KAMUZU COLLEGE OF NURSING

PERCEPTIONS OF STUDENT NURSES ON TEACHING AND LEARNING IN SKILLS LABORATORY AT NKHOMA COLLEGE OF NURSING AND MIDWIFERY LILONGWE, MALAWI

BY

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DECLARATION

I Emily Flonie Karonga, declare that this dissertation titled 'Perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma College of Nursing and Midwifery, Lilongwe, Malawi, is my original work. It has never been submitted for any other awards at the University of Malawi or any other University. The sources of information utilized in this work have been acknowledged in the reference list.

EMILY FLONIE KARONGA

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Signature

27th October, 2015

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Date

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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DEDICATION

I dedicate this work to my mother for her encouragement.

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ABSTRACT

In the past teaching and learning of clinical skills were wholly practiced at bedside in which patients were used as teaching aids and then changed to practical room which was teacher dominated. The profound change in nursing education and health care system had made these teaching methods less effective, as a result skills laboratory teaching and learning has been adopted as a strategy to support students' development of skills before clinical placement.

A descriptive quantitative study was conducted to describe perceptions of student nurse/midwives on teaching and learning in skills laboratory at Nkhoma College of Nursing and Midwifery in Lilongwe, Malawi. Data were collected from 91 students using a questionnaire and analyzed using SPSS software package version 16.0. Percentages and frequencies were used to summarise results.

The results showed that, all the participants indicated that demonstration was predominantly used and the majority 92.4% (n=84) identified the demonstration to be the most useful learning strategy while small group discussion, self directed learning, peer learning, role play and reflection were viewed least useful. The majority 86% (n=78) needed educational video films while 13.2% (n=12) needed real objects such as dead body and placenta. Benefits of learning in skills laboratory included; participants became competent 87.9% (n=80), gained confidence 85.7% (n=78) and patients' safety 29.7% (n=27). However, limited time for practice 81.3% (n=74), inadequate learning resources 42.9% (n=39), overcrowding of students during skills laboratory sessions 36.3% (n=33) and inadequate supervision 26.4% (n=24) were some of the challenges faced during learning.

The recommendations made included; Opening time for skills laboratory should be revisited, enough resources should be available, in-service training for nurse educators should be conducted on effective use of the skills laboratory, replication of the same study at different nursing colleges with a larger sample and investigating the impact of skills laboratory teaching and learning on clinical performance.

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ABBREVIATIONS

CCAP   Church of Central African Presbyterian

COMREC   College of Medicine Research and Ethics Committee.

CHAM   Christian Health Association of Malawi

KCN   Kamuzu College of Nursing

MOH   Ministry of Health

NCA   Norwegian Church Aid

NGO   Non Governmental Organization

RNE   Royal Norwegian Embassy

OPERATIONAL DEFINITIONS

Learning: This refers to understanding of information gained from the teaching process. In this study it is a process whereby students' identify gaps in their skills; actively identify learning resources, engaging with these resources until they feel competent and ready to be assessed by their facilitators.

Nurse Educator: Someone who is skilled in teaching nurses. In this study refers to lecturers and clinical instructors who ensure teaching and learning of students in skills laboratory as well as clinical setting

Skills laboratory/Clinical skills laboratory: These terms are used interchangeably in this study, and refers to a special space in the Nursing College simulating a clinical environment. This space is for teaching clinical skills using models, manikins, diagnostic and therapeutic equipment in simulated clinical environment like hospital ward or health clinic

Student: This refers to someone who attends school or one who studies. In this study refers to a Nurse Midwife technician student undergoing a three year programme

Teaching: Is the act of imparting knowledge or skills to someone else. In this study it refers to facilitation of learning in the skills laboratory.

CHAPTER 1

INTRODUCTION

1.0   Introduction and background

Teaching and learning perceptions are very crucial to the attainment of learning outcomes. This is because the student nurses perception determines the approach to learning content (Murray, Grant, Howrth & Leigh, 2008). In the era of intensified technology and student nurses generational diversity, literature has proved that student nurses learn better in simulated situations in the skills laboratory (Linder & Pulsipher 2008; Bland, Topping & Wood 2011). To this end the introduction of the skills laboratory at Nkhoma Nursing and Midwifery College in 2010 is believed to promote students learning from the teachers' perspectives while the anecdotal reports from some student nurses and midwives reflect some dissatisfaction with the way how teaching is currently done. Nursing education programmes must aim at producing competent nurses and midwives through sound education ideologies. If students' perceptions are not in line with the teacher perspectives then the educational outcomes might be compromised (Chilemba, 2014). It is therefore, a mandate that the student nurses and midwives perceptions on teaching and learning in the skills laboratory be determined to ensure that the quality of education is promoted.

Nursing institutions utilize different teaching and learning resources during training of nurses and midwives to promote the use of diverse learning styles. Diversity of learning styles is a critical factor in academic achievement and must be promoted in clinical learning (Chilemba, 2014). The skills laboratory is a recommended resource for any nursing /midwifery college for practice of clinical skills to reduce errors in patients' care (Houghton, Caseya, Shawb & Murphya 2012), The World Health Organization (WHO)

also recommends that nursing schools should have appropriate teaching and learning resources including skills laboratory to enable the theoretical and practical delivery of nursing program (WHO, 1999). The recommendation was made after it was observed that students do not develop their skill competences due to rapid changes in the hospital. Such changes are; more rapid patient turnover, increased high dependency patients, shortage of qualified practitioners and overpopulated clinical settings leading to high competition over learning experiences that make clinical teaching and learning for students a challenge. Another reported challenge in clinical teaching is that, clinical staff are too busy to adequately teach the students (Houghton 2007). The use of skills laboratory is of benefit to the students because it allows for hands-on learning, which allows them to build understanding that is functional and to develop the ability to evaluate themselves and become independent learners (Houghton, 2007).

Montgomery (2012) defined skills laboratory as an instructional room with mannequins, anatomic models and equipment similar to those found in hospital for training and self-study. In the skills laboratory students learn and practice clinical skills as many times as needed in order to develop required competencies before clinical placement. While practical room, which the college used to have in the past was for teachers to demonstrate procedures to learners thereafter allow them to practice on patients.

Quinn & Hughes (2007) defined learning as an acquisition of knowledge or skills that make an individual either completely change in behavior or modify it to suit the situation at hand. While a competency is an expected behavior that a student must demonstrate and most procedures and related competencies can be taught in a skills laboratory, such as health assessment, wound care, catheterization, drug administration and general hygiene while complex care can also be practiced in the skills laboratory setting using teams of students (Verdillo, 2010).

Teaching and learning in the skills laboratory is part of the nursing curriculum where students are expected to acquire knowledge, incorporate critical thinking and psychomotor skills, develop self-confidence in their abilities and then transfer this knowledge to the

clinical setting (Childs & Sepples, 2006). Teaching and learning in the skills laboratory is very important because if the students do not adequately practice clinical skills they will not gain confidence and the result will be serious errors in patient care. Therefore development of confidence in clinical skills and decision making may directly influence students' abilities to care for patients effectively upon graduation (Murphy & Kingston, 2009). Many students report that they feel unprepared to face the complexities of the health care work place (Lapkin, 2010). Therefore providing a safe and protected environment such as skills laboratory in which the learners can practice clinical skills before using them in real clinical settings help them acquire the necessary techniques and gain confidence (Ahmed, 2008).

Teaching and learning in the skills laboratory is ideal because students can learn from their mistakes in a non-threatening environment and pose no risk to clients. In view of this after students have learnt the theory in classroom then they are introduced to skills, concepts and procedures that they will take to the clinical setting in a simulated environment (Morgan, 2006). Students practise different skills on either mannequins or standardized patients in order to gain confidence before clinical placement (Ali, Nisar, Ghassan & Khan, 2011).

Teaching and learning in skills laboratory is also beneficial in such a way that students gain confidence and are motivated to learn (Houghton, 2007). According to Avernia (2006), skills laboratory provides a supportive and caring environment for students to practice and demonstrate nursing skills, before moving into practical setting with patients. It also provides an opportunity to become familiar with equipment and technique (Avernia, 2006). Practising psychomotor skills in such an environment decreases anxiety for the students, increases confidence and may even be viewed by the learners as fun (Morgan, 2006; Uwimana, 2009).

A study by Freeth and Fry (2005) demonstrated that both students and tutors enjoyed learning and teaching within the skills laboratory, and valued the laboratory as a teaching and learning environment which supported the linking of theory and practice. Increased confidence allows students to broaden the scope of their learning thus enriching their

clinical experience. Bradley & Bligh (2005) however caution that the educational benefits of skills laboratory are still unproven with little evidence to prove the efficacy and transferability of skills, the impact on patient care as well as the cost of health care.

Freeth and Fry (2005) also question the relationship between performance in the skills laboratory and performance in the clinical area while Bradley & Bligh (2005) stated that skills laboratory may even cause a fragmented approach to teaching and learning due to the fact that they are placed away from the clinical environment.

Strand, Naden and Slettebo (2009) conducted a study which explored students' feelings on how the use of skills laboratory impacted their learning. The study findings showed that learning in the skills laboratory permitted students to make mistakes without any risks which gave them secure feelings in the learning situation. Some students felt that through cooperation with others in the skills laboratory they learnt about different roles and the importance of purposeful communication between nurse and patient and between nurse and other health care personnel. Others felt that unaccepted attitudes or incorrect perceptions were adjusted through feedback (Strand et al., 2009; Felix, Mancussi & Ferreira, 2011).

According to Godson, Wilson, & Goodman (2007) students considered learning in skills laboratory good way because it builds their confidence since the environment is safe for practice. Mentors who also participated in Godson, Wilson, & Goodman (2007) study described the clinical skills laboratory as a useful learning environment because students come to their clinical placement better prepared, thereby reducing their workload (Godson et al., 2007). Freeth & Fry (2005) pointed out that published accounts of innovation in clinical skills laboratory tell part of the story but little is known about perceptions of students engaged in learning in skills laboratory.

Nursing Colleges in Malawi have skills laboratories which are located within their campuses. Initially not much was said or written about these skills laboratories until 2004 when Norwegian Church Aid (NCA) and Royal Norwegian Embassy (RNE) in Lilongwe, Malawi entered into a strategic partnership following the need, expressed by both Christian

Hospitals Association of Malawi (CHAM) and Ministry of Health (MOH) for Norwegian Non Governmental Organizations (NGO) and University Colleges to support their Malawian counterparts. Since then NCA has been helping Nursing Colleges with different things which included; improvement of CHAM Colleges' skills laboratories, building of new infrastructures in most nursing colleges, providing teaching and learning aids and equipment for skills laboratories to facilitate students' learning (Martinez, Fielding, & Chirwa, 2008).

In 2010, Nkhoma College of Nursing and Midwifery shifted to a new campus with new skills laboratory where students practice skills before clinical placement. However no data is available on how students perceive about teaching and learning in the skills laboratory since no study has ever been conducted. It was therefore necessary that a research study be conducted to determine perceptions of student nurses on teaching and learning in skills laboratory.

1.1 Problem statement

The shift of teaching pattern in clinical skills at Nkhoma Nursing and Midwifery College requires support and understanding from the teachers' perspectives. According to Chilemba (2014) students' feedback is a mechanism that can help in refining learning approaches. If students' feedback is not sought in terms of their perceptions on their desired learning pattern, there is conflict in the learning procedures and that would influence attainment of learning outcomes negatively.

In the past, clinical skills at Nkhoma Nursing and Midwifery College were wholly practiced at bedside where patients were used as teaching aids, and then changed to practical room which was teacher dominated. It was observed that students do not develop their competences due to profound change in nursing education and health care system such as; shortage of qualified practitioners to adequately teach the students and overpopulated clinical settings leading to high competition over learning experiences. The

skills laboratory has been adopted as a strategy to support students' development of skills before clinical placement. Since skills laboratory was introduced at this college, students' feedback has never been sought and is perceived as a challenge because if change is not well received the change might influence learning achievement negatively. Therefore it was necessary that a research study be conducted to describe perceptions of student nurse/midwives on teaching and learning in skills laboratory to promote meaningful lifelong learning.

1.2 Purpose of the study

The purpose of this study was to determine perceptions on teaching and learning in skills laboratory among student nurses at Nkhoma College of Nursing and Midwifery.

1.3 Rationale for the study

Teaching and learning in skills laboratory has been studied elsewhere in the world. However, data on perceptions of student nurses on teaching and learning in skills laboratory, in particular from Nkhoma College of Nursing and Midwifery in Lilongwe, Malawi was limited therefore a study was considered as it sought to obtain new information on the phenomenon of interest thereby improving students' learning of clinical skills.

1.4 Significance of the study

The establishment of skills laboratory at any College must bring positive learning perceptions among student nurses and midwives on teaching and learning. The results of this study could be beneficial to students by expanding their understanding on how important skills laboratory is to their clinical performance. The outcome will also help faculty to facilitate students' learning more effectively through different innovative teaching and learning strategies that promote learner participation. Furthermore the findings will be used to guide colleges to come up with strategies of making skills laboratory student friendly to motivate them to utilize the resource, hence improvement in

clinical performance, resulting in patients receiving good quality care rendered by the student nurses who were well trained in the skills laboratory. The study results could also be used as database on which any researcher could build on, while making further investigations in the same area.

1.5 Objectives of the study

1.5.1 Broad objective

To describe perceptions of student nurse /midwives on teaching and learning in skills laboratory at Nkhoma College of Nursing and Midwifery.

1.5.2 Specific objectives

i.   To determine students' perceptions on teaching and learning strategies used in the skills laboratory at Nkhoma College of Nursing and Midwifery

ii.   To examine the relevance of teaching and learning strategies used in the skills laboratory in relation to learning.

iii.   To assess benefits of teaching and learning in skills laboratory according to Nkhoma nursing and midwifery students

iv.   To identify challenges of learning in the skills laboratory as perceived by students

1.6 Summary

The chapter presented the introductory information on the phenomena under investigation in line with the objectives that shall guide the conduct of the study. In the following chapter, literature review shall be discussed in relation to perceptions of students to reflect their learning in skills laboratory.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter gives a discussion of the literature that was explored to uncover the learning perceptions of students in relation to teaching and learning in the skills laboratory. The perceptions were examined in line with teaching and learning of clinical skills and the skills laboratory is the perceived concept that is explored to identify meaningful learning in clinical context.

A search strategy to retrieve relevant literature was utilized in data bases thus HINARI with 461 articles and 43 were relevant, Pubmed 199 and only 32 were relevant, and Scirus 70 articles with 16 relevant. Search terms used were; Clinical skills laboratory, simulation, clinical skills and experiential learning. Other key words used were Clinical skills laboratory AND students' perceptions, Clinical skills laboratory AND teaching strategy, clinical skills laboratory AND student learning. Topics covered in the literature review were; Experiential Larning Theory, Teaching and learning strategies used in skills laboratory, Learning aids, Benefits and Challenges of learning in skills laboratory.

2.1 Learning in skills laboratory

Learning in skills laboratory is attributed to the theories that support learning in clinical settings such as; Experiential learning theory which was proposed by a psychologist David Kolb (1984) who was influenced by the work of other theorists such as; Jean Piaget (1936), John Dewey (1938) and Kurt Lewin (1946). Experiential learning involves learning from experience. Kolb (1984) cited in McLeod (2010) defined experiential learning as a process whereby knowledge is created through grasping and transformation

of experience through repetition to improve outcome and create permanent new behavior. Learning in a safe and controlled simulated environment such as skills laboratory where repetition is permitted, is seen to be conducive to learning clinical skills. In line with this view, Bremner, Acluddell, Bennett and VanGeest (2006) suggest that students need time to investigate, discover, make errors and correct those errors before clinically applying a skill on a patient. Learning through experience in a simulated environment is important as it ensures that clinical practice on patients is carried out with a high degree of safety (Bremner et al., 2006).

The term experiential learning was used because of the role, experience plays in the learning process. Experiential learning theory suggests that reflecting on action or in action is important in the development of critical thinking and improvement in performance hence experience of the learner is regarded very important in the learning process (Quinn & Hughes 2007). This implies that experience will shape future decision making because what was learnt in the past becomes vital in understanding future experiences.

The experiential learning theory is in a form of a model that portrays four ways of learning which are in a cycle (As shown in figure 1). Concrete Experience and Abstract Conceptualization are ways of grasping experience while Reflective Observation and Active Experimentation are ways of transforming experience (Mcleod 2010).
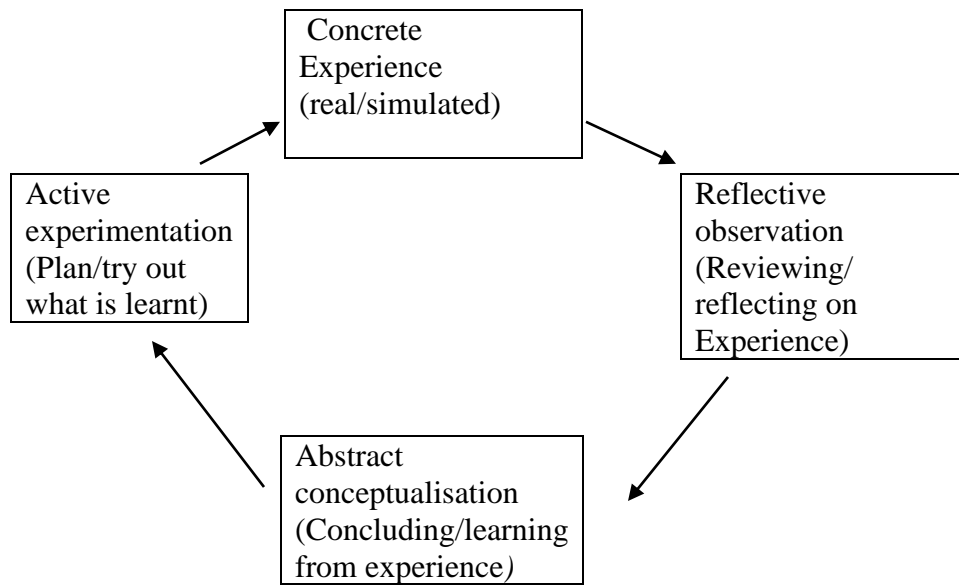
Figure 1: *Experiential Learning Model* **(Kolb 1984)**

Experiential learning is directed by individual goals and learning starts when a student responds to concrete experience that is, being involved in physical issues acquired in performing task which the student finds interesting or challenging (Quinn & Hughes, 2007). In this case the experience could be attending a demonstration or practice of skill or procedure in the skills laboratory which brings about feelings. Concrete experience involves the use of direct experience, feelings and emotions when interacting with the world (Quinn & Hughes, 2007). According to Kolb cited in Mcleod (2010) concrete experience provides the information that serves as basis for observation and reflection. From these reflections, the student understands the information and forms abstract concepts then the concepts are used to develop new ideas about the world, which then are actively tested. Through the testing of ideas, information is gathered again through experience and the process begins again (Mcleod, 2010). The process of learning does not always begin with experience but it can start at any stage because each person has his or her own style of learning basing upon specific situation (Quinn & Hughes, 2007).

Reflective observation of experience refers to students becoming aware of the experience or skill through which information about an experience can be collected while it occurs or after it has occurred (Clioff, Purcal & Arundell, 2005). Reflection can take place either individually or in groups, written or verbally, in a structured or unstructured manner and is regarded as an essential tool for transforming students from novices to experts (Clioff et al., 2005). According to Quinn and Hughes (2007) the focus of reflection is on the relationship between academic knowledge and the competence involved in practice. If students are not engaging in reflective observations, their ability to integrate theory with practice and further development of competence, problem solving and decision-making skills is interrupted (Bland et al., 2011).

Abstract conceptualization is about searching for the meaning of the experience, comparing and looking for connections between the reflected experience and other past experiences and linking it with the theoretical knowledge (Chapman, 2006). It is at this stage that students learn to use theories in problem solving, critical thinking, scientific reasoning and the use of nursing process in decision making about issues (Quinn & Hughes, 2007).

Active experimentation is based on practical application and emphasis is put on doing a task as opposed to observing (Chapman, 2006). Students test the outcome of ideas and assumptions in solving problems and making decisions associated with new situations. These in turn lead to new experiences and in that way lead to integration of theory and practice. Active involvement of students, flexibility, interaction and a degree of autonomy are key characteristics of experiential learning (Quinn & Hughes, 2007).

A study by Bradley and Bligh (2005) found that experiential learning forms an important part of students' learning in the skills laboratory and emphasized on the teaching and learning in small groups. The study further showed that self directed learning can be promoted in the skills laboratory through booking to access the resources of the skills laboratory. Self directed learning encourages students to seek and maximize learning opportunities in the skills laboratory (Bradley & Bligh, 2005).

Experiential learning has an essential part in nursing education, as the term explains itself; experience plays the central role in the learning process (McLeod, 2010)

Students are directly in touch with the realities of what is being studied rather than only thinking about it, in this study the students practice skills in a simulated environment which is the skills laboratory to gain some experience of what was learnt in classroom and apply that knowledge into actual real-work experience, and vice versa. As Experiential learning model indicated that knowledge is created through transformation of experience and that learning is a continuous process which is grounded in experience. Identification of concrete experience is the first stage in the learning cycle and this study determined perceptions of student nurses on learning in skills laboratory that takes place before clinical placement. Therefore, a programme that starts with experiential exercises like skills laboratory learning before clinical placement is in line with this type of philosophy.

The focus of nursing education lies in both theory and clinical practice, hence the researcher regarded this model as appropriate for this study because the focus of this study is based on students' perceptions on teaching and learning in skills laboratory which is a practical experience hence the skills laboratory helps in ensuring that students are able to integrate theory and practice during clinical placement.

2.2 Role of skills laboratory in students' learning

Education practices have been teacher- centered but simulation learning is considered to be more learner-centered where students abandon memorization for accessing knowledge as they become active learners (McAdams, 2009) With the Shortage of clinical placement sites, learning opportunities for students are few as they compete for supervision and other resources (Mabuda, Potgieter, & Alberts, 2008)

According to Bearnson & Wiker (2005) skills laboratory facilitates sustainable learning through repetitive practice and immediate feedback to eliminate errors as early as possible. Morgan (2006) found that students' comments supported the role of skills

laboratory in preparing them for practice and enable them to link what they had learnt to activities in clinical practice.

Croxon and Maginnis (2007) recommended that educators should reiterate the theoretical component of a lesson while teaching practical procedures in the skills laboratory. This can be achieved by utilizing a variety of teaching aids and strategies such as demonstrations with appropriate clinical scenarios, equipment, role plays, videos and case studies as these educational strategies assist students to integrate theory into practice (Bloomfied, 2013)

Gaberson and Oermann (2007) emphasized the need for adequate practice in the skills laboratory with and without supervision as this leads to competency and a sense of self-confidence in learners and also promote effective safe patient care. It is essential for student nurses to experience an effective initial skills laboratory preparation, followed by supervised practice and feedback before placement (Baillie & Curzio, 2009).

According to Ahmed (2008), the primary role of skills laboratory is to offer innovative learning methods that efficiently fill the gap between theoretical knowledge and clinical practice. There is growing interest in the use of skills laboratory to support clinical learning because of patient safety (Kneebone, et al., 2004). Learning motor skills requires practise in a safe environment because lack of skilled performance can endanger safety and comfort of patients (Quinn & Hughes, 2007). Gaberson and Oermann (2007) state that when learning complex skills students should first practise in an environment such as skills laboratory which is free from the demands of the actual practice setting. According to Baxter, Akhtar-Danesh, Valaitis, Stanyon and Sproul (2009) nursing curricula require learning opportunities which imitate experiences in nursing practice, without causing harm to patients and offer all students equal experiences.

Morgan (2006) conducted a study that aimed at establishing if the sessions taught in the skills laboratory prior to the first placement helped students integrate theory to practice during their first practice placement. The participants in Morgan's study identified that sessions taught in the clinical skills laboratory before the first practice placement, which

they identified as basic nursing skills such as taking and recording vital signs and hygiene needs of patients were useful and helped them to integrate theory to practice during their first clinical placement. A conclusion was made that the use of teaching sessions in the skills laboratory, enabled students to link theory to practice during practice placements. Morgan further states that teaching and learning in skills laboratory assists student nurses to develop psychomotor, interpersonal and communication skills as well as to develop confidence therefore, student nurses should be given opportunity to practice the skills in a safe environment using a variety of strategies such as; return demonstration, simulation and role play.

2.3 Teaching and learning strategies used in skills laboratory

The acquisition of clinical competencies requires students to have the opportunity to practise procedures several times. To facilitate this, different teaching and learning strategies are used in the skills laboratory. Strategies such as demonstration, role play, peer teaching, simulation, reflection, small group discussion, video clips, and self-directed learning are used in skills laboratory to facilitate learning (Baxter, et al., 2009). These strategies are used along side with different teaching and learning aids such as; simulated patients, video tapes, mannequins and simulators, simple anatomic models, dolls, pelvic models, plastic arm containing rubberized veins, breast models, posters and real hospital equipment (Ahmed, 2008).

2.3.1 Demonstration

Demonstration method is learning through observation, it uses several senses and students not only can hear the explanation, but also can see the procedure or process (Quinn & Hughes, 2007). Khan, Ali, Vazir, Barolia and Rehan (2012) identified the nursing students' perceptions about the effectiveness of utilized teaching and learning

strategies of clinical education in improving students' knowledge, skills and attitude. Demonstration was found to be the most effective strategy for improving students' skills, reflection for improving attitudes and problem based learning and concept map for improving knowledge. However, demonstration only provides information about cognitive and affective aspects while psychomotor components must be learned through repeated practice (Quinn & Hughes, 2007).

2.3.2 Role play

Comer (2005) mentioned role play as a support method of student learning within skills laboratory and the main advantage is that it is a cost effective method of learning clinical skills when compared to the cost of using technological simulation. Role-play can be based on previously scripted written scenarios or on a real case that may have been presented to the group. Teaching and learning through role play allows learners to practise communication skills in a safe environment while faculty members can directly observe the skills of multiple students during a single session. By playing the role of the patient, the student can get a better understanding of the patient's point of view. The main challenge of role-play is that some students hesitate to role-play. According to McKenna, Bogossian, Hall, Brady, & Fox-young (2011) role play was commonly reported as being employed for communication skills and history taking.

2.3. 3. Peer teaching and learning

Peer teaching and learning is another strategy used in the skills laboratory because of its advantages in the learning process. According to Topping (2005), peer learning is the acquisition of knowledge and skill through active helping and supporting among status equals. In peer teaching and learning, students are defined as tutors and tutees and when implemented over time the peer tutors will serve as peer mentors throughout their career (Topping, 2005). According to Sprengel and Job (2004), nursing students experience tremendous amounts of stress throughout their educational programs. Stress is often

related to learning new clinical skills, even when introduced in a non-clinical situation such as skills laboratory (Li et al., 2010)). However the majority novice nursing students taught by peers reported reduced anxiety than those taught by faculty only (Sprengel & Job, 2004; Giordana & Wedin, 2010). Reducing anxiety is thought to have a positive effect on learning both in the skills laboratory and in the clinical setting. A number of education program utilize peer teaching to facilitate learning (Colvin & Ashman, 2010).

2.3.4 Simulation

The use of simulation strategy within clinical skills education is being recognized as an important educational approach and is commonly used in nursing education (Moule, Wilford, Lockyer & Sales, 2008).

Jeffries, Rew and Cramer (2004) defined simulation as an activity mimicking the reality of clinical environment with the purpose of replicating real life scenarios. Students can explore and develop critical thinking, problem solving and practical skills to real world situations (Jeffries et al., 2004). Simulation is an active learning method which is learner centered with the educator acting as a facilitator of learning while students demonstrate self-motivation and direction (Jeffries et al., 2004). Skills laboratory provide the opportunity for students to learn through simulation, while developing their skills in a controlled and safe environment.

Murray, Grant, Howrth, & Leigh (2008) suggested simulation as an alternative opportunity for clinical skill development while McKenna et al. (2011) supported the use of simulation because time to develop skills on clinical placement with real patients is short. McCaughey & Traynor (2010) stated that simulation strategy complements traditional training with actual patients and enables students to learn in ways that reduce risks to patients. Bantz, Dancer, Hodson, & Van (2007) proclaimed that novice nurses report that their level of anxiety remained high when performing a task in front of an audience therefore simulation helped to reduce stress. For better simulation to take place, it must be made in conjunction with linked theory (Bantz et al., 2007).

In simulation students are provided with a range of mock experiences to engage in both directed and self-directed learning of clinical nursing activities (Wellard, Woolf, & Gleenson, 2007). Simulation is also argued to offer opportunities to promote nursing students' critical thinking, increase confidence as well as skill levels through providing a safe learning environment where patient safety is not compromised (McCaughey & Traynor, 2010). It also offers opportunities for skill practice where clinical experiences are infrequent (Moule et al., 2008; Richetts, 2011).

Baillie and Curzio (2009) compared learning of undergraduate nursing students using simulation and regular clinical placement. The results showed that; replacing some clinical placement hours with simulation was viewed positively by students and facilitators in response to the increasing demand for quality clinical placement outcomes. Simulation supports learning in skills laboratory by putting an individual in a position where he can experience some aspects of life by being involved in the activity. Students exposed to simulation learning increase confidence, competence and met their learning needs (Mole & McLafferty, 2004; Alinier, Hunt, Gordon, & Harwood, 2006; Schoening, Sittner, & Todd, 2006)

McCallum (2006) found that integrating simulation in nursing program enables the students to develop competence in the clinical skills which is required for award and practice. Student nurses believed that simulation is an innovative strategy that promote active learning, development of confidence and clinical competence prior to practice (Really & Spratt, 2007). In simulation, students practise skills without risk of harming patients and repetition is permitted, a notion which would be impossible in clinical practice (Berragan, 2011). Simulation learning in skills laboratory offers student nurses opportunity to master clinical skills which promote safe practice (Nehring & Lashley 2004: Goldenberg, Andrusyszyn, & Iwasiw, 2005; Alinier, et al., 2006). According to Comer (2005) providing simulated learning offers a standard of practice which is necessary to permit students to develop competence whilst providing risk-free practice. Teaching and learning through simulation can make use of variety of methods and techniques according to equipment available and the skills to be performed by the student (Medley & Horne, 2005).

2.3.5 Video

Video facilitates the process of learning through watching and imitating what is shown in the video such as; a given procedure simulated on a dummy, and thereafter students are given opportunity to practice the procedure on a dummy too. In the skills laboratory the video can be presented to the students to watch as many times as they feel necessary.

Cardosoa et al. (2012) evaluated the impact of using a video in teaching nursing students. Results revealed that the use of an educational video increased both cognitive and technical knowledge and was useful as a support tool for the development of nursing students. According to Haidar (2009) video strategy in teaching nursing skills motivates students, arousing their curiosity and promote active participation in the learning process.

The use of videotapes and videotaping in teaching clinical skills to nursing students is common that many schools of nursing have produced videotapes demonstrating various skills, which are used to provide feedback on skill performance, either as student self-directed activity or as teacher centered (Wellard, et al. (2007). Videotaping of instructors demonstrating various skills as a supplement to learning clinical skills was also suggested by Wellard, et al.(2007) in order to enable students to review the taped demonstrations at their leisure time and as many times as desired.

2.4 Benefits of skills laboratory

Students have opportunities for immediate feedback as they learn under the guidance of the facilitator and the skills learnt need to be practised and reinforced soon after learning. The opportunities of immediate feedback enhance the effectiveness of skills teaching (Ahmed, 2008).

A skills laboratory provides opportunities for students to learn and practice skills in a controlled environment on models and mannequins, before they have to perform them on patients. Ahmed (2008) further stated that, the skills laboratory provides a protected learning environment with no concern of distress that patient encounter might cause. Skills laboratory as a nursing practice environment reinforces learning in hospital in such a way that, students are expected to dress and behave in the skills laboratory as they would do when in a hospital setting. Learning through simulation in skills laboratory offers a safe non-threatening environment creating opportunities for learners to develop cognitive, psychomotor, and affective competencies away from the patient's bed side (Murray, et al., 2008).

It is unlikely that nursing students will be able to practice all the skills they require on real patients (Harder, 2009). Shortage of placements create fewer learning opportunities and increased number of students competing for supervision are some of the potential barriers to learning in the clinical setting (Harder, 2009). Simulation in the skills laboratory is offered as a response to the challenge of ensuring consistent learning in clinical practice that enhances the learning of clinical skills by providing knowledge, skills, and practice that is closely similar to real life setting (Feingold, Calaluce & Kallen, 2004).

Medley and Hone (2005) stressed that skills laboratory offer an active learning and specific patient simulation can be presented where errors can be corrected and discussed immediately. Similarly, Wellard and Heggen (2010) argued that safety is often an important reason for using simulated experiences, because students can develop competency in skills prior to providing direct care to patients. Felix, et al. (2011) indicated the use of skills laboratory an important resource in the process of teaching and learning psychomotor skills because teaching methods like simulation permit students to make mistakes and correct themselves while free from anxiety imposed by the presence of patients and guardians.

A study by Freeth and Fry (2005) demonstrated that both students and tutors enjoyed learning and teaching within the skills laboratory, valued the skills laboratory as a teaching and learning environment which supports the linking of theory and practice, an environment that is safe to practice clinical skills without the pressure from world and students learn a skill in the presence of experts. Besides the educational aspect, training in the skills laboratory is also effective for students, from the ethical-legal point of view, as it reduces errors in patients care by inexperience students (Freeth & Fry, 2005)

Baxter, et al. (2009) explained that since the environment is safe, students can be allowed to fail or make mistakes during practise as it does not carry risks compared to the real situation. Students can learn from these failures and repeat practise until they get it right. The skills laboratory is an ideal place for students to learn in simulated situation on how to care for future patients or clients and also learn how to fulfill their role as nurses. Baxter, et al. (2009) further stated that skills laboratory allowed the learners to appreciate the consequences of their actions without causing any harm to the patient and learners practice crisis or emergency events so that they are prepared to deal with them should they occur in real life.

Godson, Wilson and Goodman (2007) identified that students considered use of skills laboratory a good way to learn because the safe environment of the skills laboratory build up their confidence. Mentors in the same study also indicated that skills laboratory learning was useful because students came better prepared to clinical placement thereby reducing mentors workload.

According to Alvernia (2006) skills laboratory provides a supportive and caring environment for students to practice and demonstrate nursing skills before moving into practice with patients. It provides an opportunity to become familiar with equipment and technique in a non-threatening environment. The skills laboratory is made in such a way that it resembles a hospital ward and is essential learning resource for students in developing collaborative required skills for nursing practice (Verdillo, 2010). Teaching and learning in skills laboratory enables procedures to be done in a standardized and structured manner to improve skill performance (AL-Yousuf, 2004). In the increasing

complex clinical environment, it is no longer justified to use patients as "guinea pigs" for attaining professional competence (Gaba 2004).

Felix, et al. (2011) indicated the use of skills laboratory an important resource in the process of teaching and learning psychomotor skills because teaching methods like simulation permit students to make mistakes and correct themselves while free from anxiety imposed by the presence of patients and guardians. According to Murphy & Kingston (2009) students practise in the skills laboratory without harming a care receiver and with little stress. Murphy & Kingston (2009) further stated that the later point is an important aspect of skills laboratory learning, since learning and memory creation can easily be inhibited by stress and anxiety encountered by the student in the learning environment.

Bremner, et al. (2006) discovered that novice nursing students, who were learning physical assessment using simulators, experienced an increase in their confidence and a decrease in their stress, that helped them to feel more prepared for the clinical setting. Students in the study also felt that simulation learning enabled them to become more comfortable with the nursing role. On the other hand, a decrease in confidence increases the chances of experiencing more stress when exposed to a technical environment (Bremner, et al., 2006).

Ramnarayan and Hande (2005) noted that students could make mistakes without fear of harming someone and they were comfortable in the clinical setting because of the simulated experience. In this environment, where mistakes are permissible, the students felt at ease to learn at their own pace with frequent rehearsal of particular skills, especially difficult or painful or embarrassing procedures (Ramnarayan & Hande, 2005). In support of this notion, Bremner, et al. (2006) asserted that quality learning experiences can promote better preparation of student nurses and improve the quality of patient care. Learning in skills laboratory has become popular within nursing education and is used to teach and assess clinical skill acquisition and is reported to increase students' confidence and prepares them for real clinical setting (Richetts, 2011). Teachers play vital role in helping students gain experience and skills through observation,

feedback and role modeling while facilitating students in the skills laboratory (Bradley & Bligh, 2005).

2.5 Challenges of learning in skills laboratory

Several challenges are described in the literature that should be considered when utilizing skills laboratory. It is evident that simulation activities and the use of mannequins may not be suitable for all. Some students have described uneasiness when interacting with a lifeless mannequin and have suggested that they would prefer to talk to a real person (Bantz, et al., 2007).

According to Childs and Sepples (2006) students do not feel the same demand when learning with simulators as learners are aware that they are not nursing real patients. What is interesting to note is that even though students recognize that they are not dealing with a live patient sometimes they find simulations realistic that they are frightened and stressed up (Childs & Sepples, 2006).

Feingold, et al. (2004) highlighted one of the challenges of using simulated environment that simulations can operate in isolation from the clinical context, ignoring the learning needs of individuals within a real health care environment. According to Feingold, et al.(2004) some students are unable to relay the skills learnt in skills laboratory to the real clinical environment because they do not find scenarios lifelike. In order to appreciate skills laboratory full potential as a learning resource, simulation must be used alongside clinical practice and linked closely with it.

Another challenge with learning in skills laboratory is overcrowding of skills laboratory due to large numbers of students (Ahmed, 2008). This makes some students not able to see during demonstration and only few students have a chance to practice and being supervised.

2.6 Summary

The literature presented in this chapter reflects experiential learning theory as a support of teaching and learning in skills laboratory, important concepts in experiential learning model were described, the role of skills laboratory in students' learning, teaching and learning strategies used, benefits and challenges of learning in skills laboratory were also highlighted. Observations have shown that despite teaching and learning in skills laboratory clinical performance is still an issue. However not much is written about students' perceptions on teaching and learning in skills laboratory. Therefore, a study was necessary to determine students' perceptions on teaching and learning in skills laboratory as owners of learning. The next chapter therefore will focus on the research methodology of the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research method used in the study. Research method refers to the steps, strategies and procedures which are used for data collection and analysis in research (Polit & Beck, 2006). According to Burns & Groove (2007) research method acts as a blueprint for conducting a study. The chapter also describes the research design, population, data collection and analysis, validity, reliably and the ethical consideration. The overall aim of this study was to determine perceptions of student nurses and midwives on teaching and learning in skills laboratory.

3.1 Design

This was a descriptive quantitative study that sought to determine perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma College of Nursing in Lilongwe, Malawi. The study required to determine perceptions of students with regards to teaching and learning strategies, teaching and learning aids needed, benefits and challenges of teaching and learning in skills laboratory.

3.2 Setting

The study was conducted at Nkhoma Nursing and Midwifery College which is a Christian based nursing and midwifery education institution under the Nkhoma Church of

Central African Presbyterian (CCAP) Synod. The college is 55 Kilometers east of Malawi's Capital City. Nkhoma Nursing and Midwifery College was established in 1889 and is the oldest of all the colleges that offers nursing education in the country. It started almost at the same time with the work of evangelisation with the very missionaries at Mlanda in Ntcheu district. The primary objective for its establishment was to provide nursing and midwifery personnel to its health facilities at Mvera, Mlanda and Nkhoma campuses.

The college offers a three year integrated Nurse Midwife Technician (NMT) programme and Community Midwifery. The NMT intake is 60 students per year consisting of male and female students. There were 49 students in year two and 44 in year three making a total of 93 students for the NMT programme. There were no first year students at the college because there was no intake in 2013. For Community Midwifery programme there were 15 students.

3.3 Target population

Polit and Beck (2006) described population as all individuals or objects with common characteristics in which the researcher is interested on. The population in this study consisted of second and third year student nurse/midwives at Nkhoma Nursing and Midwifery College who were pursuing a three year Nurse/Midwifery Technician program.

3.4 Sampling method and sample size

Sample for the study sought the senior students of Nkhoma College of Nursing and Midwifery to be ideal in understanding the issues under investigation hence they were all invited. Sampling is defined as the process of selecting subjects who are representative of the population being studied (Burns & Groove, 2007). All the 93 students from year two and three were invited to participate in the study. In total 98% (n=91) responded to the questionnaires.

3.5 Inclusion criteria

To be included in the study, the participant had to be a student at Nkhoma Nursing and Midwifery College, had to be in second or third year of study and be willing to participate in the study.

3.6 Exclusion criteria

Exclusion criteria define the potential participants who were excluded in the study. The following criteria were applied for this study; students who were pursuing community midwifery assistance program, the researcher assumed they might not have the same views as they were undergoing a different program of study.

3.7 Data collection

In this study, data were collected using a self administered questionnaire developed by the researcher using information from the literature. (Appendix B). The questionnaire was developed in line with the study objectives. The questionnaire was divided into five parts, part A requested demographic data which included; year of study, gender and age. Part B requested data regarding students' perceptions about teaching and learning in skills laboratory. A five point Likert scale was used to rate these perceptions on teaching and learning. Part C was about teaching and learning strategies used in the skills laboratory, Part D was about teaching and learning aids students needed during learning, and lastly, Part E was about benefits and challenges of learning in skills laboratory as perceived by students. The participant signed consent form to indicate their willingness to participate and were given two weeks to return the filled questionnaire which were put in a self addressed envelopes.

3.8 Pre-test

Pre-test is defined as a small scale study using a small sample of respondents who will not be part of the final study in order to test and refine the instrument (Polit & Beck, 2006). In this study the researcher conducted a pre-test to determine whether the questions were clearly worded, understandable and useful in generating desired information. The pre-test was conducted at Nkhoma Nursing College with 10 participants who were about to complete their training before main study and were not part of the study. Following the pre-test some questions were re-phrased for clarity. The purpose of pre-test was to minimize errors, examine reliability, validity and to indicate adequacy of the questionnaire (Burns & Groove, 2007). It also gave an estimate of time to complete the questionnaire.

3.9 Validity

Validity is the degree to which an instrument accurately measures what it is supposed to be measuring and see if it reflects the concepts it is supposed to measure (Polit & Beck, 2006). To ensure that the data collecting instrument was valid, experts reviewed it before use. These experts included Nurse Educators and research experts. The instrument was further refined through pretesting on senior students who were about to complete their training before main study. The pretesting of the instrument informed the researcher if the questions on the questionnaire were feasible and worthy for the study. After the validity and accuracy the data collection tool was established, then the tool was put to use.

3.10 Reliability

The reliability of an instrument refers to the consistency with which it measures the attributes it is supposed to measure and be able to give same results each time it is used (Polit & Beck, 2006). For reliability of the instrument in this study, the researcher used the pretesting results to assist in refining the instrument. The pretesting results showed

that the questions posed gave similar responses between different respondents therefore no changes were made in the instrument after pretesting as it gave the intended outcome.

3.11 Ethical considerations

Prior to conduct the study, the research proposal was submitted to College of Medicine Research and Ethical Committee for approval [Appendix E]. In addition, permission to conduct the study was sought from Nkhoma College of Nursing management [Appendix G] where the study was conducted. Consent from the participants was obtained by providing them with detailed information about the research so that they would provide an informed consent. Study participants were asked to sign a consent form before participating [Appendix A]. Participants were assured of their right to refuse to participate in the study and that their refusal would not risk their training. They were free to withdraw from the study at any point and presentation of findings would not display individual responses. Participants were informed that there were no monetary benefits for taking part in the study. To ensure privacy and confidentiality of participants, the instruments bared no names on them. Numbers were used for anonymity. After data collection the questionnaires were locked in a cupboard where nobody accessed the data apart from the researcher and the supervisor.

3.12 Data analysis

After data collection, the tools were checked for completeness and accuracy. The data were analyzed using SPSS software package version 16.0. Descriptive statistics such as percentages, and frequencies were used to summarize and describe data on perceptions of student nurse midwives on teaching and learning in skills laboratory with regard to teaching and learning strategies and aids students needed when learning in skills laboratory, benefits and challenges faced by students when learning in skills laboratory. The results were presented in form of tables and figures.

3.13 Summary

This chapter discussed the research design and the methods that were followed to guide the conduct of this study. The methods and procedures have been outlined and in the next chapter research findings shall be presented.

CHAPTER 4

PRESENTATION OF RESULTS

4.0 Introduction

The chapter presents the study findings that are presented in line with the study objectives as outlined in chapter one (page 7). The demographic characteristics of the study population are presented first, followed by study results. The study objectives were: to describe students' perceptions on teaching and learning strategies used in skills laboratory at Nkhoma College of Nursing, to examine the relevance of teaching and learning strategies used in skills laboratory in relation to learning, to assess benefits of teaching and learning in skills laboratory according to Nkhoma Nursing and Midwifery students and analyze challenges of learning in skills laboratory as perceived by the students. The results are presented in tables and figures.

4.0.1 Sample Realization

A sample of 93 students was invited to participate in the study, 91 responded reflecting a response rate of 98%. According to Fincham (2008) study reports that are intended to be generalized should have a response rate from at least 80%. Therefore, response rate in this study is acceptable as it is in line with the standards, hence, results could be generalized.

4.1 Demographic characteristics of participants

4.1.1 Year of study and gender of participants

A total of 91 student nurse midwives participated in the study, 52% (n=47) were in second year while 48% (n=44) were in third year. Out of all the participants, 54% (n=49) were female and 46% (n = 42) were male.

4.1.2 Age of participants

The age of participants (Refer figure 1) ranged from 19 years to 31 years with mean age of 24 years and Standard Deviation of 2.287.
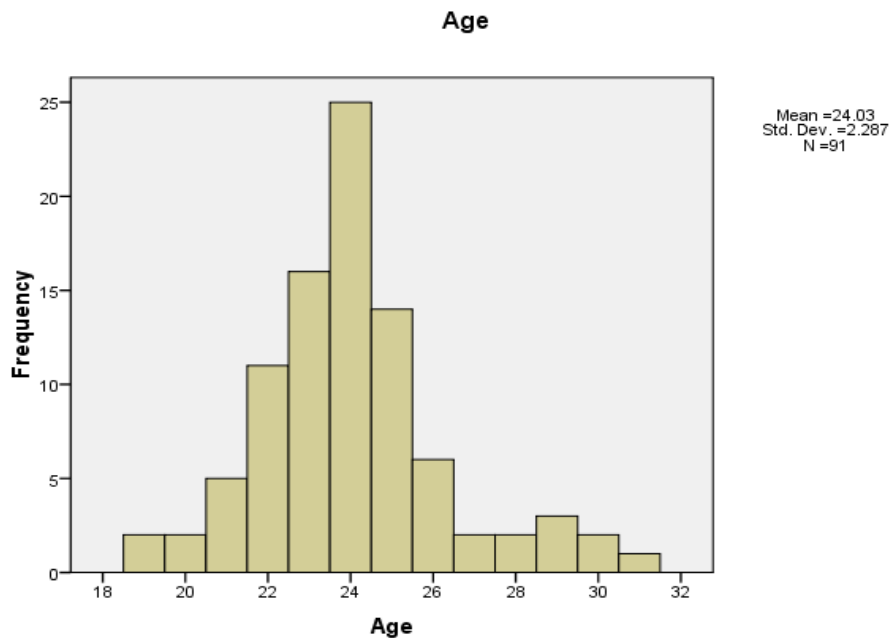
Figure **2**: *Age of participants in years*

4.2 Teaching and learning in skills laboratory among student nurse/midwives

The teaching and learning perspectives in the skills laboratory among the student nurse/midwives were examined from different dimensions, in terms of teaching and learning in the skills laboratory with special focus on strategies, learning aids, the actual learning in the skills laboratory, benefits of learning in the skills laboratory as well as some of the challenges viewed by the participants. Therefore, the study findings are presented in line with identified subtopics.

4.2.1 Teaching and learning strategies used in skills laboratory

In this sub section participants had to indicate the teaching and learning strategies that are used to promote their learning in the skills laboratory. All participants indicated that demonstration is commonly used in the skills laboratory, 84.6% (n=77) indicated that self directed learning is utilized through the use of learning guides, 78 % (n=71) indicated that the small group discussion method is prevalent in some class sessions (Refer table 1). Interestingly only 58.2% (n=53) said peer teaching and learning is one of the strategies in their learning encounters. Some participants, 54.9% (n=50) indicated reflection is at times used. The least used strategies as reported by the participants are the role play, 34.4% (n=31), learning through video 15.4% (n=14) and simulation 12.1% (n=11).

Table 1

Teaching and learning strategies used in skills laboratory

Strategies	Frequency	Percentage (%)
Demonstration	91	100
Self directed learning using learning guides	77	84.6
Small group discussion	71	78
Peer teaching and learning	53	58.2
Reflection	50	54.9
Role play	31	34.1
Teaching and learning using video	14	15.4
Simulation	11	12.1

4.2.2 Most useful Teaching and learning strategies reported among participants

The most useful teaching and learning strategies were identified from the reported strategies. (See table 2). The majority 92.4% (n=84) of the participants identified the demonstration to be the most useful learning strategy in the skills laboratory. While only 35.2 % (n=32) indicated small group discussion, 19.8 %(n=18) role play, 15.5 %(n=14) peer teaching and learning, 10% (n=9) self directed learning, 8% (n=7) reflection and 6% (=5) indicated learning using video.

Table 2

Most useful teaching and learning strategies in skills laboratory

Strategies	Frequency	Percentage (%)
Demonstration	84	92.4
Small group discussion	32	35.2
Role play	18	19.8
Peer teaching and learning	14	15.5
Self directed learning using learning guides	9	10
Reflection	7	8
Learning using video	5	6

4 .2.3 Learning aids

The participants had to indicate whether learning aids were needed in their learning in the skills laboratory. The findings showed that the majority of participants needed the learning aids, 86% (n=78) indicated need for video films during learning in skills laboratory (see table 3), while only 14.2% (n=13) need learning guides, 13.2% (n=12) need real objects like dead body and placenta, 12.1% (n=11) need flip charts and posters, surprisingly 4.4% (=4) need realistic mannequins and 1.1% (=1) need trips to other skills laboratories.

Table 3

Learning aids needed in skills laboratory

Learning aids	Frequency	Percentage (%)
Video	78	86
Learning guides	13	14.2
Real objects like placenta and dead body	12	13.2
Flip charts and posters	11	12.1
Realistic mannequins	4	4.4
Trips to other skills lab	1	1.1

4.2.4 Participants' learning views in skills laboratory

The results showed that all participants agreed that the main aim of learning in skills laboratory is to practice clinical skills. However, the majority 97.8% (n=89) agreed that practice in skills laboratory help them to integrate theory into practice, only 1 participant was neutral and another one disagreed that practice in skills laboratory help to integrate theory into practice. Further, 96.7% (n=88) agreed that practice with real equipment in skills laboratory is helpful, and 2.2% (n=2) were neutral while 1 participant disagreed that practice with real equipment in skills laboratory is helpful.

The results also showed that majority 94.5% (n=86) of the participants agreed that they attended skills laboratory sessions when scheduled by the teacher 3.3% (n=3) neutral while 2.2% (n=2) disagreed that they attended skills laboratory sessions when scheduled by the teacher. The majority 93.4% (n=85) of participants agreed that practice in skills laboratory helped to reflect on clinical experience, 3.3% (n=3) were neutral and the remaining 3.3% (n=3) disagreed that practice in skills laboratory helped to reflect on clinical experience.

When asked to give their views about whether skills laboratory is essential for practice of nursing skills, the majority 92.4% (n=84) agreed that skills laboratory is essential for practice of nursing skills, 4.4% (n=4) were neutral while 3.3% (n=3) disagreed that skills laboratory is essential for practice of nursing skills. Ninety one point two percent (n=83)

agreed that skills laboratory is conducive environment for learning clinical skills, 7.7% (n=7) were neutral and 1 participant disagreed that skills laboratory is conducive environment for learning clinical skills, 91.3% (n=83) further agreed that practice in skills laboratory makes their conduct in clinical placement safer for patients, themselves and colleagues, 5.5% (n=5) were neutral and the remaining 3.3% (n=3) disagreed that practice in skills laboratory makes their conduct in clinical placement safer for patients, themselves and colleagues.

The results also showed that 84.6% (n=77) of the participants agreed that skills laboratory learning help them behave ethically in the clinical area, 11% (n=10) were neutral while 4.4% (n=4) disagreed that skills laboratory learning help them behave ethically in the clinical area. About 79.2% (n=72) agreed that it is good to learn through mistakes while knowing that no one gets hurt, 7.7% (n=7) were neutral, and 13.1% (n=12) disagreed that it is good to learn through mistakes while knowing that no one gets hurt. Seventy one percent (n=65) further agreed that the reason for coming to the skills laboratory is to practice without patients, 19% (n=17) were neutral while 10% (n=9) disagreed that the reason for coming to the skills laboratory was to practice without patients.

The study showed that 69.3% (n=63) of participants agreed that students were oriented to the skills laboratory, 7.7% (n=7) were neutral and 23% (n=21) disagreed that students were oriented to the skills laboratory. Of the participants, 66% (n=60) further agreed that they practiced in skills laboratory when there was a problem with their clinical skills, 14.2% (n=13) were neutral and 19.8% (n=18) disagreed that they practiced in skills laboratory when there was a problem with clinical skills while 59.4% (n=54) agreed that they practiced in the skills laboratory when preparing for Objective Structured Clinical Examination (OSCE), 16.4% (n=15) were neutral while 24.2% (n=22) disagreed that they practiced in skills laboratory when preparing for OSCE and 57.2% (n=52) agreed that mannequins were realistic enough to help develop clinical skills, 28.6% (n=26) were neutral while 14.2% (n=13) disagreed that mannequins were realistic enough to help develop clinical skills.

It was also noted that 57.2% (n=52) of the participants agreed that skills laboratory was conveniently located for practice at free time, 13.2% (n=12) were neutral while 29.7% (n=27) disagreed that skills laboratory was conveniently located for practice at free time, 47.3% (n=43) further agreed that they booked skills laboratory for self-study, 17.6% (n=16) were neutral while 35.2% (n=32) disagreed that they booked skills laboratory for self-study, 40.7% (n=37) agreed that there was no instructor to guide learning during self-study, 19.8% (n=18) were neutral while 39.6% (n=36) disagreed that there was no instructor to guide learning during self-study and further 37% (n=34) agreed that clinical skills practiced in skills laboratory could better be practiced in the clinical area while 28% (n=25) were neutral and 35% (n=32) disagreed that clinical skills practiced in skills laboratory could better be practiced in the clinical area.

When asked to rate the rules in skills laboratory, 26.4% (n=24) of the participants agreed that rules in skills laboratory did not favor students' learning, 20.9% (n=19) were neutral while 52.8% (n=48) disagreed that rules in skills laboratory did not favor students' learning. The study further revealed that 24.2% (n=22) of the participants agreed that they considered the value of skills laboratory just like college library and internet resource, 28.6% (n=26) remained neutral while 47.2% (n=43) disagreed that they considered the value of skills laboratory just like college library and internet resource. Twenty two percent (n=20) agreed that practice in skills laboratory was too artificial to be useful, 27.5% (n=25) were neutral while 50.5% (n=46) disagreed that practice in skills laboratory was too artificial to be useful. The results further showed that 3.3% (n=3) of the participants agreed that they did not use skills learnt in skills laboratory in the clinical area, 2.2% (n=2) were neutral while the majority 95% (n=86) disagreed that they did not use skills learnt in skills laboratory in the clinical area.

The results also showed that 2.2% (n=2) of the participants agreed that they did not see the connection between practice on models and providing care to patients. About 3.3% (n=3) were neutral and the majority 94.5% (n=86) disagreed that they did not see the connection between practice on models and providing care to patients and 2.2% (n=2) of participants agreed that the reason for coming to the skills laboratory was to get some

rest, 1 participant was neutral and the majority 96.7% (n=88) disagreed that the reason for coming to the skills laboratory was to get some rest.

4.2.5 Benefits of learning in skills laboratory as perceived by the participants

The majority 87.9% (n = 80) of the participants indicated that they became competent when learning in skills laboratory, 85.7% (n = 78) gained confidence after learning in the skills laboratory, while 48.4% (n = 44) indicated that learning in skills laboratory helped them integrate theory into practice, 42.9% (n = 39) indicated correction of mistakes as a benefit of learning in skills laboratory, 29.7% (n = 27) indicated safety for the patient as a benefit, 24.2% (n = 22) are helped to get familiar with hospital equipment, 23.1% (n = 21) indicated that learning in skills laboratory promoted independence when caring for the patient.

Further 22% (n = 20) of participants indicated that they learnt professional discipline in the skills laboratory, 19.8% (n = 18) indicated learning from experts (teachers) as a benefit, while 12.1% (n = 11) indicated that skills laboratory helped them reflect on clinical experience, 5.5% (n = 5) indicated that they were able to practice procedures for rare conditions in the skills laboratory. Other 4.4% (n = 4) indicated that learning in skills laboratory helped them pass clinical examination and 1 participant indicated that learning on dolls was fun.

4.2.6 Challenges faced when learning in skills laboratory as perceived by participants

When asked to express their views about challenges faced when learning in skills laboratory, the participants illustrated some of them as follows; 81.3% (n=74) indicated that learning in skills laboratory was given limited time for students to practice.

Most students 75.8% (n=69) expressed that the skills laboratory was closed when students were free for self-study, 42.9% (n=39) mentioned inadequate teaching and

learning aids such as; blood pressure machines, thermometers, and linen for bed making as a challenge. Of the participants, 36.3% (n=33) indicated that skills laboratory was congested with students during sessions, 26.4% (n=24) pointed out inadequate supervision during skills laboratory learning a challenge, while 6.6% (n=6) expressed that learning on models did not portray true picture of patients and 2.2% (n=2) indicated unfriendly instructors/teachers to be a challenge to their learning.

4.3 Summary

This chapter presented study results on students' perceptions on teaching and learning in skills laboratory, with focus on teaching and learning strategies used, learning aids, actual learning in skills laboratory, and benefits of learning in skills laboratory as well as challenges faced by students when learning in skills laboratory.

The study results showed that the majority of participants appreciated teaching and learning in skills laboratory because they gained confidence and became competent before clinical placement. Demonstration which is teacher centred was predominantly used and viewed most useful while innovative teaching and learning strategies such as; small group discussion, peer learning, role play, reflection and self directed using learning guide were rated least useful. Limited time for practise, inadequate learning resources, congestion of students during laboratory sessions and inadequate supervision emerged as major challenges to teaching and learning in the skills laboratory. Chapter 5 will discuss the research results and presents conclusion, limitation and recommendations.

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the study results. Interpret findings, presents limitations, makes conclusion and provides recommendations. The study aimed at determining the perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma Nursing and Midwifery College.

5.1 Learning in skills laboratory

The results in this study showed that the process of learning in the skills laboratory began after learning in classroom and that guided to learning in the skills laboratory. The teacher first demonstrated the procedure to the students and then the students performed return demonstration. Thereafter, students practiced on their own until they became competent when teachers conducted check offs and declared them competent in that particular skill before going to the clinical area to practice on patients and clients. The findings showed that students mastered skills through practice and correction of mistakes by experts who were the teachers.

Grealish (2009) found that students learn skills through experience, practice and coaching by experts. During practice the teacher gives the students feedback on their performance and the learning process ends with the students being declared competent after check offs hence ready to practice in the clinical setting. The teaching and learning process in the skills laboratory is in line with the novice to expert theory which describes the pattern of knowledge growth from beginner novice to the expert level (Rothgeb, 2008).

5.1.1 Teaching and learning strategies in skills laboratory

The results showed that a variety of teaching and learning strategies were used in the skills laboratory at Nkhoma College of Nursing. These include demonstrations, small group, and self-directed learning using learning guides. Reflection, peer learning, role play, and simulation which were rarely used while learning by video tape recording has never been used. Although a variety of teaching strategies are used, the study results showed that demonstration was the commonly used strategy. This finding is in agreement with Childs and Sepples (2006) findings, which showed that the usual teaching and learning strategy in the skills laboratory is demonstration of the procedure with the aim of showing the students specific materials and steps to be followed.

The dominance of demonstration as a teaching strategy in the skills laboratory is not something new in many nursing educational programs. The results from Ahmed's (2008) study showed that tutor demonstration was the main method of teaching, although learning in the skills laboratory is supposed to be self-directed. Quinn and Hughes (2007) also argued that Demonstration strategy is associated with teacher-directed learning and only provides information about cognitive and affective aspects while psychomotor components must be learned through repeated practice

Interestingly findings in this study also showed that students further indicated small group discussion, self-directed learning using learning guides as some teaching and learning strategies sometimes used in the skills laboratory. However reflection was effective in improving students' knowledge through integration of past experiences and comprehensive study of the situation resulting in improvement in subsequent performance. According to Rothgeb (2008) reflection facilitates development of critical thinking. Use of role play allows learners to practice communication skills in a safe environment (Corner, 2007). Educational video strategy increases both cognitive and technical knowledge. While simulation strategy complement traditional training with actual patients and enable students to learn in ways that reduce risks to patients (McCaughey & Traynor, 2010).These teaching and learning strategies are learner-centered and very useful in learning clinical skills, as they promote student participation

as well as experiential learning that facilitates development of critical thinking which is a key to safe practice Rothgeb (2008).

In this study demonstration by the teacher was found to be the most useful learning strategy in the skills laboratory. This means that acquisition of knowledge with this approach is teacher-centered that puts the learner a passive recipient of information thereby hindering deeper learning. These findings are consistent with those of Khan, Ali, Vazir, Barolia and Rehan (2012) who found that demonstration was the most effective strategy for improving students skills (Khan, Ali, Vazir, Barolia and Rehan, 2012). As novice, students would like to see how the procedure is done by the teacher to act as a reference before learning from others (Bremner et al., 2006). However the use of traditional teaching strategy such as demonstration alone cannot match the use of concrete experience in line with Kolbs' experiential learning model, as the lack of innovative teaching and learning strategies that promote learner participation may hamper students' effective learning (McLeod, 2010).

Wellard, et al. (2007) explored the use of skills laboratory in undergraduate nursing programs in Australia the results also highlighted the predominance of teacher talk and demonstration in the laboratory classes where teachers demonstrate the specific skills being taught.

5.1.2 Learning aids needed in skills laboratory

The study result showed that nursing students need a variety of learning aids, the majority of students indicated that they need video and video tape recording to be used for learning in skills laboratory. Educational video are rarely used at Nkhoma Nursing College while video tape recording has never been used in the skills laboratory. Educational video help students learn communication skills while video tape recording provide effective feedback through self assessment. These teaching and learning aids also motivate students, arousing their curiosity and promote active participation in the

learning process (Haidar, 2009). Preparation for use of video in teaching and learning is the same as any other teaching aids or resources. Specific learning objectives should be determined in advanced, instructional sequences should be developed and reinforcement activities planned.

The results also showed that students needed to handle real objects such as dead body and real placenta when learning in the skills laboratory. These results differ from Hilton & Pollard (2004) study results which stated that skills laboratory reproduce health care settings, mostly the hospital ward and are normally equipped with objects found in the hospital such as; beds, a range of medical instruments in addition to adult and infant mannequins . The results of this study further showed that students required realistic mannequins to help them feel close to reality when learning in the skills laboratory, which would lead to mastery of clinical skills that help in providing safe care to patients and clients.

5.1.3 Benefits of learning in skills laboratory

The results from this study showed that there were a number of benefits associated with learning in skills laboratory such as; skills laboratory allowed students to practice skills and became competent, students gained confidence through repeated rehearsals, they linked theory to practice, mistakes were corrected, patients were safe, they got familiar with hospital equipment, professional discipline was promoted, students also learnt from experts, procedures for rear conditions were practiced, skills laboratory helped them pass clinical examination and students were motivated to learn because skills laboratory learning was fun. These findings correspond with those of Ahmed (2008) which stated that teaching and learning in skills laboratory is independent on availability of patients with a particular condition, it also allows periods of pause during demonstrations to emphasize important points. Opportunities of immediate feedback enhance further effectiveness of skills teaching and learning (Ahmed, 2008).

The results further showed that safety for the patients is a benefit of learning in skills laboratory because patients are not used as learning aids as a result students learn with confidence while knowing that no one will be hurt which is a key to nursing practice. According to Bradley & Bligh (2005), the skills laboratory provides a safe environment where students learn introductory clinical skills. Wellard et al. (2007) also indicated that students learn in the skills laboratory because it is permissible to make mistakes and confidence develop through repetitive practice until a skill is mastered.

Felix et al. (2011) indicated that skills laboratory is an important resource in the process of teaching and learning psychomotor skills. Teaching methods like simulation permit students to make mistakes and correct themselves while free from anxiety imposed by the presence of patients and guardians (Felix et al., 2011).

Ahmed (2008) was of similar view that the skills laboratory is an environment where mistakes are allowed, the students can feel at ease to learn at their own pace and with frequent rehearsal of particular skills especially difficult, or painful, or embarrassing ones.

Another benefit of learning in skills laboratory stated by the participants is that it helped them integrate theory into practice. It is important to integrate theory to practice because nursing education is a combination of theoretical and practical components which requires integration for effective patient care. Therefore becoming a nurse involves the cognitive, affective and psychomotor domains of learning. Morgan (2006) Investigated use of skills laboratory before clinical placement, and found that sessions taught in the skills laboratory before the first practical placement, such as taking and recording vital signs and hygiene needs of patients were useful and helped students to integrate theory to practice during their clinical placement.

5.1.4 Challenges of learning in skills laboratory

The challenges indicated in the study included limited time given to students to practice during scheduled sessions, overcrowding of students in skills laboratory during sessions, inadequate supervision during practice and lack of teaching and learning aids such as; educational video and video tape recorder, blood pressure machines, thermometers, learning guides and linen for bed making.

The results of this study showed that limited time for practice is the major challenge of learning in skills laboratory. The increased number of students makes it impossible for every student to have a chance to practice during scheduled time yet, learning motor skills requires practice in a safe environment such as skills laboratory because lack of skilled performance can endanger safety and comfort for patients (Quinn and Hughes, 2007).

Closing the skills laboratory after working hours when students are free for safe study emerged as another challenge with learning in the skills laboratory. The students have access to the skills laboratory during scheduled sessions and they had to book if they want more practice as self study. Unfortunately the skills laboratory only opens during working hours when the students are also on other scheduled lessons or clinical placement. The results however showed some form of control regarding access to the skills laboratory in that they had to book if they want to access the skills laboratory for self study.

Another challenge is inadequate teaching and learning aids, these include; blood pressure machines, thermometers, learning guides and linen for bed making. Practice using such equipment is ideal as the students will have similar experience when using the equipment in the clinical setting. Bartfay, et al. (2004) stated that if the simulated skills differ from the real-life situation, students would not be able to make effective connections between what they know and the action that is required.

Overcrowding of students in the skills laboratory was another challenge during learning in the skills laboratory. This could be due to large numbers of students against scheduled session time. The increased number of students result in few students benefiting when learning because others cannot see what is being demonstrated by the teacher and those only few will have a chance to practice. However, small size learning groups help to form close working relationships where teachers can be able to understand individual students' learning style and difficulties, therefore be able to offer more targeted instruction. A study by Mabuda, et al. (2008) showed that teaching and learning clinical facilities which are overcrowded had a negative impact on clinical learning. Bradley and Bligh (2005) emphasized on the teaching and learning in small groups as it forms a significant component of students' learning through interaction.

The study results also showed that there was inadequate supervision during learning in skills laboratory due to large numbers of students against limited number of teachers. That makes it impossible for teachers to reach each and every student. This result is in contrast with Moscaritolo (2009) views which states that supervision is a solution to many challenges that nursing education is faced with, such as; increasing class sizes, rising competency requirements, decreasing number of faculty, tightening budgets, and shrinking clinical placement opportunities (Moscaritolo, 2009).

5.2 Conclusion

The study attempted to determine perceptions of student nurse/ midwives on teaching and learning in skills laboratory. The results highlighted a number of important areas to be considered during teaching and learning in skills laboratory such as; use of variety of teaching and learning strategies; demonstration strategy which is teacher-centered was predominantly used and viewed most useful while innovative teaching strategies which are learner-centered such as; role play, small group discussion, peer learning, reflection, simulation and self-directed learning promoted through using learning guides were viewed least useful which is a threat to students' effective learning as they lack active

participation in the learning process. The results further showed need for learning aids such as video tapes and real objects like placenta and dead body to facilitate learning.

The results also showed some outstanding benefits such as, increased competence and safety for the patients following exposure to learning in skills laboratory. There is indication that the skills acquired during practice in skills laboratory will be transferred to the clinical setting to the advantage of patient care. Other benefits included an environment where immediate feedback was provided and mistakes corrected to facilitate learning, an environment that facilitated linking of theory to practice, an environment where professional discipline and independent learning were promoted.

Learning in skills laboratory was not only perceived as an effective approach but was also reported to be enjoyable and built students' confidence. However despite all these benefits students still face challenges when learning in the skills laboratory, such as limited time for practice, overcrowding of students during laboratory sessions, inadequate supervision during sessions, lack and inadequate learning aids which were regarded as critical as students learn through doing and experience. These issues are essential in the learning process. The College should be aware of these challenges in order to effectively plan for students learning that will promote quality patients' care.

5.3 Study Limitations

The study was conducted at one CHAM Nursing College therefore the findings cannot be generalized. The participants were from two levels of study only, excluding other groups who could have given their views also.

5.4 Recommendations

Based on the findings, the following recommendations are made for nursing administration, nurse educators and further research.

5.4.1 Nursing administration

Teaching and learning aids was a concern in this study. The Nkhoma College administration has to ensure enough resources are available in the skills laboratory for effective learning; these are educational video and video tapes, Blood pressure machines, thermometers and linen for bed making. The College has to appropriately deploy enough teachers to supervise students during laboratory session and self study. Staff from the clinical setting may be invited as experts to teach other skills while experts in specific field such as Information and Technology may be used to assist in video tape recording during demonstrations and students practice for feedback on performance.

Inadequate time for practise in the skills laboratory was also a crucial concern for the students, skills laboratory policy on opening time should be revised to enable students' access the resource for more practice as self study after scheduled periods.

In-service training should be conducted for nurse educators on utilization of innovative teaching strategies that promote learner active participation to enhance integration of theory and practice for patient safety in addition to predominant traditional teaching strategy the demonstration.

5.4.2 Nursing educators

Faculty should be oriented on effective use of the skills laboratory to promote self-direction to students using available learning package in the skills laboratory. Plan skills laboratory sessions in small groups to ease congestion and involve other faculty members to participate in supervision of students during laboratory sessions. Use variety of innovative teaching strategies with a focus on making students' self-directed learners, critical thinkers, and problem solvers as this would be helpful in patient care. Educators should make use of opportunities found in the clinical setting to teach students using real aids such as dead body and placenta as indicated in the study results as these learning aids could not be stocked in the skills laboratory due to legal aspects.

5.4.3 Further research

Further studies need to be conducted on the following areas:

Replication of the same study at different nursing colleges, with a larger representative sample because the environment where education takes place is not the same and the study might yield different findings and would also increase generalizabilty of the study. There is need to explore perceptions of nurse educators on teaching and learning in skills laboratory as this would learn from educators' views also. Investigate the impact of teaching and learning in skills laboratory on clinical performance to assess effectiveness.

5.5 Dissemination of study results

Copies of the research findings will be submitted to Nkhoma Nursing College, Kamuzu College of Nursing library, and College of Medicine Research and Ethics Committee (COMREC) and findings will be presented at professional conferences.

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Appendices

Appendix A: Information sheet
Research title: Perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma College of Nursing Lilongwe, Malawi

Dear Participant,

I wish to invite you to participate in a research study titled **"Perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma College of Nursing Lilongwe, Malawi"** I am Emily Karonga, a student at Kamuzu College of Nursing. In partial fulfillment of my Masters, I am conducting a research study.

What is the purpose of the study?

The study will provide information that may guide colleges to come up with strategies for teaching and learning, and appropriate teaching and learning aids that can facilitate students' learning in skills laboratory, Your participation in the study will also provide an insight of the challenges faced during teaching and learning in skills laboratory and how best to assist the students.

Why have you been selected to participate in the study?

You have been selected to participate in the study because you are a student nurse at the study site and you have been engaged in learning in skills laboratory to acquire clinical skills.

Are you forced to participate in the study?

Your participation in the study is voluntary. You may withdraw from participating at any time you feel so and there will be no penalty. Withdrawal will not affect your studies in any way. If you agree to take part you will be asked to sign a consent form. Information about you will be confidential and no one will identify who answered which question. No

names will be written on the questionnaires instead code numbers will be used. Study findings will be presented as group findings not individual information.

What are the possible risks for taking part?

There are no physical risks associated with the study. The probable risk could be the psychosocial risk in terms of spending time completing a questionnaire about your learning in skills laboratory. The study has been approved by the appropriate people and research committee at College of Medicine, Kamuzu College of Nursing and Nkhoma Nursing College.

What are the possible benefits of taking part?

The findings of the study will assist in determining the quality of teaching and learning in skills laboratory to promote students' learning of clinical skills. There are no financial benefits from the study.

The procedures

The study procedures include, completing a questionnaire that will take approximately 30 minutes. Code numbers will be used for identification so that data is not linked to your name. The gathered information will be kept by the researcher and only those people who are directly involved in the study will have access to the information. Questionnaires will be retained for academic purposes until after award of a degree and publication if relevant then will be destroyed by burning.

Whom can you contact?

If you have any questions or concerns about the study, please contact; Emily Karonga, Kamuzu College of Nursing, P/Bag 1 Lilongwe. Cell phone number 0999421118; Email emilykaronga@yahoo.com; you can also contact College of Medicine Research and Ethics Committee (COMREC) Secretariat, phone number 01871911, extension 209.

Participant declaration

 I have read this consent form and I voluntarily consent to take part in this study.

…………………………   …………………   ………………………..

Participant's Name   Signature   Date

I have explained the study to the participant above and have sought his/her understanding for informed consent.

…………………………   …………………………..   ……………………………

Researcher's Name   Signature   Date

THANK YOU FOR TAKING PART IN THIS STUDY

Appendix B: Questionnaire

Research Title: Perceptions of student nurses on teaching and learning in skills laboratory at Nkhoma College of Nursing Lilongwe, Malawi.

Id No:-…………………………………………………

Part A: Demographic data

Year of study   (Year 2)   (Year (3)

Gender   (Male)   (Female)

Age…………………………………………………………………………………

Part B: Information about teaching and learning in skills laboratory

Please select information about teaching and learning in skills laboratory by ticking the responses of your choice on the Likert scale provided from 1 to 5

Key

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

NO	ITEM	SD 1	D 2	N 3	A 4	SA 5
	The main aim of teaching and learning in skills laboratory (SL) is to practice clinical skills					
	The SL is a conducive environment for learning clinical skills					
	Practicing in SL helps me integrate theory into practice					

	Students are oriented to SL during first week of admission to the programme				
	SL is essential for practice of nursing skills				
	I practice in SL when there is a problem with my clinical skills				
	I practice in SL when preparing for OSCE				
	I consider the value of SL just like college library and internet resource				
	I don't see the connection between practicing on models and providing care to patients				
	I don't use skills learnt in SL in the clinical area				
	I attend SL sessions when scheduled by the teacher				
	I book time in SL to improve my clinical performance				
	It is good to learn through mistakes while knowing that no one will get hurt				
	Practice in the SL makes my conduct in clinical placement safer for patients ,myself and colleagues				
	Things I do in the SL help me to behave ethically in clinical area				
	Practice in the SL help me reflect on my clinical experience				
	Clinical skills practiced in SL could be better practiced in the clinical area				
	The reason for coming to the SL is to get some rest				
	The reason for coming to the SL is to practice without patients				
	Practice in the SL is too artificial to be useful				
	Practice with actual equipments in SL is helpful				

	Mannequins are realistic enough to help develop clinical skills					
	SL is conveniently located for practice at free time					
	Rules in the SL do not favor students learning					
	There is no instructor to guide learning during self-study					
	The SL is closed when students are free for self-study					

Please list the benefits you get from learning in SL

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PART C

Teaching and learning strategies used in skills laboratory

Please tick **yes** for teaching and learning strategies used in SL and **No** for those not used

	ITEM	YES	NO
	Demonstration		
	Role play		
	Peer teaching and learning		
	Simulation		
	Reflection		
	Small group discussion		
	Teaching and learning using video tapes		
	Video tape recording		
	Self- directed learning using learning guides		

Please list the teaching and learning strategies you find most useful

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PART D

List the teaching and learning aids you miss during learning in skills laboratory

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PART E

 Please indicate the challenges you face with learning in SL

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Thank you very much for accepting my request and spend your time answering the questions.

Appendix C: Letter of support to conduct a research study

UNIVERSITY OF MALAWI
KAMUZU COLLEGE OF NURSING

PRINCIPAL
MALATA , A
DIP NURS, MRN
B.Sc., MN, PhD

P/BAG 1, LILONGWE
MALAWI TELEPHONE01 751 622/200
TELEGRAMS:NURSING

FAX:01 756 424
EMAIL: principal@kcn.unima.mw

17TH SEPTEMBER, 2013

TO WHOM IT MAY CONCERN

LETTER OF SUPPORT FOR RESEARCH: EMILY KARONGA

This is a letter of support for a study in "Perceptions of student nurses on teaching and learning in skills laboratory in Malawi" which the above mentioned student is conducting in partial fulfillment of her master's degree in Nursing and midwifery Education. The results of the study will assist students to increase their understanding about the importance of skills laboratory to their clinical performance and will enable faculty to facilitate their learning more effectively through use of different innovative teaching strategies that promote learner participation. Findings will also guide colleges to come up with student friendly skills laboratories that will motivate students to use and practice their skills resulting in quality patient care.

Christina N. Chihana B.Sc. Med.
SENIOR LECTURER AND COORDINATOR OF MSc. DEGREE IN NURSING AND
MIDWIFERY EDUCATION PROGRAM

Appendix D: Letter seeking approval from COMREC

Kamuzu College of Nursing

Private Bag 1,

Lilongwe.

7th August, 2013.

The Chairman,

College of Medicine Research and Ethics Committee (COMREC),

Private Bag 360,

Chichiri.

Blantyre 3.

Dear Sir,

SUBMISSION OF RESEARCH PROPOSAL FOR APPROVAL

I am a postgraduate student pursuing Master Science in Nursing and Midwifery Education; I hereby submit my research study proposal titled: "Perceptions of student nurses on teaching and learning in skills laboratory in Malawi"

I would therefore request the committee to go through the proposal and if it meets the standards grant permission to conduct the study at Nkhoma College of Nursing and Midwifery in Lilongwe District.

Yours Faithfully,

Emily Karonga

Appendix E: Certificate of approval

CERTIFICATE OF ETHICS APPROVAL

This is to certify that the College of Medicine Research and Ethics Committee (COMREC) has reviewed and approved a study entitled:

P.10/13/1472– Perceptions of Student Nurses on Teaching and Learning in Skills Loboratory at Nkhoma College of Nursing by Emily Karonga

On 20th January 2014

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC as indicated on the next page

Dr. FG. Kalanda- Chairperson (COMREC)

Approved by College of Medicine

20 JAN 2014

(COMREC) Research and Ethics Committee

20 January 2014
Date

Appendix F: Letter seeking permission from Nkhoma College of Nursing

Kamuzu College of Nursing,

Private Bag 1

Lilongwe.

7th August, 2013

The Principal,

Nkhoma College of Nursing,

Post Office Box, 48,

Nkhoma.

Dear Madam,

PERMISSION TO CARRY OUT A RESEARCH STUDY

I write to request for your permission to carry out a pretest and research study at your college. I am a student at Kamuzu College of nursing, pursuing Master Degree Science in Nursing and Midwifery Education. In partial fulfillment of the requirements of the course, I am expected to conduct a research study on the topic of my choice but related to Nursing and Midwifery Education. The title of my research study is; **"Perceptions of student nurses on teaching and learning in skills laboratory in Malawi"**

It is hoped that pretesting of tool will be on 14th October, 2013, and the study will be conducted from 22nd to 25th October, 2013.

Looking forward to your favorable response

Yours faithfully,

Emily Karonga

Appendix G: Letter of permission from Nkhoma College of Nursing

NKHOMA COLLEGE OF NURSING

P. O. Box 48, **NKHOMA**   or   P/Bag 228, **LILONGWE**
Tel: +265 127 9422/424   E-mail: nkhomacollege@gmail.com

All communication should be addressed to:
The college Principal

In reply please quote:

Our Ref: 09/07/AD/013   5th September 2013

Emily Karonga
Kamuzu College of Nursing
Lilongwe Campus
Private Bag 1
LILONGWE

PERMISSION TO CONDUCT A RESEARCH STUDY

The College would like to accept your request to conduct a research titled **"Perceptions of student nurses on teaching and learning in skills laboratory in Malawi"** However the College is requesting you to send a copy of Certificate from Ethics Committee before conducting your research.

Wishing a good success during your research here at Nkhoma College

Sincerely Yours,

F. NDEGE
ACTING PRINCIPAL

THE PRINCIPAL
NKHOMA COLLEGE OF NURSING
0 5 -09- 2013.
P. O. BOX 4   NKHOMA
TEL: 09-