g. before shifts) I felt comfortable taking part in the discussions | 1 | 2 | 3 | 4 | 5 |
| There was a positive atmosphere in the PHC facility | 1 | 2 | 3 | 4 | 5 |
| The PHC professional nurses were generally interested in Undergraduate student nurse supervision - | 1 | 2 | 3 | 4 | 5 |
| The PHC professional nurse learned to know the undergraduate Student nurse by their personal name | 1 | 2 | 3 | 4 | 5 |
| There were sufficient meaningful learning situations in the PHC facility | 1 | 2 | 3 | 4 | 5 |
| The learning situations were multi-dimensional in terms of Content | 1 | 2 | 3 | 4 | 5 |
| The PHC facility can be regarded as a good learning environment | 1 | 2 | 3 | 4 | 5 |

---

**Leadership style of the PHC operational manager to enhance clinical practice and identify learning opportunities:**

| | | | | | |
|---|---|---|---|---|---|
| The operational manager regarded the staff in her/his clinic as a key resource | 1 | 2 | 3 | 4 | 5 |
| The operational manager was a team member | 1 | 2 | 3 | 4 | 5 |
| Feedback from the operational manager could easily be considered as a learning situation | 1 | 2 | 3 | 4 | 5 |
| The effort of undergraduate student nurses was appreciated | 1 | 2 | 3 | 4 | 5 |

---

**Quality service delivery rendered in the PHC facility providing ample opportunity to undergraduate students to conduct patient case studies:**

| | | | | | |
|---|---|---|---|---|---|
| The PHC service delivery philosophy was clearly defined | 1 | 2 | 3 | 4 | 5 |
| Patients received individual care according their needs/reasons for visiting the PHC facility | 1 | 2 | 3 | 4 | 5 |
| There were no problems in the information flow related to patients' care | 1 | 2 | 3 | 4 | 5 |
| Documentation of service delivery was clear and could be utilised for patient study cases which undergraduate nursing students need to submit to nurse educator | 1 | 2 | 3 | 4 | 5 |

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***The supervisory relationship***

In this form, the concept of supervision refers guiding, supporting and assessing of student nurses made by PHC professional nurses. Supervision can occur as individual supervision, or as group (or team) supervision.

**The interaction between professional nurses working in the PHC facility and undergraduate students with the focus on supervision**: (circle one alternative only)

| | |
|---|---|
| did not have a supervisor at all | 1 |
| A personal supervisor was allocated to me, but the relationship with this personal nurse did not work during the placement | 2 |
| The supervisor Dominicged during the placement, even though no Dominicge had been planned | 3 |
| Supervisor varied according to shift or place of work | 4 |

Same supervisor had several students and was a group supervisor rather than an individual supervisor 5

A personal supervisor was named and our relationship worked during this placement 6

Other method of supervision, please specify?
.....
.....
.....

How often did you have **separate private unscheduled supervision with the supervisor**:

| | |
|---|---|
| not at all | 1 |
| less than once a week | 2 |
| about once a week | 3 |
| about twice a week | 4 |
| on a daily basis | 5 |

---

The content of supervisory relationship:

The following statements concerning the supervisory relationship.

For each statement, please choose the option disagree that best describes your own opinion.

*Evaluation scale:*
1 = fully disagree
2 = disagree to some extent
3 = neither agree nor
4 = agree to some extent
5 = fully agree

| | | | | | |
|---|---|---|---|---|---|
| My supervisor showed a positive attitude towards supervision | 1 | 2 | 3 | 4 | 5 |
| I felt that I received individual supervision | 1 | 2 | 3 | 4 | 5 |
| I continuously received feedback from my supervisor | 1 | 2 | 3 | 4 | 5 |
| Overall I am satisfied with the supervision I received | 1 | 2 | 3 | 4 | 5 |
| The supervision was based on a relationship of equality and promoted my learning during clinical skills practice | 1 | 2 | 3 | 4 | 5 |
| There was a mutual interaction in the supervisory relationship | 1 | 2 | 3 | 4 | 5 |
| Mutual respect and approval prevailed in the supervisory relationship | 1 | 2 | 3 | 4 | 5 |
| The supervisory relationship was characterized by a sense oftrust | 1 | 2 | 3 | 4 | 5 |

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***Role of the Nurse Educator***

Nurse teacher is a lecturer (employed by a Nursing College in Limpopo province) who is responding the clinical placement and should accompany the student in the practical setting, not all the time but should have contact sessions and work with the undergraduate nursing student in the PHC facility. The following statements concerning the linking nurse teacher are grounded into main areas, each with their own title.

For each statement, please choose the option that best describes your own opinion.

*Evaluation scale:*
1 = fully disagree
2 = disagree to some extent
3 = neither agree nor disagree
4 = agree to some extent
5 = fully agree

**The ability of nurse educators employed at the nursing college to bridge the gap between theory and practice:**

| | | | | | |
|---|---|---|---|---|---|
| In my opinion, the Nurse Educator was capable to integrate theoretical knowledge and everyday practice of nursing when accompany undergraduate nursing student in PHC facility | 1 | 2 | 3 | 4 | 5 |
| The Nurse Educator was capable to operationalise the learning goals for clinical placement in a PHC facility | 1 | 2 | 3 | 4 | 5 |
| The Nurse Educator assist me to reduce the theory-practice cap | 1 | 2 | 3 | 4 | 5 |

If nurse educator did not visit you as undergraduate nursing

Student in the PHC facilities please circle all the ones.

| | | | | | |
|---|---|---|---|---|---|
| The Nurse Educator allocated me and was not at all part of my practical skills and procedures which should be conducted during period of practice. | 1 | 2 | 3 | 4 | 5 |
| Nurse Educator was like a member of the nursing team | 1 | 2 | 3 | 4 | 5 |
| Nurse Educator was capable to give his or her theoretical expertise to the clinical professional team in PHC facility | 1 | 2 | 3 | 4 | 5 |
| The nurse Educator and the clinical team worked together in supporting my learning | 1 | 2 | 3 | 4 | 5 |

If nurse educator did not visit you as undergraduate nursing
Student in the PHC facilities please circle all the ones.

**The relationship between PHC operational manager and nurse educators during practical accompaniment:**

| | | | | | |
|---|---|---|---|---|---|
| The common meetings between myself, professional nurse supervisor and nurse teacher were comfortable experience | 1 | 2 | 3 | 4 | 5 |
| In our common meetings I felt that we are colleagues | 1 | 2 | 3 | 4 | 5 |
| Focus of the meetings was on my learning needs | 1 | 2 | 3 | 4 | 5 |



*Thank you for your time and help!*

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