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**DETERMINANTS OF NURSING STUDENTS' SATISFACTION WITH THE  
CLINICAL LEARNING ENVIRONMENT IN THE KUMASI METROPOLIS**

**BY**

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**DECLARATION**

I, Sandra Adwubi Osei hereby declare that this thesis is the outcome of my original research study except for references made to other peoples' work and textbooks which have been duly acknowledged. The study was undertaken under the guidance and supervision of Dr. Florence Naab and Dr. Mary Ani-Amponsah both of the School of Nursing and Midwifery, University of Ghana. This work has not been partly or fully submitted for any other degree neither has it been submitted concurrently in candidature for any other degree.

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**ABSTRACT**

The clinical learning environment (CLE) is beneficial to the trainee nurse in acquisition of the requisite skills, attitudes and values for future professional practice. Students' satisfaction with the CLE makes the student dedicated, motivates them to learn and also prepares them adequately for future professional practice. Satisfaction assessment has been linked with graduate competency and student retention in the nursing programme. Using the Expectancy Disconfirmation Model as a framework, this study offers an in-depth understanding of the elements that bring about nursing students' satisfaction with the CLE in the Ghanaian context. The study employed a cross-sectional survey design. Validated data collection instruments were adapted to gather data from a sample of 340 nursing students from three nursing and midwifery training institutions in the Kumasi metropolis in the Ashanti region of Ghana. The data was analysed using Statistical Package for Social Sciences (SPSS) version 21.0. Descriptive statistics, correlation and regression were the main statistical tools used in the data analysis. The findings revealed that nursing students are dissatisfied with the clinical learning environment. Positive relationships were found between nursing students' expectations, students' perceived performance of the CLE and students' satisfaction with the CLE. Nursing students' expectations, learning opportunities and communication/ feedback in the CLE were found to be the main predictors of nursing students' satisfaction with the CLE. These findings have established the need to improve nursing students' clinical experiences to enhance professional nursing practice.

**Keywords:** clinical learning environment, students' satisfaction, expectations, perceived performance

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**DEDICATION**

This work is dedicated to my late father Mr Osei Kwame of blessed memory, Madam Joyce Ossei (mother) and all friends and family who have been very instrumental in my upbringing and educational progression.

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**LIST OF ABBREVIATIONS/ACRONYMS**

**CLE-** Clinical Learning Environment

**CINAHL-** Cumulative Index of Nursing and Allied Health Literature

**EDT-** Expectancy Disconfirmation Theory

**IRB-** Institutional Review Board

**NMIMR-** Noguchi Memorial Institute of Medical Research

**NM&C-** Nursing and Midwifery Council of Ghana

**SDA-** Seventh Day Adventist

**SECEE-** Students' Evaluation of Clinical Education Environment

**SPSS-** Statistical Package for Social Sciences

**UG-** University of Ghana

## **CHAPTER 1: INTRODUCTION OF THE STUDY**

### **1.1 Background**

The training of a nurse with the requisite skills and knowledge requires an exposure to the complex realities of both theoretical knowledge and practical experience. Despite the interrelationship between theoretical and experiential knowledge needed in the training, clinical learning experience has been distinguished as an essential component of nursing students' learning process because it enhances the student's opportunity to build up requisite knowledge, skills and attitudes that are crucial for future professional practice of nursing (Benner, Sutphen, Leonard, & Day, 2010; Lee, Clarke, & Carson, 2018).

The main objective of nursing education is to prepare students to attain technical knowledge and skills that will help graduates render riskless quality care to patients in the clinical environment. This objective can be achieved when appropriate conditions exist in the clinical learning environment as this facilitates students' learning opportunities (Arkan, Ordin, & Yılmaz, 2018). These conditions are largely influenced by variables such as availability of practical guidelines, hierarchical working environment, awareness of students' learning needs, teamwork, staff morale, attitude of staff towards patients and relations and the quality of care rendered to them (Chuan & Barnett, 2012).

The practical environment is described as the clinical learning environment (CLE) since it is from this setting that the nursing student acquires the requisite clinical skills. The CLE encompasses all the educational and learning activities that a trainee nurse is exposed to during their clinical placements (Flott & Linden, 2016).

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The CLE comprises the clinical setting, the staff, clients, nurse mentor and nurse educator (Chan & Ip, 2007; Papp, Markkanen, & von Bonsdorff, 2003). The CLE is best described as a web of the various influences within the clinical workplace that affects learning outcomes of the nursing student. These influences include the institutional protocols, physical forces such as unit structure and instruments, the human factors such as ward managers and members, the other medical team players as well as the non-paramedics (Andrews, Brodie, Andrews, Thomas, & Wong, 2005; Bloom, 1964; Dunn & Burnett, 1995).

The CLE serves as a medium for the translation of theoretical components of the curriculum into specialised skills and attitudes within a warm and safe atmosphere (Steven, Magnusson, Smith, & Pearson, 2013). Lúanaigh (2015) posits that the CLE is not just a workplace nor an area for demonstration and application of knowledge and skills gained in the lecture hall but rather an area that provides a platform for learning. It is an essential component of nursing students' learning process because it is student-centred, it aims at helping the student develop his or her competencies to the highest level (Papastavrou, Dimitriadou, Tsangari, & Andreou, 2016).

The CLE affords the nursing student an opportunity to build the essential knowledge, skills and values that are crucial for future professional practice (Benner et al., 2010). Again, a conducive CLE helps the nursing student to build the ideals, principles and values which are fundamental for rendering efficient nursing care. More so, it forms the theoretical foundations needed to build one's nursing knowledge, aids in ethical decision making in clinical practice and helps in sharpening clinical judgment. It equally assists the nursing student in identifying and

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nurturing their professional selves (O'Mara, McDonald, Gillespie, Brown, & Miles, 2014).

In order to acquire these traits, the nursing student requires a CLE that is supportive, innovative, creative and individually-centred to facilitate expansion of self and creation of room for learning to take place (Papastavrou, Lambrinou, Tsangari, Saarikoski, & Leino-Kilpi, 2010; Papathanasiou, Tsaras, & Sarafis, 2014). In spite of the enormous importance of CLE in the clinical nursing education, evidence from the plethora of literature suggests that there are complexities that surround learning in these environments (Msiska, Smith, & Fawcett, 2014; Ranjbar, 2015; Ross, 2012). The perspectives of the student unveil that the CLE can be very stressful with elements of anxiety-provoking events of their training owing to the fact that required skills do not exist independently (Ross, 2012; Suen, Lim, Wang, & Kowitlawakul, 2016).

Furthermore, students have to play the role of a learner and at the same time a worker (Moscaritolo, 2009). In the CLE, the nursing student combines reasoning, fine motor, and affective skills in response to patient needs which are met under the supervision of a nurse educator/mentor (D'Souza, Venkatesaperumal, Radhakrishnan, & Balachandran, 2013). Services of an expert is therefore needed to guide nursing students through this stage of their training. Research evidence from Noonan et al. (2009) establishes that the presence of positive role models has an impact on students' perception of the CLE, making the role of the nurse educator very essential. Role models have been identified as key players in moulding nursing students' identities (Vinales, 2015).

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According to the International Council of Nurses (ICN), professional nurses are mandated to impart knowledge and be abreast with current developments to promote evidence-based practice (International Council of Nurses, 2003). Mentoring and preceptorship allow students and newly qualified nurses to imitate senior professional nurses in moving through clinical proficiency. Mentors and preceptors also help in the integration of students into the unfamiliar environment which is key to student development (Vinales, 2015). Albeit the benefits of the mentor /role models in the CLE, bad role models have also been found to be disastrous to the student competency development and nursing profession as a whole (Morton-Cooper & Palmer, 2000).

In his seminal work, Moos (1987) asserts that the learning environments have strong consequences on student's behaviour, feelings, and growth. Again, Murphy et al. (2012) affirms that nursing students acquire skills and competencies necessary to progress from inexperience to experts in the profession through clinical placements. The feedback from students about the impact CLE has on their training is a key element in the success of their nursing career (Chuan & Barnett, 2012; Henderson, Cooke, Creedy, & Walker, 2012). This is because experts in nursing education believe when students have positive attitudes towards their CLE, it goes a long way to improve their understanding and appreciation of the complex learning process and facilitates educational experience acquisition (Bigdeli et al., 2015; Chuan & Barnett, 2012; Jamshidi, 2012).

Astin (1993) in his seminal work described the essence of education as not only impartation of knowledge but also to develop the student in totality. Studies have shown that one way of student development is by collecting information on student

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satisfaction (Lovecchio, DiMattio, & Hudacek, 2015). Psychologists define satisfaction as wholly dependent on the individual's environment, calibre, behaviour and nature. Student satisfaction has been defined as the student's perception or attitude towards the learning activities he or she is engaged in (Elliott & Shin, 2002). It is believed that satisfaction occurs when students are happy with their studies or adopt aggressive learning attitudes and dissatisfaction occurs when students are unhappy or adopt negative or passive attitude towards learning (Tough, 1982). Student satisfaction has been identified as a significant feature in evaluating the quality of learning approach and it is also a vital element in the success of educational programmes (Duong, 2015).

Globally, some studies have reported that nursing students are satisfied when clinical staff recognise their contribution to patient care and treat them with respect in the CLE (Chan & Ip, 2007; Lúanaigh, 2015). The extent to which students are satisfied is also affected by the distinctiveness of organizational atmosphere created at each nursing ward (Kyei & Antwi, 2015; Murphy et al., 2012), clinical placement duration (Warne, Johansson, & Papastavrou, 2010), years nursing students spent in their study (Papastavrou et al., 2010), supervision in educational setting (Sundler, Björk, Bisholt, & Ohlsson, 2014) and effective collaboration between key stakeholders in the health delivery system (Kyei & Antwi, 2015).

Student satisfaction assessment has been linked with graduate competency and student retention in the nursing programme (Papastavrou et al., 2016). A national study done in Australia by Clare, White, Edwards and Van Loon (2002) revealed that both trainee nurses and health care staff are in support of CLE that provide quality learning experiences to students and also equip them with the skills that make them

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function efficiently in their respective places of employment on completion of their training. On the contrary, nursing students express unfavourable CLE as an environment which is non-supportive, with poor interpersonal relationships between the clinical staff and nursing students (Killam & Heerschap, 2013; Shaban, Khater, & Akhu-Zaheya, 2012). The impact of negative perception of nursing students within the CLE hinders learning which influences attitudes and confidence levels. This has even led to some students abandoning the programme of study (Algozo & Peters, 2012; Anthony & Yastik, 2011; Shaban et al., 2012).

In Ghana, nursing practice has gradually evolved from the state where nurses learnt on the job to a stage where nursing practice is guided by research evidence. This evolution is in accordance with the health care needs of the Ghanaian populace as part of Nursing and Midwifery Council of Ghana (N&MC) commitment to safeguard the concern of the citizenry through the outmost quality of education and professional delivery of nursing and midwifery services (Nursing and Midwifery Council, 2013). Clinical placement forms a significant part of educating the nursing students and other health professionals as required by educators and professional bodies. Currently the curriculum for nursing training institutions oblige students to spend 432 hours, 624 hours and 576 hours in their first, second and third academic years respectively in the CLE as part of their training (Nursing and Midwifery Council of Ghana, 2015). Nonetheless, there seems to be scanty research evidence on the CLE and its effect on the nursing students in Ghana. This study therefore seeks to explore the determinants of nursing students' satisfaction with the clinical learning environment in the Ghanaian context.

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### 1.2 Problem statement

Globally clinical education is well known all through the literature as a required component of the nursing curriculum which provides students the golden opportunity to build and advance their clinical skills, knowledge and attitudes (Killam & Heerschap, 2013; Tanner, 2006). The acquisition and development of these practical skills take place in the CLE. This makes the CLE an important component of nursing education.

Empirical evidence indicate that most Ghanaian nursing students have issues with their experiences in the CLE. Nursing students have reported that the actual care rendered by nurses does not reflect what is being taught in the classroom which creates disharmony between theory and practice (Adjei, Sarpong, Attafuah, & Amertil, 2018). Students have further reported stress relating to lack of recognition from nurses in the learning environments which have affected their learning (Bam, Oppong, & Ibitoye, 2014). Awuah-Peasah, Sarfo and Asamoah (2013) also reported that majority of the Ghanaian student nurses either absent themselves from the clinical work schedule or report late without showing much interest in the clinical component in nursing education.

Irrespective of the student nurses' experience with the CLE which determines their output upon completion, the Ghanaian populace expect high standards of care from nursing professionals. Therefore, in order to guarantee quality and efficient care delivery in the clinical agencies to gain public trust, much effort must be contributed to the clinical training of nursing students. Lee, White and Hong (2009) assert that nursing students' satisfaction assessment is a significant measure of effective clinical learning. As a practice based profession, nursing students' satisfaction with the

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clinical learning environment is vital especially when students' satisfaction has been identified to have a major impact on student's programme completion and adequate preparation for future career (Lovecchio et al., 2015).

However, the concept of nursing students' satisfaction with the CLE seems less explored in the clinical education literature. There is therefore a need to investigate the factors that makes the nursing student satisfied with the CLE. Understanding these factors will help to ensure that quality nurses are trained and retained especially, when studies have revealed that nursing student satisfaction with the CLE has a significant relationship with satisfaction with the nursing profession (Admi, Moshe-Eilon, Sharon, & Mann, 2018).

This study examined the factors that make Ghanaian nursing students satisfied with the CLE. The study used the Expectancy Disconfirmation Theory (EDT) adapted from management sciences to assess the determinants of nursing students' satisfaction with the clinical learning environment.

### **1.3 Purpose of the Study**

The purpose of this study was to examine the determining factors of nursing students' satisfaction with the clinical learning environment in the Kumasi Metropolis.

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### **1.3.1 Specific Objectives of the Study**

The specific objectives of this study were to:

1. Identify nursing students' expectations of the CLE
2. Describe the nursing students' perceived performance of the CLE
3. Measure the level of nursing students' satisfaction with the CLE
4. Examine the relationship between students' expectations and satisfaction with the CLE
5. Assess the relationship between students' expectations and perceived performance of the CLE
6. Examine the relationship between students' perceived performance of the CLE and satisfaction with the CLE
7. Establish the influence of students' expectations and perceived performance of the CLE on nursing students' satisfaction with the CLE

### **1.4 Research questions**

1. What are nursing students' expectations of the CLE?
2. What is the perceived performance of the CLE?
3. What is the level of students' satisfaction with the CLE?
4. What relationship exists between expectations and satisfaction?
5. What is the relationship between perceived performance and satisfaction?
6. What is the relationship between expectations and perceived performance?
7. How do nursing students' expectations and perceived performance of the CLE influence nursing students' satisfaction with the CLE?

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### **1.5 Statement of Hypothesis**

1. There is a positive relationship between students' expectations and students' satisfaction with the CLE
2. There is a positive relationship between students' perceived performance of the CLE and students' satisfaction with the CLE
3. There is a positive relationship between students' expectations and perceived performance of the CLE

### **1.6 Significance of the Study**

The findings of this study will be a vital contribution to nursing knowledge in the area of clinical education. It is expected that findings will benefit nurse managers and clinicians in maintaining quality clinical teaching and also foster a student-centred CLE which will promote positive relationships between clinical staff and nursing students. In addition, findings will help clinical agencies with less optimal environment to redesign their CLE to foster achievements of desired learning outcome.

It will also help nursing institutions to train and develop nurses who are passionate and loyal to the profession to meet the demanding needs of society. Additionally, it will enable nurse educators to collaborate effectively with clinical staff and the entire health team on planning for clinical placements. Findings will again help the Nursing and Midwifery Council (N&MC) to review their set guidelines on clinical education to incorporate students' satisfaction within the CLE to ensure students' loyalty.

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### 1.7 Definition of terms

**Satisfaction:** the contentment one feels when one has fulfilled a desire, need or expectation

**Clinical learning Environment:** the practical environment where nursing students learn to integrate theory and practice, develop their clinical judgement and problem-solving skills.

**Perceived performance:** A person's perception of the actual performance of a service

**Expectation:** A characteristic that an individual anticipates to be associated with a service.

**Nursing student / student:** a general nursing or midwifery student enrolled in an accredited nursing school.

**Nurse:** a registered nurse or midwife.

### 1.8 Organization of the research

Chapter One introduces the study, the problem statement and further outlines the purpose, objectives and the operational definition of terms. Chapter Two reviews the theoretical framework (Expectancy Disconfirmation theory) and the study literature. The literature is reviewed on students' expectation of the CLE, students' perceived performance of the CLE and students' satisfaction with the CLE. Chapter Three is focusing on the research methods, procedures in conducting the study and the analytical approach used in this study. Chapter Four is the presentation of the research

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findings and Chapter Five is the discussion of the study results. Chapter Six is the summary, conclusions and recommendations of the research.

## **CHAPTER 2: THEORETICAL FRAMEWORK/LITERATURE**

### **REVIEW**

This chapter presents a review of theoretical underpinnings and relevant empirical literature concerning the study. A detailed review of the Expectancy Disconfirmation Model (EDT) adopted in this study was conducted to serve as a guide to the study. In addition, various empirical reviews on the study constructs over the last three decades were reviewed to identify gaps in literature.

#### **2.1 Theoretical Framework (The Expectancy Disconfirmation Theory)**

Theories such as Happy-productive Student Theory (Cotton, Dollard, & de Jonge, 2002) and Investment Model Theory (Hatcher, Kryter, Prus, & Fitzgerald, 1992) which attempt to clarify students' satisfaction with the CLE were reviewed. Happy-productive student theory focuses on students' psychological stress levels, their wellbeing and satisfaction whereas investment model establishes the connection between students' drop out and academic performance. The various constructs and the flow of the models could not support in analysing the determining factors of students' satisfaction with the CLE.

However, a useful model found to assist in comprehending the determinants of nursing students' satisfaction with the CLE is the Expectancy Disconfirmation model propounded by Oliver (1980). The databases used for the theory search were Cochrane, Medline, EBSCOHOST, CINAHL, ScienceDirect, Google and Google scholar. The Expectation Disconfirmation Theory (EDT) also known as Expectation Confirmation theory is a cognitive theory believed to effectively fulfil the

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responsibility of measuring customer satisfaction or dissatisfaction better (Oliver, 1980; Spreng & Page, 2003).

Expectancy Disconfirmation model is a customer satisfaction model. Customer satisfaction concept has been a well-researched area over the last few decades and continues to receive attention from different authors spanning across diverse disciplines. The satisfaction model concept was developed as a result of the recognition of the influence of customers/consumers of goods and services in different varieties of discipline. According to Oliver (1980), the theoretical underpinning of consumer satisfaction models were emanated from social and applied psychology.

There are four constructs in the EDT model. These are expectation, perceived performance, disconfirmation (confirmation) and satisfaction.

### **2.1.1 Expectations**

Expectations are attributes or traits that a consumer or customer anticipates to derive from consumption of goods or utilizing a service. Customers' form initial expectations about a service or product before using it for the first time. Prior expectations are developed from various feedback from other consumers, advertising or mass media (Halstead, Hartman, & Schmidt, 1994). Expectations have a direct relationship with both perceived performance and disconfirmation of beliefs but inversely affect satisfaction by means of a mediational relationship through the disconfirmation construct (Oliver, 1980).

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### **2.1.2 Perceived performance**

Perceived performance indicates the post experience perceptions about the product or service. The customer's appreciation of the actual performance after using the goods or utilizing a service. It has a direct relationship with initial expectation and a direct influence on (dis)confirmation of beliefs and satisfaction (Oliver, 1980). Also, perceived performance has a direct relationship with satisfaction. The more the service provided meets the customer's needs, the more satisfied the customer is with the experience (Johnson, Nader, & Fornell, 1996).

### **2.1.3 Disconfirmation of beliefs**

Disconfirmation of beliefs are the judgments or evaluations a customer makes after an actual experience with the goods or services. This is reached after comparing it with the initial expectations (Oliver, 1980). It is also defined as the supposed difference between the earlier expectation and the actual performance of the goods or service. However, this construct is not used in the study due to the inability of the researcher to get a validated instrument to measure the construct and it has been duly acknowledged as a study limitation.

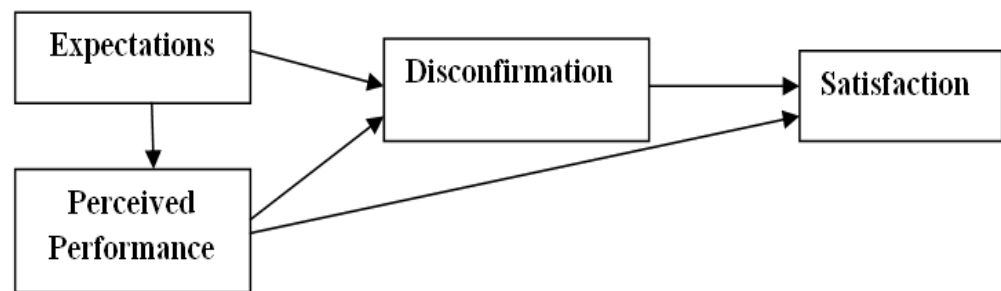
### **2.1.4 Satisfaction**

Satisfaction indicates the extent to which the customer is content with the goods or services. It is influenced directly by perceived performance and disconfirmation of beliefs and inversely related to both expectations and perceived performance through mediational relationship in the disconfirmation construct. According to Oliver (1980), feelings of satisfaction arise when consumers compare their observations of a product's performance to their expectations. If perceived

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performance surpasses the customer's initial expectations (positive disconfirmation), then the customer is satisfied. But if a customer's initial expectation surpasses perceived performance (negative disconfirmation), then the customer is displeased (Spreng, MacKenzie, & Olshavsky, 1996).

**Figure 2.1: EDT model**



**Source: Oliver (1980)**

Presently, learning organisations have welcomed the notion of the student as a customer showing interest in the acquisition of advanced training that will develop the student for future professional identity (Ravindran & Kalpana, 2012). In relation to this study, the EDT model is being used as an explanatory tool to aid the researcher derive nursing students' expectations of the CLE, their actual experiences upon using the CLE and further bring out the determinants of nursing students' satisfaction with the CLE.

The CLE is well thought-out as a service that nursing students who are customers of the service are assessing. Generally, students have expectations and predictions of how learning should be in the CLE before they visit or use the clinical facilities for practical learning experience. These expectations are normally developed

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from theories learnt in books and lectures together with feedback from senior colleagues and tutors. Upon reaching the sites, students get to face the realities associated with learning in the CLE and they form perceptions about their experiences in the CLE. These perceptions whether positive or negative inform the student's satisfaction with the CLE. Students are satisfied when the CLE supports or exceeds their expectations and dissatisfaction results from the inability of the CLE to fulfil the students' expectations of the CLE.

### **2.2 Literature Review**

The literature was reviewed using the objectives of the study and the constructs of the model used. The databases used to retrieve relevant literature were: ScienceDirect, EBSCOHOST, CINAHL, PubMed, JSTOR, African Medicus Index and Google Scholar using the keywords: clinical learning environment, clinical learning, students' satisfaction, expectations of students in clinical learning, nursing students' clinical learning experiences. The literature reviewed are ordered under the following headings:

1. Student's expectation of the CLE
2. Students' Perceived performance of the CLE
3. Students' satisfaction with the CLE

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### **2.2.1 Students' Expectations of the CLE**

Students' expectations of their CLE can positively or negatively influence their learning and satisfaction in the nursing profession. According to Papathanasiou et al. (2014), nursing students usually desire a more supportive CLE. Nursing students have branded an effective CLE as an environment with consistent and thoughtful use of knowledge, critical thinking, practical skills, communication, standards, emotions and reflections in their routine practice for the development in the health of the patients and the entire community (Sousa & Krainovich-Miller, 2012).

In order to ensure the sustenance of nursing standards in our work settings, it is expected that professional nurses (clinicians and educators) join forces to provide professional support to students on clinical placement. This is significant for the reason that students count on preceptors and mentors to help them become proficient nurses (Anderson, Moxham, & Broadbent, 2016). Although monitoring of students on clinical placement is believed to be a shared responsibility of the training institutions and health facilities (Anderson et al., 2016; Burns & Paterson, 2005), International nursing standards states that it is the responsibility of practicing experienced nurses to provide support and aid in the total professional growth of student nurses (International Council of Nurses, 2003). In Australia, Anderson, Moxham and Broadbent (2018) found that even though nurses support students in the CLE, most practicing nurses are partially conscious of the nursing standards which oblige them to provide professional development to the nursing student.

In a United Kingdom study, students disclosed that they expected the clinical staff to serve as mentors and willingly guide their clinical practice (Foster, Ooms, &

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Marks-maran, 2014). Further studies have revealed that clinical learning is easily facilitated when clinical staffs are receptive and support students as part of the working team and students believe that good nurses are those who support and encourage students to take up new tasks in the CLE (Lúanaigh, 2015).

Research evidence from Liljedahl, Engqvist, and Charlotte (2014) establish that nursing students desire constant supervision in the CLE to aid them perform actual procedures and also help them become autonomous in their day-to-day activities. However, most clinical nurses argue that the workload involved in combining teaching to their normal duties discourage them from supervising students since it causes delay in their work (Luhanga, Billay, Grundy, Myrick, & Yonge, 2010). Again, other nurse clinicians assert that lack of gratitude from training institutions and clinical agencies discourage them from taking up the preceptorship work (Browning & Pront, 2015; Evans, Costello, Greenberg, & Nicholas, 2013).

In addition, studies report that students expect to have an effective communication with the health team, have a free interaction with the patients and also receive constant feedback on their performance and doings within the CLE (Burnard, Haji, Rahim, Hayes, & Edwards, 2007; Lúanaigh, 2015). Again, nursing students expect the assigned clinical hours to be used efficiently and effectively without doing personal errands and unskilled jobs for the staff (Chuan & Barnett, 2012).

Moreover, nursing students in Turkey have reported that they expect the physical surroundings of the CLE to be attractive with a low number of students practicing at a time with erudite nurses who regard students as team members (Arkan et al., 2018; Kapucu & Bulut, 2011). Students expect to fit in the working teams

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within their unit of placement, where the students are assigned to specific tasks by the clinical staff (Lúanaigh, 2015). It has also been testified that nursing students want to be respected as members of the team, appreciated and able to trust clinical staff in the CLE (Lúanaigh, 2015; Papastavrou et al., 2010; Spouse, 2001) and feel belonged to the CLE (Vinales, 2015).

Research evidence establishes that a sociable welcome from members of the clinical team on the reporting day has a positive impact on the nursing students' confidence and also increases their learning capacity (Chesser-Smyth, 2005; Levett-Jones & Lathlean, 2008). Additionally, Levett-Jones, Lathlean, Maguire, and McMillian (2007) advance that students who are given the opportunity to be part of the nursing team feel empowered, safe and more confident in their learning experience.

Furthermore, nursing students have publicized that they expect the CLE to have adequate resources and paraphernalia to work with as well as knowledgeable personnel to supervise their activities on the ward (Bam et al., 2014; Kapucu & Bulut, 2011; Phuma-Ngaiyaye, Bvumbwe, & Chipeta, 2017). Students expect the clinical agencies to support the clinical staff to enable them perform effectively as mentors and preceptors (Foster et al., 2014; Jokelainen, Tossavainen, Jamookeeah, & Turunen, 2013).

It is also noted in the literature that nursing students' training is demanding as a result of the packed curriculum loaded with both theory and clinical practice (Cilingir, Gursoy, Hintistan, & Ozturk, 2011; Shaban et al., 2012; Suen et al., 2016). Nursing students have reported that combining the academic work with the clinical

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activities is very stressful especially, when assigned to understaffed units with overflow of patients. This situation overburdens the staff which affects the clinical teaching and learning experience in the CLE (Chernomas & Shapiro, 2013; O'Mara et al., 2014; Wolf, Stidham, & Ross, 2015). Nursing students therefore expect CLEs that are less loaded with hospital duties, with adequate time to interact with their trainers in order to reduce stress and help them achieve their clinical objectives (Reeve, Shumaker, Yearwood, Crowell, & Riley, 2013).

Additionally, in other disciplines, studies have indicated that students whose experiences surpass their expectations of the learning environment are extremely satisfied (Appleton-Knapp & Krentler, 2006). Regarding the relationship between students' expectation and satisfaction, positive correlations were found between business students' expectations and their satisfaction with hybrid learning (Pinto & Anderson, 2013).

### **2.2.2 Students' Perceived Performance of CLE**

Nursing students have diverse perceptions about the realities within the CLE. Most of these perceptions are influenced by the student nurses' potential and actual encounters with the CLE. Some students have appraised their CLE positively (Lamont, Brunero, & Woods, 2015; Serena & Anna, 2009; Warne et al., 2010). Others have given negative evaluations as a result of inadequate learning support and assistance from clinical nurses during clinical placement (Brammer, 2008; Papastavrou et al., 2010; Reeve et al., 2013).

According to the Canadian Nurses' Association (2008), clinical nurses are ethically obliged to assist students in the CLE. However, it has been argued that, the

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lack of learning assistance and support of students are as a result of unwillingness of some nurses to take up the clinical teaching role (Luhanga et al., 2010), lack of formal training on clinical teaching (Asirifi, Mill, Myrick, & Richardson, 2013) and laborious workloads in the CLE (Bahadori et al., 2014). In addition, lack of coordination between educational institutions and clinical agencies (Shoqirat & Abu-Qamar, 2013) and inadequate support from stakeholders within the CLE (Anderson et al., 2016; Browning & Pront, 2015) have also been outlined as a cause of inadequate support of students in the CLE. Other studies have reported students' indiscipline and reluctance to learn within the CLE as a cause of the lack of assistance and support from staff (Awuah-Peasah et al., 2013; Msiska et al., 2014).

Spouse (2001) posits that, students who are left on their own without clinical supervisors are usually not able to practice advanced and complex procedures so these students find themselves doing the same basic procedures everyday which hinder them from developing new skills. It has further been identified that students who are neither supervised directly nor mentored in the CLE have problems in developing confidence and planning individualised care in the absence of laid down instructions and directions (Newton, Billett, Jolly, & Ockerby, 2009). Students in Ireland revealed they appreciate the presence of their educational instructors in the CLE as they have much time to support them unlike the clinical staff who are mostly busy with other activities (Noonan et al., 2009). However, students in Malawi indicated the presence of their instructors made them anxious and felt like being examined in the CLE (Msiska et al., 2014).

Additionally, studies have revealed that some CLE do not have the resources and equipment required to meet the students' learning expectations (Msiska et al.,

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2014). Others too have poor psychosocial conditions such as lack of infection prevention measures, working protocols and guidelines which make students scared of contracting diseases in the course of working. These make most students passive in participating in clinical activities (Baraz, Memarian, & Vanaki, 2015). Nursing students in Turkey commended their CLE as having a positive influence on their clinical learning as majority of the students specified that their trainers offered them the needed materials for learning and also used demonstration in teaching which positively affected their learning (Serçekuş & Başkale, 2016). However, in a Norwegian study, students complained of the inability to get the appropriate instruments and materials for performing procedures which led to incorrect and poor clinical learning (Haraldseid, Friberg, & Aase, 2015).

Furthermore, communication and feedback are considered an essential part of clinical learning as it allows the students to appreciate their own contributions in the CLE. According to Clynes and Raftery (2008), students usually prefer feedback from assigned supervisors to advance their clinical learning and promote their personal growth and further argue that feedback does not only benefit the students but also develops the supervisor professionally. Nursing students have revealed that their clinical learning is enhanced in the CLE when they receive constant support and feedback from the clinical nurses and their instructors (Jahanpour, Azodi, Azodi, & Khansir, 2016; Serçekuş & Başkale, 2016).

Nursing students have described a good nurse as one who has worthy interpersonal relations and communication skills with students (Aydin, Sehiralti, & Akpınar, 2017). Students have reported that timely feedback from their preceptors and instructors enhance their clinical learning (Sweet & Broadbent, 2017).

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Notwithstanding the importance of communication and feedback to the nursing student in the CLE, students have indicated that most instructors gave discouraging responses in the presence of patients and their relatives which reduced the patients' confidence in them and affected their learning (Clynes & Raftery, 2008; Serçekuş & Başkale, 2016). In the latter study conducted in Turkey, participants emphasised that most instructors and clinical staff did not respect them as team members who had something good to offer (Serçekuş & Başkale, 2016). However, nursing students in Sweden commended their clinical instructors and preceptors for building their confidence in the clinical area and also training them to develop clinical skills independently (Jansson & Ene, 2016).

Moreover, students have highlighted that they are able to learn effectively and identify learning opportunities in the CLE when they get supervisors and preceptors who are proficient in the procedures they teach. However, in a study by Jahanpour et al. (2016), students reported they were not able to learn effectively in the CLE as some of their instructors had inadequate clinical experience. This assertion confirms a study by Brammer (2008) which established that some registered nurses lacked the relevant skills to facilitate student learning which led to nervousness between the nurse and the students on the ward. Again, in a Ghana-based qualitative study, most of the students reported differences in the theory taught in class and what is being practiced at the CLE which made them confused (Adjei et al., 2018). Although, Ha (2015) asserts that stress among students in the CLE obstructs their interactions with clients, approximately 90% of nursing students in Ghana have reported that their stress level increases in the CLE when practice differs from theory learnt in school (Bam et al., 2014).

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Additionally, report from an integrative review have indicated that nursing students learn best when they are actively involved with their learning (Walker, Rossi, Anastasi, Gray-Ganter, & Tennent, 2016). Studies have revealed that the presence of nurse educators and instructors in the CLE augment the clinicians' role in helping students to achieve their learning objectives and being active participants in their learning (Lamont et al., 2015).

According to O'Mara et al. (2014), the departmental organization, philosophy and atmosphere within the CLE positively affect students' evaluation of the CLE. Internationally, nursing students have reported diminished sense of belongingness in most CLEs, which causes anxiety and leads to their lack of interest in the practice. In some instances, nursing students confirmed they had to work extra hard to be recognised by the staff in order to feel belonged to the group as some staff perceived them as outsiders (Dickson, Walker, & Bourgeois, 2006; Levett-Jones & Lathlean, 2008; Liljedahl et al., 2014). In a qualitative research work by O'Mara et al. (2014), participants of the study narrated how they were ignored and gossiped about by the clinical staff in the CLE making the atmosphere not conducive for learning. These students further reported challenging practical learning environments with negative teaching cultures and clinical staffs' unfamiliarity with their clinical objectives for the placements.

In addition, some students have complained that the outsized number of students on the wards do affect the clinical practice (Arkan et al., 2018). However, Sedgwick, Oosterbroek and Ponomar (2014) study brought a different dimension to the argument where registered nurses were reported discriminating among students based on their language and cultural background thereby making the other students

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feel alienated in the CLE. On the contrary, students in Turkey had a positive interactive atmosphere in the CLE thereby enhancing their learning (Kapucu & Bulut, 2011).

Nursing students have also reported unproductive use of their clinical learning hours as clinical staff do send them on errands which are not connected with the nursing care nor their clinical duties (Adjei et al., 2018; Chuan & Barnett, 2012). Similarly, students in Malawi complained that registered nurses saw them as extra working staff instead of learners in the CLE which made it difficult for them to achieve their learning objectives (Msiska et al., 2014). Male student nurses have also reported isolation (Al-Momani, 2017) and exclusion from certain essential procedures in the CLE especially at the maternity units which affects their skills development due to gender bias and culture. Other male students have complained of being assigned strictly to male patients which affects their learning in the CLE (Powers, Herron, Sheeler, & Sain, 2018).

### **2.2.3 Students' Satisfaction with the CLE**

Various research works have confirmed that, it is only clinical learning that allows nursing students to ponder over and appraise the theories and experiences gained from classroom, simulation rooms and reading textbooks. It also serves as a medium to strengthen the development of real life and interpersonal skills (Levett-Jones & Bourgeois, 2010; Newton et al., 2009; Papathanasiou et al., 2014). The extent to which students are content with their clinical learning environment is pivotal in their allegiance to the nursing profession. This expands the likelihood of the student

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using the same clinical site for future clinical learning experience (Lamont et al., 2015).

A positive, motivating, and supportive CLE results in high student satisfaction (Dunn & Hansford, 1997; Jahanpour et al., 2016; Nash, Lemcke, & Sacre, 2009) and evidence from a systematic review indicates that satisfaction promotes positive learning outcomes (Phillips, Mathew, Aktan, & Catano, 2017). Studies have revealed that when students are unhappy and dissatisfied with the CLE, it often leads to the development of undesirable behaviours (Hirsch, Barlem, Barlem, Da Silveira, & Mendes, 2015), termination of the clinical practice and sometimes attrition from the entire nursing programme (Eick, Williamson, & Heath, 2012). Nursing students in Sweden described their CLE as friendly and supportive with the interest and needs of the student in mind which brought a positive impact on their clinical development (Jansson & Ene, 2016).

Evidence from various studies have established that harmonious relationship from clinical staff, mentors and preceptors has a great influence on nursing students' satisfaction (D'Souza, Karkada, Parahoo, & Venkatesaperumal, 2015; Lamont et al., 2015; Löfmark, Thorkildsen, Råholm, & Natvig, 2012; Skaalvik, Normann, & Henriksen, 2011). In a mixed method design study, most of the students who were interviewed disclosed that their satisfaction was linked with sense of belongingness in the placement units as it empowered them to take advantage of opportunities to learn (Levett-Jones & Lathlean, 2008).

In addition, findings from Papastavrou et al. (2010) study indicate the most satisfied students were those who had named preceptors and mentors and had regular

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learning sessions with them within the CLE. In a study done by Papastavrou et al. (2016), students appraised their relationship with clinical instructors as a dominant feature for their satisfaction. Also in an Australian study, 65% of the participants were satisfied with the CLE because they received adequate support from their clinical instructors and mentors regardless of the increased load on team members. Furthermore, 3% were dissatisfied with the CLE in relation to factors such as unwelcomed attitudes, inadequate support from nurses in their unit of placement (Lamont et al., 2015). This result is similar to a satisfaction study conducted in Cyprus where effective supervision in the CLE accounted for the maximum level of satisfaction and lack of supervision accounted for least satisfaction among the nursing students (Papastavrou et al., 2016). In addition, nursing students in the U.K were satisfied because of the quality of mentorship they received in the CLE (Gale, Ooms, Sharples, & Marks-Maran, 2016).

Some students have also attributed their satisfaction in the CLE to their involvement in patients' care and decision making (Lamont et al., 2015) and the tutorial climate of their unit of placement (Nepal et al., 2016; Warne et al., 2010). In a related educational study, graduate students indicated satisfaction with their direct involvement in their field work (García-Aracil, 2009). Other students are satisfied when their expectations and clinical objectives are met in the CLE (Lamont et al., 2015). However, findings from a systematic review suggests that nursing students are mostly dissatisfied with their CLE when they are not involved directly in the activities of the unit. Additionally, students are unhappy when preceptors and mentors are not innovative in their clinical teaching (Phillips et al., 2017).

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Furthermore, in a Saudi Arabian study, approximately 61% of the students reported they were able to meet their clinical objectives, and 75.6% indicated overall satisfaction with their CLE (Abouelfetoh & Mumtin, 2015). Again, the level of study of student nurses has been reported as an influential factor contributing to their satisfaction with the CLE. Studies indicate students' expectation of their CLE increases when climbing the education hierarchy (Papastavrou et al., 2016).

### **2.3 Summary of Literature Review**

The literature reviewed predicted expectations of the nursing students, perceived performance of the CLE and nursing students' satisfaction as significant factors that influence student learning in the CLE. Both quantitative and qualitative studies reviewed provided essential information about students' learning in the CLE across the globe. However, most of the satisfaction studies reviewed did not explore satisfaction in relation to nursing students' expectations and perceived performance of the CLE. The literature revealed a gap on studies regarding students' satisfaction with the CLE in the African and Ghanaian context.

Although studies were found to have explored nursing students' expectations, experiences and satisfaction with the CLE, limited number of studies captured the determinants of students' satisfaction with the CLE. Again, most of these studies were conducted in high income countries with few studies in the low and middle income countries particularly in the Ghanaian context.

### **CHAPTER 3: RESEARCH METHODOLOGY**

This chapter presents information on the research design and techniques which were used to answer the research questions. The chapter further describes the research setting, population of the study, the inclusion and exclusion criteria, sampling technique and sample size, data collection instrument, method of data collection, pre-test of the research instrument, validity and reliability, the data management process, data analysis, and the ethical considerations of the study.

#### **3.1 Study Design**

A cross-sectional quantitative design was used in order to obtain a wide view of nursing students' satisfaction with the CLE. This approach enabled the researcher to take a snapshot of the population at a time and generate both statistical and numerical information large enough for generalisation through the use of questionnaire (Sedgwick, 2014). Again, cross-sectional survey was adopted since it is the most accurate design to examine the attributes of individuals and also to measure the occurrence of phenomena as well as summarizing the data through statistical tools (Grove, Burns, & Gray, 2014). Cross-sectional survey enabled the researcher to gain an insight into students' expectation, their actual experiences in the CLE and their satisfaction with the CLE (Polit & Beck, 2010).

#### **3.2 Research Setting**

The setting was the Kumasi Metropolis in the Ashanti region of Ghana. Amongst the 30 administrative districts in the Ashanti region is the Kumasi Metropolis. Kumasi metropolis is the second major and the most populated urban centre in Ghana. The metropolis is divided into ten sub metro areas: Subin, Kwadaso, Asokwa, Bantama, Manhyia, Suame, Tafo, Nhyiaeso, Asawase and Oforikrom with

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an estimated population of 1,730,249 representing 36.2 percent of the entire Ashanti region population. Although Kumasi Metropolis is cosmopolitan in nature with migrants from all over the country and abroad, the Asante tribe, a sub group of the Akan ethnic group forms about 80.2 percent of the entire population (Ghana Statistical Service, 2014). The Kumasi metropolis has a wide range of infrastructure such as healthcare, teaching and learning, information and communication technology and transport services that provides social services to its residents.

The Metropolis has three nursing training institutions accredited by the Nursing and Midwifery Council of Ghana to run Registered General Nursing and Midwifery programmes. These are the Kumasi Nursing and Midwifery Training College (KNMTC), SDA Nursing and Midwifery Training College (SDA NMTC) and Premier Nurses' Training College, Moshie-Zongo.

The Kumasi Nursing and Midwifery training school is the oldest nursing school in the region. It was established in the year 1957 and is situated on the same premises of the Komfo Anokye teaching hospital, Kumasi. At the time of the study, the college had a population of 1,213 Diploma General Nursing and Midwifery students (Kumasi Nursing and Midwifery Training College, 2017).

The SDA nursing and midwifery training was established in the year 2005 and is affiliated to the Seventh Day Adventist mission and overseen by the Ministry of Health. It is located at Kwadaso- Kumasi. It had a total student population of 976 at the time of the study (SDA Nursing and Midwifery Training College, 2017).

The Premier Nurses' training college is one of the accredited private institutions in the Ashanti region that offers Diploma in General Nursing and

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Midwifery programme. It was established in the year 2004 and is situated at Moshie-Zongo in the Asawase sub metro of the Kumasi metropolis. It had a total student population of 175 at the time of the study (Premier Nurses Training College, 2017).

### **3.2.1 Study sites**

The study sites were the three accredited nursing schools in the Kumasi Metropolis.

### **3.3 Target Population**

The target population was students studying in the three (3) accredited nursing institutions in the metropolis. The estimated population was 2,363 drawn from KNMTC (1213), SDA-NMTC (976) and Premier NTC (175).

#### **3.3.1 Inclusion Criteria**

Second and third year students from the target population who had undertaken at least one vacation practicum in a health facility and were consenting to take part in the study were recruited.

#### **3.3.2 Exclusion Criterion**

First year students were excluded from the study because of their minimal exposure to the clinical learning environments.

### **3.4 The Sampling technique and sample size**

Polit and Beck (2008) explains sampling as a procedure involving the selection of a portion of the populace who meet the standards for inclusion in the study of a phenomenon to represent the total population so that inferences can be

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made about the population. All the three accredited nursing schools which offers registered nursing and midwifery programmes in the Kumasi Metropolis were used in the study. Each institution was represented as a stratum where the researcher used the simple random sampling method to select the respondents from each stratum for the study.

Again, the study employed Yamane (1967) sample calculation method ( $n = \frac{N}{1 + Ne^2}$ ) where  $n$  is the sample size,  $N$  is the sample population and  $e$  is the significant level that was used in the study. The formula is shown below:

$$n = \frac{N}{1 + N(e)^2}$$

Where  $n$  = required sample size

$N$  = Accessible population

$e$  = significance level

$$\text{Therefore, } n = \frac{2363}{1 + 2363(0.05)^2} \approx 342$$

According to Yamane (1967), with an error of 5% and a confidence coefficient of 95%, the calculation from a population of 2,363 was approximately 342. To account for non-response and attrition rate, the sample size was adjusted by 10% to make it 376. The researcher represented each of the three institutions as a stratum and proportionate stratified sampling was used to avoid misrepresentations of the schools. Using the individual percentages of the schools in the entire population, KNMTC represented 51.3% therefore, 193 respondents were selected randomly from

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the inclusion criteria. Further, 155 students were selected from SDA-NMTC representing 41.3% and 28 students from Premier NMTC representing 7.4%.

### **3.5 Data Collection Tools**

The dependent variable in the study is ‘Satisfaction’ while the independent variables include demographic data, expectation and perceived performance of the CLE. One of the research instruments commonly employed in quantitative study is questionnaire (Polit & Hungler, 1994). Satisfaction is a widely studied subject among researchers. The researcher therefore found it more reliable and less time consuming to adapt a validated questionnaire (attached as appendix C) which has been used across similar settings and with good validity.

Questionnaire adapted from Customer Satisfaction Scale, students’ evaluation of the clinical education environment and an expectation scale adapted from SERVQUAL (Babakus & Mangold, 1992) were used to collect the data. All variables were measured using the Likert scale questionnaires. Questions about basic demographic characteristics of the respondents (age, gender, programme of study, year of study and number of vacation clinical practicum attended) were added.

Students’ satisfaction with the CLE was measured by the Customer Satisfaction Questionnaire (Roberts, Attkisson, & Stegner, 1983). The questionnaire has eight (8) items. Each item is rated from a 4-point anchored scale. The questionnaire were scored by summing the individual item scores to produce a mean range of 8 to 32 with the highest scores indicating greater satisfaction.

Students’ perceived performance of the CLE was assessed using the adapted version of Students’ Evaluation of Clinical Education Environment (SECEE) scale

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(Sand-Jecklin, 2009). The questionnaire has twenty-nine (29) Likert items and three (3) open ended questions. Each item is rated 1 (strongly disagree) to 5 (strongly agree). The questionnaire was scored on a five (5) point Likert scale. After the evaluation, the 29 items were further grouped into four subscales namely learning assistance and support with item numbers (2, 6, 10, 14, 18, 22, 25 & 28) under it, department atmosphere with item numbers (1, 5, 9, 13, 17 & 21), communication and feedback with item numbers (4, 8, 12, 16, 20, 24 & 27) and learning opportunities (3, 7, 11, 15, 19, 23, 26 & 29) under it with a higher point value representing a more positive or desired state and a lower point value representing a negative perception of the CLE. During the data analysis, the items 9, 11, 21 and 25 which were negatively worded were reverse coded to prevent response bias.

The students' expectation of the clinical learning environment was assessed with the expectation component of the SERVQUAL scale. The Servqual scale was adapted to fit the CLE to measure students' expectations. The questionnaire has 15 items and each item is rated from 1 (strongly disagree) to 5 (strongly agree). This scale was scored on a five point Likert scale with a higher value reflecting higher expectations of the CLE. All the three scales used were readily available online for use.

### **3.6 Pre-testing the Questionnaire**

The questionnaire containing the demographics and the three adapted scales were pre-tested among 10 nursing students from the Royal Ann College of Health at Abuakwa-Manhyia in the Atwima Nwabiagya district which is close to the Kumasi metropolis to discover gaps and also confirm the reliability of the tool. The Cronbach's alpha values for the pre-test were 0.77 for students' expectation scale, 0.82 for perceived performance (SECEE) scale and 0.83 for the satisfaction scale. The

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results from the pre-test were monitored to identify items left unanswered and items participants struggled to understand. The necessary adjustment such as items revision were done.

### **3.7 Data Collection Procedure**

Prior to data collection, an introductory letter (attached appendix A) from the School of Nursing and Midwifery, University of Ghana was sent to the Noguchi Memorial Institute of Medical Research Institutional Review Board (NMIMR-IRB) for ethical approval. The ethical clearance –CPN 025/17-18 (attached appendix D) together with an introductory letter (attached as appendix E, F, G) were sent to each of the selected study sites to seek permission to access students for the research. Two (2) research aides were educated to assist in the collection of data. After institutional consent, heads of department were contacted to help in the identification of prospective respondents.

Second and third year general nursing and midwifery students who met the inclusion criteria and were willing to participate in the study were met in a conference room. General information on the study, purpose and objectives of the study, questionnaire and respondent selection process were communicated to the participating students. Anonymity, privacy and confidentiality issues were made clear to enable participants make an informed decision about taking part in the study or not.

Respondents were encouraged to ask questions of which the researcher gave clear answers. A box of pieces of paper rolled with ‘yes’ or ‘no’ written on each was used in the selection to ensure randomization. Respondents who picked ‘yes’ were guided to sign the Consent forms (attached as appendix B). Questionnaire were then administered after signing the consent. After a maximum of 45 minutes, all

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questionnaire were returned to researcher and her assistants in the conference rooms.

This procedure was repeated for all the three study sites.

### **3.8 Validity of Data Collection Tools**

Validity establishes the ability of the research tool to truly measure what it intends to measure or how accurate the results are. In the process to ensure validity of the research tool, the researcher adapted existing scales that had been developed and tested in many studies. Moreover, an extensive and rigorous review of most recent and relevant literature was undertaken to ensure content validity. The researcher also pre-tested the instruments with ten (10) students from Royal Ann College of Health in Atwima Nwabiagya District close to Kumasi Metro to ensure they measure what it intends to measure. Respondents of the pre-test were given the opportunity to comment on the clarity of the questions. The researcher used probability sampling techniques to ensure the sample is a true reflection of the population to ensure external validity.

### **3.9 Reliability of data collection tools**

The degree of reliability is usually determined by the use of correlational procedures. The higher the correlation coefficient, the more reliable the tool is. The values range from 0 to 1. An instrument is considered reliable when the Cronbach's alpha is 0.6 and above (Nieswiadomy, 2002). The known Cronbach's alpha of the customer satisfaction scale is 0.9, Servqual expectation scale is 0.9 and SECEE scale is 0.8. In this study, the Cronbach's alpha of the tools calculated during data analysis were 0.87 for the expectation scale (15 items), 0.77 for the SECEE scale (29 items) and 0.80 for the satisfaction scale (8 items).

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### **3.10 Data Analytic Approach**

The analytical process began with data management. Data management denotes the scientific and rigorous systematic processes of squeezing and bringing out comprehensive, communicative, valid and reliable information on research findings and validation of hypothesis (Jopee, 2000). The management process started with the identification, diagnosing and editing of the inoperative data which is known as Data cleaning. The researcher took out non-engaging respondents and improperly filled questionnaire. The data were then coded into compatible format for computer entry and statistical tools' application. Frequencies were run for all items in the questionnaire to identify missing data using Statistical Package for Social Sciences (SPSS) version 21. In order to plug all holes, the completed questionnaires were visited again to check for missing data. Items left unanswered were assigned values such as '99' and '77' for non-applicable items.

Descriptive statistics such as mean, frequency and standard deviations were used to summarize and describe the collected data. Student expectations of the CLE was measured by computing the response rate from the Likert scale (1-5) and using the weighted average. Perceived performance of the CLE was assessed using SECEE scale. The 29 items were further grouped under four subscales. The Likert response rate (1-5) under each subscale was computed and weighted to obtain the mean score. The individual responses from the open ended questions were organised and the attributes categorised based on the similarity in meaning. Again, Students' satisfaction scores were summed up to determine the level of satisfaction with the CLE. The scores ranged from 8 to 32 with a maximum score indicating satisfaction. The three

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different scales were further grouped into a 2-point Likert scale leaving out the neutral responses to make the responses more meaningful.

Correlation analysis specifically Pearson product-moment correlation (Pearson  $r$ ) was used because the variables were measured on an interval scale. The correlation was conducted to determine the relationship between nursing students' expectation of the CLE and students' perceived performance of the CLE, students' expectation and students' satisfaction with the CLE, and students' perceived performance of the CLE and their satisfaction.

Again, multiple regression analysis was used to determine the predictors of nursing students' satisfaction using the students' demographic characteristics, expectation scores and perceived performance subscale scores as independent variables against the dependent variable satisfaction. Three different models were generated after which model diagnostic tests were run on the residuals to check whether the regression models followed the theoretical multiple regression assumptions. Data analysis was conducted at an alpha level of 0.05 and a statistical power of 95%.

### **3.11 Ethical Considerations**

Ethics is an essential component of research (Sieber & Tolich, 2013). In order to address ethical issues, ethical clearance and introductory letters were obtained from the University of Ghana's Noguchi Memorial Institute for Medical Research Institutional Review Board and the school of Nursing and Midwifery respectively. Institutional approvals were obtained from the NMTC-Kumasi, SDA-NMTC-Kwadaso and Premier NTC.

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Respect for persons as autonomous individuals was ensured in this study by explaining the research procedure in detail to the respondents to enable them make informed consent. The researcher had no formal working relationship with the research assistants as well as the study participants. General announcements were made to ensure voluntary participation of the respondents. Further, the respondents were made aware that they reserved the right to participate and also withdraw at any point without any form of coercion. The privacy of the respondents were held in high esteem by informing them not to write their names on the questionnaire and also ensuring they did not. Again, any anxiety on the part of respondents on the implication of filling the questionnaire was allayed by assuring them that the information gathered from them will be used solely for research purposes. Codes were used to ensure anonymity such that even the researcher cannot link respondents with the data provided.

All identifying information that would lead to respondents' identification have been coded and the collected data is accessible to the researcher and supervisors alone to ensure confidentiality. In line with the Data Protection Act, 2012 of Ghana (Act 843), the collected data have been securely locked in a cabinet for a period of five (5) years after which the data will be destroyed in a manner that cannot be restored.

## **CHAPTER 4: FINDINGS OF THE STUDY**

This chapter presents the findings of the study. The socio-demographic characteristics of the respondents, followed by the rest of the findings organized according to the objectives of the study.

### **4.1 Demographic characteristics of the respondents**

Out of the 376 questionnaire administered to the respondents, 340 were returned and fully completed, given a return rate of 90.4%. Majority (82% n=279) were females. Approximately 29% (n = 97) of the students were second year students, whereas 71% (n=243) were third year students. With respect to the programme of study, 51% (n = 172) were general nursing students and 49% (n = 168) were midwifery students. Also, 17% (n = 59), 45% (n = 152) and 40% (n = 129) have used one, two and three facilities for their vacation practicum respectively for clinical learning. The mean age of the respondents was 22.58 years. Table 4.1 below projects the socio - demographic characteristics of the respondents' sampled.

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**Table 4.1: Demographic characteristics of the respondents**

<b>Demographics</b>	<b>Frequency</b>	<b>Percent (%)</b>	<b>Mean</b>	<b>Standard Deviation</b>
Age			22.58	2.18
Gender				
Male	61	17.9		
Female	<b>279</b>	<b>82.1</b>		
Year of Study				
2nd Year	97	28.5		
3rd Year	<b>243</b>	<b>71.5</b>		
Programme of Study				
Nursing	<b>172</b>	<b>50.6</b>		
Midwifery	168	49.4		
Number of facilities used				
1	59	17.4		
2	<b>152</b>	<b>44.7</b>		
3	129	37.9		

*Note: n=340*

#### 4.2 Students' Expectations of the CLE

The overall mean score for students' expectation of the CLE was high (4.35) with a standard deviation (SD) of 0.56 suggesting that students expect more from the CLE. An exploration of each item to understand students' expectation of the CLE revealed that 93.4% (n=316) agreed that the CLE should have material resources to promote learning, 91.2% (n=310) agreed that CLE should be visually appealing and 93.6% (n=318) reached a decision that clinical staff must dress professionally.

On time allocated for clinical practice, majority (90.8%, n=309) agreed that the time should be used for its intended purpose. Approximately 90% (n=305)

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believed staff must be reassuring when students have problems. Meanwhile, 54.4% (n=185) did not want students to be billed for their clinical learning experience and 84.1% (n=286) expected staff to tell students exactly when procedures will be performed. Again, 77.6% (n=264) admitted it is realistic for students to learn from clinical staff and 96.2% (n=327) expected the clinical staff to willingly help students. On students safety working with clinical staff, 94.4% (n = 321) looked forward to that and majority (94.1% n=320) also agreed that staff should be knowledgeable.

Also, 94.1% (n=320) expected the staff to be polite and 91.8% (n=313) expected the hospital management to support staff to do their work well and 81.4 (n=277) believed students should be able to trust the staff. Lastly, 77.9% (n = 265) expected staff to give students personal attention. Table 4.2 below shows the summary of students' expectations of the CLE.

**Table 4.2: Students' Expectations of the CLE**

<b>Students' Expectation</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
CLE should have material resources to promote learning				
Disagree	12	3.6		
<b>Agree</b>	<b>316</b>	<b>93.4</b>	4.64	.81
Environment should be visually appealing				
Disagree	9	2.7		
<b>Agree</b>	<b>310</b>	<b>91.2</b>	4.46	.76
Clinical staff must dress professionally				
Disagree	8	2.4		
<b>Agree</b>	<b>318</b>	<b>93.6</b>	4.61	.74
Time allocated for clinicals should be used for its intended purpose				
Disagree	15	4.5		
<b>Agree</b>	<b>309</b>	<b>90.8</b>	4.47	.86

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<b>Students' Expectation</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
When students have problems clinical staff must be reassuring				
Disagree	15	4.5		
<b>Agree</b>	<b>305</b>	<b>89.7</b>	4.44	.85
CLE should be specific in billing students for clinical experience				
<b>Disagree</b>	<b>185</b>	<b>54.4</b>		
Agree	123	36.2	2.61	1.5
staff should tell students exactly when procedures will be performed				
Disagree	16	4.8		
<b>Agree</b>	<b>286</b>	<b>84.1</b>	4.33	.93
It is realistic for students to learn from staff				
Disagree	35	10.3		
<b>Agree</b>	<b>264</b>	<b>77.6</b>	4.06	1.1
Staff should always be willing to help students				
Disagree	9	2.7		
<b>Agree</b>	<b>327</b>	<b>96.2</b>	4.71	.67
Students should be able to feel safe in working with staff				
Disagree	12	3.6		
<b>Agree</b>	<b>321</b>	<b>94.4</b>	4.60	.77
Staff should be knowledgeable				
Disagree	11	3.3		
<b>Agree</b>	<b>320</b>	<b>94.1</b>	4.64	.74
Staff should be polite				
Disagree	10	3.0		
<b>Agree</b>	<b>320</b>	<b>94.1</b>	4.67	.73
Staff should get adequate support from management to do their work well				
Disagree	13	3.9		
<b>Agree</b>	<b>313</b>	<b>91.8</b>	4.54	.84
Students should be able to trust the staff				
Disagree	16	4.7		
<b>Agree</b>	<b>277</b>	<b>81.4</b>	<b>4.23</b>	.93

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<b>Students' Expectation</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
Staff should be expected to give students personal attention				
Disagree	24	7.0		
Agree	<b>265</b>	<b>77.9</b>	4.18	1.0
<b>Overall</b>			<b>4.35</b>	<b>.56</b>
Field Data (2018)				

### 4.3 Students' Perceived Performance of the CLE

Perceived performance of the CLE was evaluated based on four sub scales under the SECEE scale. These subscales are: Learning support/assistance, Department atmosphere, learning opportunities and Communication/feedback. The overall mean score for students' perceived performance was low (2.83) with a standard deviation of 0.50 suggesting a negative evaluation of the CLE.

Exploration of the subscales suggested that 63.3% (n=215) disagreed that the CLE supported or assisted their learning and 54.5% (n=185) also disagreed that the departmental atmosphere supported their learning. Further, 53.1% (n=180) disagreed that communication and feedback in the CLE were useful to their learning and 69.4% (n=236) disagreed that there were learning opportunities in the CLE. Table 4.3 below gives a summary of the students' perceived performance of the CLE.

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**Table 4.3 Students' Perceived Performance of the CLE**

<b>SECEE subscales</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
Learning support/Assistance			<b>2.83</b>	<b>0.83</b>
<b>Disagree</b>	<b>215</b>	<b>63.3</b>		
Agree	98	28.9		
Department Atmosphere			<b>2.88</b>	<b>0.52</b>
<b>Disagree</b>	<b>185</b>	<b>54.5</b>		
Agree	115	33.7		
Communication/ feedback			<b>2.90</b>	<b>0.71</b>
<b>Disagree</b>	<b>180</b>	<b>53.1</b>		
Agree	134	39.3		
Learning Opportunities			<b>2.73</b>	<b>0.56</b>
<b>Disagree</b>	<b>236</b>	<b>69.4</b>		
Agree	86	25.3		
<b>Overall</b>			<b>2.83</b>	<b>0.50</b>

Field Data (2018)

Additionally, the three open ended questions attached to the scale were analysed using descriptive statistics. Approximately 30% (n=36) established that their involvement in practical work promoted their learning in the CLE, 48.59% (n=52) reported that negative attitudes and lack of assistance from the nursing staff hindered their learning in the CLE. Also, nearly 70% (n=32) suggested there should be effective teaching, support and assistance in the CLE. Table 4.4 below presents the details.

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**Table 4.4 Perceived performance of the CLE (open ended questions)**

<b>Items</b>	<b>Percentages</b>	<b>Frequency</b>
<b><u>Aspect that promoted student learning</u></b>		
Availability of resources/equipment	16.53	20
<b>Involvement in practical work</b>	<b>29.79</b>	<b>36</b>
Departmental support	24.75	30
Assistance from nurses	18.18	22
Nurse patient relationship	10.74	13
<b>Total</b>	<b>100</b>	<b>121</b>
<b><u>Aspect that hindered students' learning</u></b>		
High workload	1.87	2
<b>Negative attitudes and lack of assistance from nursing staff</b>	<b>48.59</b>	<b>52</b>
Ineffective communication	7.48	8
Inadequate resources/equipment	26.17	28
Unnecessary Errands	15.88	17
<b>Total</b>	<b>100</b>	<b>107</b>
<b><u>Suggestions</u></b>		
Avoid unnecessary errands	6.5	3
<b>Effective teaching support and assistance</b>	<b>69.56</b>	<b>32</b>
Correction of student mistakes	8.7	4
Improvement in communication	8.7	4
Avoid unlawful billing of students	6.3	3
<b>Total</b>	<b>100</b>	<b>46</b>

Field Data (2018)

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**4.4 Students' Satisfaction with the CLE**

Table 4.5 below shows students' satisfaction with the CLE. The overall mean score was low (16.01) suggesting that students are not satisfied with the CLE. Further exploration of the individual items in the scale to understand the students' dissatisfaction revealed that 52.6% (n=179) were not content with the quality of learning received in the CLE and 68.2% (n=232) did not receive the kind of service they wanted. Further, 72.3% (n=246) indicated their learning needs were not met in the CLE whereas 50.3% (n=171) do not intend recommending the same CLE to a friend. Also 56.8% (n=193) were dissatisfied with the amount of service received and 62.6% (n=213) revealed that services received did not help in achieving their objectives. Finally, 55.3% (n=188) disclosed they would not like using the same facility for clinicals again and 71.2% (n=242) were displeased with the general services they received in the CLE.

**Table 4.5 Satisfaction with the CLE**

<b>Students' Satisfaction</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
Quality of learning received				
<b>Poor</b>	<b>179</b>	<b>52.6</b>		
Good	161	47.3	2.40	.82
Did you get the kind of service you wanted				
<b>No</b>	<b>232</b>	<b>68.2</b>		
Yes	108	31.8	2.11	.96
To what extent has the CLE met your learning needs				
<b>Needs unmet</b>	<b>246</b>	<b>72.3</b>		
Needs met	94	27.6	2.05	.83
With your experience in that facility, would you recommend the CLE to a friend				
<b>No</b>	<b>171</b>	<b>50.3</b>		

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<b>Students' Satisfaction</b>	<b>Frequency</b>	<b>Percent</b>	<b>Mean</b>	<b>Std. Deviation</b>
Yes	169	49.7	2.47	1.00
How satisfied are you with the amount of service you received				
<b>Dissatisfied</b>	<b>193</b>	<b>56.8</b>		
Satisfied	147	43.2	2.27	.923
Have the services you received helped you to deal more effectively with your objectives				
<b>No</b>	<b>213</b>	<b>62.6</b>		
Yes	127	37.4	2.36	1.40
If you are to go for clinicals again would you go back to this same facility				
<b>No</b>	<b>188</b>	<b>55.3</b>		
Yes	152	44.7	2.34	1.03
In an overall general sense, how satisfied are you with the service you received				
<b>Dissatisfied</b>	<b>242</b>	<b>71.2</b>		
Satisfied	98	28.8	2.12	.879
<b>Overall</b>			<b>16.01</b>	3.87

Field Data (2018)

#### 4.5 Relationship between students' expectation and perceived performance of the CLE

Table 4.6 below presents the results of the correlation analysis between students' expectations of the CLE and students' perceived performance of the CLE using Pearson product-moment correlation (Pearson  $r$ ). Expectation has a weak positive but significant correlation with total perceived performance ( $r = .13, p = 0.02$ ) indicating that an increase in expectation may cause an increase in overall perceived performance and vice versa. This finding supports hypothesis three (3). Again, amongst the four subscales of perceived performance, students' expectation had a

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weak positive significant correlation with learning opportunities ( $r = .15, p = 0.00$ ) suggesting that an increase in expectation may cause an increase in learning opportunities.

**Table 4.6 Correlation between Expectation and Perceived Performance**

<b>Variable</b>	<b>Expectation</b>	
<b><u>Pearson's correlation</u></b>	<b><u>Correlation</u></b>	<b><u>Sig.</u></b>
<b>Perceived performance</b>	<b>.13*</b>	<b>.02</b>
Learning support/assist.	.09	.07
Department atmosphere	.10	.06
Communication/feedback	.08	.15
<b>Learning opportunities</b>	<b>.15**</b>	<b>.00</b>

*Note: correlation is significant at 0.01 level (2 tailed) and at 0.05 level (2 tailed)  
n = 340*

**4.6 Relationship between students' expectation and satisfaction with the CLE**

Pearson r correlations between nursing students' expectation of the CLE and their satisfaction with the CLE is presented in Table 4.7 below. Expectation has a positive correlation with students' satisfaction ( $r = .31, p = .00$ ) suggesting that an increase in nursing students' expectation may cause an increase in the students' satisfaction with the CLE and vice versa. In other words, students are satisfied when their expectations are met. The positive relationship between students' expectations and satisfaction with the CLE supports hypothesis one.

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**Table 4.7 Correlation between Expectation and Satisfaction**

Variables	Satisfaction	
	Correlation	Sig.
<b>Expectation</b>	<b>.31**</b>	<b>.00</b>

\*\* *Correlation is significant at the 0.01 level (2-tailed). n=340*

**4.7 Relationship between students' perceived performance and satisfaction**

The results of Pearson r correlation between students' perceived performance of the CLE and their satisfaction with the CLE is presented in table 4.8 below.

Satisfaction shows moderate positive yet significant correlation with total perceived performance ( $r=.40, p<.01$ ) and learning opportunities ( $r= .41, p< .01$ ). Also, there are weak positive correlations between satisfaction and learning support/assistance ( $r= .26, p< .01$ ), department atmosphere ( $r= .25, p<.01$ ) as well as communication/feedback ( $r=.38, p<.01$ ). These significant correlations suggest that, an increase in learning opportunities, conducive departmental atmosphere, good learning assistance and positive communication/feedback within the CLE may cause an increase in student satisfaction. This finding supports hypothesis two.

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**Table 4.8 Correlation between Perceived Performance and Satisfaction**

Variables	Satisfaction	
	Correlation	Sig.
<i>Perceived performance</i>	.40**	.00
<b>Learning assistance/ support</b>	.26**	.00
<b>Department atmosphere</b>	.25**	.00
<b>Communication/feedback</b>	.38**	.00
<b>Learning opportunities</b>	.41**	.00

\*. Correlation is significant at the 0.05 level (2-tailed), \*\*. Correlation is significant at the 0.01 level (2-tailed)  $n=340$

**4.8 Model Diagnostics Tests**

All the statistical models were examined to see whether the model followed the theoretical linear regression assumptions. The correlation between the independent variables were low indicating no multi-collinearity in model 3. The model diagnosis analysis were done on the models residuals using the histogram plot, scatter plot, the quantile-quantile plot (QQ-plots) and their Durbin Watson test values. It was observed that the errors were normally and independently distributed with a mean of zero and constant variance of one ( $Niid 0, 1$ ). The Durbin-Watson values ( $model 1 = 1.73$ ,  $model 2 = 1.77$ , and  $model 3 = 1.72$ ) were greater than one and less than three as the required threshold indicating the absence of autocorrelation. Also, homoscedasticity was established as examination of the residual scatter plots showed no pattern for all the three models. Again, the histogram plot of the residuals shows that the errors were normally distributed. The QQ plot points for all the models were very closed to the line of fit. All the graphs are presented in Appendix H.

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**4.9 Predictors of nursing students' satisfaction with the CLE**

In order to determine the predictors of nursing students' satisfaction with the CLE, regression analysis was performed. The multi linear regression analysis was conducted in three different models. Table 4.9 shows the details of the regression analysis.

In model one, the demographic factors (gender, age, year of study, programme of study and number of facilities used for vacation practicum) were used as the predictors against the dependent variable (satisfaction) to determine if the demographics of the students predict satisfaction significantly. The results showed that demographic factors contribute only 0.5% ( $R^2=0.005$ ) of the total variance in satisfaction. None of the demographic factors significantly predicted students' satisfaction with the CLE.

In model 2 of the multi linear regression, demographic factors were taken out since it could not significantly predict satisfaction. Students total expectation score was entered into the model. Students' expectation was significant and accounted for 10% of the total variation in satisfaction ( $R^2 = .10$ ,  $F_{(1,338)} = 35.8$   $p=.00$ ).

In model 3, total scores of perceived performance was entered into the model and this accounted for 25% ( $R^2 = .25$ ,  $F_{(5,334)} = 21.96$ ) of the total variation in satisfaction with learning opportunities ( $p=0.00$ ) and communication/feedback ( $p=0.00$ ) being the significant predictors of satisfaction. This suggests that students are satisfied with the CLE when there are more learning opportunities and a good communication and feedback systems in the CLE.

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**Table 4.9: Multi regression analysis of expectation and perceived performance subscales as predictors of student satisfaction**

		Unstandardized Coefficients		Standardized Coefficient		
		B	Std.Error	Beta	t	Sig.
Model 1	(Constant)	13.38	2.57		5.21	.00
	Age	.07	.101	.04	.69	.49
	Gender	.41	.613	.04	.66	.50
	Year of Study	.12	.531	.01	.24	.81
	Prog. Of study	.16	.477	.02	.33	.74
	No. of facilities used	-.13	.322	-.02	-.39	.69
<b>Model 1</b>	<b>Summary: <math>R = .07</math>, <math>R^2 = .005</math>, <math>F_{(5,334)} = .32</math> <math>p = .90</math>, <math>Adj. R^2 = -.01</math>, <math>Durbin-Watson = 1.73</math>, <math>Std. Error = 3.89</math></b>					
Model 2	(Constant)	9.35	1.13		8.26	.00
	Expectation	1.59	.26	.31	5.98	.00
<b>Model 2</b>	<b>Summary: <math>R = .31</math>, <math>R^2 = .10</math>, <math>F_{(1,338)} = 35.8</math> <math>p = .00</math>, <math>Adj. R^2 = .09</math>, <math>Durbin-Watson = 1.77</math>, <math>Std. Error = 3.68</math></b>					
Model 3	(Constant)	2.79	1.564		1.78	.07
	Expectation	1.34	.247	.26	5.43	.00
	Learning support/ assistance	.03	.057	.03	.46	.64
	Department atmosphere	.00	.061	.00	.04	.96
	Communication/ feedback	.17	.059	.22	2.85	.00
	Learning opportunities	.17	.058	.22	2.94	.00
<b>Model 3</b>	<b>Summary: <math>R = .50</math>, <math>R^2 = .25</math>, <math>F_{(5,334)} = 21.96</math> <math>p = .00</math> <math>Adj. R^2 = .24</math>, <math>Durbin-Watson = 1.72</math>, <math>Std. Error = 3.38</math></b>					

*Note: Dependent variable = Satisfaction*

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#### 4.10 Summary of the Findings

The study found that the average age of the nursing students was approximately 23 years. Fifty-one percent (51%) of the respondents were General Nursing Students and 71% third year students. Females formed the majority (82%). With respect to expectation, nursing students exhibited high levels of expectation of the CLE (M=4.35, SD= 0.56 on a 5 point scale). In terms of perceived performance, nursing students gave a negative evaluation of the CLE (M=2.83, SD=0.50 on a 5 point scale).

The survey further revealed that nursing students are dissatisfied with their clinical learning environment (M= 16.01, SD= 3.87). There is a positive correlation between students' expectation of the CLE and learning opportunities subscale of perceived performance ( $r = .15, p = .00$ ) and expectation has a positive correlation with satisfaction ( $r = .31, p = .00$ ). Perceived performance on the other hand also has a positive relationship with satisfaction ( $r = .40, p = .00$ ).

Findings from the multi linear regression showed that student expectations ( $p = 0.00$ ), learning opportunities ( $p = 0.00$ ), and communication/ feedback ( $p = 0.00$ ) are significant predictors of nursing students' satisfaction with the CLE.

## **CHAPTER 5: DISCUSSION OF FINDINGS**

This chapter discusses the findings of the study. The demographic characteristics are discussed first followed by the other findings.

### **5.1 Demographic characteristics**

The respondents in this study were General Nursing (51%) and Midwifery students (49%). Majority (82.1%) of the respondents were females with less than 20% males. This finding is in harmony with the world wide notion that nursing and midwifery are female dominated professions. However, the low number of males in this study may be associated with the fact that current midwifery training in Ghana is female dominated unlike general nursing which accommodates male students. In addition, third year students formed the majority (71.5%) of the respondents with an approximated mean age of 23 years which is within the accepted health trainee age range of 18 to 35 years in Ghana (Nursing and Midwifery Council, 2016).

### **5.2 Students' Expectation of the CLE**

Results obtained from this study gives an explicit impression that nursing students have high expectations of the clinical learning environment just as students in Greece (Papathanasiou et al., 2014). These high expectations may be due to the fact that nursing students are usually longing to graduate as professionals working on patients and therefore wish for a model environment where all the theories learnt in class can be observed, practiced and appreciated. For instance, majority of the students agreed that the physical environment of the CLE must be appealing with knowledgeable staff and adequate material resources to practice with. This finding is consistent with studies conducted in Turkey (Kapucu & Bulut, 2011) and Malawi (Phuma-Ngaiyaye et al., 2017) where nursing students expected same. Often times,

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students are happy and enthused about their learning when a CLE provides services they have learnt about and are eager to practice it. Also, seeing, feeling and observing an instrument or equipment being used in the right way helps the student to appreciate the theory learnt. This further brings theory which is normally abstract into reality and aids in giving a clearer picture of the phenomenon. However, Ghanaian students have reported minimal number of knowledgeable nurses and inadequate resources in the CLE as a major contributor of their stress and a cause of theory-practice gap in the CLE (Bam et al., 2014).

Majority of the students agreed that it is practicable to learn from clinical staff and therefore clinical nurses should give them the needed attention and assist them readily with their learning experience. This finding is in accordance with findings in the United Kingdom (Foster et al., 2014) and Australia (Lúanaigh, 2015). This expectation of the CLE may be as a result of students' beliefs that unlike theory, clinical learning cannot be studied in isolation but rather involves emulating what professional nurses do, understanding the rationale behind what they do and by practicing under their constant supervision just as Swedish students hoped for continuous monitoring (Liljedahl et al., 2014).

Again, majority of the students agreed that nurses must be polite and supportive, and students should be able to trust and feel safe working with them as reported in previous research (Levett-Jones et al., 2007; Lúanaigh, 2015). Students need support from staff to build their confidence in the CLE. Students mostly want the assurance that when they need help they can easily talk to someone who is ready to listen and answer them respectfully without being condemned. Students want the liberty to question procedures where necessary and ask questions without being

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intimidated. Also, students feel secured when they see themselves as team members rather than strangers within the CLE.

Furthermore, the study revealed that most of the students do not want the CLE to bill them for their practical experiences. Instead, majority expect the hospital authorities to equip the nurses to enable them work effectively as supervisors and preceptors just as nursing students in the UK recommended (Foster et al., 2014). Students believe they will be working with the same facilities after completion of their programmes and therefore must not be charged for using these facilities for their learning experience. Also, students have the belief that management can provide resources and relieve nurses of their workload to enable effective clinical teaching and prevent the issue of staff burn-out.

Additionally, students want the clinical learning hours to be used resourcefully and also expect staff to inform them about ward routines as found in an Australian study (Lúanaigh, 2015). When students are properly orientated in the CLE, it makes it easier for them to fit in as team members as they get to know more about their new environment thereby reducing their anxiety. Mostly, students want to know the ward activities so they can anticipate the learning opportunities in the unit and also be active participants.

### **5.3 Students' perceived performance of the CLE**

In this study, majority of the nursing students gave an overall negative evaluation of the CLE. These findings contrast with studies conducted in Europe (Serena & Anna, 2009; Warne et al., 2010) and Australia (Lamont et al., 2015) in which students rated their CLE positive. The negative rating of the performance of the CLE may be related to the inability of the CLE to match the students' ideal CLE.

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For instance, 63.3% reported that they were not supported and assisted in the CLE. This result is similar to a Ghanaian qualitative study by Adjei et al. (2018) in which students labelled the CLE as unsupportive. Although the current study design did not allow for details from students, this disclosure may be related to reasons such as inadequate and ineffective preceptorship and mentorship within some CLE where nobody feels responsible for nursing students learning in the CLE due to the absence of named preceptors and mentors. Most nurses are ignorant of the nursing students' clinical learning objectives and usually do not prepare themselves adequately to take up the teaching role. This is primarily a consequence of lack of coordination and planning between some schools and the healthcare facilities ahead of students posting to the CLEs as found in Jordan (Shoqirat & Abu-Qamar, 2013). However, a Ghana-based study revealed that most clinical nurses lacked basic clinical teaching skills (Asirifi et al., 2013).

Further, approximately 50% of the students in this study intimated in the open ended questions that negative attitudes and inadequate guidance from the nursing staff is a major hindrance to their learning in the CLE. In line with this statement, nearly 70% of the students recommended effective teaching, support and assistance in the CLE. This finding is similar to an Iranian study result by Jahanpour et al. (2016). Moreover, it can be argued that most students visit the CLE inadequately prepared and organized for their learning experience which discourages some nurses from attending to their learning needs.

Additionally, nursing students (n=185) in this study reported poor departmental atmosphere within the CLE denoting that the atmosphere was not conducive for their clinical learning, which was contrarily reported in Turkey

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(Kapucu & Bulut, 2011). Majority (56.2%) of the respondents in this study indicated that they were not adequately oriented to the department and 26.2% did not get the needed equipment, supplies and resources to practice with. This finding is similar to previous studies done in Norway (Haraldseid et al., 2015), Malawi (Msiska et al., 2014) and Ghana (Bam et al., 2014). Orientating students in the CLE makes them feel accepted as team members and relieves them of anxiety. Levett-Jones and Lathlean (2008) posit that feeling belonged in the CLE is essential for learning. The unfavourable nature of the wards as reported in this study can be attributed to the bad reception to students and the poor teaching cultures in some wards. In Canada, students revealed that the unfriendly nature of the departmental staff made it difficult for them to ask questions (O'Mara et al., 2014).

Also, the perception of some nurses that students do not know much and hence assigning them constantly to the basic nursing procedures on the wards makes the students lose interest in their learning. Nursing students in Malawi reported that the clinical nurses saw them as extra working hands instead of learners thereby making learning on the ward difficult (Msiska et al., 2014). Again, the number of students competing for resources and skills at a time could be a factor as anecdotal evidence indicates that units with as low as twelve beds mostly have about thirty nursing students or more using it for their clinical practice at a time. In addition, it can also be maintained that the workload of nurses as unveiled by Bahadori et al. (2014) makes it difficult for nurses to create a conducive learning environment for students.

Furthermore, approximately 70% of the participants revealed that there were not much learning opportunities in the CLE. This is similar to what is reported in the literature (O'Mara et al., 2014). This assertion may be as a result of the difference in

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practice and theory as reported in previous studies in Ghana (Adjei et al., 2018; Bam et al., 2014) and other parts of the world (Jahanpour et al., 2016). This may be attributed to the traditionalism attitude of nursing care where the non-sequential way of performing procedures is the accepted norm on the wards these days. Nursing students in Ghana reported that this theory practice gap affected their learning and increased their stress levels (Bam et al., 2014). However, some students in Turkey reported further disparities in practices among the professional nurses which disorganised their clinical learning experience (Serçekuş & Başkale, 2016).

In addition, the lack of learning opportunities within the CLE may also be attributed to the continual absence of nurse educators in the CLE to complement the role of clinical staff and preceptors in providing adequate support to the students. Also, the large number of students present in the CLE at a time makes it impossible for supervised hands on practice which affect students' clinical learning. In turkey, students described their preferred CLE as one with low number of students at a time (Arkan et al., 2018; Kapucu & Bulut, 2011).

Besides, approximately 30% of students in this study confirmed through the open ended questions that their involvement in the actual nursing care maximized their learning and built their confidence in the CLE just as reported in an integrative review by Walker et al. (2016). Additionally, it can be stressed that the fear of encountering threatening health situations on the wards make students less active in clinical activities which also affect their learning. However, Ghanaian nurses posit that the attitude of nursing students such as lateness and absenteeism towards work serve as a barrier to pursuing learning opportunities in the CLE (Awuah-Peasah et al., 2013).

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Lastly, this study revealed ineffective communication and feedback system in the CLE. Majority (53.1%) indicated that the communication and feedback process in the CLE were not beneficial to their learning. This finding is inconsistent with Jansson and Ene (2016) study outcome in which Swedish students commended their supervisors for their constructive feedback which promoted their learning in the CLE. The result from this current study can be related to the issue of poor personal development of some clinical staff. Anecdotal evidence suggests that most clinical nurses are not updated with current research findings and trends in nursing. Others attend workshops in order to fulfil their regulatory demand of professional licence renewal without paying maximum attention to the content. These attitudes of some nurses reduce their confidence in engaging in productive communication with students on clinical practice.

However, Lúanaigh (2015) intimates that the ability of a nurse to communicate effectively with students in the CLE promotes clinical learning. Approximately 45% of respondents in Bam et al. (2014) study reported deficit in knowledge and skills of the nurses in the CLE. Students in Iran also complained their learning was ineffective as majority of their supervisors lacked mastery on the procedures they teach (Jahanpour et al., 2016).

Additionally, it can also be stated that most nurses in an attempt to give feedback end up condemning students which deter the students from asking questions which subsequently affect their learning. Most nurses usually do not consider privacy when giving feedback. This makes students reserved in the CLE which resonates with reports in the literature (Serçekuş & Başkale, 2016). This may be due to inadequate knowledge on steps in providing feedback among nurses.

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**5.4 Students' Satisfaction with the CLE**

The result of this study states empirically that nursing students are generally dissatisfied with their CLE unlike their colleagues in Australia (Lamont et al., 2015), Cyrus (Papastavrou et al., 2016) and Saudi Arabia (Abouelfettoh & Mumtin, 2015). Approximately 70% reported overall dissatisfaction with the CLE. The students' discontentment with the CLE may be related to the inability of the CLE to meet their expectations and learning needs. For example, majority of the participants indicated they did not get the needed assistance and rated poorly the knowledge and skills acquired in the CLE. This finding is incongruous with findings in Norway (Löfmark et al., 2012). This declaration could be due to the fact that there were no trained preceptors and mentors to assist them in their skills acquisition and the few conscientious nurses who were willing to assist were also not familiar with student learning goals for the period.

The study further revealed that majority of the respondents were not pleased with the CLE as their objectives were not met, contrasting with Australian nursing students who reported maximum satisfaction with the CLE (Lamont et al., 2015). The assertion of unachieved objectives may be related to the assigning of nursing students in the CLE to departments which have no link with their learning objectives. Usually because of the large student numbers, most nurse managers do not assign students based on their learning objectives as some institutions also allow their students to use CLE which do not have the facilities to suit the learning needs of the students. In addition, most clinical staff do not consider the learning objectives of students before assigning them duties on a shift. In a previous Ghanaian study (Adjei et al., 2018), students indicated they were assigned to units which had no bearing with their clinical

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objectives for the period. Again the absence of nurse educators in the CLE can be an associative factor as literature reveals that educators familiarity with practice and curriculum help in connecting theory and practice which aids students in achieving their clinical goals (Noonan et al., 2009).

Additionally, more than 50% of the respondents in this current study indicated that they will not use the same learning environments for their practical experience neither will they recommend to a friend. This finding disagrees with a previous study conducted in Ghana by Kyei & Antwi (2015) in radiography. When students are satisfied with the CLE, it can affect their future career decision making such as returning to the facility as working staff and when dissatisfied, it may go a long way to deter some students from accessing healthcare from these clinical agencies even years after completion.

### **5.5 Determinants of Nursing Students' Satisfaction**

Educational researchers have described satisfaction as a complex phenomenon which cannot be studied in isolation (Elliott & Shin, 2002; Gibson, 2010). This makes studying other variables such as initial expectations and perceived (actual) performance as propounded by Oliver (1980) important in determining nursing students' satisfaction with the CLE.

On the relationship between students' expectations and perceived performance, this study found a weak significant positive relation between students' expectations and learning opportunities under perceived performance of the CLE. This indicates that an increase in students' expectations may lead to an increase in learning opportunities. This may be related to the fact that students are usually eager to learn and know more in the CLE. Hence, students mostly try to take advantage of

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every little opportunity they get to learn in the CLE when they have higher expectations of the CLE.

In addition, there was a weak significant positive relationship between expectations and students' satisfaction with the CLE. This suggests that when nursing students have high expectations of the CLE and these expectations are met in the CLE, they are highly satisfied. However, the study results intimate that although nursing students had high expectations of the CLE, they were dissatisfied because their expectations were not met in the CLE.

Regarding the relationship between students' perceived performance of the CLE and satisfaction with the CLE, this study found a significant positive relationship between all the four elements under perceived performance. This finding is in harmony with studies conducted in Oman (D'Souza et al., 2015) and Cyrus (Papastavrou et al., 2016) in which satisfaction significantly correlated to all the five dimensions of the CLE scale used. This study result indicates that an improvement in learning support and assistance, communication and feedback, positive departmental atmosphere and learning opportunities in the CLE may lead to an increase in students' satisfaction with the CLE and vice versa.

Furthermore, on the influence of students' expectations and perceived performance of the CLE have on students' satisfaction with the CLE, this study found that students' expectations and perceived performance of the CLE jointly explains 25% of the variance in students' satisfaction. In addition, students' expectations, learning opportunities and communication/feedback were identified as the predictors of students' satisfaction with the CLE. These findings from the study contrast with a Cyrus study (Papastavrou et al., 2016) which found learning support and assistance as

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the predictor of students' satisfaction. These findings indicate that students are very satisfied with the CLE when there are more learning opportunities, effective communication/feedback system and when their expectations are met in the CLE.

Moreover, this study found no significant difference between students' demographic characteristics (age, gender, programme of study, year of study and number of facilities) and their satisfaction with the CLE. This finding is inconsistent with D'Souza et al. (2015) study which found age as a predictor of satisfaction. The findings also disagree with an Israeli study (Admi et al., 2018) which found a significant difference between male and female students' satisfaction. The result of this study specifies that whether the student is studying midwifery or general nursing, is a male or female student, in second or third year, have used two or more facilities for clinical learning, these demographic characteristics do not influence the students' overall satisfaction with the CLE.

### **5.6 Summary of Discussion**

Nursing students in the Kumasi metropolis evaluated their CLE negatively and were discontent with the support received, departmental atmosphere, learning opportunities, communication and feedback in their CLE although they had high expectations of the CLE.

The findings of this study suggest that students are dissatisfied with the CLE. The dissatisfaction is as a result of unmet expectations of the CLE. Again, the students were dissatisfied because they were not allowed much individuality to practice at their level of abilities and were unsuccessful in achieving their clinical objectives. In addition, nursing students were dissatisfied because clinical nurses did

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not communicate their responsibilities to them clearly and did not provide constructive feedback in the CLE.

## **CHAPTER 6: SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS**

This chapter summaries the entire study and discusses the limitations, implications of the study, conclusions and recommendations based on study findings.

### **6.1 Summary**

The clinical learning environment (CLE) is an essential feature in nursing education. The CLE serves as a learning platform for the translation of the theoretical components of the nursing core curriculum into specialised skills, values and attitudes. In the wake of increased enrolment of students and pressure on the CLEs, this study investigated nursing students' satisfaction with the CLE taking into consideration students' expectations of the CLE and the actual performance of the CLE in the Ghanaian context. The expectancy disconfirmation theoretical model was adopted as the framework for the organisation of this study.

Literature was reviewed under students' expectations of the CLE, perceived performance of the CLE and students' satisfaction with the CLE. A cross-sectional quantitative design was used in the study and structured questionnaire was used to collect the data. A sample of 340 general nursing and midwifery students were randomly selected from a total population of 2,363 students. The sample recruited adequately represented all the three nursing and midwifery training schools in the Kumasi Metropolis. The research questionnaire was divided into four sections covering students' demographic characteristics, expectations of the CLE, perceived performance of the CLE and students' satisfaction with the CLE. Ethical clearance obtained from Noguchi Memorial Institute of Medical Research Institutional Review Board, University of Ghana, together with an introductory letter from the School of

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Nursing and Midwifery were taken to the study sites for permission to gain access to the students. With the help of two trained research assistants, the data was collected from students in their respective schools.

Statistical Package for Social Sciences (SPSS) version 21.0 was used to analyse the data. Frequencies were run to help clean the data. Descriptive statistics, specifically mean and standard deviations were used to summarize the data on students' expectations, perceived performance of the CLE and students' satisfaction with the CLE. Pearson's Product Moment Correlation (Pearson's 'r') was used to test the relationship between students' expectations, perceived performance of the CLE and students' satisfaction with the CLE. Multiple linear regression analysis was used to determine the extent to which students' expectations and students' perceived performance of the CLE predict students' satisfaction with the CLE.

The findings from the study revealed that 82% of the respondents were females and 71% were in their third year of study. The mean age of the respondents was approximately 23 years. A mean score (M) = 4.35 was obtained for students' expectations of the CLE indicating that students had high expectations of their CLE. Students had negative opinions about the actual performance of the CLE. More than 50% of the respondents were unhappy with the learning support and assistance received, communications and feedback, learning opportunities and the departmental atmosphere in the CLE. Further, students showed total dissatisfaction with the CLE (M=16.01). Positive relationships were established between expectations of the CLE and students' satisfaction with the CLE as well perceived performance of the CLE and students' satisfaction with the CLE. The study revealed that students are satisfied

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when they have more learning opportunities and positive communication and feedback systems in the CLE as well as when their expectations of the CLE are met.

### **6.2 Implications of the findings**

The findings of this study have implications for nursing management and practice, nursing education and nursing research.

#### **6.2.1 Nursing Management and Practice**

Majority of the students were not satisfied with the CLE because they did not get adequate resources to practice with and the ward environments were not encouraging for learning. Departmental atmosphere was found to have a positive correlation with satisfaction. This requires conscious efforts from nurse managers and clinical nurses to create conducive atmosphere in their work stations for effective teaching and learning to secure the future image of the nursing profession.

Nurse managers' in particular must communicate and emphasize the essence of creating conducive learning atmosphere for students and its effects on delivery of care to both hospital management and nursing staff. By so doing, management will not hesitate in procuring adequate equipment and material resources to support effective nursing practice. It will also enable staff who take up preceptorship and mentoring duties to get enough support from management in performing their roles. Nurse managers must encourage and ensure nursing procedures are performed correctly so that students can learn the right things as this will bring about improvements in the standards of care. A large number of students expect to feel safe in the hospital environments while learning. This implies that there should be

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effective communication, development and adherence to standard protocols and infection prevention guidelines to promote safety.

### **6.2.2 Nursing Education**

The study established that majority of the students reported dissatisfaction as a result of unsuccessfulness in achieving their learning objectives in the CLE. This implies that most of the placements did not meet the learning goals of the student. Programme and clinical coordinators in the various educational institutions need to ascertain the suitability of placement for the students learning objectives before approving for students. Again, most students complained about ineffective communication and feedback process in the CLE. Nurse educators must give students the opportunity to have access to their evaluation forms to know the feedback on their performance in the CLE as communication has been found to be a predictor of satisfaction.

The study revealed that students were not adequately assisted and supported in the CLE. Nurse educators must teach and encourage students to be more assertive and proactive in seeking guidance and support from the clinical staff and preceptors in achieving their objectives. Again, the study disclosed a positive relationship between students' expectations and learning opportunities in the CLE. This implies that, students must be taught to make conscious efforts in the CLE to learn and acquire knowledge, skills and attitudes for their future professional role.

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### **6.2.3 Nursing Research**

Although teaching and guiding students to acquire skills and values in the CLE is a professional responsibility of practicing nurses, students reported inadequate support and assistance from clinical nurses in the CLE in the study. Learning support was found to be positively correlated with satisfaction. This may be attributed to some clinical nurses' lack of insight or disregard for their professional roles in the training of students. There is therefore the need for further study on the role of the clinical nurse in the development of the trainee nurse professional identity. This further enquiry will potentially sensitize practicing nurses on their professional responsibilities.

### **6.3 Study Limitations**

As a limitation for all socially oriented self-reporting studies (Opoku, 2005), the questionnaire might not be a tool absolutely sensitive to determine the true opinions of respondents. However, caution was taken at all levels to make the questionnaire clear and unambiguous so as to obtain the needed data. The researcher did not find any validated instrument to measure the disconfirmation construct of the expectancy disconfirmation model in relation to this study. This prevented the researcher from studying the mediators that seeks to explain further the relationship between expectations and satisfaction. Future research should consider it. The researcher did not find data collection tools authenticated purposely for measuring students' expectation and satisfaction with the CLE. However, caution was taken to ensure validity and reliability of the tools used. Again, cross-sectional designs may not provide definite information about cause and effect relationships. It was however used because of the limited time available for the researcher.

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### **6.4 Insights Gained**

A lot of understanding has been gained on the entire research process. For example, using a theoretical model in organising the study made reviewing the literature and the entire study less complicated. I have gained in-depth knowledge in analysing and reporting quantitative data. This has elevated my passion to undertake more research works in the near future.

### **6.5 Conclusion**

Clinical learning experience has been captured as an important component of the curriculum which develops the students' professional identity. Nursing students in the Kumasi metropolis reported dissatisfaction and highlighted most of the missing elements in the CLE that affect the achievement of their learning goals. Students' satisfaction has been identified as vital to loyalty. Therefore, the degree of students' satisfaction with the nature of the learning environment where the experience takes place must be of interest to stakeholders. Major stakeholders in clinical nursing education need to identify their key roles and perform them accordingly. Deliberate efforts must be made to make the CLE purposeful and conducive for effective clinical teaching and learning as well as skills and values acquisition.

### **6.6 Study Recommendations**

Based on the study findings, the following recommendations are made to the Clinical agencies and service providers, Nursing and Midwifery Educational institutions, Nursing and Midwifery Council and Nurse Researchers.

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### **6.6.1 Clinical agencies and service providers**

Clinical agencies and service providers should;

- Formally set up a unit for preceptorship and students' clinical coordination within the facility. This will enable management to plan for it in their budgets for formal training and refresher courses for preceptors and mentors in the facility to assist both students and newly graduated nurses.
- Procure and maintain adequate resources to meet the students' learning needs and enable professionals to practice according to appropriate policies and standardized guidelines for care.
- Ensure students are assigned preceptors or competent staff to guide and support students throughout the clinical learning hours.
- Provide students with effective orientation to the practice area to make students feel belonged to the various working teams and also provide appropriate learning opportunities for the students by ensuring the learning environment is safe for practice.
- Contribute to student development by availing themselves to be trained as preceptors and mentors to engage in effective student teaching and learning in the CLE.

### **6.6.2 Nursing and Midwifery educational institutions**

Nursing and Midwifery educational institutions should;

- Ensure practice placements meet the standards of the nursing programme being offered and likewise meet the needs of the level of their students in order to build their confidence in practice.

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- Collaborate with clinical agencies to train and equip preceptors and mentors in the facilities of placements to support their students in the CLE at all cost and ensure preceptors and mentors are informed of changes in the curriculum at any given time.
- Ensure the clinical aspect of the curriculum is well communicated to clinicians so that they prepare ahead of time.
- Provide sufficient number of nurse educators to liaise with nurse clinicians to support the students in the CLE to bridge the theory practice gap and also promote evidence based practice.

### **6.6.3 Nursing and Midwifery Council of Ghana**

The Nursing and Midwifery Council should;

- Formulate a policy where preceptors can be trained, regulated and assigned logbooks to make the role more standardised and appreciative.
- Collaborate with training institutions to regulate the itinerary for clinical practise schedule to reduce the number of students released into the clinical area at a time.

### **6.6.4 Nurse Researchers**

Nurse researchers should;

- Replicate the study in other regions of the country since the current study focused on student nurses in one metropolis of Ghana.
- Consider using longitudinal study design in exploring students' expectations, perceived performance and satisfaction. This will provide more definite information on the phenomenon as it is believed that people mostly do not

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remember the past correctly but instead allow current experiences to tint their initial opinions.

- Conduct more studies in the field of clinical education to produce collective evidence to inform policies in nursing education and practice.

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APPENDICES

Appendix A: Introductory letter to Noguchi



**UNIVERSITY OF GHANA**  
**SCHOOL OF NURSING**

SON/A.12

October 11, 2017

Ref. No.:.....

The Chairman  
NMIMR – IRB  
P. O. Box LG 581  
Univ. of Ghana  
Legon.

Dear Sir/Madam,

**DEPARTMENTAL APPROVAL LETTER**

This is to introduce to you Osei Sandra Adwubi, an M. Phil second year student of the above School, who has submitted her thesis proposal for review and approval by the Institutional Review Board. Her thesis topic: **“Determinants of Nursing Students Satisfaction with the Clinical Learning Environment”** has been reviewed and approved by the department of Maternal and Child Health of the School of Nursing and Midwifery.

Counting on your usual co-operation.

Thank you.

Yours faithfully,

Dr. Florence Naab  
SUPERVISOR



**COLLEGE OF HEALTH SCIENCES**

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**Appendix B: Consent Forms**

**NMIMR-IRB CONSENT FORM**

Title: Determinants of Nursing Students Satisfaction with the Clinical Learning Environment in the Kumasi Metropolis

**Principal Investigator:** Osei, Sandra Adwubi

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**General Information about Research**

This study seeks to examine the determinants of nursing students' satisfaction with the clinical learning environment in the Kumasi Metropolis. It is aimed at identifying students' expectations of the clinical learning environment, their actual experiences of the clinical learning environment and also assess the nursing students' satisfaction about the clinical learning environment. The research requires that you fill a questionnaire that will take you about 20-45 minutes to complete. The questionnaire is divided into four (4) sections and demands that you provide information on yourself excluding your name, your expectations of the clinical learning environments, your evaluation of the perceived (actual) learning environment and your level of satisfaction with the clinical learning environment. Prior to the start of filling the questionnaire, the key to answering the questions will be explained to you and you will be required to sign a consent form. You are encouraged to freely ask questions and share opinions as there are no right or wrong answer. The information you will provide is solely for academic purpose and again your name will not be needed.

**Possible Risks and Discomforts**

**There will be minimal risk as the time spent in answering the questions may cause fatigue; you will therefore be given a maximum of 45 minutes to answer the form.**

**Possible Benefits**

This study may not be of benefit to you now but findings will be communicated to Nursing and Midwifery Council of Ghana to review their set guidelines on clinical education to incorporate your collective expectations and factors that makes student satisfied with learning in the hospital (clinical learning environments). Again, findings will be



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communicated to clinical agencies to redesign their learning environments to enable future nursing students achieve their learning objectives for clinical practice. In the long run, this study finding will help train competent graduate nurses in the future.

### **Confidentiality**

**The questionnaire does not require you to write your name and I will ensure that you don't put your name on it. Also, any other identifying information that will lead to your identification will be coded using study codes. My supervisors and I will be the only persons with access to the information you provide. After the study, the data will be securely locked in a cabinet in the supervisor's office for a period of five (5) years before they are destroyed. The findings of the research will be reported in general terms and not on the individually collected data to the public.**

### **Compensation**

There will not be any compensation for participating in the study however you shall be refreshed with yoghurt after completion and submission of the questionnaire.

### **Voluntary Participation and Right to Leave the Research**

Your participation is voluntary. It is your right to participate in this study or withdraw from the study. Under no circumstance will you be penalized for not participating or withdrawing from the study.

### **Contacts for Additional Information**

In case of any questions or further clarification on the research, please contact any of the following individuals

Osei Sandra Adwubi. +233 243084379 Email: [sandycata88@gmail.com](mailto:sandycata88@gmail.com),

Dr Florence Naab, School of Nursing and Midwifery, University of Ghana, Legon-Accra

Phone Number: +233 263 741717 Email: [fnabb@ug.edu.gh](mailto:fnabb@ug.edu.gh)

### **Your rights as a Participant**

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: [nirb@noguchi.ug.edu.gh](mailto:nirb@noguchi.ug.edu.gh)



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**VOLUNTEER AGREEMENT**

The above document describing the benefits, risks and procedures for the research title (*Determinants of nursing students' satisfaction with the clinical learning environment*) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and signature or mark of volunteer

**If volunteers cannot read the form themselves, a witness must sign here:**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

\_\_\_\_\_  
Date  
Consent

\_\_\_\_\_  
Name Signature of Person Who Obtained



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**Appendix C: Questionnaire**

**DATA COLLECTION INSTRUMENT**

This questionnaire is part of a study to determine nursing students' satisfaction with the Clinical Learning Environment (CLE). Information obtained will remain confidential and used to improve nursing education.

**PART 1: Demographic characteristics**

Please select one response by ticking the box that best describes you as a student nurse/midwife for each of the following questions.

1. Age (years): .....
2. Gender:        Male [ ]                      Female [ ]
3. Year of study: Second year [ ]    Third year [ ]
4. Programme of Study: Nursing [ ]    Midwifery [ ]
5. Number of facilities used for vacation practicum    One [ ]    Two [ ]    Three [ ]

**PART 2: Expectations of Clinical Learning Environment**

This part of the study uncovers student's expectation of the clinical learning environment.

Please select one of the response that best fit your expectations by ticking the box [√]

**Key: 1=strongly disagree 2= disagree 3= Neutral 4= agree 5= strongly agree**

Item No.	Statement	1	2	3	4	5
1.	Clinical Learning Environment should have material resources to promote learning					
2.	The environments should be visually appealing					
3.	Clinical staff must dress professionally					
4.	Time allocated for clinicals should be used for its intended purpose					
5.	When students have problems, clinical staff must be reassuring					
6.	Clinical Learning Environment should be specific in billing students for clinical experience					
7.	Clinical staff should tell students exactly when procedures will be performed					



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8.	It is realistic for students to learn from clinical staff					
9.	Clinical staff should always be willing to help students					
10.	Students should be able to feel safe in working with the staffs in the CLE					
11.	Clinical staff should be knowledgeable					
12.	Clinical staff should be polite					
13.	Staff should get adequate support from management to do their work well					
14.	Students should be able to trust the staff in the clinical learning environment (CLE)					
15.	Clinical staff should be expected to give students personal attention					

**PART 3: Actual performance (perceived performance) of the CLE**

Please tick (✓) the number that best represents your answer to the following questions.

**Key: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree**

	Statement	1	2	3	4	5
1.	I was adequately oriented to the agency or department					
2.	My preceptor/resource nurse was available to answer questions and to help with patient care					
3.	A wide range of learning opportunities was available at this agency/department					
4.	My responsibilities in providing patient care were clearly communicated to me					
5.	My preceptor/resource nurse maintained ultimate responsibility for the patients to which I was assigned					
6.	My instructor was available to answer questions and to help with patient care					



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	resources negatively impacted my clinical experience					
22.	Nursing students helped each other with patient care and problem solving in this setting					
23.	This environment provided an atmosphere conducive to learning					
24.	The nursing staff were positive about serving as a resource to nursing students					
25.	When I needed assistance with a situation or skill, it was difficult to find someone to help					
26.	I was allowed to perform "hands on" care at the level of my clinical abilities					
27.	The nursing staff provided constructive feedback about my nursing actions in this setting					
28.	The instructor encouraged students to assist each other with patient care and to share their learning experiences					
29.	I was successful in meeting most of my learning goals in this environment					

What aspects of this clinical setting helped/promoted your learning?

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What aspects of this clinical setting hindered your learning?

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Is there anything else you wish to mention?

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PART 4: SATISFACTION

We are interested in your honest opinion, circle the number that best describes your satisfaction with the Clinical learning environment. Answer whether they are positive or negative

1. How would you rate the quality of learning you received?  

1	2	3	4
-----	-----	-----	-----
Poor	Good	Fair	Excellent
  
2. Did you get the kind of service you wanted?  

1	2	3	4
-----	-----	-----	-----
No, definitely not	No, not really	Yes, generally	Yes, definitely
  
3. To what extent has the clinical learning environment met your learning needs?  

1	2	3	4
-----	-----	-----	-----
None of my needs have been met	only a few of my needs have been met	most of my needs have been met	Almost all my needs have been met
  
4. With your experience in that facility, would you recommend the CLE to a friend?  

1	2	3	4
-----	-----	-----	-----
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely
  
5. How satisfied are you with the amount of service you received?  

1	2	3	4
-----	-----	-----	-----
Quite dissatisfied	Indifferent or mildly Dissatisfied	Mostly satisfied	Very satisfied
  
6. Have the services you received helped you to deal more effectively with your objectives?  

1	2	3	4
-----	-----	-----	-----
No, they seem to make things worse	No, they really didn't help	Yes, they helped somewhat	Yes, they helped a great deal

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7. If you are to go for clinicals again, would you go back to this same facility
- | 1                  | 2                    | 3               | 4               |
|--------------------|----------------------|-----------------|-----------------|
| -----              | -----                | -----           | -----           |
| No, definitely not | No, I don't think so | Yes, I think so | Yes, definitely |
8. In an overall, general sense, how satisfied are you with the service you received?
- | 1               | 2                                     | 3                | 4              |
|-----------------|---------------------------------------|------------------|----------------|
| -----           | -----                                 | -----            | -----          |
| Quite satisfied | Indifferent or<br>Mildly dissatisfied | Mostly satisfied | Very satisfied |



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**Appendix D: Ethical clearance**

**NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH**  
*Established 1979* *A Constituent of the College of Health Sciences*  
University of Ghana

**INSTITUTIONAL REVIEW BOARD**

Phone: +233-302-916438 (Direct)  
+233-289-522574  
Fax: +233-302-502182/513202  
E-mail: nirb@noguchi.ug.edu.gh  
Telex No: 2556 UGL GH

Post Office Box LG 581  
Legon, Accra  
Ghana



My Ref. No: DF.22  
Your Ref. No:

13<sup>th</sup> November, 2017

**ETHICAL CLEARANCE**

**FEDERALWIDE ASSURANCE FWA 00001824** **IRB 00001276**

**NMIMR-IRB CPN 025/17-18** **IORG 0000908**

On 13<sup>th</sup> November, 2017, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

**TITLE OF PROTOCOL** : **Determinants of Nursing Students Satisfaction with the Clinical Learning Environment in the Kumasi Metropolis.**

**PRINCIPAL INVESTIGATOR** : **Sandra Adwubi Osei M.Phil Cand.**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 12<sup>th</sup> November, 2018. You are to submit annual reports for continuing review.

Signature of Chair: .....  
Mrs. Chris Dadzie  
(NMIMR – IRB, Chair)

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**Appendix E: Introductory letter**



**UNIVERSITY OF GHANA**  
**SCHOOL OF NURSING**

Ref. No.:... SONM/F..11.....

December 5, 2017

The Principal  
K. N.M.T.C.  
Kumasi

Dear Sir/Madam,

**INTRODUCTORY LETTER**

I write to introduce to you Sandra Adwubi Osei, M.Phil Year II student of the School of Nursing, University of Ghana, Legon. As part of the M.Phil programme, she is conducting a research on **“Determinants of Nursing Students’ Satisfaction with the Clinical Learning Environment in the Kumasi Metropolis.”** Your outfit has been chosen as her data collection outlet.

I would be grateful if you could kindly offer her the necessary assistance needed to enable her collect data for her thesis.

Thank you.

Yours faithfully,

Dr. Florence Naab  
SUPERVISOR



INTEGRI PROCEDATIS

**COLLEGE OF HEALTH SCIENCES**

P. O: Box LG 43, Legon, Accra, Ghana.  
• **Tel:** +233 (0) 302 513 250 / 0289 531 213 • **Email:** son@chs.ug.edu.gh • **Website:** www.nursing.ug.edu.gh

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**Appendix F: Introductory Letter**



**UNIVERSITY OF GHANA**  
**SCHOOL OF NURSING**

Ref. No.:...SONM/E.11.....

December 5, 2017

The Principal  
Premiere Nursing Training College  
Kumasi

Dear Sir/Madam,

**INTRODUCTORY LETTER**

I write to introduce to you Sandra Adwubi Osei, M.Phil Year II student of the School of Nursing, University of Ghana, Legon. As part of the M.Phil programme, she is conducting a research on **“Determinants of Nursing Students’ Satisfaction with the Clinical Learning Environment in the Kumasi Metropolis.”** Your outfit has been chosen as her data collection outlet.

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Thank you.

Yours faithfully,

Dr. Florence Naab  
SUPERVISOR



INTEGRITY PROCEEDS

**COLLEGE OF HEALTH SCIENCES**

SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

**Appendix G: Introductory Letter**



**UNIVERSITY OF GHANA**  
**SCHOOL OF NURSING**

Ref. No.:...SONM/F.11.....

December 5, 2017

The Principal  
SDA N.M.T.C.  
Kwadaso-Kumasi

Dear Sir/Madam,

**INTRODUCTORY LETTER**

I write to introduce to you Sandra Adwubi Osei, M.Phil Year II student of the School of Nursing, University of Ghana, Legon. As part of the M.Phil programme, she is conducting a research on **“Determinants of Nursing Students’ Satisfaction with the Clinical Learning Environment in the Kumasi Metropolis.”** Your outfit has been chosen as her data collection outlet.

I would be grateful if you could kindly offer her the necessary assistance needed to enable her collect data for her thesis.

Thank you.

Yours faithfully,

Dr. Florence Naab  
SUPERVISOR



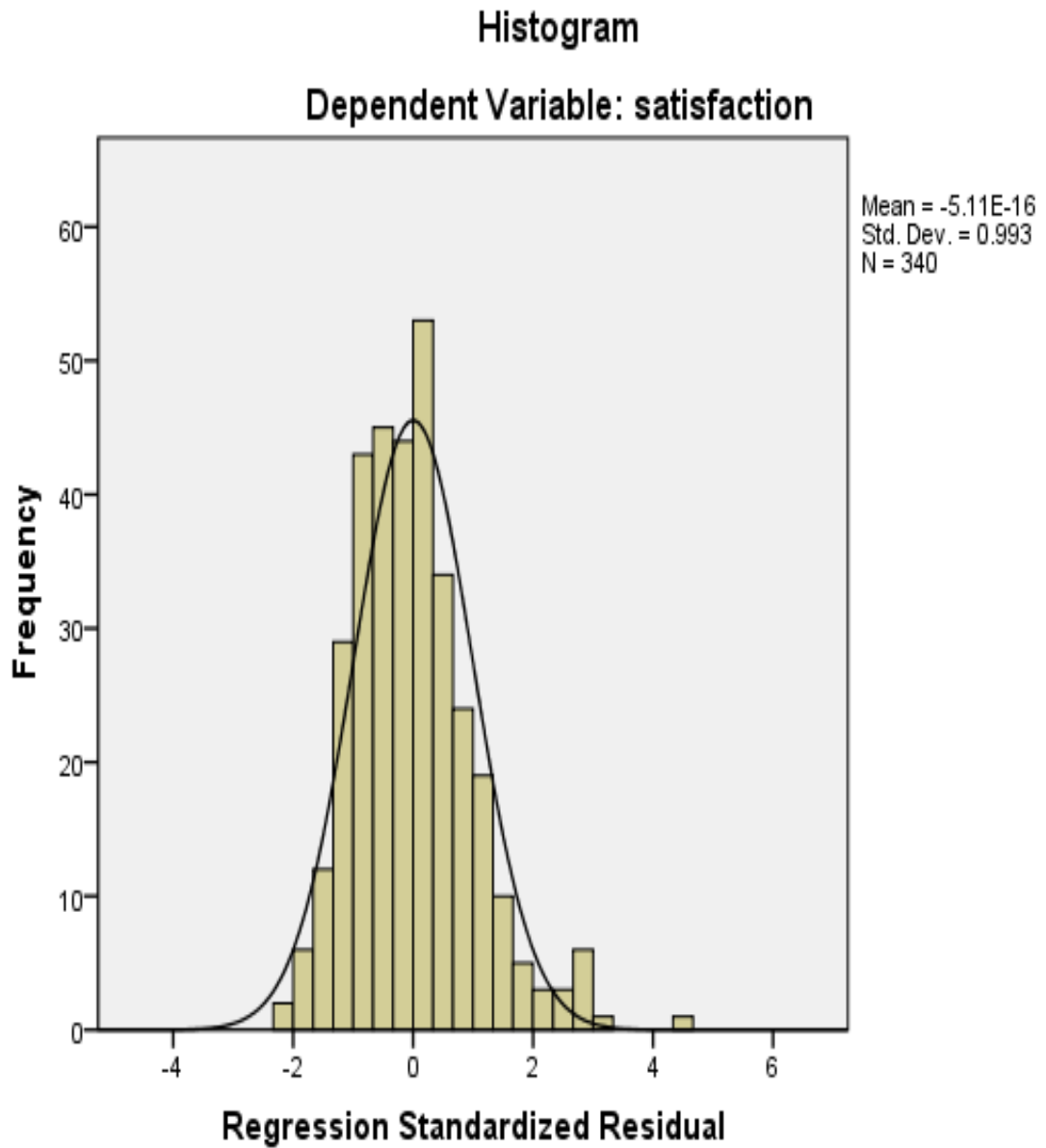
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**COLLEGE OF HEALTH SCIENCES**

SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

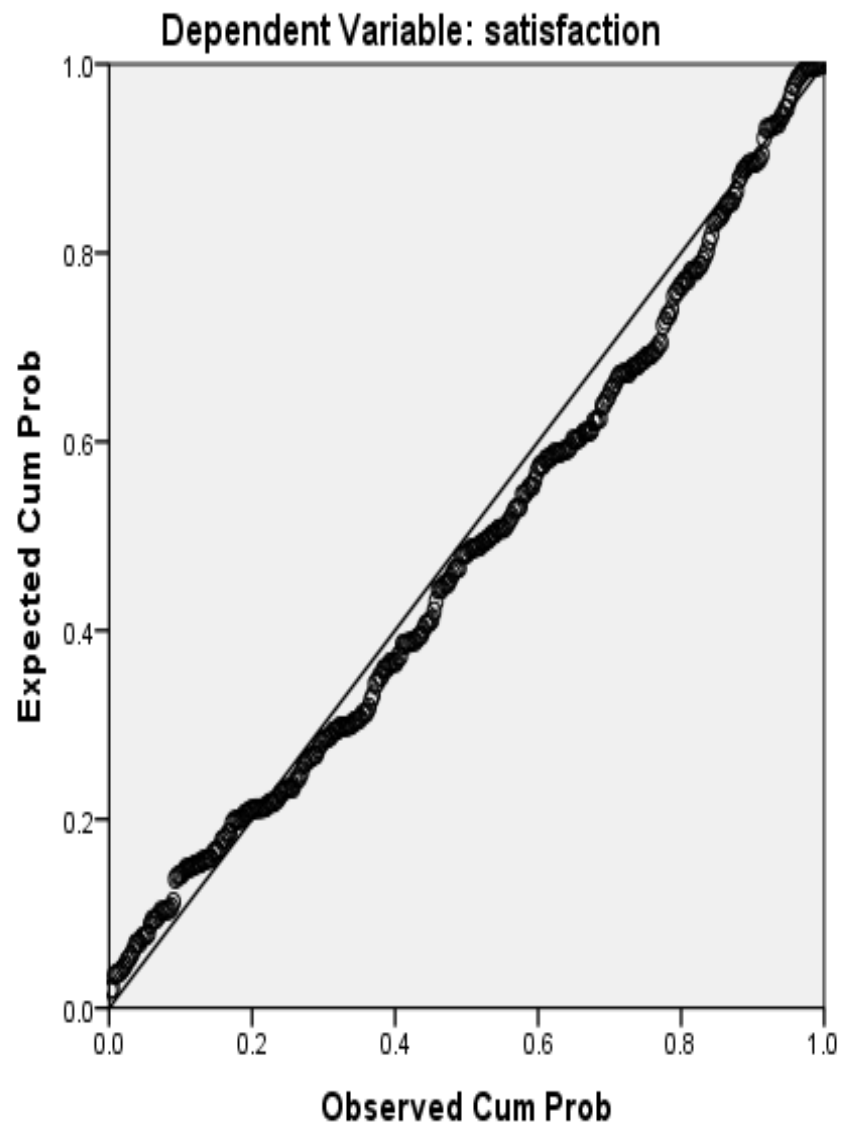
**Appendix H: Regression Models Diagnostics Tests**

**Model 1**

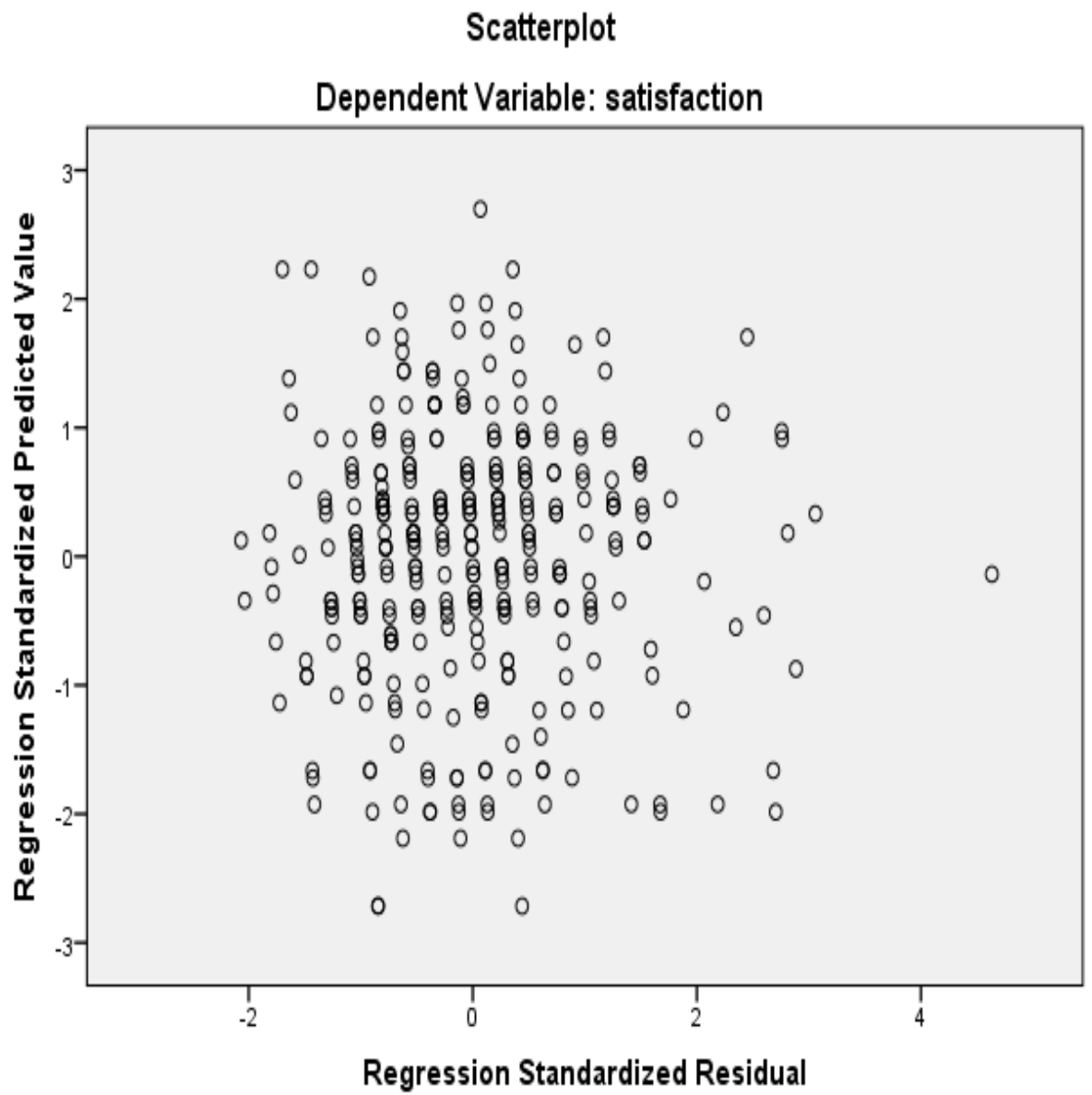


SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

Normal P-P Plot of Regression Standardized Residual

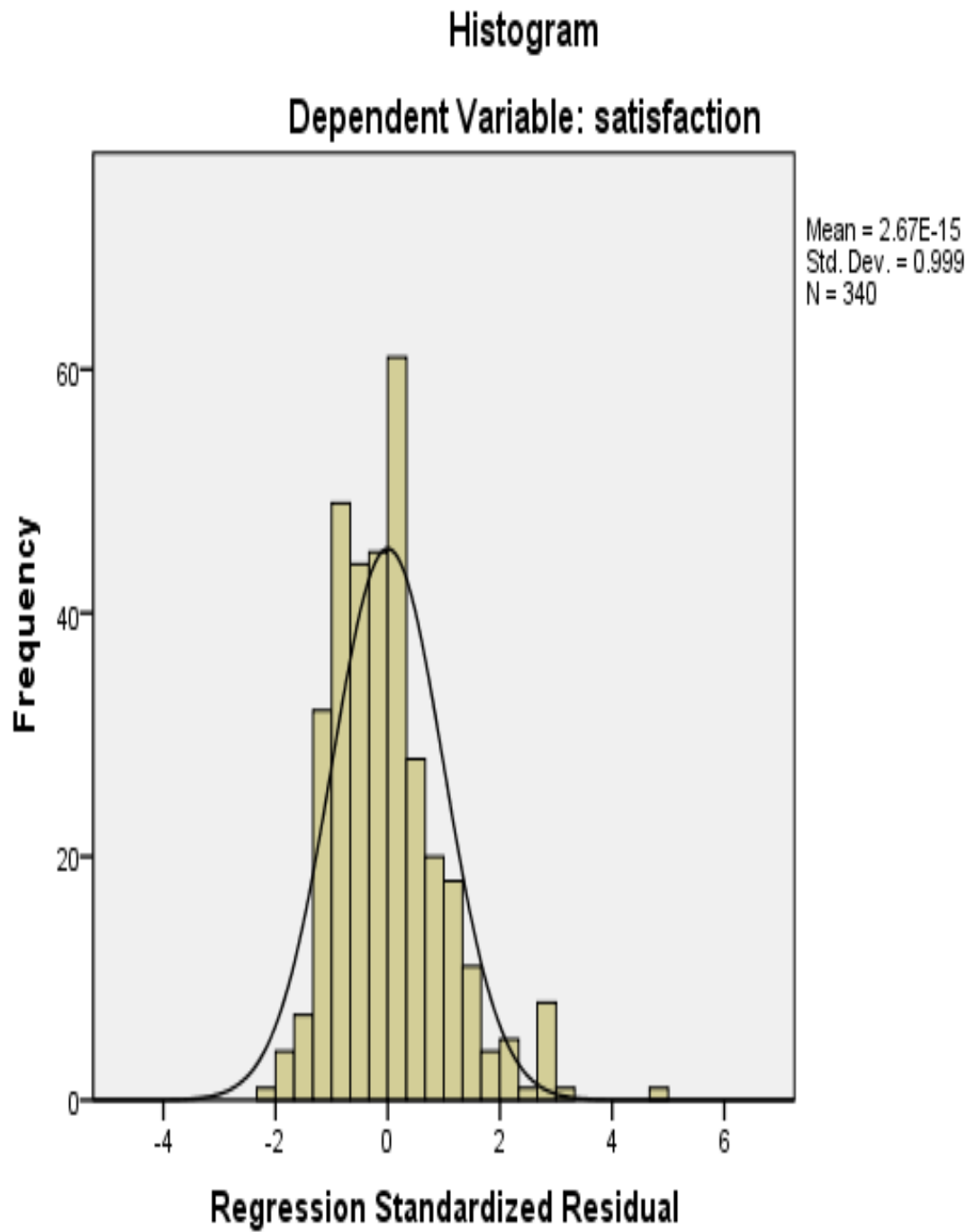


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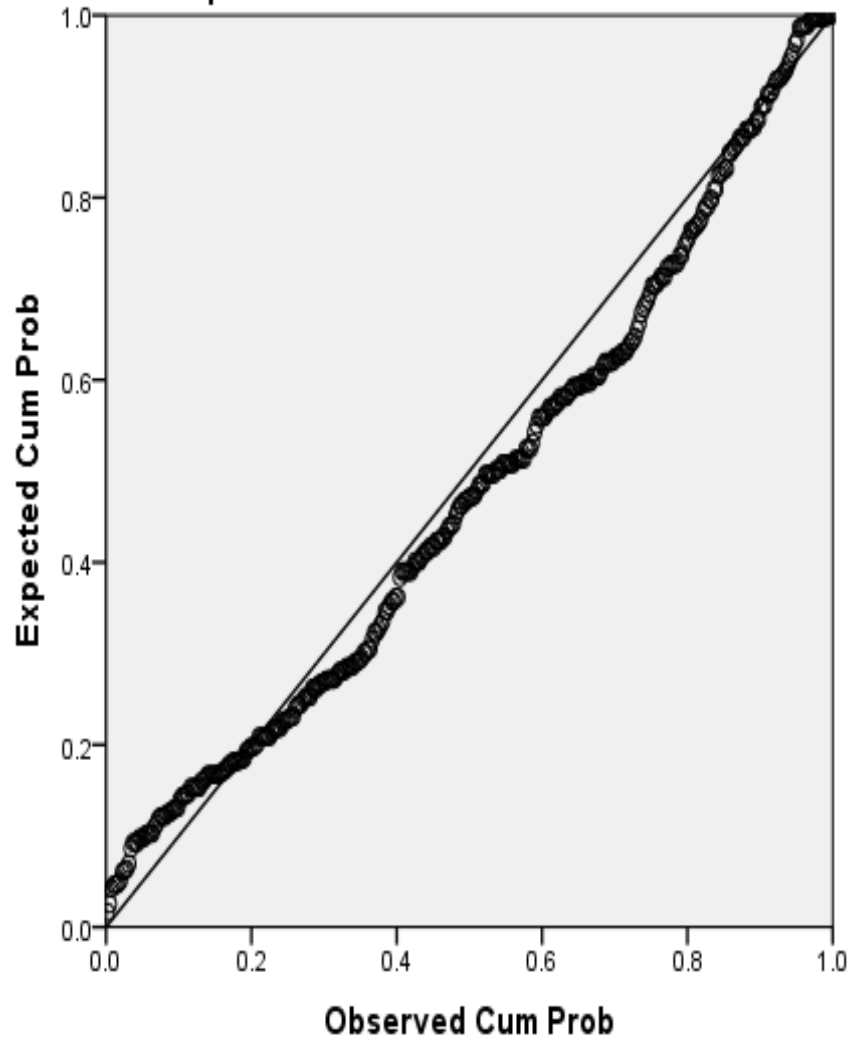
Model 2



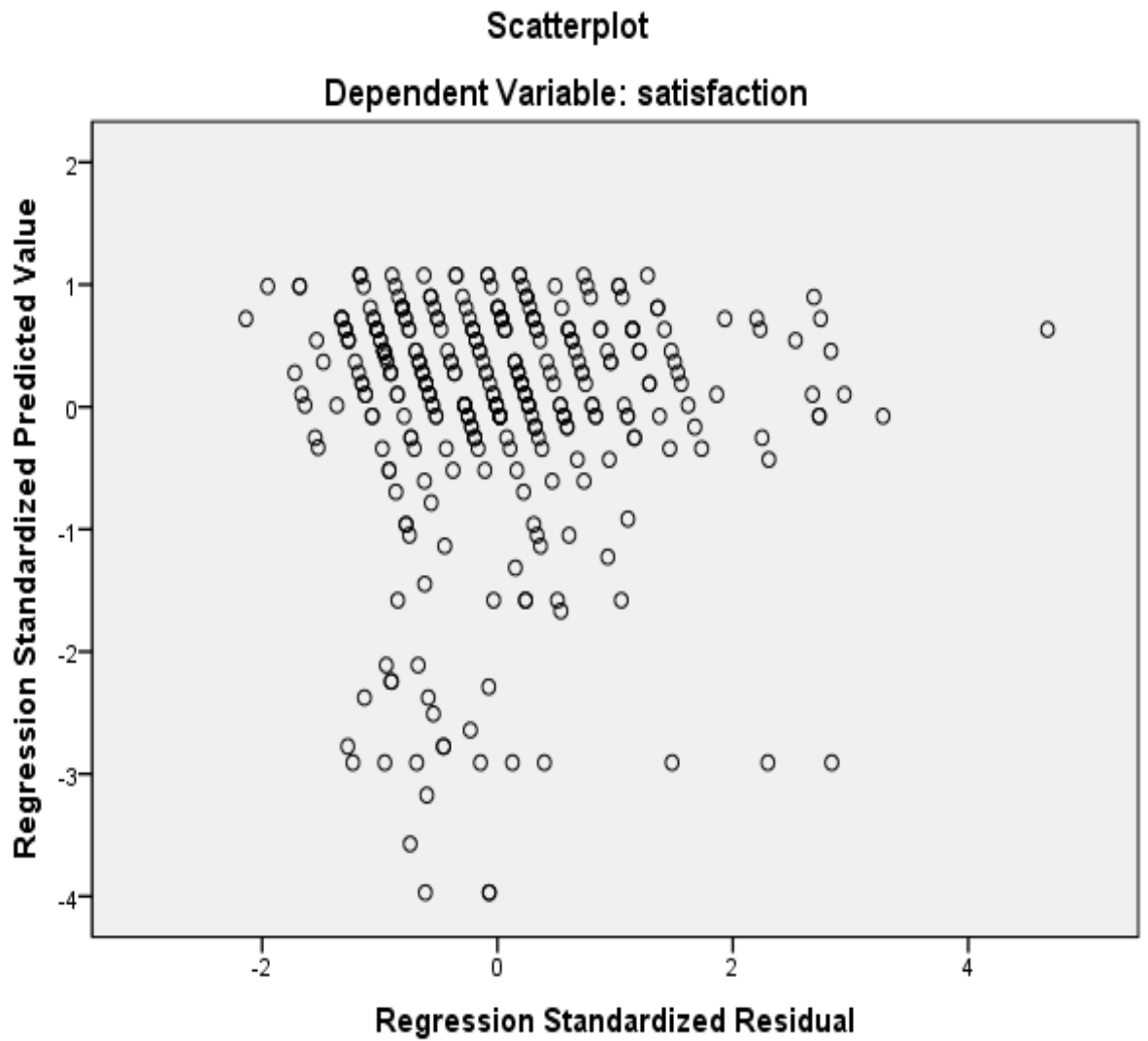
SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: satisfaction

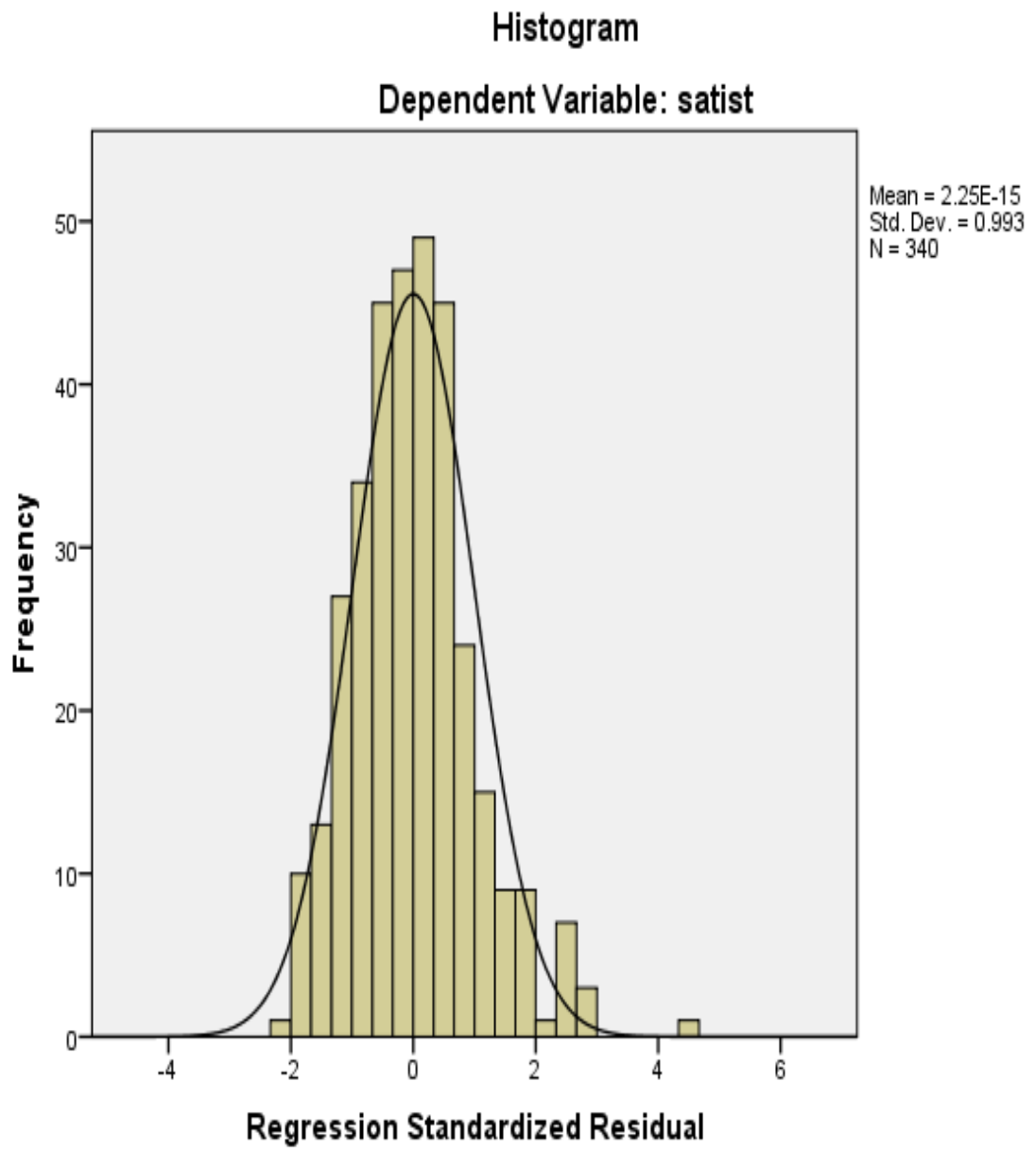


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SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

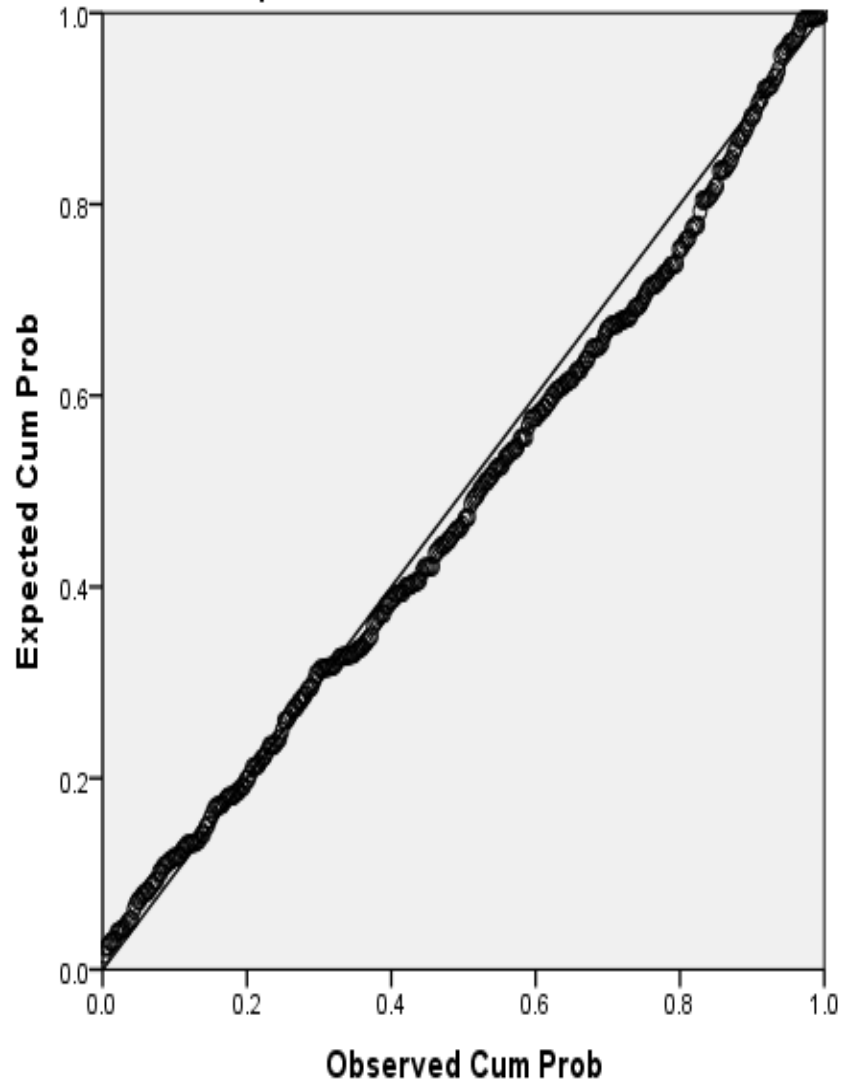
Model 3



SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: satisf



SATISFACTION WITH THE CLINICAL LEARNING ENVIRONMENT

