FACTORS ASSOCIATED WITH REGISTERED NURSING STUDENTS' SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT AT THE UNIVERSITY TEACHING HOSPITALS (UTH) LUSAKA, ZAMBIA

BY

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DECLARATION

I, **Louisa Lukupa**, hereby certify this dissertation is the product of my own work submitting it for the Degree of Master of Science in Clinical Nursing. I further attest that it has not been submitted to University of Zambia or another University in part or full for the award of any programme.

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CERTIFICATE OF APPROVAL

This dissertation of **Louisa Lukupa** has been approved in partial fulfilment of the requirements for the award of the Degree of Master of Science in Clinical Nursing by the University of Zambia.

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Examiner III

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ABSTRACT

Clinical learning is an integral part of nursing training and forms a foundation of competence development in nursing practice. In an attempt to produce competent and skilled registered nurses, more hours have been allocated for clinical learning practice than the theory in the new curriculum for registered nurse training. Nursing education involves both theoretical and practical training as students are expected to gain the knowledge and competencies before progressing and completing their three year training diploma program.

The main objective of the study was to assess factors associated with registered nursing students' satisfaction with the clinical learning environment at the University Teaching Hospitals (UTH) Lusaka, Zambia.

A cross sectional study design was used to elicit registered nursing students' satisfaction with the clinical learning environment. The total sample size was 329 final year nursing students from four different nursing colleges within Lusaka, who were selected using a simple random sampling method. A pretested self-administered questionnaire was used to collect data, entered and analysed with Statistical Package for Social Sciences (SPSS) version 22 program. Confidence interval was set at 95%. A 5% level of significance was set, only p values of 0.05 or less were considered statistically significant. The Chi-Square test, Bivariate and multiple logistic regressions were used to test for associations between the dependent and independent variables.

The study findings revealed that 302 (92%) of students were not satisfied with the clinical learning environment at the University Teaching Hospitals, while only 27 (8%) were satisfied. Related factors which influenced satisfaction were clinical environment, the relationship that existed between mentors and mentees/ ward staff, availability of human and material resources, knowledge, attitude and skills of mentors on mentorship and supervision of students.

The results showed that registered nursing students were not satisfied with the clinical learning environment at the University Teaching Hospitals (UTH) Lusaka, Zambia. Their experiences ranged from uncaring attitude from qualified staff, inadequate equipment and staffing, inadequate clinical supervision and non-availability of mentors in the wards. Therefore there is need for policy makers to address some factors within the clinical environment and clinical supervision which hinders clinical skills acquisition and affect the quality of the nurses being trained.

Registered nursing students, satisfaction, clinical learning environment, clinical supervision and student related factors.

DEDICATION

It is with utmost pleasure and sincere gratitude that I dedicate this study to my lovely and dear husband Mr. Moonde Mung'andu for his prayers, selfless trust, undying support, sacrifices and encouragements that made this work possible and stayed by my side always.

My parents Mr. Michael M. Lukupa and Mrs. Mirriam Michelo Lukupa who educated and taught me to give my best in all that I do in life and believed in me.

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LIST OF ABBREVIATIONS

GNC   - General Nursing Council

MOH   - Ministry of Health

UNZABREC –University of Zambia Biomedical Research Ethics Committee

UTH- University Teaching Hospitals

ZUNO- Zambia Union of Nurses Organisation

SPSS- Statistical Package for Social Sciences

RN- Registered nurse/nursing

OSCE- Objective Structured Clinical Examination

CLE- Clinical Learning Environment

LNI- Lusaka Nursing Institute

LHI-Lusaka Health Institute

DCN- Dovecot College of Nursing

MASCON-Makeni School College of Nursing

CHAPTER ONE

INTRODUCTION

Clinical learning is an integral part of nursing training (Sharil and Masoumi, 2005). It forms a foundation of competence development in nursing education (Bergjan and Hertel, 2013). Due to its critical role in skills acquisition, the clinical learning must take place in a conducive environment. An ideal clinical learning environment is one that fosters independence, critical thinking, clinical judgment, problem solving, ethics, safety practices and a sense of responsibility (D,souza et al., 2015). The way students perceive the learning environment and how satisfied they feel with the experience will largely influence their clinical learning and skills acquisition. Therefore, the study focuses on factors associated with registered nursing students' satisfaction with the clinical learning environment at the University Teaching Hospitals in Lusaka, Zambia.

1.1 Background information

Nursing educations divided into two important components; theoretical component and clinical practice (Elcigil and San, 2006; Zamanzadeh et al., 2012). Clinical practice involves placing students in different settings where they learn various clinical skills (Taniyama et al., 2012). Clinical placements are central to facilitating the integration of theory and practice in that students are able to relate what they learn in class to real life situation hence understanding better. The success of this is multifactorial (Zilembo and Monterosso, 2008a). Several authors have asserted that clinical placement is where undergraduates are exposed to the reality of nursing (Henderson et al., 2012; Salamonson et al., 2011) and where they are readied and prepared for practice (Zilembo and Monterosso, 2008a). Others have noted that clinical support and supervision of undergraduate nursing students is regarded as integral to the quality of clinical placement experience (Reid-Searl and Happell, 2011; Sayers, 2010). Henderson, Happell, and Martin (2007a) have stated that a clinical placement where theory transitions to practice enables students to develop the competencies required to perform effectively.

Therefore, a conducive clinical experience prepares then to acquire acceptable. Moreover, a positive and enabling clinical placement has also been noted to be influential in students' desire to align themselves to specialties of interest (Henderson, Happell and Martin, 2007b).

The success of clinical learning and clinical skills acquisition depend on several factors (Henderson et al., 2012; Johansson et al., 2010). Among these, a conducive and quality environment plays a key role because it gives chance to students to learn without distracters. According to Papp et al (2003) a clinical environment is an interaction of forces in the clinical area that is, clinical settings, equipment, staff, patients, and nurse mentors. These forces influence the clinical learning outcomes and have an impact on student behaviour and performance because in their absence adequate learning cannot take place (Dunn and Burnnet, 1995). The non availability of such factors, create gaps in skills and competence acquisition thereby producing nurses with poor clinical practice.

A Clinical Learning Environment (CLE) constitutes a supportive atmosphere (Pai et al., 2011) based on psychological and pedagogical aspects of clinical learning (Newton et al., 2010). Important elements of a CLE include among others staff-student relationships, peer support, meaningful learning situations, good interpersonal relations, support and feedback (Newton et al., 2012; Peyrovi et al., 2005; Papathanasiou et al., 2014; Levett-Jones et al., 2009). A favourable clinical learning environment enhances students' professional responsibility and assists students with self-directed learning, decision making and problem solving skills (Taniyama et al., 2012). During clinical learning students are able to apply theory into practice as well as distinguishing between different settings, internalize learning and develop self monitoring skills (Tiwari et al., 2005). Unfavourable clinical learning environment makes students' practice difficulty leading to poor acquisition of competences.

The clinical learning environment includes the ward atmosphere, the culture and the complexities of care and the supervisory relationships between students, clinical and school staff. A study by Henderson, Happell, and Martin (2007b) reported that nursing graduates are more likely to seek employment in clinical settings in which they had positive experiences as students. This implies that negative experiences such as lack of medical and human resources may lead to dissatisfaction among students and this may affect their work in future.

According to Scully (2011) staff–student relationships and the nature of this relationship has an impact on students' learning. In the same study, Scully reported that poor staff relationships, lack of staff commitment to teaching, autocratic and hierarchical relationships, poor student-supervisor relationship are obstructive factors for learning, whereas feeling part of the team is closely linked to the opportunity to learn. A significant shortage of nursing staff has also been identified globally as a barrier to clinical learning (Murray et al., 2010, Nelson et al., 2004 and Roche et al., 2004). Clinical teachers, support structure and facilitating nurses during clinical education are of great importance to students' learning process which can be influenced by environment among other indicators (Bourgeois et al., 2011). Students' satisfaction with clinical learning is cardinal in acquisition of clinical skills and this will lead improved performance among the students. A satisfied student is more likely to be competent in taking care of the patients, will exhibit positive attitudes and will contribute effectively in patient care. On the other hand a discontent student is more likely to portray negative attitudes towards learning and this may affect their performance leading to incompetence and increased errors which may ultimately compromise patients' safety.

In Zambia, clinical learning is the cornerstone of nursing education. Clinical practice comprises two thirds of nurse education programs while the theoretical components take up a third of nurse training (General Nursing Council of Zambia, 2014). The General Nursing Council of Zambia (GNC) Registered Nursing Curriculum specifies the number of hours that students are required to practice in various clinical settings and these settings are also spelt out in the curriculum (GNC 2014).

These settings range from Hospital facilities to community settings. Each clinical placement has its own objectives which are spelt out and given to students as they go for clinical practice. During clinical practice students are required to interact with the clinical environment and be mentored by the clinical teachers and staff nurses including other health care providers such as physicians, pharmacist and radiographers just to mention a few. A conducive clinical learning which is supported by a good learning environment is therefore key in nurse training in Zambia in the sense that students are able to practice what they learn in class accordingly.

Several attempts have been put in place to enhance clinical learning which will result in students being satisfied. The Registered Nursing curriculum is revised every three to five years by GNC and other stake holders to strengthen clinical learning. Furthermore new teaching methods such as simulation and assessment strategies such as Objective Structured Clinical Examination (OSCE) were introduced in order to prepare students' competences before practicing on humans to promote patients' safety. Clinical teaching staff and nurse tutors have also been oriented to new trends in teaching, learning and student assessment in order to provide quality classroom and clinical teaching (GNC curriculum, 2014). However, students' clinical performance continues to be a challenge in registered nurse training. Therefore, the study aimed at exploring factors associated with registered nursing students' satisfaction with the clinical learning environment at the UTH in Lusaka, Zambia.

1.2. Statement of the problem

Nursing students' satisfaction with the clinical leaning environment is important because this will influence their clinical learning and ultimately their acquisition of the knowledge, skills and appropriate attitude.

Several factors could influence clinical learning one of which is satisfaction with the clinical learning environment. When students are satisfied with the clinical learning environment it could influence their performance in the clinical placement settings.

However, there could be indications that there is dissatisfaction among nursing students and this could be affecting their clinical learning and acquisition of clinical skills. Some of these indications could be poor practical results coming from the nursing training institutions. For example in the 2015 June and December qualifying practical examinations Lusaka Nursing Institute recorded 27% and 18% failure rate respectively while Makeni College School of Nursing for the same period recorded 29% an 8% respectively (General Nursing Council, 2016). Additionally, several reports from the public have indicated that the nursing care provided by the newly qualified nurses is not up to the required standards and that their conduct leaves much to be desired (ZUNO, 2015). Anecdotal reports from the UTH in Lusaka, from clinical staff and nurse educators who participate in teaching, supervising and examining of students have equally registered concerns over the poor performance and conduct of nursing students. All this could be attributed to dissatisfaction with the clinical learning environment among the nursing students. Several factors could be associated with satisfaction with the clinical learning and these may include the clinical environment, population of students, supervision, staff shortages and attitude.

General Nursing Council of Zambia training assessment tools for nursing and midwifery (GNC, 2014) specifies that; clinical staff student ratio for small group demonstration or instruction is 1:10 while for teaching or mentorship/supervision is 1:50, however, the ratios at the moments are not meeting the standard. Dovecot College of Nursing (DCN) has a total number of 320 against five (5) clinical instructors, Lusaka Health Institute (LHI) has 430 students against five (5) clinical instructors, Lusaka Nursing Institute (LNI) has 570 students against five (5) instructors and Makeni School College of Nursing (MASCON) has 586 students against six (6) instructors. In such a situation where there is shortage of clinical instructors to teach and supervise student nurses, satisfaction with clinical experience is a challenge and student performance may be affected.

Previous studies that have been done focused on student satisfaction with clinical experience have shown that new graduates have good knowledge in theory but poor clinical skills hence risking patient's lives (Cherry and Jacob in Hoseini, Islamian, and Bakhtiari, 2009). Similarly, in Zambia it has been observed that practice of newly graduated nurses is inadequate and the life of the patient is at risk (ZUNO, 2015). However, there are few studies which have focused on satisfaction with the clinical learning and factors associated. Therefore there was need to explore factors associated with registered nursing students' satisfaction with the clinical learning environment at UTH.

1.3 Justification

It is hoped that the findings will be used to create awareness of the factors that contribute to students' satisfaction with clinical learning in order to enhance clinical skills acquisition, improve student performance and ultimately improve patient care. Feedback will be given to UTH, GNC, SON, UNZA and MOH who are the policy markers for nursing training in Zambia in order to make corrective measures in areas needing improvement. The findings will add to the body of knowledge in nursing education and will also serve as a reference for future research in nursing education in Zambia.

1.4 Conceptual framework

The study was guided by Kano Satisfaction Model. This is a theory of product development and customer satisfaction developed in the 80s by Professor Noriaki Kano. The central theme of the Kano Satisfaction Model is that organizations (Hospitals) need a profound understanding of their customers' requirements to increase satisfaction and secure loyalty. Teaching Hospitals do not only provide medical care but also need to pay attention towards the issues of increasing customer (students) satisfaction. Nursing students are part of the customers in the health care facilities. The managers need to find out causes and remedial solution for customer satisfaction in spite of good medical services. Therefore, to appreciate students' needs and increase their satisfaction of the clinical learning environment, educators need to think from customer's point of view. Many researchers have applied the useful diagram of Kano's model for identifying customer's needs and how a given service feature or attribute affects customer satisfaction. In this case Kano model is applied to identify customer needs and calculate customer satisfaction coefficient that helps to prioritize the importance of service qualities that can increase customer satisfaction in health care service (Srivastava and Gupta, 2011, Kano, 2000).

Kano's model is hierarchical: Basic services must be provided before offering differentiable services and do both before exciting customers. Furthermore, before doing any of these, it is very important to understand customers and what each customer group requires.

Basic Services

The basic or expected services (lower curve in the model) are attributes which are taken for granted and so obvious that they are not worth mentioning. According to Kano these attributes do little to improve satisfaction unless they fail, in which case they can cause serious dissatisfaction if not done.

Performance or differential Services (the central line of the model)

Performance services are those expressed by customers when asked what they want from the service. Depending on the level of their fulfillment by a service these requirements can satisfy or dissatisfy customers.

Excitement or Extraordinary Services

Excitement attributes (upper curve in the model) lay beyond customer's expectations. If these services are present they will excite the customer but their absence does not dissatisfy them as well, as they do not expect them in the first place.

1.4.1 Diagrammatic application of kano model to students' satisfaction with clinical learning environment

Basic Services: Orientation of students on a new clinical placement, it allows students to get familiar with the environment they will work from but if not done, students can get confused on the geography of the environment affecting their performance.
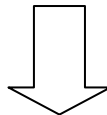
Performance or differential Services: Instructors demonstrating a procedure before telling students to do a return demonstration.
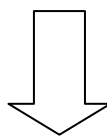
Excitement or Extraordinary Services: Offering senior students opportunities to demonstrate procedures to junior nursing students.

Very satisfied:

Adequate supplies, adequate staffing, adequate instructors

Excitement services:

Offering senior students opportunities to demonstrate procedures to junior nursing students.

Awarding best performing students nurses.

Performance services:

Demonstrations, ward rounds, assessments, supervision by instructors

Need not fulfilled

Lack of supervision by instructors, inadequate staffing and inadequate supplies

Indifferent services:

An explanation given as to why service delivery is not appropriately done. Expected services offered.

Need well fulfilled: students satisfied with clinical learning

Basic services: adequate supplies, adequate staff, positive attitude of staff.

Dissatisfied: No demonstrations done to students, staff poor attitude, not enough supplies, expected services not offered.

Source: Jacobs and Randy. (1999), Evaluating satisfaction with media products and services.

Figure 1: Adapted conceptual framework of students' satisfaction with clinical learning.

1.5 Research question

What are the factors that are associated with registered nursing students' satisfaction with the clinical learning environment?

1.6 Objectives

1.6.1. General objective

To explore factors associated with registered nursing students' satisfaction with the clinical learning environment at the University Teaching Hospitals.

1.6.2 Specific objectives

The specific objectives of the study are

1. To determine clinical environmental factors associated with registered nursing students' satisfaction with the clinical learning environment.

2. To identify student related factors associated with registered nursing students' satisfaction with the clinical learning environment.

3. To identify pedagogical factors associated with registered nursing students' satisfaction with the clinical learning environment.

1.7 DEFINITION OF TERMS

1.7.1 Conceptual definition of terms

1.7.1.1 Student satisfaction: This is an extent to which student's clinical experiences match their expectations (Bredart et al, 2001).

1.7.1.2 Clinical experience: This is experiential learning as posing and testing questions in a real situation (Benner, 1984)

1.7.1.3 Registered Nursing Student: This is an individual who has been enrolled to train as a nurse (Dlamini, 2011)

1.7.1.4 Satisfaction: It is feeling one gets when his / her desires, needs or expectations   have been fulfilled (Wong, 2009).

1.7.1.5 Attitude of Health Workers: This is a set of relatively stable and consistent beliefs underlying the behaviours of personnel providing care during interaction in a medical situation (Haidet et al., 2001).

1.7.1.6 Clinical Environment: The surrounding forces and external motivation that   will affect the individual student (Bloom, 1965 in Bourgeios et al., 2010)

1.7.1.7 Clinical supervision: It is a process through which the clinical supervisor enables the progression of a novice (the learner) in the direction of becoming a knowledgeable professional, through the process of preserving and upholding care standards, practice-focused professional relationships and contemplation on practice   (Mahmud, 2013 & Pillay & Msthali, 2008)

1.7.1.8 Assessment strategies: The exercise of discernment on the quality of students' work as a way of supporting learning and appraising its outcomes (Higher Education Quality Council in Sandy 2014).

1.7.1.9 Learning styles: These are different approaches used to impart knowledge such as case reports, self directed learning and trial and error (Dagdaran et al., 2012)

OPERATIONAL DEFINITION OF TERMS

1.8.2.1 Satisfaction: This is the registered nursing students' state of being content or pleased with the experience in clinical area.

1.8.2.2 Student satisfaction: This is a feeling and contentment a student in clinical experience gets when his/her desires and expectations have been fulfilled.

1.8.2.3 Attitude of Health Workers: This is a settled way of thinking or feeling, typically reflected in the behavior of the health care provider towards students.

1.8.2.4 Clinical learning: These are activities done and exposed to during practicum experience.

1.8.2.5 Pedagogical factors: These are factors that focus on the nature of the content and information, learning and teaching strategies and what learning is.

1.8.2.6 Clinical supervision: It is the process of ensuring that nursing students acquire the intended skills, competencies and knowledge to practice as nurses through the guidance and observation of the qualified member of staff.

1.8.2.7 Clinical learning environment: These are the different settings in which the nursing students acquire knowledge and skills.

1.8.2.8 Assessment strategies: These are the methods used to ascertain the competencies and skills gained by the nursing students which maybe done formatively at the end of each activity or summative.

1.8.2.9 Learning styles: These are methods of interacting and preparing knowledge using specific steps or actions.

1.9.0 VARIABLES

1.9.1 Dependent variables
- ❖ Satisfaction

1.9.2 Independent variables
- ❖ Related factors influencing satisfaction with clinical learning environment

Environmental factors
- Adequacy of materials
- Staff shortage
- Attitude

Pedagogical factors

- Assessment strategies
- Teaching methods
- Feedback system

Student related factors

- Learning styles
- Relationship between teaching staff, clinical staff and nursing student

Table 1: Variables, cut-off points and indicators

Variables	Indicators	Cut-off points	Question numbers
Dependent Variable ❖ Satisfaction	Very good	20-25	1-10
	Good	15-20	
	Poor	1-10	
Independent Variables Environmental factors • Adequacy of materials/resources • Staff shortage • Staff attitudes	Very good	20-25	11-15
	Good	15-20	
	Poor	1-10	
Student related factors • Learning styles • Relationship between teaching staff, clinical staff and nursing student	Satisfied	15-20	16-20
	Dissatisfied	1-10	
Pedagogical factors			
❖ **Feedback system**	Very Good	20-25	21-25
	Good	15-20	
	Poor	1-10	
❖ **Clinical teaching methods**	Appropriate	20-25	26-30
	Inappropriate	15-20	
	Poor	1-10	
❖ **Assessment methods**	Very good	20-25	
	Good	15-20	30-35
	Poor	1-10	
❖ **Open ended questions**			**35-40**

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CHAPTER TWO

LITERATURE REVIEW

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2.1 Introduction

This chapter highlights related literature on factors associated with satisfaction with clinical learning among registered nursing students. Literature review is a written summary of what is known on a research problem. The task of reviewing research literature involves the identification, selection, critical analysis and written description of existing information on a topic (Polit and Beck, 2003). The chapter begins by giving an overview of clinical learning, literature on student's satisfaction with clinical learning and factors associated with satisfaction with clinical learning namely environmental, student related and pedagogical factors. Finally a summary of the gaps in the literature for previous studies is given.

2.2. Overview of registered nursing student satisfaction with clinical learning environment

Clinical learning has always been an important aspect of nursing education (Sharif and Masoumi, 2005; Tiwari et al., 2005 and D'souza, et al., 2013). It is a platform that is used to put into practice what has been learnt in class. The nursing curriculum is directed towards preparing professional and competent nurses who would apply their knowledge and skills throughout their work process (Khater et al., 2014). The curriculum covers both classroom and clinical learning as they both share equal importance and competencies which are clearly articulated and organized throughout the course outline enabling students to understand courses from the easiest to hardest. For nursing students to perform competently in the clinical setting and advance professionally they need clinical learning.

Studies done in Iran have proved that clinical learning provides the student with the prospect of integrating the theoretical knowledge gained in class into practice (Zamanzadeh, et al., 2012). Learning in the clinical environment provides the real world context for nursing students to develop the knowledge, skills, attitudes and values of a registered nurse. Acquisition of clinical skills therefore enhances the clinical performance of nursing students during training. It is for this reason that Cassidy (2009) described clinical learning and performance as the "heart" of professional practice.

Therefore, clinical practice placements constitute an important aspect of students` learning and it influences clinical performance. In other words, clinical placements play an important role in clinical learning because they influence students' acquisition of skills and knowledge for quality care provision as well as serving the right environments for the application of theory to practice (Fitzgerald et al., 2010).

Nursing being hands on practical discipline, what nurses and nursing students learn in clinical practice is more important than what they demonstrate in a classroom setting (Potgieter, 2012; Kube, 2010). This is attributed to the fact that clinical learning activities provide real life experiences and opportunities for transfer of knowledge to practical situations. It is therefore important to understand that every profession requires a special level of knowledge, skills, and personal characteristics (Hajbagheri and Dianti, 2000). The professional role and readiness of the nursing student graduates to enter into working environment in different time intervals demands the appropriate personality features for Nursing (Hajbagheri and Dianti, 2000).

According to a study conducted in Ghana by Peasah et al (2013) in 2013 on attitudes of nursing students towards clinical work, it was concluded that clinical work in nursing education is an important component of the nursing curriculum aimed at actively empowering nursing students with the necessary skills and competences needed for the nursing profession. This study however revealed that 63% of the nursing students reported late for work, 60% were absent from work without permission and 64% used mobile phones during working hours. In addition, 41% of students did not show commitment to clinical work. It was further reported that the attitude portrayed by students had an influence on the way the Medical and Nursing staff related to them.

2.3. Student's satisfaction with clinical learning environment

As much as clinical learning is an important component of nursing education considering that nursing is a practice-based profession, clinical placement evaluations while students are on placement is equally very useful for better understanding of what constitutes quality clinical education from the students' perspective and provides better educational experiences (Kaphagawani and Useh,

2013). Of great importance is the students' satisfaction with the environment. However, students may not be satisfied with the clinical environment and several factors could be implicated in this. Some of the significant barriers that have been identified to bring about negative influences on satisfaction with clinical placements are limited participation in patient care, not being included in ward activities, and inadequate support of clinical staff (Henderson et al., 2007). In other related studies, some factors affecting the learning placement experience of nursing students have been reported and these were either related to student nurses experiences of clinical learning environments, supervision provided by qualified nurses in clinical placements and the level of interaction between students and nurse teachers. This daily clinical supervision is perceived as an essential supportive framework for the undergraduate nursing students in facilitating skills development, reflection and reducing emotional burnout (Brunero and Lamont, 2012).

2.4 Environment Factors

There are several factors that may influence satisfaction with registered nursing students with clinical learning environment. Among these are clinical environment, availability of resources, staff attitude and shortages.

2.4.1 Clinical Environment

A clinical environment includes everything that surrounds the Nursing work, including the clinical settings, the staff and the patients (Papp et al, 2003; Hathorn, 2006). The clinical learning environment has been shown to have a direct impact on nursing student's perception of their profession and facilitates professional grounding (McKenna et al, 2010). The quality of Nurse Education depends largely on the quality of the clinical experience that nursing students receive in the clinical environment (Henderson et al, 2006). The clinical education setting is the most influential in the development of nursing skills, knowledge and professional socialization. Therefore, stressing the importance of the learning climate within the clinical environment is essential to the successful preparation of registered Nurses (Ajiboye, 2000).

During their clinical placement nursing students are expected to develop the relevant knowledge, skills and competence (Chan, 2002), to develop their capacity for "knowing how" as well as for "knowing that" (Cope et al., 2000; Dunn et al., 2000) and to expand their perceptions of their future role as a registered nurses. This necessity has in turn highlighted the increasing significance of the nature and quality of student clinical learning experiences (Adams, 2002; Chan, 2002; Cope et al., 2000; Dunn et al., 2000; Zhang et al, 2001). As graduates, Nursing students are required to have adequate knowledge and skills and to be able to transform competencies into effective performance (Zhang et al, 2001). This will help students to adapting an environment that can be unpredictable, unstructured, overwhelming and students can be left with feelings of vulnerability, stress and anxiety (Cheraghi et al, 2010 and Changizi et al., 2012). The stress and anxiety levels increase as nursing students learn to apply their theoretical knowledge to the clinical work with their first patients in new environments while being observed by their Clinical Instructors and their peers (Ratanasiripong et al, 2012). A receptive, friendly and academically sound environment is ideal for nursing students as it will make students feel appreciated and respected. This motivates students to learn and perform very well. Nursing students from both Private and Government Nursing schools should freely interact with each other in order to promote a conducive environment for learning in order to improve their clinical performance.

2.4.2 Material resources

In order to provide high-quality nursing care to patients, students need to acquire clinical knowledge as well as practical skills. The importance of nursing students being taught to link the theory learnt at college to the realities of nursing practice needs to be emphasized. Teaching is a major aspect of the mentors' role; however, mentors often report a lack of both time and resources to facilitate learning which can lead to students feeling unsupported and may contribute to higher drop-out rates. To prevent this, nurse educators should make the purpose of clinical learning explicit to both students and mentors (Cope et al, 2000).

Modern trends in skilled learning stress the importance of embodying the realities of clinical environments to academic training. Lack of clinical equipment and other medical and surgical supplies can be stressful to a nursing student in the clinical placement. According to a study done in Iran, it was observed that nursing students experienced a lot of anxiety due to insufficient medical and surgical supplies in the Hospitals (Motlag et al., 2012). Similarly studies done in South Africa and Malawi found that nurses were unable to develop competences due to lack of equipment and most clinical allocations assigned to nursing students had inadequate supplies and equipment making it hard for the clinical staff to guide the students in their learning (Mabuda et al., 2008 and Msiska et al., 2014). Because of lack of equipment and medical surgical supplies, students would not practice procedures accordingly hence, resulting in poor clinical competences.

2.4.3 Staff attitude

Attitude plays a key function in regulating human behaviour towards attaining goals, valuable development of multifaceted knowledge and being mindful of its magnitude about the learning environment (Awuah- Peasah et al., 2013).   Attitudes are important in patient care and can be interpreted in certain dimensions of care. Attree (2001) studied the perception of doctors, nurses, managers, patients and their relatives in the United Kingdom. The results indicated that five of the seven dimensions were important – encouraging close, sociable relationships (courtesy and emotional support), patient focus (patient-centred care), open communication and information flow (communication and information), availability of accessibility to patient (access) and holistic care (technical quality). Health workers' courtesy and emotional support are important dimensions of patient care and students' clinical leaning environment.

According to Dagdaran et al. (2012), when nursing staff have adequate information and good attitude towards students and interact appropriately it would promote improved student's clinical performance. However, a study which was done in Norway revealed that staff nurses who lacked motivation and had bad attitude were unable to supervise the nursing students and hindered the students' learning process (Dale, 2013). This would lead to dissatisfaction among nursing students.

Moreover it has been observed that there has been an increase in negative attitude exhibited by staff nurses and nursing students towards the nursing profession. This has been attributed to increased unimpressive workload, lack of rest and inadequate remuneration (Awuah- peasah et al., 2013 and Magobe et al., 2010). Furthermore, the negative attitude has resulted in low spirits in performing nursing duties, role modeling to students as well as teaching students. This has progressively contributed to poor performance and lack of competencies in nursing students (Magobe et al., 2010).

2.4.4 Staffing levels

There has been a substantial shortage of nursing staff noted globally (Eman et al., 2012). In order to become competent practitioners, nursing students need to be guided and supervised. According to Kapaghawani and Useh (2013), lack of supervision may lead to nursing students learning incorrect procedures, lack of competency and lack of interest in the nursing profession as they feel frustrated in their work. Furthermore, a clinical setting rich in learning experiences but lacking a supportive environment discourages the learners in seeking experience and results in the loss of learning and growth opportunities (Mabuda et al., 2008). This could be the reason why many nursing students have poor clinical practice because most of the time they are not supported in the clinical area by the staff nurses.

Similarly, Henderson, et al. (2007b) in Lamont, et al. (2013), noted that negative influences on satisfactory clinical placements have been identified as limited participation in patient care, not being included in ward activities and inadequate support of clinical staff which could be attributed to inadequate staff. Another study which was conducted showed that, nursing students' practice in clinical settings characterised by severe nursing shortages had a negative impact on both clinical teaching and learning. In a similar study done in Malawi by Katete (2014) revealed that 91% of Registered Nurses (RN) reported that shortage of staff and workload prevented RNs from teaching nursing students in the clinical Area. Research further reveals that a shortage of staff affects the conduciveness of clinical learning environments (Mabuda et al., 2008). This situation hinders the nursing students from acquiring new skills and clinical practice knowledge because these are few nurses to mentor in clinical area.

2.5 Student Related factors

2.5.1 Relationship between faculty and student nurses

An academic and supportive relationship should exist between Nurse Educators and Nursing students during their clinical experience. Together with clinical mentors, Nurses and clinical instructors, play a pivotal role in facilitating the acquisition of knowledge and clinical skills by the Nursing students in both public and Private Nursing schools. This helps to improve their clinical performance.

Nurses are the first role models for students in clinical settings and they can have a significant role on students' motivation (Nasrin, 2012). Role models are individuals who occupy a particular status in a certain social system and conduct themselves in a manner befitting persons holding such a portfolio and execute their roles in a clearly observable manner (Searle et al, 2010). Thus, availability of role models for students would enable nursing students to render nursing care within their scope of nursing practice. However, this is not the case with the clinical environment at UTH due to staff shortages as such nursing students have no enough staff nurses to emulate from hence poor clinical learning practice.

Clinical educators establish a human and material training environment so that educational encounters can be conducted through direct instruction on student-conducted patient care and conference-based instruction (Taniyama, 2013). The Nurse Educators need to create conducive learning environment. A conducive clinical learning environment is one that is supportive with good ward atmosphere and good relations and is perceived to produce positive learning outcomes (Papp et al, 2003, Edwards et al 2004). When students are exposed to such environments, they are motivated to learn and are encouraged to put in their utmost energy to acquire the acceptable clinical skills and competences. Students feel confident and motivated to learn in an environment where they are respected, recognized, supported and regarded as part of the team (Symith 2005, Chan 2005, and Hickey, 2007).

In this study it was also noted that students felt that lecturers' visits during clinical practice were extremely useful as they assumed great value, not only because they provided students with support, but also because the prospect of a visit motivated students to carry out preparatory work and discuss learning outcomes. This was similar to a study which was conducted by (Kristofferzon et al, 2012).

Teachers themselves found that sufficient time for clinical practice competed with the demands of academia for classroom based teaching, publishing and research activity.

However, some authors argued that to teach effectively, teachers must update their skills by participating in care, while other authors consider that Nursing teachers can maintain effective teaching and knowledge in the clinical area through reading, writing and research (Barrett, 2007). Poor relationships with clinical staff, lack of support from educators and lack of challenging learning opportunities are some of the negative experiences that may affect students' learning (Ip and Chan 2005). Although, unfriendly staff with bad and hostile attitudes denies students opportunities to learn (Mntambo, 2004). It is therefore important to maintain the cordial relationship of nursing students with clinical staff, Clinical Instructors and mentors from host institutions of clinical attachment to enhance clinical learning. It has a strong bearing on students' clinical performance because the relationship creates part of the learning environment for students. Students learn and perform well in an environment which is friendly, receptive, open and supportive.

2.5.2 Learning styles

The teachers need to take into consideration individual learning styles in order for satisfaction of clinical learning environment to occur. According to Frankel (2009), there are differences such as, what stimulates someone to learn, personal attributes and the basic knowledge and understanding of what is to be learned. He further argues that their ability to reason influences them to learn easily or delay in learning. Therefore learning styles are important and individual needs have to be considered if learning has to be successful (Dagdaran et al., 2013). Teachers guide the nursing student into use of methods that are appropriate for each given experience. Additionally, Hope et al. (2010) argues that nursing students gain knowledge by utilization of active performances and also rehearsing what has been taught. Frankel (2009) further states that visual learning and practice styles are some of the learning styles that need to be utilised. Therefore it is imperative that a variety of methods are considered as we prepare the nursing students.

2.6 Pedagogical factors

The Clinical environment is complex and rapidly changing, with a variety of new settings and roles in which nurses must be prepared to apply the knowledge they have learnt, (Zamanzadeh, et al., 2012), which demands a new approach to teaching and learning. According to Chambers et al. (2013), if nurse education is to truly prepare nurses to function in this environment, then the aim of nurse education has to change from learning what is known towards educating for the unknown future and the focus should be on active learning (Baghchegai, et al., 2011).

A variety of strategies and styles of learning for nursing student placements are used to meet a number of the above ideals for placement, (Bourgeois, 2011). Many methods are being developed, for example, simulation, cooperative learning, case studies, reflection and discovery learning. These methods guides the nursing student to explore what can work best for themselves. Some of the other strategies that have been used for learning include peer learning. Peer learning refers to 1st and 3rd year nursing students learning with and from each other, collaborating, sharing ideas, knowledge and experiences during clinical placements (Seecomb, 2008 in Brynildsen et al., 2014). This learning strategy enhances acquisition of clinical skills and competences because nursing student are free to consult their peers. Peer learning helps the novice nursing students to deal more effectively with the challenges during initial clinical placements, increase their confidence in clinical practice and develop their knowledge, skills and attitudes (Brynildsen et al., 2014 and Baghchegai et al., 2011). It also allows the individual student to bring their own experience to the learning process

Studies done in Iran by Zamzaden et al. (2012), identified utilization of different strategies such as social cultural based and scaffolding to promote integration of theory into practice. Social culturally learning is a learner-centred and self-directed model of learning with more active participation of learners. However, these strategies need to be appropriately applied in order to augment learning and promote integration through incorporating other strategies.

Furthermore, some studies conducted in Norway, revealed that some supervisors would not have the competency and skill of the appropriate strategy to use in the clinical setting. It was observed that nurses who were knowledgeable and had the appropriate qualifications promoted quality learning experiences (Dale, 2013). It has also been perceived that supervisors and junior nurses lack knowledge in these new approaches. According to Cheraghi., et al (2012), nurses in the wards tend to follow the routine approaches which may further widen the gap. It is therefore important to ensure that persons responsible for clinical teaching are adequately prepared for the obligation. This will enable adequate supervision of nursing students in clinical skills acquisition. Thus there is need to evaluate the ability of the students to such strategies and other learning approaches in the clinical area.

2.6.1 Assessment Approaches

Assessment has always been an integral part of learning, as teaching and assessment are integral parts of one learning process (Atanga, et al, 2014). It is advocated in the literature that lecturers should have a shared role with mentors in the clinical assessment of students (Clifford, 1994, May et al, 1997, Watson & Harris, 1999). It is well documented by (Wilson-Barnett at al 1995, Wheeler 2001) that for the majority of lecturers this recommendation has not been implemented in Practice. The lecturer's role is predominantly interpreted as providing advice and support to mentors (Payne et al, 1991). Wilson-Barnett at al 1995, Camiah 1997, states that a holistic approach that attracts the full participation of the Tutors, clinical instructor and mentors blends well all the aspects of theoretical learning and development of practical skills. It provides insights about student's deep learning abilities. Nursing students' constructs of learning, were primarily dependent on their interpretation of the demands of the assessment tasks (Cownan, 1998 in Tiwari, et al, 2005). Thus careful assessment of clinical performance ensures that students meet objectives and practice safe patient care.

A number of approaches, including written assignments, anecdotal notes, rating form, skills checklists, and portfolios can assist with student evaluation (Oermann, 2008). Therefore, Faculty should develop a variety of evaluation approaches for the setting in which they teach, in both classroom and clinical evaluation, the creative challenge comes from determining the many ways students can demonstrate their

achievement of objectives, attainment of knowledge and mastery skills (Penn, 2008). The choice of assessment methods should be different in order to assess the knowledge, skills, attributes and professional values acquired by nursing students during training. This will help to show a holistic reflection of the students' clinical performance. Assessments for nursing students are done according to the guidelines provided for in the Nursing curriculum. Clinical staff and educators from the institution of clinical attachment participate in conducting practical assessments for these students. This creates some degree of stress in the Nursing student being assessed because students are not familiar with these assessors. This affects the clinical performance of these Nursing students to some extent. These assessors from other institutions only interact with the students in the clinical area during assessments only; therefore, they may not be able take care of the knowledge gaps and learning needs of these students.

2.6.2 Feedback System

Feedback is a collaborative process of providing in sight to learners about their performance (Clynes and Raftery, 2008). During clinical experience, a good feedback system is of importance as it improves the clinical performance of nursing students. It is believed that when students know their progress and deficiencies on their practice and improve on their weaknesses, they get motivated and become confident, hence optimizing learning, leading to growth (Clynes, 2008; Komaratat and Ourntanne, 2009). Feedback is known to be an effective pre-requisite for learning. Regular feedback, reflections, and practical advice from the supervisor are important factors for improving the students' practical competence, confidence, motivation, and self-esteem (Dale et al, 2013). Thus tutors should be willing to receive feedback from students about their teaching style. They should encourage students to feel free to comment about how they present the lecture or lesson as this will produce a mirror imaging or a reflective interaction through which the tutor will learn and readjust or modify his or her approach to the course or content to the mutual benefit of the student, tutor and the institution (Jafta, 2013). If the clinical tutors and or clinical instructors are subjected to student evaluation, then teaching and learning gaps would be identified. This situation may ultimately save patients' lives through safe practice.

However, the process is not just feedback on performance but a communication process that draws out performance explanations and enables students to develop strategies to enhance future performance. Well-constructed debriefings lead to positive reflective outcomes (Byykx et al, 2011). Debriefing is particularly important following formative assessment, as the opportunity. Ultimately giving and receiving constructive feedback is an integral part of creating healthy cultures and safe care (Boynton, 2014).

Therefore, it is a professional obligation for Nurse Educators to develop the skills in feedback system as part for their work culture. This enhances student learning both in clinical practice and theory. Every Nursing school, whether Private or Government, has adopted its own feedback system. It is an important factor in the learning of students as it helps to identify students' learning needs and teaching methods to enhance their clinical performance. Clinical Instructors, Mentors and Nurse Educators are responsible for providing feedback (Kapagawamiangd and Useh., 2013). Feedback is always integrated with knowledge, which the students use to improve on their weaknesses. Nursing students require timely, feedback as this helps to improve on their clinical performance as they sharpen their practical skills through reflective feedback. The responsible staff should ensure that the feedback is given fairly without any discrimination.

2.7 Conclusion

Clinical education is an integral part of nursing education because it covers the application of theory into practice in the real situation on the actual patient. The factors that were looked at were clinical supervision, staff attitude, staff shortage and availability of resources. Despite many studies being reviewed limited studies have been done on students' satisfaction with clinical learning environment hence the need to carry out the study.

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This chapter includes details of research design, research settings, study population, sample selection and sample size. It also includes data collection techniques and an explanation of a pilot study which will be conducted to ascertain validity and reliability of the research instruments. Ethical considerations, data analysis and dissemination of findings are also included.

3.2 Study design

The study used a cross sectional quantitative approach. It was cross sectional because it involved the collection of data at one point in time. The method gave a clear overview of the events relating to factors associated with nursing student's satisfaction with clinical learning environment at University Teaching Hospitals.

3.3 Research setting

The study was conducted at the University Teaching Hospitals where the selected four registered training nursing schools conduct their clinical learning. The Hospitals provides most of the clinical learning for Registered Nursing Students not only for those from Lusaka because it is a tertiary Hospitals offering specialized care. University Teaching Hospitals were chosen because they had similar characteristics of interest for study by the researcher. In addition, University Teaching Hospitals were chosen because the investigator observed an increase in number of nursing schools using them for clinical learning resulting in a rise in the number of students.

3.4 Study population

A population is the entire aggregation of cases in which a researcher is interested (Polit and Beck, 2003). The study population included four hundred and twenty three (423) third year registered nursing students both male and female doing registered nursing programs from four selected schools within Lusaka undertaking their clinical learning at University Teaching Hospitals which are all private schools because the only government nursing school (Lusaka school of nursing) is offering a different program of nursing.

3.5 Target population

The target population is the aggregate of cases about which the researcher would like to make generalizations (Polit and Beck, 2003 and Fain, 2009). This has also been referred to as the study population. The target population included final year students pursuing their registered nursing in the face to face program.

3.6 Accessible population

This is the population that is readily available to the researcher and that represents the target population as closely as possible (Fain, 2009). The accessible population included nursing students in the final year and were attached to UTH at the time of the study.

3.7 Sampling

Sampling is the process of selecting individuals for a study in such a way that individuals represent the larger group from which they were selected (Fain 2009).

3.7.1 Sampling method and sample size

Probability sampling was used to select the sample where stratified random sampling was used to select schools then later selected participants randomly from the chosen schools. The subjects were grouped according to their schools from the accessible population, this was done to ensure that all the students had adequate representation in the study and all schools would have the opportunity of providing information that would help to identify the factors associated with nursing student's satisfaction with clinical learning environment.

Then the selection of the specific sample was done within the groups randomly for equal opportunity of participating in the study. The proportion was according to the total number of student using the following formula.

Krejcie and Morgan formula of infinite (S = X2 NP (1-P) ÷ d2 (N-1) +X2P (1-P) = 329.

- Krejcie and Morgan formula (1990)

- S = X2NP(1-P)

- d2(N-1) +X2P(1-P)

- S=required sample size

- X2= Degree of freedom at the desired confidence level (1.962=3.8416)

- N= Accessible study population size (423)

- P=Population proportion (assumed at 0.50)

- d= Degree of accuracy assumed at 0.05)

- **Sample size = 329**

From the total 329, Dovecot college-66, Makeni School College of Nursing - 91, Lusaka Health Institute-76 and Lusaka Nursing Institute-96 calculated using above formula.

3.7.2 Inclusion criteria

The following were included in the study as they met the inclusion criteria set by the researcher.

1. Final year students pursuing their registered nursing in the face to face program.

2. Those who were willing to participate.

3. Students from nursing schools/colleges.

3.7.3 Exclusion criteria

Those who did not meet the inclusion criteria set by the researcher were excluded from the study.

1. Registered nursing students pursuing their diplomas from Universities.

2. Students from Lusaka College of nursing because they are training a different program registered nursing midwifery (RNM).

3. Those who did not consent.

3.8 Data collection tool

A self-administered questionnaire was used to collect data from the respondents. The questionnaire was adapted from the clinical learning environment and teaching scale instruments which measures the clinical learning environment of students (Dlamini, 2011 and Saarikoski, 2008). The questionnaire was designed using a five-point scale to rate the views of participants ranging from 'strongly agree', 'agree', 'neutral', and 'disagree' to 'strongly disagree'. The questionnaire was divided into three parts. Part one comprise questions on the demographic characteristics of the participants which included gender, age, and name of the school, whether participants have prior training as enrolled nurses or not and whether they have ever practiced as nurses before.

The second part of the questionnaire comprised 10 responses on satisfaction with clinical learning environment, 5 responses on environmental factors, 5 responses on clinical environment, 5 responses on student faculty interaction, 5 responses with assessment methods and 5 responses on clinical teaching methods. Part three consisted of 5 open-ended questions which sought descriptions or suggestions of what they thought could be done by students, as well as the educators in order to bring about satisfaction in clinical nursing education.

3.8.1 Validity

Construct and content validity was measured by checking items in the data collection tool against the objectives of the study and the concepts in the conceptual framework, to establish if all elements investigated were measured. Questions were constructed in a simple, clear and precise way giving respondents chance to give clear and precise answers which brought out factors that influenced nursing student satisfaction with clinical learning. The instrument was adapted from the clinical learning environment and teaching tool by Saarikoski, 2008 and Dlamini, 2011. These tools have been tested and used in the UK and Swaziland with reliability of Cronbach's alpha coefficient for the CLES+T categories ranged from .77 to .96 and correlation coefficient was 0.74 respectively. Furthermore, positive questions were used in the questionnaire to avoid mistake of negative coding in data analysis. The instrument was pretested.

3.8.2 Reliability

Pretesting of the instrument was done through a pilot study to check whether the instruments were able to bring out consistent information about student satisfaction in clinical learning. Adjustments to the data collection tool was made as need arose.

3.9 Data collection technique

The researcher introduced herself and the topic understudy and then a self administered questionnaire was given to the participants. They were provided a place where they were given the questionnaires by the researcher. They were given a day to answer the questionnaires and were requested to bring them back on the following day. Oral and written instructions were given to ensure adequate understanding and making an informed consent by the participants.

3.10 Pilot study

The pilot study was done among nursing students who have similar characteristics with the study sample at Kabwe School of Nursing which included 10% of the actual study. This was done to evaluate the psychometric properties of instruments, practice in collecting data, and revealing questions and/or instructions that might be ambiguous, consider reliability of subjects, and estimate time associated with data collection and helped the researcher to identify any part that needed modification and in this case none was done to the questionnaire.

3.11 Ethical consideration

Ethical approval was sought from the University of Zambia Biomedical Research Ethics Committee (UNZABREC). The purpose of the study was explained and a written consent was obtained from each respondent before the study. Those that did not consent to participate in the study were reassured that they would not suffer any consequences as a result of not participating. Those who consented asked to sign the consent form, which was explained to them fully.

A written permission was sought from the Medical Superintendents for University Teaching Hospitals and Kabwe General Hospitals. The respondents were not remunerated in any way. Questionnaires and discussions were administered in privacy that was offered by the researcher. The respondents were assured of anonymity by using serial numbers on the questionnaires instead of writing their names.

After data collection, the questionnaires were kept under lock and key for security and confidentiality. No one, apart from the principal researcher was allowed to access the collected data. Respondents were not subjected to any physical harm as the study did not involve invasive procedures.

3.12 Data analysis

After data was collected, the questionnaires were checked for completeness, consistency, legibility and accuracy. Categorization of the open-ended questions, which involved reading through all responses and grouping answers that belonged together, was done. This enabled the researcher to report percentage of respondents giving answers that fell in each category.

Codes were assigned to each category, entered and analysed using Statistical Package in Social Science (SPSS) version 22.0 software. Confidence interval was set at 95%. A 5% level of significance was set, only p values of 0.05 or less were considered statistically significant. The Chi-Square test, bivariat and multiple logistic regressions were used to test for association between the dependent variable and independent variables.

3.13 Data presentation

Research findings were presented according to the sections of the questionnaire. Some data were grouped together to give an overall picture. Data were presented using frequency tables, histograms, pie chart, and cross-tabulations to communicate research findings.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This section describes data analysis, characteristics of participants and the findings of the study on factors associated with students' satisfaction with clinical learning environment at University Teaching Hospitals (UTH). Data was collected using a self-administered questionnaire of three hundred and twenty nine (329) questionnaires given to the students and a 100% response rate was attained. The respondents were drawn from four institutions namely Dovecot College of Nursing (DCN), Makeni School College of Nursing, (MASCON), Lusaka Health Institute (LHI) and Lusaka Nursing Institute (LNI).

4.2 Data analysis

The data was processed and analyzed using Statistical Package for Social Sciences (SPSS) version 22. The proportions were reported for each category in the frequency tables. Graphical presentation depicted the respective variable categories in form of bar graphs. To test the association between the dependent categorical variables and each independent variable which are also categorical chi-squared test was used**.**

4.3 Presentation of findings

The study findings were presented according to the sequence of the questionnaire and were presented in frequency tables and cross tabulations. The cross tabulation of variables helped show relationships between the major study variables.

4.4 Section A. Socio demographic data

This section consists of the frequency table   representing the age and gender of the respondents.

Table 2: Social demographic characteristic of the study population (n= 329)

Students' demographic data	Frequency	Percentage
Sex		
Male	89	27%
Female	240	73%
Total	**329**	**100%**
Age		
19 – 22 years	141	43%
23 – 24 years	109	33%
25 – 40 years	79	24%
Total	**329**	**100%**

Table 2 above shows that most of the respondents 73% (240) were female while 43% (141) respondents were aged between 19 and 22 years. Furthermore all the respondents 100% (329) were in their third and last year of training as this was the target population.

4.5 Location of participants in the study

A total of 329 students participated in the study. The distribution of the participants by study area is shown in Table 3.

Table 3: Location of the participants (n=329)

Location	Frequency	Percentage (%)
DCN	66	20
MACSON	91	28
LHI	76	23
LNI	96	29
	329	**100**

Table 3 above shows the location of participants by their respective schools. 20% (66) were coming from DCN, 28% (91) from MACSON, 23% (76) from LHI while 29% (96) from LNI.

4.6 Factors associated with satisfaction with clinical environment

To explore the students' understanding to other factors that can influence satisfaction to the learning environment. Questions were used to measure variables which utilised a five- point Likert scale: l-Strongly Disagree, 2-Disagree, 3- Not sure, 4- Agree and 5-Strongly Agree.

4.6.1 Availability of Learning Material
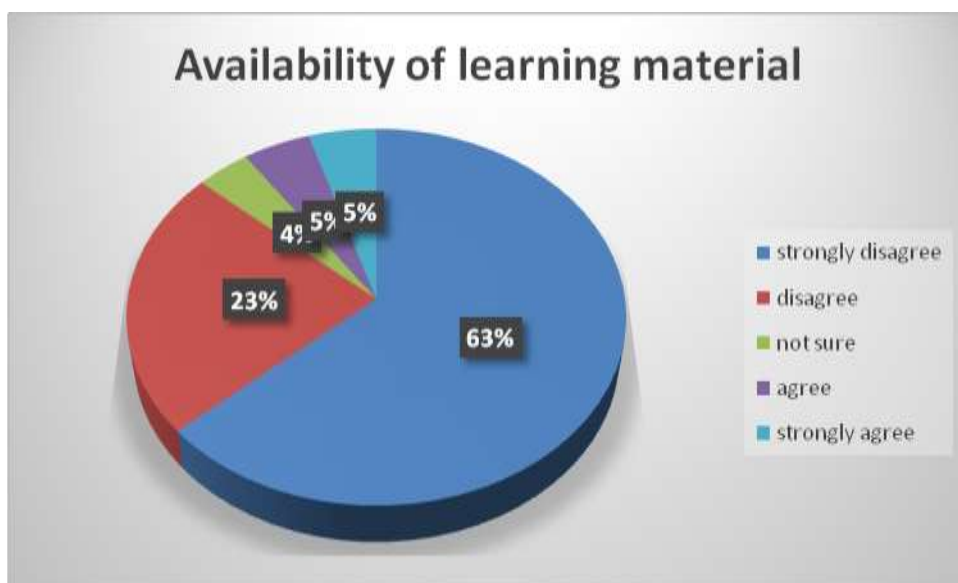
Figure 2: Availability of learning materials

Figure 2 above shows that majority 55% (181) agreed that the prescribed reading materials promoted a good learning environment to students once adequately available while 5% (16) strongly disagreed and 20% disagreed respectively.

4.6.2 Procedures Demonstrated Before Placement
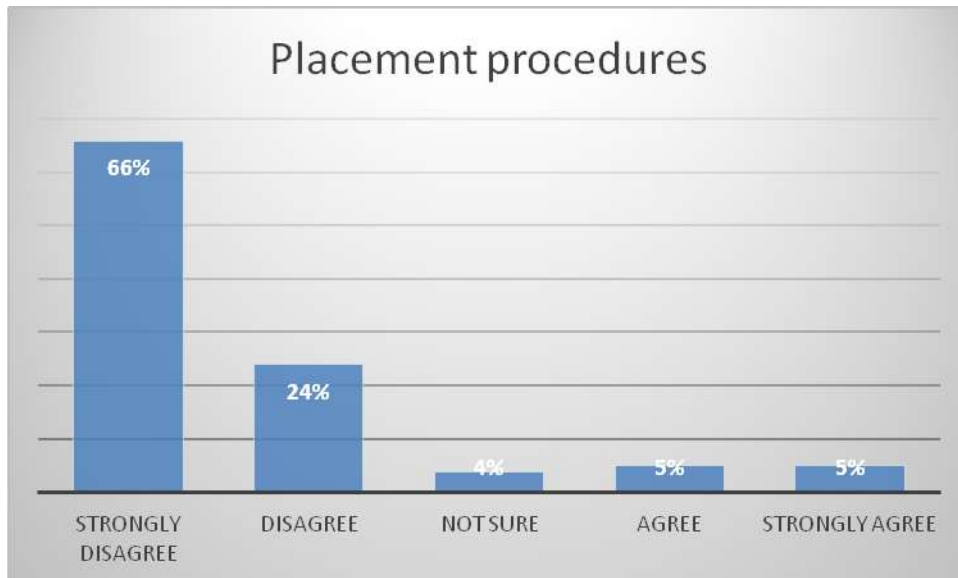
Figure 3: Students' view on procedures demonstrated before placement (n= 329)

Figure 3 shows that most of the respondents 49% (161) strongly agreed that procedures were demonstrated to nursing students before they were sent for clinical practice. Only 2% (2) strongly disagreed with the statement that procedures were demonstrated before clinical allocation at UTH.

4.6.3 Availability of Clinical Staff

Figure 4: Availability of clinical staffing

Figure 4 above shows that 63% (217) disagreed that clinical instructors and support staff are adequate and available at all times for students, while 4% (13) were not sure if clinical staff were adequately available to students at UTH.

4.6.4   Sequencing of Theory and Practice
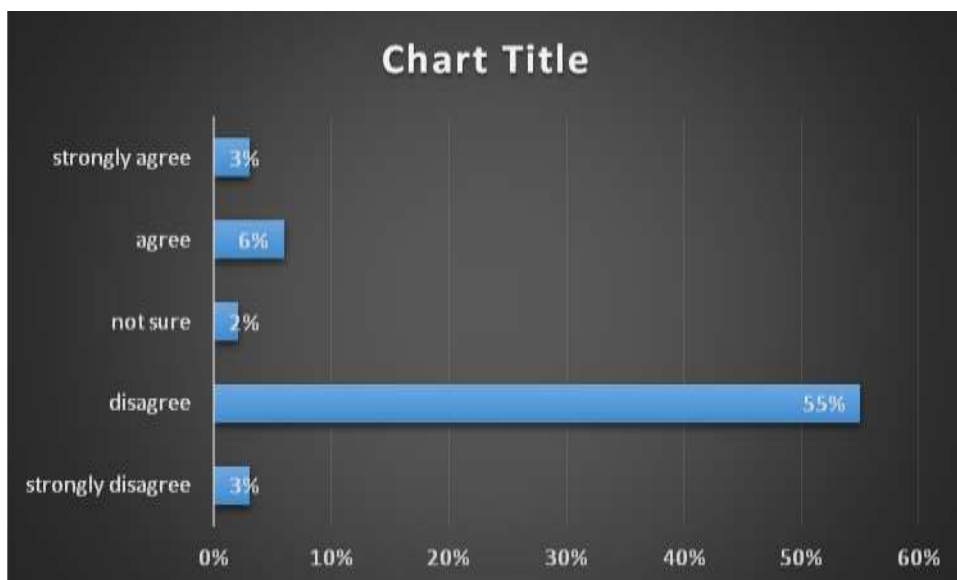
Figure 5: Sequencing of theory and practice (n = 329)

It was enquired as to whether the sequencing of theory sessions with clinical practice enabled the students to be up to date with information satisfactorily. Figure 5 above

showed that majority 55% (181) of the respondents disagreed that the clinical placement was sequenced with the theory where 3% (10) of the respondents strongly agreed.

4.6.5 Relevance of theory into clinical practice
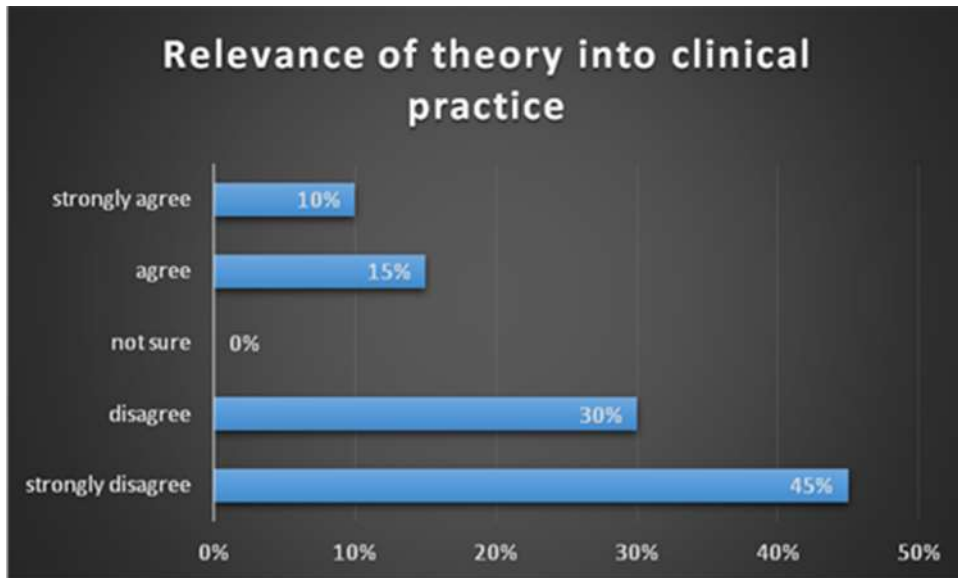
Figure 6: Relevancy of theory into clinical practice (n=329)

Figure 6 above shows that overall 45% (148) of the respondents disagreed to the statement that theory was irrelevant to clinical practice and 10% (33) strongly agreed.

4.7 Responses on clinical environment factors

This section covers the responses on clinical environment factors which have been graded in five Likert scales and these are strongly disagree, disagree, not sure, agree and strongly agree. Below is the description of the findings.

Table 4: Responses on clinical environment (n=329)

	Characteristics	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1.	Mentorship	23(7%)	30(9%)	13(4%)	66(20%)	197(60%)
2.	Sequencing clinical allocation and competencies	63(19%)	178(54%)	33(10%)	30(9%)	26(8%)
3.	Nurse tutors in clinical area.	10(3%)	46(14%)	33(10%)	132(40%)	105(32%)
4.	Application of objectives by clinical instructor	23(7%)	145(44%)	125(38%)	26(8%)	10(3%)
5.	Adequate staffing	13(4%)	79(24%)	30(9%)	112(34%)	92(28%)
6.	Adequate equipment and materials	4(1%)	30(9%)	26(8%)	135(41%)	135(41%)
7.	Equipment in good working good condition	4(1%)	43(13%)	23(7%)	161(49%)	99(30%)
8.	Available student cupboard	102(31%)	158(48%)	0	40(12%)	30(9%)

As indicated in Table 4 data was further grouped in three groups of agree, not sure and disagree. Those grouped as agree were responses on agree and strongly agree; those grouped as disagree were those on strongly disagree, disagree and not sure remained the same. See table 5 below.

Table 5: Response on clinical environment factors (n=329)

	Characteristics	Agree	Not sure	Disagree
1.	Mentorship	46(16%)	13 (4%)	263(80%)
2.	Sequencing clinical allocation and competencies	240(73%)	33 (10%)	57(17%)
3.	Nurse tutors in clinical area	59 (18%)	33 (10%)	237(72%)
4.	Application of objectives by clinical instructor	168 (51%)	125 (38%)	37(11%)
5.	Adequate staffing	95(29%)	30 (9%)	205(62%)
6.	Adequate equipment and materials	33 (10%)	25(8%)	270 (82%)
7.	Equipment in good working condition	46(14%)	23 (7%)	260 (79%)
8.	Available student cupboard	257 (78%)	4(1%)	69(21%)

Table 5 shows that most of the respondents 270 (82%)) disagreed to the statement which says, "The equipment and medical and surgical supplies are usually adequate for practice while 25(8%) were not sure. Three quarters of the respondents 263(80%) disagreed with the statement that stated, "each student was allocated to a specific member of staff for mentorship" and 13 (4%) of the respondents were not sure. More than half of the respondents 260 (79%) also disagreed that "the equipment is always in good working condition" while 23 (7%) were not sure. Most of the respondents 257 (78%) agreed to the statement that "each department have a specific student cupboard for safe keeping of equipment" while 69(21%) respondents disagreed. Above average 240(73%) of the respondents agreed to the statement which said "Clinical allocation is according to competencies/ objectives to achieved while 33 (10%) respondents were not sure.

Furthermore 237(72%) of the respondents disagreed to the statement that "Nurse tutors spend at least an hour per week with us in the clinical setting for supervision" while 59 (18%) agreed and 10.0% (33) of the respondents were not sure. More than average of the respondents 205(62%) disagreed that staffing levels were always

adequate each shift while 95(29%) of the respondents agreed and 30 (9%) were not sure.
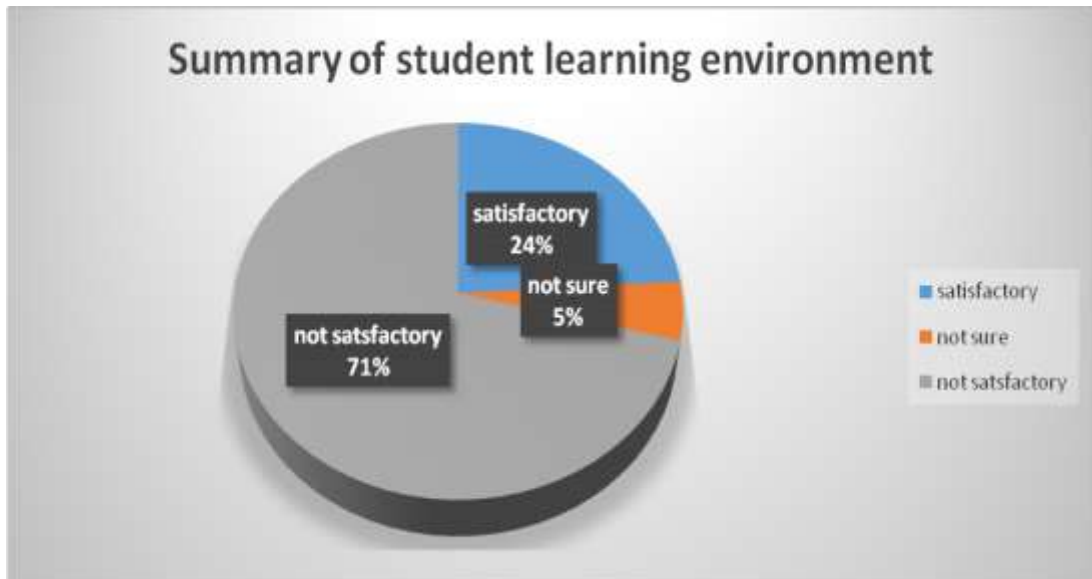
Figure 7: Summary of student learning environment

Figure 7 above describes the responses on the summary of the clinical environmental factors that influenced satisfaction. The above figure shows that 24% (79) of the responses identified these clinical environment as being satisfactory while 71% (234) respondents felt they were unsatisfactory and 5%(16) were not sure as to whether the environment was satisfactory or not.

4.8 Section D: Student related factors

This section covers the responses on student - related factors which have been graded in five levels and these are strongly disagree, disagree, not sure, agree and strongly agree. There were seven (7) questions on the questionnaire and the minimum value of the responses was seven (7) and the maximum being forty five (45). Below is the description of the findings.
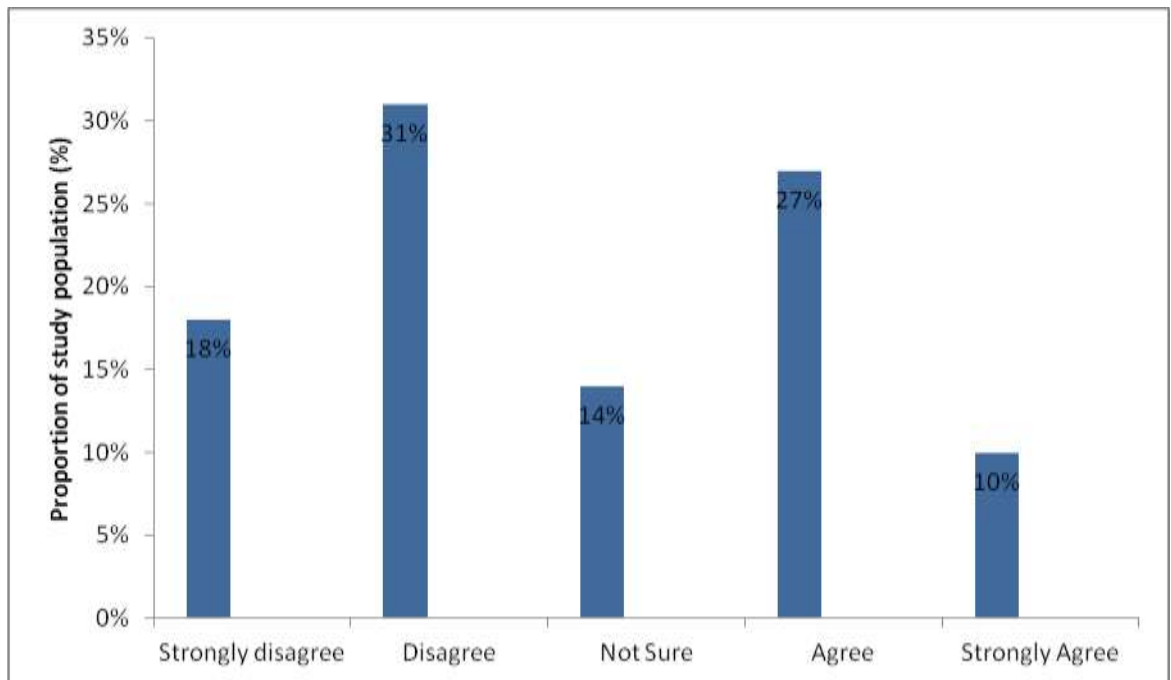
Figure 8: Responses on availability of clinical instructors in clinical area (n = 329)

Figure 8 above shows that 31% (102) of the respondents disagreed with the statement "that the clinical instructors are always available in the clinical area," while only 10% (33) respondents strongly agreed

4.8.1 Learner staff relationship
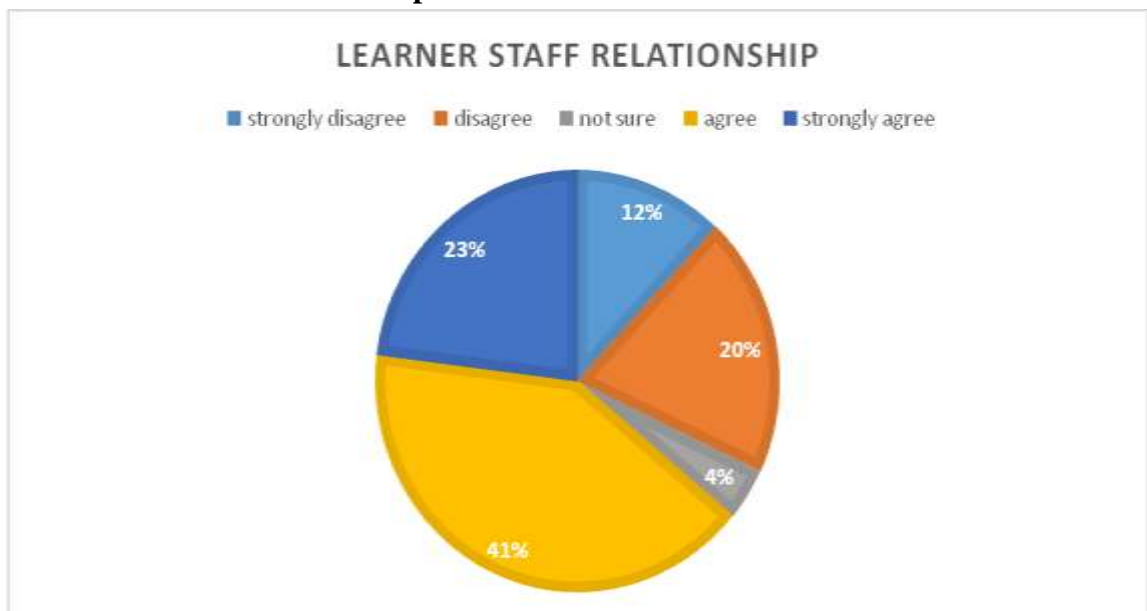
Figure 9: Learner staff relationship (n = 329)

Figure 9 above shows that 41% (135) respondents agreed that students maintained a good relationship with the clinical staff while 23% (76) strongly disagreed.

4.8.2: Learners engagement in reflection
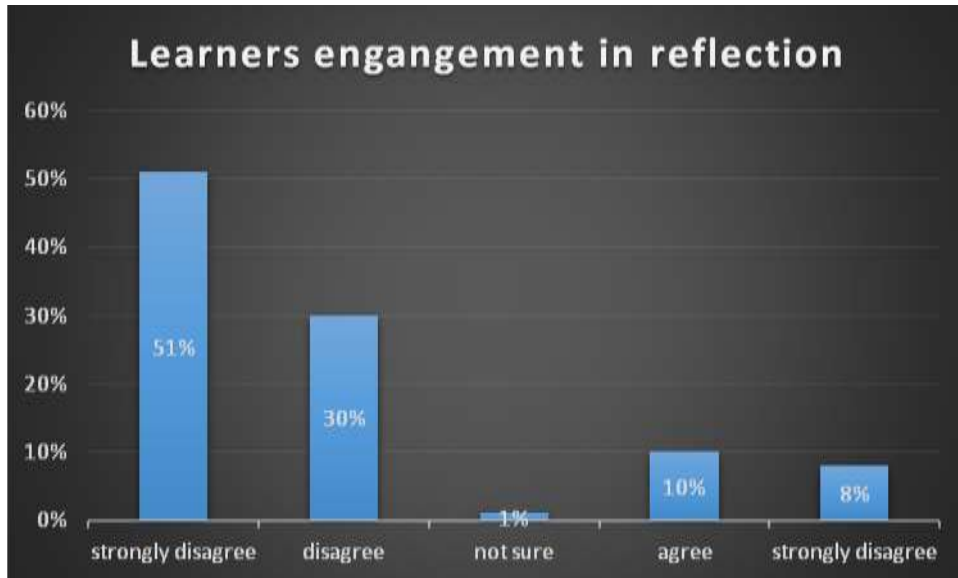
Figure 10: Learners engagement in reflection (n= 329)

Figure 10 shows that 1% (13) respondents were not sure whether nursing students engaged in reflection during their clinical practice, while 8% strongly agreed.

4.8.3 Participants satisfaction with the learning environment

Results for participant's satisfaction are summarized in Table 3. It was found that 302 out of 329 participants (92%) in the study were not satisfied with the suitability of their learning environment. Figure one shows the summary of the number of students satisfied and not satisfied by learning institution at UTH.

Table 6: Summary of participant's satisfaction

Location	No. of participants	No. satisfied	No. not satisfied
DCN	66	6	60
MASCON	91	7	84
LHI	76	6	70
LNI	96	8	88
Total	**329**	**27**	**302**

4.9 Section E: Pedagogical factors

This section covers the responses on pedagogical factors and opinions about their learning environment which have been graded in three levels and these are disagree, not sure and agree. There were five (5) questions. Below is the description of the findings.

Table 7: Pedagogical factors

		Agree	Not sure	Disagree
1.	Is the clinical area conducive for learning?	66(20%)	7(2%)	256 (78%)
2.	Prepared enough to practice as a nurse when you complete.	168(51%)	49 (15%)	112(34%)
3.	In the clinical setting, patients are managed as we are taught in class and ethical principles are upheld in practice.	95 (29%)	10(3%)	256(78%)
4.	Clinical practice outcomes are clearly defined and explained to us.	125 (38%)	20 (6%)	184(56%)
5.	Peer education is commonly encouraged in the clinical placement.	102(31%)	7 (2%)	220(67%)

Table 4 shows that most of the respondents 256 (78%) disagreed to the statement which says, "The clinical area conducive for learning while 7(2%) were not sure and only 66(20%) agreed that the environment was conducive. About half of the respondents 168(51%) agreed to the statement that says, students were prepared enough to practice as nurses when they completed their training while 112(34%) disagreed and 49 (15%) were not sure. Three quarters of the respondents 256(78%) disagreed with the statement that stated, "In the clinical setting, patients are managed as they were taught in class and ethical principles were being upheld in practice" and 10(3%) of the respondents were not sure while 95 (29%) agreed. More than half of the respondents 184(56%) also disagreed that "Clinical practice outcomes were clearly defined and explained to them during the training at UTH" while 20 (6%) were not sure. Most of the respondents 220(67%) disagreed to the statement that "Peer education was commonly encouraged in the clinical placement" while 102(31%) respondents agreed and the rest 7 (2%) were not sure.

4.10 Section F: Responses on the relationship between dependent and independent variables

Bivariate logistic regression model was used to test several factors that may influence the learners to be satisfied with their clinical learning environment. In this study backward regression method was used because of the dependent variable (satisfaction) which only categorised participants either satisfied or not satisfied. A few factors have been used such as the number of hours spent to reflect on the materials covered in a particular day by the student, the student tutor relationship, availability of adequate tutors, and availability of adequate clinical support staff.

Table 8: Responses on the relationship between dependent and independent variables

Characteristics	Crude Odds Ratio (95%CI)	Unadjusted P-value	Adjusted Odds Ratio (95%CI)	Adjusted P-value
1. Availability of clinical support staff				
Yes	1			
No	0.27 (0.029-2.58)	0.26	0.20 (0.02-2.2)	0.019
2. Availability of adequate clinical instructors				
Yes	1			
No	0.61 (0.23-0.87)	0.08	0.34 (0.02-3.01)	<0.0001
3. Time to reflect on materials covered (Hours/day)				
1-2	1.5 (0.37-6.33)	0.6	1.23 (0.47-4.18)	0.026
2-4	2.1 (0.2-3.22)	0.4	2.96 (1.24-3.87)	<0.001
5+	1			
4. Learner relationship with Clinical Staff				
Good	1			
Fair	0.90 (0.08-3.15)	0.88	0.62 (0.21-1.37)	0.042
Bad	0.58 (0.52-6.62)	0.03	0.06 (1.89-5.21)	<0.0001

The study shows that in a learning environment whose learners have inadequate staffing of the clinical support staff are about 70% less likely to be satisfied than those whose learning environment has adequate support staff while adjusting for

availability of adequate clinical instructors, time spent to reflect on materials covered and the relationship with Clinical staff and this is reduction is statistically significant with the P-value of 0.02. It is also indicating that in a learning environment whose learners have inadequate staffing of the clinical instructor staff are about 40% less likely to be satisfied than those whose learning environment has adequate clinical instructors while adjusting for availability of adequate clinical support staff, time spent to reflect on materials covered and the relationship with Clinical staff its effect is statistically significant with the P-value of <0.0001.

The time spent to reflect on the materials covered is among the factors that may contribute to the learner's satisfaction. The study results indicate that the longer the time spent by the learner to reflect on the materials covered in that particular day positively contribute to the satisfaction of that learner when compared to those who spend less time. Learners who spend utmost two hours reflecting on the materials covered in a day are 25% times less likely to be satisfied than those who spend four hours of reflection while adjusting for availability of adequate clinical support staff, availability of adequate clinical instructors staff and the relationship with Clinical staff and this is statistically significant with the P-value of 0.03.

Learners who have a bad relationship with the clinical staff are about 40% less likely to be satisfied with the learning environment than those with a good relationship while adjusting for the time spent to reflect on the materials covered, availability of clinical staff and clinical support staff and this difference is statistically significant with the P-value of <0.0001. Learners who have a fair relationship with the clinical staff are about 10% less likely to be satisfied with the learning environment than those with a good relationship while adjusting for the time spent to reflect on the materials covered, availability of clinical staff and clinical support staff and this difference is statistically significant with the P-value of 0.04.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discussed the results of the study on, factors associated with registered nursing students' satisfaction with the clinical learning environment at the University Teaching Hospitals (UTH) Lusaka, Zambia.. Additionally, it also presented the recommendations, limitations and conclusion. The study was aimed at exploring the factors associated with registered nursing students' satisfaction with the clinical learning environment at the university teaching Hospitals (UTH) Lusaka, Zambia.

The findings revealed that the majority of nursing students were not been satisfied with the clinical learning environment at University Teaching Hospitals and also observed that student's learning conditions were not favourable. This is in line with the study done in Kenya which had results that showed students not being satisfied with the learning environment, (Brien, et al 2012). However, there are no studies done at University Teaching Hospitals on the same.

5.2 Socio-demographic variables

The findings in Table 2 showed that most of the respondents 73% (240) were female while 43% (141) respondents were aged between 19 and 22 years. Furthermore all the respondents 100% (329) were in their third and last year of training as this was the target population. The findings were similar to a study done in Iran in which 75% respondents were female and 25% were males reflecting that nursing still remains a female dominated profession as observed by (Katete, 2014).

5.3 Student's satisfaction with clinical learning environment

The clinical environment includes the equipment and materials, members of staffs' attitude and their availability in the clinical area. This study in Table 6 also showed that 302 (92%) of students were not satisfied with the learning environment at UTH while only 27 (8%) were satisfied. It is worth mentioning that there are other factors that influenced student's satisfaction with their clinical learning environment.

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This study also showed that in a learning environment whose students have inadequate staffing are about 70% less likely to be satisfied than those whose learning environment has adequate staff while adjusting for availability of adequate clinical instructors, time spent to reflect on materials covered and the relationship with Clinical staff and this is reduction is statistically significant with the P-value of 0.02. To the contrary, Dagdaran, *et. al* (2012) found that the majority students whose staff are inadequate are more likely to study harder than those with adequate staffing. Furthermore, the findings in Table 5 of this study showed that most of the respondents 263 (80%) disagreed to the statement which said "The equipment and medical and surgical supplies were usually adequate for practice. Three quarters of the respondents 257 (78%) disagreed with the statement that stated "Each student is allocated a specific member of staff for mentorship. More than half of the respondents 260 (79%) also disagreed that "the equipment is always in good working condition". The non-availability of the resources can hinder the ability of the nursing students to adequately practice thereby, making the learning environment not conducive. Furthermore they may feel that they are not supported in their learning. This is in agreement with the study by Benner et al., (2011) which revealed that supportive environments facilitate a progression of socialization where apprehension lessens, poise increases and learning is improved. It is from clinical placements that students start to acquire the needed attributes of caring, critical thinking skills, application of situational understanding, competence and clinical skills, (Lawal et al., 2015).

5.4 Variables associated with students' satisfaction with clinical learning environment

In this study, registered nursing students' satisfaction to the clinical learning environment was established by determining the students' related factors, pedagogical factors and environmental factors.

5.4.1 Students' related factors
5.4.1.1 Students' relationship with clinical staff

The study in Figure 9 revealed that learners who have a bad relationship with the clinical staff are about 40% less likely to be satisfied with the learning environment than those with a good relationship. The findings agree with those done in Mexico where 50% of students who relate well with their instructors find time to interact and get more information to improve their skills and performance, Benner, P. *et al* (2008). The findings of this study are consistence with the study done by Dagdaran, et al., (2012), that indicated that careful selection of clinical environment enhances satisfaction with clinical learning. When learners and clinical staff/teachers are in good relationship communication flows well in turn making learning interesting resulting in good acquisition of clinical skills.

According to Awuah- pearsah, 2013, 70% of nursing students' attitude towards work deteriorates as they increase year of training. Furthermore, Table 5 of this study indicated that 82.2% of the nursing students felt that the equipment and human resources were inadequate for practice. Similar findings of Dlamini, (2011), Msiska et al, (2014) & Malwela et al., (2016) lack of materials and human resources hindered integration of theory into practice. Contrary to the findings of this study, studies done in Limpopo showed that midwives and nurses did not perform the skill according to requirements (Malwela, et al., 2016). Additionally Dlamini, (2011), argues that registered nurses preferred simpler and less complex approaches to clinical practice and nursing students could not question them.

Therefore there was need to address some of these factors within the clinical environment and clinical supervision that are likely to hinder the students' satisfaction with clinical learning environment which can affect the quality of the nurses being trained.

A good relationship promotes good learning environment as there is good communication of expectations for the students and challenges that may be faced during clinical learning. Hence there is need for them to ensure good linkages to promote continuity in knowledge transfer.

Contrary to these findings, studies done in Japan among student nurses and clinical instructors it was observed that there was inadequate communication between student nurses and clinical staff which led to inadequate understanding on what to be taught to the nursing students while in the clinical area. It was further argued that due to lack of time it was impossible for student nurses to explain to the clinical staff, (Taniyama, et al., 2012). Furthermore if the students ensured that they offered appropriate support so that even during their absence the clinical staff would still facilitate the learning of the nursing students.

Table 5 findings show that more than half of the respondents 207 (63%) acknowledged that clinical staff were always available to guide and assist them in the clinical practice in achieving their goals. According to the findings it was statistically significant (62.8%, $p < .017$) that nursing students who had adequate support were able to agree to the satisfaction of the learning environment. Furthermore, the findings of the study showed that almost all the respondents 270 (82%) disagreed that the clinical staff have no authority over their learning. Presence and support from clinical instructors in the clinical area motivates students' learning because they are in charge of clinical learning.   Another study done in Jamaica, 78.8% of Year 2 students and 73.3% of Year 3 students acknowledged that the relationship with the clinical staff influenced learning, (Lawal et al., 2015). Similar findings in the study done in Greece attested that nurses and doctors contributed to the nursing students' learning in the clinical area, According to Billings & Halstead as cited by Lawal, et al., (2015), this has been ascribed to the fact that clinical staff plays the role of counsellor, instructor, mentor and more to the nursing students as they transition from novice to experts in the field of nursing.

5.4.1.2 Student's Reflection

Reflection is one of the strategies that nursing students may use to acquire new knowledge. Figure 10 showed that that in a learning environment whose learners have inadequate staffing of the clinical instructors are about 40% less likely to be satisfied than those whose learning environment has adequate clinical instructors. These findings agree with those done in Uganda where about 80% of nursing students had high performance in different work places due to the time given to study Ajani, (2011). The time spent to reflect on the materials covered is among the

factors that may contribute to the learner's satisfaction. The study results indicate that the longer the time spent by the learner to reflect on the materials covered in that particular day positively contribute to the satisfaction of that learner when compared to those who spend less time. Learners who spend utmost two hours reflecting on the materials covered in a day are 25% times less likely to be satisfied than those who spend four hours. Chen and Rodgers, (2011) also found that the more time students have to assimilate the daily class work, improves their performance by 30% in their school work.

The findings of the study also showed that nursing students who did not get engaged in reflection also had poor performance. This can be referred to the fact that reflection has not been adequately explained to the nursing students. Consistent with these findings, a study done in Spain showed that nursing students did not adequately engage in reflection, (Lapeña-Moñux, et al., 2016). According to studies done by Kapaghawani & Useh, (2013), reflective process allows nursing students to learn from their practice experience through discussions and meetings with other students under the guidance of the preceptor. When this is missing then students' performance will be hindered.

5.5. Pedagogical Factors

Tutors provide both theoretical and clinical skills knowledge for student nurses. In this Table 7 indicated that most of the participants argued that there was need for the tutors to be demonstrating the procedures on the actual patients not only in skills laboratory as it would help them understand the procedure better.

It is espoused that the nurse educator is in a better position to enhance the roles of the participants in the satisfaction of clinical learning environment and practice in nursing education, since s/he facilitates the teaching and learning process, (Dlamini, 2011).

Accordingly Hussein & Joseph Osuji, (2017) posits that "As nurse educators, our role is as a knowledge channel that facilitates the sharing, convey, and implementation of best practice guidelines". They further argue that Nurse Educators are expected to support practitioners and student nurses during their practice to ensure safe administration of care and best clinical outcomes. This can be achieved through demonstration of procedures in preparation for the clinical placements.

The demonstration involving the nursing staff will further clear the misconceptions and confusions that nursing students sometimes face in the clinical area. According to Sharif and Masoumi (2005), students become anxious and confused if they practice something different from what they learnt in the classroom and this may affect their satisfaction with clinical learning environment. However the demonstration of procedures has always been a challenge as the old nurses still maintain the approaches they were taught in performing procedures and new ones also have their own way of doing things hence confusing learners.

According to Cheraghi et al., (2012) studies done in Iran showed that nurses preferred the old methods of performing procedures which they were comfortable with and hence many nursing procedures were done in the wrong way, different from what was taught in the clinical skills laboratory in the school. In other studies it has been referred to as the hidden curriculum of nursing, (Lapeña-Moñux, et al., 2016).

5.6 Assessment and Feedback

Assessment is the exercise of deduction on the quality of students'work as a way of supporting learning and reviewing its outcomes (Higher Education Quality Council 1996:2) in Sandy, (2014).

Therefore there is need to ensure that what is assessed is planned according to the competencies of the student. The findings of the study in table 5 showed that 48% of the respondents felt that the assessments were done prepared and according to the procedures that had been demonstrated. Assessment according to the procedure showed statistical significance ($x^2 = 9.23$, $p < .010$). According to Hunt et al., (2011) assessment should be done to review whether the student has understanding of the basic standard principles of practice as they have been prepared. Furthermore the sub category on the sequencing of tests and examinations was acknowledged as a factor.

However, similar studies done in Malawi showed that evaluation can be a source of bias especially when nurse educators and clinical staff do not closely monitor the students during the period of allocation, (Msiska et al., 2014). According to Elcigil & San, (2007) nursing students stop focusing on learning instead they just prepare for the assessment in order to get good grades.

This can be worsened the way feedback is given. Since nurses educators tend to give more feedback on the weaknesses of the students.

The findings of the study in table 5 indicated that 38% feedback was given and this has been posited by Elcigil & San, (2007) the feedback given mostly is negative.

5.7 Environmental factors

5.7.1 Explained objectives to the nursing students and clinical staff

Table 5 shows objectives also had been explained in relation to the competencies to be achieved, and then the nursing students would be able to integrate the theory into practice. The findings from the study showed that 276 (84%) respondents acknowledged that they knew exactly what was expected of them in the classroom and in the clinical practice. However some were not able to achieve them as they were engaged in other duties which were none nursing or focused more on patient care. Consistence with findings posited by Pillay & Mtshali, (2008) that "to facilitate growth, each student had a copy of objectives to be covered in the clinical settings", but the participants raised the concern that they were unable to cover all the objectives on time.

According to the studies done in Canada, it was observed that clinical nurses required an understanding of the learning requirements and anticipated outcomes for each level of nursing student who entered their clinical environment in order to endow with bearing in how to best support and critically assess the nursing students. To this end, it was suggested that academic and clinical staff provide clinical nurses with an outline of students' competencies and learning needs at the onset of each clinical rotation, (Kern, et al., 2014). It becomes easy to follow up and attend to grey areas of students when clinical staffs have the objectives of the students and this can also reduce on using students on none nursing activities.

5.7.2 Sequence clinical allocation and Core competencies

Table 5 findings showed that the core competencies needed to be clearly understood and this could be achieved when the learning environment was prepared according to the objectives to be achieved. According to Dgadaran, et al., (2012), careful selection of clinical cases, choosing Hospitals sectors relevant to clinical learning objectives

and an appropriate physical environment promoted student satisfaction and performance. Dafogianni, et al 2015, demonstrate that in Greece the nursing student sampled acknowledged that the content of the clinical courses achieved the learning objectives at the start of clinical practice, and they were appropriate to the subject of clinical learning environment. When students are allocated to clinical areas in line with what they had already learnt in class, it gives them a clear picture because they apply the theory into real life situation making understanding easier.

5.7.3 Availability of equipment and material resources

Lack of resources for practices has been attested as a factor hindering integration of theory into clinical practice. According to Lawrence, (2014) material resources are required to enhance optimum clinical learning experience.

The findings of the study in table 5 showed a significant relationship between student satisfaction to the learning environment and availability of resources. Those who did not agree (85.5%) with availability of equipment and resources in the clinical area also had unsatisfactorily agreed to their learning environment. Therefore this hinders the students' ability to perform procedures according to the requirements.

Similar studies done in Taiwan showed that nursing students worked without adequate resources, and in some instances they had to improvise if they had to practice to satisfy the conduciveness of their learning environment, (Msiska et al., 2014). According to Mwale and Kalawa, (2016) this has led to lack of acquisition of skills. Equipments and medical surgical supplies are tools for students during clinical practice, nursing being hands on profession can never be learnt well in the absence of such items.

5.7.4 Staff shortages

Clinical staffs are an important part of the clinical learning environment. They provide the link between the theoretical knowledge and the transfer of information of the knowledge into the practice and clinical skills acquisition. Table 5 findings showed 62.2% of the nursing students observed that there was shortage of staff in the clinical area. According to Pillay & Mtshali (2008), Cheraghi et al, (2010) & Msiska, et al., (2014), sometimes due to staff shortages, nursing students were used as part of the workforce because of their experience, bypassing the reason for their presence in the units, namely to learn what would be expected from them as

registered nurses. Similar studies done in posited that shortage of staff led to heavy workloads and nursing students being allocated patients to care for and performing non nursing duties which further improve the learning environment, (Cheraghi et al., 2010). When Nursing students are regarded as part of the workforce it delays them in completing objectives in a particular unit because they stop concentrating on activities they are supposed to do.

5.8. Application of the Framework

The theoretical framework used to guide the study is Kano Model of Satisfaction. The theory gave details of the nature of knowledge and skills of the students relating to satisfaction with clinic learning environment. Furthermore, factors associated with satisfaction with student nurses with clinical learning environment as they practice in real life situation in the clinical setting. The study findings showed that student nurses satisfaction with clinical learning environment was poor. The findings showed that non availability of resources, clinical staff and nurse educators in the clinical practicum area provided a learning environment that did not adequately promote satisfaction. Furthermore when nursing students were engaged in their own learning through activities such as reflection they could learn more as it was observed. However there was need to orient the nursing students in learning methods that promoted self directed learning such as reflection as it was noted that most students did not seem to adequately understand how it can be done.

The study also established that some factors associated with satisfaction with student nurses with clinical learning environment as they practice in real life situation in the clinical setting, explanations of the competencies to be achieved for that allocation ensuring that what was practiced was similar to what was taught. The nursing student can learn and integrate when they are conversant of with the expectations and this can be achieved if the nursing student is actively involved according to their level of training.

5.9 Strengths of this Study

The study achieved the main objective of exploring factors associated with registered nursing students' satisfaction with the clinical learning environment at the university teaching Hospitals (UTH) Lusaka, Zambia. It also established that there was

statistically significant relationship between satisfaction and associated factors with clinical learning environment, explanation of the objectives and ensuring competencies were met. It has added to the body of knowledge which will inform policy towards development of strategies that will improve the satisfaction of clinical learning environment among nursing students.

5.10 Limitations of the Study

There was limited literature on the research topic done locally and hence the researcher used literature from researches done in other places which were related to the local situation.

The nursing students were recruited from one training institution and therefore the results may not be generalised to other Hospitals.

5.11 Implications to Nursing

5.11.1 Implications to Nursing Education

The main interest of nursing education is to produce a competent and independent caring nurse who is capable of providing quality care based on the needs of the patient, family and community. It is therefore, important for nursing education to improve mentorship by introducing the clinical education mentorship team which is made up of nurses and midwives with a passion for improving standards of care. Nursing education can assist in the provision of continuing education programs for nurses that focus on topics such as how to work best with students and faculty in clinical setting as well as training of mentors. There is also need to conduct orientation programmes of the clinical staff on the nursing curriculum so that procedures are done systematically using the recommended approaches The nurse education department should inform the staff nurses that they are responsible for delegation and supervision of student nurses and that educators also need to follow up the nursing students in the clinical area to demonstrate procedures to show students what is expected.

5.11.2 Nursing Research

Literature show that little has been done on student's satisfaction with clinical learning and also the study revealed that there were some inadequacies in the clinical

skills acquisition in nursing students doing practicum at UTH. It is recommended that more studies should be undertaken on student's satisfaction with clinical learning in Zambia. Studies on the role of mentors, experiences of mentors on mentorship and supervision as well as staff nurses' perceptions of mentoring in clinical areas should be conducted.

5.11.3 Nursing Practice

Mentorship plays a vital role in shaping future nursing professionals and the future of nurses. The study revealed varying levels of satisfaction with most having moderate satisfaction of the support they received from the clinical staff. To ensure that student nurses receive high-quality mentorship, mentors must be given support at the point of care delivery. There is need for the nursing staff to consider the students as part of the health care team who are not only there as an extra hand in patient care but also are to learn in order to gain the competence in clinical skill. Staff nurses need to know how important they are as role models for future nurses and the student's professional socialization. However it was observed that some staff showed some negative attitude towards the nursing students. Nurses and midwives need to be informed on how their professional socialization affects student nurses and must take an active role in changing situations that create negative attitude because this will improve students' performance and confidence levels.

5.11.4 Nursing Administration

All Registered Nurses/Midwives, regardless of their position are leaders and should have the ability to teach and guide students in clinical setting. The study showed inadequacies in the availability of both human and materials resources in the clinical area affecting students' clinical learning and satisfaction because the human resource provides the valued knowledge and the skills that the nursing students can learn from while materials provide students with opportunity to practice during training preparing them to be qualify as nurses who will provide quality care to clients.

Therefore the nurse administrators should collaborate with the nurse educators to ensure that they provide the resources at all times for the students to have adequate

practice and Staff nurses should be allowed to voice out concerns and participate in problem-solving activities that are identified when working with student nurses.

5.12 Conclusion

The objectives of the study were achieved according to the results. It shows that 92% (n-303) of respondents were not satisfied with clinical learning environment. Some identified factors included shortage of staff, lack of supervision, inadequate medical surgical supplies and attitude of staff nurses. There should be adequate involvement of nurse tutors and clinical instructors in clinical practice. The study further showed that majority of those who had poor clinical environment and inadequate clinical supervision were not satisfied with the clinical learning.

5.13 Recommendations

i. Recommendations to mentors

The study revealed that the overall satisfaction with clinical learning was low among nursing students at UTH hence Nurse educators, clinical instructors and clinical staff need to improve the quality of education and practice being provided to the nursing students and should also be available so that they provide support and enhance satisfaction of the appropriate skills in the clinical practice among nursing students.

Mentors should design a program for accompanying and avail themselves in clinical practice during internship on a daily basis to guide the student nurses and should also regularly update their knowledge and skills on latest trends in clinical practice to enable them to teach procedures which are relevant to the current practices and new technology as well as act as positive role models to the interns.

ii. Recommendations to the Nursing Schools

The study findings indicate that some nursing students were satisfied while others were not therefore the four different Nursing school management and the clinical area should strengthen clinical supervision, student related factors and provide an effective clinical learning environment to assist the nursing students acquire new skills and prepare to be qualified nurses. The Schools of Nursing management must also organize regular clinical care meetings and presentations which will enable

clinical staff and nurse educators refresh their knowledge and skill of demonstration of procedures and provision of care to the satisfaction of nursing students.

Considering the reality that clinical instructors may be overwhelmed with a lot of nursing students to follow up on the wards owing to the increased clinical instructor-student ratios, the nurse education managers need to lobby for more clinical instructors to be allocated to the clinical area to reduce on work load which will enable them provide satisfactory support and education to the nursing students. Furthermore the nurse educators should have a deliberate plan to ensure that they are in the clinical area as much as possible.

iii. Recommendations to the University Teaching Hospitals

The Registered nurses must be encouraged to view clinical teaching and supervision of student nurses during clinical placements as part of their teaching function and quality improvement strategy in the wards. Mentors should be chosen among the registered nurses working in the clinical area other than picking nurse tutors who are not always in the clinical area and busy with their teaching. This will help in having mentors in wards all the time because that is where they operate from. The ward staff should promote a positive psychological learning environment and offer a supportive environment as well as viewing student nurses as part of the nursing team.

Qualified nurses and students should show interest in each other. Management should ensure that student nurses are allocated to a mentor and supervised by senior nurses in the ward.

iv. Recommendations to General Nursing Council

The sister in- charges should assist the General Nursing Council to identify registered nurses who are interested in clinical teaching and allocating them as mentors to facilitate clinical teaching and learning. There should be adequate preparation for the role of the mentor and training in the area of clinical practice so as to provide adequate support to students. The GNC should increase the number of mentors and reduce the ratio from 1:10 to 1:5

v. Recommendations to the Ministry of Health

MOH should expand the establishment so that more nurse tutors, registered nurses and clinical instructors can be employed to assist student nurses.The Ministry should train mentors and not just relying on ward staff to mentor student nurses.

vi. Recommendations for further research

The study was conducted in one Hospital, it may be important in future to conduct another study which will focus on the registered student nurses from other training Hospitals where students do their attachment. Future studies should be extended to nurse educators, clinical instructors and clinical staff so that factors are identified from their perspective as well. An evaluation of the Registered Nursing program should be done so as to work on the gaps identified in this study.

vii. DISSEMINATION AND UTILIZATION OF FINDINGS

The findings of the study were presented at the postgraduate seminar week 18th August 2017. The results will also be presented to the University Teaching Hospitals, the General Nursing Council of Zambia, Ministry of Health and Nursing Schools where the study participants were selected from for implementation of the gaps identified in the study. In addition, bound copies of the study will be submitted to the School of Nursing Sciences, UNZA -Medical Library and Main Library. The findings will also be published in a journal such medical journal of Zambia or any other recognised ones.

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APPENDIX 1: Student's information sheet

FACTORS ASSOCIATED WITH REGISTERED NURSING STUDENTS' SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT AT THE UNIVERSITY TEACHING HOSPITALS (UTH) LUSAKA, ZAMBIA.

You are requested to participate in a research study whose title is mentioned above. The study is being conducted by Louisa Lukupa Master of Science in Clinical Nursing Student at the University of Zambia. The study to explore factors associated with registered nursing students' satisfaction with the clinical learning environment is important because the findings will help in improving quality of students' clinical learning environment. Before you decide whether or not to participate in this study, the purpose of the study, any risks or benefits and what is expected of you will be explained. You are free to ask questions about anything you do not understand about this study. Your participation in this study is entirely voluntary but if you choose not to participate, that will not affect your learning and no privileges will be taken away from you. If you decide to participate, you are free to withdraw without any explanation and if you agree to participate, you will be asked to sign the consent in the presence of a witness. Agreement to participate will not result in any immediate benefits.

Purpose of the study

The study is designed to obtain information on factors associated with student satisfaction with clinical learning environment and identify potential areas for service improvement. This is to help Schools of Nursing, University Teaching Hospitals and Policy makers to set up measures in improving clinical learning environment.

Procedure

The study will involve signing of the consent form and completing the questionnaire. Once it is completed, the questionnaire should be returned to the researcher.

Risks and discomforts

There is no risk involved in this research though part of your time will be spent answering some questions.

Benefits

There will be no direct benefit to you by participating in this study, but the information which will be obtained will help the policy makers and the training institutions to improve the clinical learning environment thereby improving practical performance.

Cost, reimbursement and compensation

Your participation in this study is voluntary. You will receive no money for your participation. However, if you feel like withdrawing at any time, you are free to do so and this will not affect your learning experience in the classroom or clinical area.

Confidentiality/anonymity

The data we collect do not contain any personal information about you. The discussion and information collected in this study will be kept strictly confidential.

No one will link the data you provided to the identifying information you supplied (e.g., address, email).

For further information

We will be glad to answer your questions about this study at any time. You may contact us by phone or email

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APPENDIX II: Informed consent form

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and discomforts and confidentiality of the study, I further understand that taking part in the study is purely voluntary, if I accept to take part in this, I can withdraw at any time without having to give an explanation.

I, _____   _____

(Names)

Agree to take part in this study.

Signed _____Date: _____

(Participant)

Participants' signature or thumb print

Signed: _____Date: _____

(Witness)

Signed _____Date: _____

(Researcher)

APPENDIX III: Self administered questionnaire

TITLE: FACTORS ASSOCIATED WITH REGISTERED NURSING STUDENTS' SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT AT THE UNIVERSITY TEACHING HOSPITALS (UTH) LUSAKA, ZAMBIA.

DATE: …………………………   SERIAL NO: …………………………..

INSTRUCTION TO RESPONDENTS

1. Do not WRITE your name on the questionnaire, ONLY serial No. are required exclusively for comparison
2. Put (X) on the most appropriate response to the question
3. Attempt all the questions in all the three sections
4. All information provided will be kept confidential

PART 1: DEMOGRAPHIC DATA

Please fill in the blanks and place an (X) next to the correct response.

1. Gender: Female: -------------- Male ----------------

2. Age: -------------------------------

3. Name of training Nursing School……………………

4. Do you have any previous training as a nurse? Yes/ no

5. If the answer to question 4 is yes, how many years have you worked as a nurse?……………......................

Part 2: Information on perception and satisfaction with clinical learning environment.

Please rate your satisfaction by placing an (X) next to the most appropriate response.

Key: 1 = strongly Disagree,   2 = Disagree,   3 = Not sure,   4 = Agree,   5 = Strongly Agree

	ITEMS	1	2	3	4	5
satisfaction with clinical learning environment						
1.	Materials are adequate for clinical learning.					
2.	Medical –surgical supplies are available for using during practicing on the ward.					
3.	Clinical instructors demonstrate procedures before telling us to do retain demonstrations.					
4.	Number of hours spent in the clinical area is as required by the curriculum.					
5.	We complete the clinical allocations as prescribed by the curriculum.					
6.	Is the clinical area conducive for learning?					
7.	Prepared enough to practice as a nurse when you complete.					
8.	In the clinical setting, patients are managed as we are taught in class and ethical principles are upheld in practice.					

9.	Clinical practice outcomes are clearly defined and explained to us.				
10.	Peer education is commonly encouraged in the clinical placement.				
Student faculty relationship/supervision					
11.	The ratio of clinical instructors to students is appropriate				
12.	Clinical instructors do follow us in our different clinical allocations.				
13	We are given learning objectives for every clinical allocation and we are able to meet these objectives, these objectives are clearly explained to us				
14.	Clinical objectives are clearly communicated to clinical staff so that they know what is expected of students in the clinical area				
15	Our clinical instructors are able to make clinical learning objectives				
Clinical Environment					
16	There is adequate equipment and supplies in the clinical area to facilitate my skill acquisition in the clinical area				
17	Clinical staff are always willing and able to guide students on patient care and clinical skills as per procedure and learning objectives				
18	We feel welcome by the Clinical staff and Nurse Educators from the host institutions when we go for clinical practice.				
19	We are given room to practice effectively and interact with patients to enhance learning of relevant clinical skills				
20.	We are able to come up with a demonstration				

	schedule and practice on our own in the clinical area according to our level of training					
feedback system						
21.	Observations are made during return demonstrations and clinical practice is discussed including strengths and weaknesses.					
22.	Evaluation manuals are regularly checked by tutors and clinical instructors					
23.	Feedback is given immediately after demonstration of procedure and involved in reflection					
24.	Ward managers provides timely and fair feedback on clinical performance, and this feedback provides learning opportunities.					
25.	Feedback is given immediately after practical assessment					
Clinical Teaching Methods						
26.	Different methods are used for clinical teaching in the clinical area					
27.	The use of Nursing case studies is employed during our clinical practice					
28.	We are allowed to participate during nursing rounds					
29.	Our clinical instructors offer individualized attention to our learning needs during clinical practice					
30.	The Nursing process is used at all times to care for patients					
Assessment methods						
31.	Tests and examinations are structured in a way that what I have learned and practiced in the clinical setting is clearly integrated.(e.g. Drills					

	and scenarios)					
32.	Assessments are prepared and given within a particular allocation					
33	Procedures that have been taught and demonstrated are specifically given practical assessments					
34.	Assessments are administered on individual basis					
35.	Assessments are carried out by any clinical staff available					

Adapted from Dlamini, (2011) and Saarikoski et al, (2008)

Part three (3)

Open ended Questions

36. What are the factors that you think affect you in the clinical learning environment at University Teaching Hospitals?
…………………………………………………………………………………………
……………………………

37. What other factors do you think could hinder your clinical learning?
…………………………………………………………………………………………
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…………………………………………………………………………………………

38. Do you think you have adequate theoretical preparation to enable you practice skills effectively? If not, give reasons.…………………………………………………………………………………
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39. What measures do you think should be put in place to improve your clinical learning environment?
…………………………………………………………………………………………
…………………………………………………………………………………………..

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40. What do you think should the government do in order to support clinical learning environment at University Teaching Hospitals?

……………………………………………………………………………………………

……………………………………………………………………………………………

Thank you very much for according me time to interact with you