# ASSESSMENT OF THE ROLE OF NURSE EDUCATORS IN CLINICAL LEARNING OF UNDERGRADUATE NURSING STUDENTS AT KENYATTA NATIONAL HOSPITAL, KENYA

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF NURSING EDUCATION OF KENYA METHODIST UNIVERSITY**

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## DECLARATION AND RECOMMENDATION

I declare that this research thesis is my original work and has not been presented for a degree or any other award in any other University.

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## DEDICATION

I dedicate this work to my late father Philip, and my mother Dinah who is my role model in my academic endeavors. My family and children Benecia and Abreana whose support was immeasurable.

## COPYRIGHT

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# ABSTRACT

Clinical learning enables nursing students to implement knowledge transfer from theory to practice. Therefore, it is the role of nurse educators to fulfill this role to facilitate learning in graduate nursing education. This can be achieved when educators conduct effective patient-centered interactions with student nurses. Although their role is stipulated by the relevant bodies, it is not clear to nurse educators. At the study site, the hospital withdrew clinical mentors leaving a huge gap in the role of nurse educators to fulfill. The purpose of this study was to assess the nurse educators' role in the clinical learning of undergraduate nursing students at Kenyatta National Hospital, Kenya. A descriptive cross-sectional study design that adopted a mixed-method was used. The target population was all nurse educators from all seven universities. Multiple sampling was used, thus stratified random sampling, then purposive for the eighty-two nurse educators, and convenience sampling for the 3rd-year undergraduate nursing students. Quantitative and qualitative data were collected using an internet -administered, semi-structured questionnaire, and an interview guide. In quantitative data analysis, descriptive statistics were used and Statistical Package of Social Sciences (SPSS) version 24 was employed, then for inferential statistics, Binary Logistic Regression by Odds Ratio, the level of significance was set at <0.05. Data was presented in form of tables and figures. Qualitative data were coded, analyzed thematically, and presented in narratives. Ethical approval, clearance, and permission protocols were observed. Participants' informed consent was sought and anonymity, and confidentiality were observed. The teaching role, (90.8%) participated in planning and orientation, and for teaching methods, case study (85.5%, p=0.030) was highly utilized by educators. The educator skills and attributes, evaluation, and environment were significant at (p=0.001, p=0.005, p=0.003) respectively thus affecting learning outcomes. For the supportive role, professional socialization (55.3%, p=0.004), use of the clinical teaching model (89.5%, p=0.008), and supervisory visits 2 weekly p=0.001 were significant. In the administrative role, formal and informal orientation was (10.5%, p=0.001) thus essential to clinical learning. Regarding collaborative roles, forums were less utilized (7.9%, p=0.039), and training of health workers 47.4%, p=0.041) respectively. In conclusion, the role of nurse educators was significantly affected by the planning, orientation, good interpersonal relationships, clinical teaching methods, and a conducive environment. Professional socialization, availability of educators, use of clinical teaching model, and supervisory visits were found to improve clinical learning outcomes. None the less clinical orientation, and facilitating transport for students were essential with the use of collaborative forums. Also, good interpersonal relationships, training of health care workers, and feedback were found to be significant. The study recommends the readjustment of policies by universities and curriculum review on the clinical roles of nurse educators, especially in teaching, administration, support supervision, and models. Also, the formation of collaborations and partnerships at clinical sites by various universities is to be considered.

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## LIST OF ACRONYMS AND ABBREVIATIONS

**AACN** American Association of Colleges of Nursing

**BScN** Bachelor of Science in Nursing

**BSN** Board of Singapore Nursing

**CL** Clinical learning

**CLiP** Collaborative Learning in Practice

**COI** Community of inquiry

**HEI** Health Education England

**KHP** Kenya Health Policy

**KNH** Kenyatta National Hospital

**MOH** Ministry of Health Kenya

**NCK** Nursing Council of Kenya

**NMC** Nursing and Midwifery Council

**RCN** Royal College of Nursing,

**SDG** Sustainable Millennium Goals

**SAQA** South African Qualification Authority

**SSA** Sub-Saharan Africa

**UK** United Kingdom

**WHO** World Health Organization

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

Clinical learning (CL) is a patient-centered, three-part educational interaction between a trainer, student, and patient in the clinical setting enabling nursing students to translate knowledge into skills (Papastavrou et al., 2016). CL begins at the pre-registration of students and continues in practice as students acquire clinical competence skills (Estrada-Masllorens et al., 2016). This, therefore, is important, and the Nursing and Midwifery Council (NMC) of England, stipulates that the key areas in clinical learning are supervision, support, and assessment of learners by the nurse educators (Nursing and Midwifery Council [NMC],2018).

Consequently, nurse educators are not only responsible for preparing and mentoring students, but also ensuring a competent workforce able to make critical decisions, and manage and practice evidence-based care in clinical settings (Bifftu et al., 2018). Fundamentally, these lead to effective clinical learning as the nurse educator can conduct patient-specific discussions and interactions with students (Sezer, 2018).

Globally, the objective of nursing education is to ensure competencies and quality in nursing care. The World Health Organizations' (WHO), policy framework recommends nurse educators' role in improving these competencies to meet the global strategy on human resources by 2030 (The World Health Organizations' [WHO], 2016). As a result, the Royal College of Nursing (RCN) and Health Education England (HEI) recognizes undergraduate retention as a pressing global concern in healthcare as it is dependent on effective clinical learning by graduate nurses. It

emphasizes personal and professional support to enhance students' competencies and retention emphasizes (Jenkins & Germaine, 2018).

In developing and developed countries, currently, the majority of boards of nursing have been reviewing new standards on nurse educators' roles in clinical learning. These are, supportive, collaborative, supervision, and assessment during placements to ensure a competent nurse graduate (NMC, 2018). The Board of Singapore Nursing (BSN) recommends nurse educators provide guidance, supervision assessment, and support in the clinical placement period (Board of Singapore Nursing [BSN], 2017).

Currently, nurse educators encounter numerous situations where students are unable to translate theoretical knowledge into their clinical practice (Hussein & Osuji, 2017). In Turkey, the conventional nursing education of theory then practice is practiced, but during clinical placements, students perceive it as complex and negatively impacts their practice (Tanriverdi et al., 2017). Consequently in Tunisia, post-graduation, students reported this period as stressful (Bouchlaghem & Mansouri, 2018).

In Sub-Saharan Africa (SSA), clinical learning has been sluggish in progression. This has led to an SSA region framework in nursing education formulation from 2012 to 2022. However, literature still reports a lack of necessary competency roles among faculty in clinical settings (Bvumbwe & Mtshali, 2018). In South Africa, van Graan and Williams (2017) advocates the South African Qualification Authority (SAQA) curriculum to have an extensive review to meet the nurse educators' roles in implementing knowledge transfer to skills. In Nigeria, the clinical roles of nurse educators on what, how, and why are still debatable and unclear leading to role confusion, despite the nursing council protocols and guidelines to standardize as recommended (Omisakin, 2016). Also, there is a need for students to be prepared in

clinical practice by educationally highly qualified clinical staff and lecturers (Odetola et al., 2018).

In Kenya, for the last fifteen years, there has been an enormous growth in undergraduate nursing education and it moving from hospital-based to universities. New structures in student preparation are being applied (Nursing Council of Kenya [NCK], 2018). However, guidelines and scope regarding specific clinical roles of undergraduate nurse educators are yet to be formulated by NCK and probably the commission for higher education.

Locally too, studies have particularly focused on undergraduate students' perceptions, competencies, and experiences in clinical learning respectively (Mburu, 2015; Wachira et al., 2017; Wakhungu, 2019). Additionally, faculty participation in clinical learning -barriers and enablers were also studied (Waweru et al., 2019). These, therefore, contribute to the nurse educator's role in clinical learning being limited, there is also a paucity of literature on the clinical roles of faculty. The majority of the studies globally and regionally have focused on clinical learning environments and even roles well stipulated in nursing boards and policy frameworks, but a gap still exists on what the nurse educator needs to do and how to carry out clinical learning effectively. It is with such divergence in clinical learning that the researcher assessed the duties of nurse educators in clinical learning of undergraduate nursing education.

### 1.2 Statement of the problem

The 21st century has witnessed major reforms in nursing, among them is the movement of its education from hospitals to universities to enable the bridging of the practice gap among nursing graduates, and improve the divergent roles of faculty (Huston et al., 2018). Since

then, globally, the WHO has been tasked to improve nursing education through nurse educators' strategies particularly undergraduate to ensure quality healthcare delivery outcomes and improve nursing shortages by 2030 (WHO, 2016).

In Africa, Nigeria, Omisakin (2016) reinforces that clinical nursing educators formulate and implement their tasks, avail conducive sites, and adequate supervision for learners. Regardless of these well-formulated policies and guidelines, implementation has been slow, especially by nursing education regulators. In Kenya, NCK, syllabus stipulates two thousand six hundred and forty hours for clinical placements (NCK, 2014). Thus, each university must organize clinical learning by its faculty through planning, supervision, teaching, and evaluation so often.

Anecdotal report from nurse managers at Kenyatta National Hospital (KNH) is that nurse educators seldom supervise and follow-up their students on the wards apart from availing themselves during assessments. This has led to students not meeting their course core objectives, thus affecting clinical learning outcomes. Needless to say, KNH is faced with an ever-increasing number of patients, and consistent staff shortages for the last five years. These led to the withdrawal of clinical instructors who were student mentors, despite the increase in student numbers on clinical placements.

The majority of the universities have tried to comply with NCK requirements of clinical learning by employing one or two clinical instructors, but they are not enough to meet the enormous numbers of students. Whether these roles can be formulated and implemented by universities or NCK is still underway. A review of the literature has also found that in all the outlined roles of nurse educators, there still exist gaps in their role fulfillment and attainment. When nurse educators perform their roles effectively students' cognitive abilities, skills and competencies improve leading to quality nursing care and a

competent graduate are assured. Therefore, it is indispensable for nursing educators' roles and responsibilities to be explored to improve clinical learning outcomes.

### 1.3 Purpose of the Study

This study was to assess the nurse educators' role in clinical learning of undergraduate nursing students placed at Kenyatta National Hospital, Nairobi. This will prepare them to effectively execute their clinical roles thereby improving clinical learning outcomes to guarantee a competent nurse graduate with sufficient with sufficient knowledge, skills, and attitude.

### 1.4 Broad Objective

The main aim of this study was to assess the role of nurse educators in the clinical learning of undergraduate nursing students at Kenyatta National Hospital, Nairobi, Kenya.

#### 1.4.1 Specific Objectives

i. To determine the nurse educators teaching role in clinical learning of undergraduate nursing students at Kenyatta National Hospital, Kenya.
ii. To establish the nurse educators' supportive role in clinical learning of undergraduate nursing students at Kenyatta National Hospital, Kenya.
iii. To establish the nurse educators' administrative role in clinical learning of undergraduate nursing students at Kenyatta National Hospital, Kenya.
iv. To determine the nurse educators' collaborative role in clinical learning of undergraduate nursing students at Kenyatta National Hospital, Kenya.

### 1.4.2 Research Questions

i. What is the teaching role of nurse educators in clinical learning of undergraduate students at Kenyatta National Hospital, Kenya?
ii. What supportive role do nurse educators play in clinical learning of undergraduate students at Kenyatta National Hospital, Kenya?
iii. What administrative role do nurse educators play in clinical learning of undergraduate students at Kenyatta National Hospital, Kenya?
iv. How do nurse educators execute their collaborative role in clinical learning of undergraduate students at Kenyatta National Hospital, Kenya?

## 1.5 Justification

The roles played by nurse educators in the implementation of undergraduate education are vital as they determine the kind of graduate and quality of nursing care. Estrada-Masllorens et al. (2016) acknowledge that when nurse educators perform their role effectively they improve learners' cognitive abilities toward their practice and skills development.

Globally, WHO (2016) nursing lecturers are guided to ensure competent graduates in clinical practice, which is deemed to help meet the global strategy on human resources Therefore, requires them to efficiently perform their teaching and clinical duties. The American Association of Colleges of Nursing (AACN) recognizes the need for more nursing faculty to meet the demand for educators required to teach clinical sections. Therefore, the need for clinical faculty needs for them to have their roles well stipulated (American Association of Colleges of Nursing [AACN], 2016).

Clinical roles when well-executed help in meeting the Sustainable Millennium Goal (SDG) three, target 3C which stipulates the need for education of health workers, and this is achieved through nurse educators in enhancing learning both in class and clinical sites. Kenya so far has tasked the Ministry of Health (MOH-K), and this is being implemented through its policy framework 2014-2030, and vision 2030 to ensure a competent workforce in meeting the equity distribution of essential health services. Therefore, nurse educators play a key role in this (Ministry of Health [MOH], 2014). MOH (2018) also implemented Universal Health Coverage in all the counties. Therefore, nurse educators' role in clinical learning is imperative in implementing knowledge.

Further to above the regulatory nursing body, NCK in 2014 made a mandatory requirement for every Kenyan university to have clinical instructors to enable them to meet the rising demand from the high student enrollments. Subsequently, these roles therefore when well implemented promote effective clinical learning to bridge the knowledge practice gap.

### 1.6 Significance of the study

The need for effective higher education in nursing especially in clinical learning is of uttermost importance in achieving effective implementation of faculty roles. These culminate in nurse educators who can facilitate evidence-based nursing as a foundation for undergraduate nurse graduates. These in turn prepare the graduates to provide safe, quality care. As a result, there is an assurance of quality educational experiences for graduates to work in a diverse, ever-changing health care environment.

The professional development of nurse educators is improved through these clinical roles as they can be able to identify gaps in nursing practice and clinical education. In turn, bridging

the knowledge transfer gap being witnessed in clinical practice. This is achieved through policy formulation, life long learning by universities to enable educators to acquire more knowledge and understanding about clinical learning.

Universities can review their curriculum on clinical education when roles are specified, thus also more strategies on scope and syllabi implementation by institutions of higher learning and NCK, thereby promoting evidence-based education. Needless to say, employers or external customers will benefit from the well-executed roles of nurse educators through quality care and services offered by nurses, thereby productivity. Fewer incidences of malpractice, morbidity and mortality will be reported in institutions. Client satisfaction with nursing care will therefore be improved and nursing image and education changed to be more desirable and often sort after by upcoming students and employers. Society will thus appreciate degree nurses and embrace them better.

### 1.7 Limitations of the Study

Clinical learning in nature has many components and therefore the findings may not be as extensive and may differ as each university may implement them based on its curriculum.

Data collection on the wards may not be possible because of end-of-semester examinations and some institutions do clinical and theory courses together. The current Covid-19 pandemic social distancing and availability of students and educators in clinical areas was a challenge.

### 1.8 Delimitation of the Study

The questionnaire will be based on the standard components of clinical learning, thereby achieving generalization for all participants on the specified roles and processes.

A master rotation plan will be sought from the sampled universities prior, so data collection will take place during students' clinical rotations. Also, data collection will be dependent on the institution's implementation plans on Covid-19 on social distancing and participants' availability.

### 1.9 Assumptions of the Study

Nurse educators' responses could have been influenced by prior experiences in clinical education and the internal and external environment as they follow up with students, and also their prior practices could influence the current.

### 1.10 Operational definition of terms

**The administrative role**-This is developing, planning, and executing clinical activities by nurse educators like accomplishing how to access learning environments, orientation, and clinical developing programs to enhance positive clinical learning outcomes.

**Clinical Courses-**These will be medical, surgical, and midwifery practicum units undertaken by the undergraduate students at KNH.

**Clinical learning** – This is where undergraduate nursing students gain clinical knowledge, attitude, and practical experience in clinical courses through a set of planned activities by the nurse educators to ensure a competent nurse graduate It will interchangeably also be clinical education.

**Clinical placement site**- Wards offering access, learning, and rotation of clinical courses to undergraduate students at KNH.

**Clinical skills** - are the essential nursing abilities to be acquired in clinical courses through practicum learning experiences by undergraduate students.

**Collaborative role** –This is the inter-professional partnership between nurse educators, institution, staff, and students to enhance clinical learning in undergraduate nursing students.

**Nurse educators** – a registered nurse lecturer with postgraduate and above qualifications in nursing, teaching at the university and facilitating learning of nursing students at clinical sites.

**Nursing students**- male and female nursing learners enrolled for undergraduate pre-registration nursing education, in their third year undertaking/or prior took their clinical courses at Kenyatta National Hospital.

**Supportive role**-Are task nurse educators do include; supervising, follow up,and psychological and social presence to enable undergraduate students to meet their clinical learning course outcomes.

**Teaching role-** These are the tasks nurse educators undertake of identification of undergraduate students' clinical needs, and outcomes, planning activities, guiding, and evaluation of learning to ensure a competent nurse graduate.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Introduction

The literature review will involve the different roles of nurse educators in various studies. These will include teaching, supportive, administrative, and collaborative roles. How these roles have been carried out, their importance on clinical learning of undergraduate students, and outlines even some challenges faced by educators in implementing these roles.

Clinical learning takes different forms including setting objectives, planning, demonstration, implementation, and evaluation of learning. This is geared toward nurturing a competent, knowledgeable, and reflective nurse not contingent on others for decisions made in practice (Omisakin, 2016). Nurse educator's roles combine both theory and clinical components ranging from curriculum formulation, implementation, and evaluation (Educator, 2017). Supervisory support is important to enhance clinical learning (Bos et al., 2015).

Kpodo et al. (2016) found out that the best clinical nursing education practices for nurse educators are divided into three phases; before, during, and after clinical placement. Omisakin (2016) found out that in Nigeria, nurse educators' roles in clinical placements are divergent and complex in students' preparation for effective and efficient practice.

## 2.2 Teaching role of nurse educators in clinical learning

Strategies for clinical teaching are identified as five components to including; need assessment, goal and objective setting, implementation of learning, guidance, and evaluation of learning (Oermann et al., 2017).

In Italy, this is core as it is hoped to change a student into a professional who can practice competently and with confidence (Brugnolli & Benaglio, 2017). Nurse educators, therefore, are required to carry out various strategies in teaching to ensure clinical learning takes place including the following:

### 2.2.1 Execution of the components of clinical teaching

In achieving this, McPherson and Candela (2019) found out that educators need orientation to prepare themselves adequately, students, and nurses in clinical for clinical teaching. In their study, the preparation processes included: support, training, resource provision, communication, and setting of objectives. The outcome was the attraction of more students to clinical learning and the retention of higher-quality faculty.

Clinical teaching involves orientation, in a study to evaluate clinical training this was seen as an important component by the educators in preparation for clinical learning and teaching. It was categorized as establishing rapport, providing a cordial environment, and exposing the students to equipment and procedures. This created a good atmosphere for the students to relate well, making it easy for them to go to a preceptor with his/her problems. Through orientation, the role of the preceptor is also realized (Eyeson, 2017).

Another component is planning for clinical teaching which begins with setting objectives for the required skill achievement. These should incorporate cognitive, psychomotor, and affective domains. They focus on clinical learning activities on the development of knowledge that cannot be acquired in the classroom or other learning settings. Secondly, is the preparation of the clinical agency staff whereby there is negotiating of an agreement or contract between the program and the agency. This establishes an effective working relationship (Oermann et al., 2017).

Planning by organizing the orientation of students at the beginning of clinical learning is vital. Farzi et al. (2018) found out that learners felt that their teacher should design their clinical course appropriately to include preparing them on what to expect from the course beforehand from beginning to end before embarking on implementation. This was to help them effectively attain their course objectives. Consequently, a study by Akram et al. (2018) on clinical activities preparation, revealed that there was a positive correlation between teachers planning clinical activities before learning. One of the roles of the teacher was to plan for the tasks beforehand in readiness to start working with the students. This helped students familiarize themselves with what was taught in theoretical courses reflecting the need for harmonization and keeping them updated.

Despite the above being practiced in various parts of the world and studies showing the importance of execution of these processes, some parts like Kenya are still struggling to implement this. In a study on the evaluation of clinical training in nursing, it was noted that nursing educators of the BScN programs need to address gaps in clinical training especially in the clinical learning of students as less than half of the educators did this (Nyangena et al., 2011).

### 2.2.2 Curriculum integration

Knowledge by clinical educators at curriculum makes them better in building relationships and this leads to teacher competence and confidence, ending in building the relationship between the student and the teacher. The educators in this study were able to get to know, support, and challenge their students in a way not possible with the past traditional curriculum (O'Rae et al., 2016).

O'Rae et al. (2016) also found that integrating faculty within clinical and classroom teaching assists students to develop knowledge to bridge the theory and practice gap environments. Nurse educators were asked about their evolving role and it increased their sense of responsibility as they were required to be more knowledgeable of the entire curriculum not just their current teaching assignment. This role enabled them to better integrate theory and practice for their students and were able to support them in transitioning in both.

Luhanga (2018) found out that the instructors' familiarity with the curriculum and evaluation process was important. This enhanced knowledge of curriculum integration demonstrated effective clinical teaching skills, as they possessed clinical expertise and competence in supervising students to perform the required skills.

Curriculum integration in the above studies played an enormous role in nurse educators' implementation of clinical learning, but this role is not fully implemented in the global aspects of clinical teaching, despite policies having been formulated and studies have found its importance in this. Locally, Luhanga (2018) suggested several strategies to assist educators with this, they included: preparing, familiarizing, and mentoring new nurse educators, availability of necessary resources, and facilitation of personal and

professional development These were to assist them in effectively incorporating clinical learning from theory to practice.

### 2.2.3 Use of clinical teaching skills and attributes

Bifftu et al. (2018) study to identify teaching behaviors in undergraduate students in Ethiopia revealed that clinical teaching behavior was important to modify and facilitating clinical education. Nursing educator competencies were found essential teaching abilities and personal traits. Consequently, Salehian et al. ( 2017) found out that a caring attribute in clinical learning was essential and enabled students *to* safely practice, gaining confidence and competence with frequent interactions with their educators in a conducive clinical atmosphere.

Niederriter et al. (2017) found that a trusting student-teacher relationship is one of the most important aspects of students' learning during a clinical experience. The students were able to relate well with faculty who were approachable, available, clear in expectations, and ready to teach. They too identified coach techniques for their faculty as calmness, patient, student advocate, critical thinker, and constructive criticism. Knowledge was a core in faculty specialty as they said that an effective clinical teacher is one with specialty experience, competence, debriefing, and knowledge.

Nurse educators agreed that being knowledgeable, available, and readily transferring information to students enhanced critical thinking, and transformed them to assist students (Girotto et al., 2019). As clinical facilitators, participants added skillfulness, positive attitude, and supportiveness to influencing learners and staff socialization while in clinical sites (de Swardt, 2019).

Other attributes were teaching ability being rated highly while interpersonal relations were low. These assisted them to perform their teaching role. However, their weaknesses in the delivery of content, and inaccessibility, and unethical (Gangadharan et al., 2016). Consequently, an educator with poor clinical competency exposes competency exposes themself to identity threats as experienced by the participants in this study where problems emerged in acquiring clinical competencies. The educators felt confused and more stressed as a result of a lack of clinical competence. They too felt inadequate as they were unable to meet students' needs (Moghadam et al., 2017).

Despite these attributes in the clinical educator facilitating effective clinical learning, the above literature also highlights some of the pitfalls that made the educators not fully execute learning. Locally, this was highlighted by Bifftu et al. (2018) who found out that interpersonal relationships were poor among faculty as attributed to their character, environment, and technological advancement, which later hindered students learning.

### 2.2.4 Utilization of teaching methods in clinical learning

Undergraduate students learn most of their professional behaviors from their clinical educators and they consider them as the best role models in learning (Gangadharan et al., 2016). Crookes (2015) found out that the participants used clinical simulation as a means of providing a realistic environment for clinical learning. They also used other methods like gaming, art, narratives and story-telling, reflection, and problem-solving. Needless, Phillips et al. (2019) found out that innovation was key. The students in this study preferred an innovative clinical teacher ever challenging, newer strategies use,

and modern ways of skill practice. It improved skill acquisition and made learning memorable and looking forward to the next clinical interactions.

Eyeson (2017) on assessing clinical strategies attested that mentorship and preceptorship through experienced clinical educators were core. This contributed to a conducive clinical site, improved interactions between staff and nurse educators, and promoted student learning. All elements that facilitate learning are based on a variety of methods. The participants in this study were exposed by their faculty to methods from simpler to complex. They became consistent and efficient when skills were introduced systematically. This enabled them to achieve more as they moved from one step to another and year after year. This is reflected in their attitudes too as there was a change in behavior and knowledge at the end of each evaluation (Brugnolli & Benaglio, 2017).

On evaluation, educators who utilized higher levels of skill and knowledge transfer produced highly competent (Reljić et al., 2017). However, de Swardt (2019) attested that educators used simulation mostly while mentioning discussion and debriefing as preparation methods they preferred in clinical teaching and they found them effective too.

Different teaching methods and their effectiveness were evaluated in another study and pre and post-test designs were used by nurse lecturers which included innovative and common methods. The majority of innovative ways were used and they revealed more effective than traditional ones. Also, the objective structured clinical evaluation was found a better option because of the visual clinical interactions with the client. Though students found it tenser educators found it reliable and valid (Lewallen & Van Horn, 2019).

The gaps in the above studies are that majority of them are suggesting what the nurse educators should be used in the execution of clinical learning rather than their exact role in this. Scarce studies in Kenya are recorded, and not fully researched, but in one study by Waweru et al.(2019) learning models were a setback to clinical teaching and learning.

### 2.2.5 Assessment and evaluation

One of the roles of nurse educators is to evaluate students if they have met the objectives. Both summative and formative are used with all the learning domains incorporated and from simpler to complex ways. Subjectively, while the student is learning, knowledge, skills, and attitude are assessed and may include communication, strategies in teaching, type of instrument to be used, behaviors, and critical thinking among others (Lewallen & Van Horn, 2019).

In a study on clinical evaluation, one of the roles of educators was found to be planning and preparing for assessment. These included the methods to be used by that faculty to help improve consistency in judging students` progress. Participants agreed to evaluation as important. However, the current tools used were for observation and no two observations were equal. Giving feedback and grading of students using formative and summative assessment was found inadequate and inappropriately done as students were not communicated to (Eyeson, 2017).

In another study, the educator subjectively assessed practical skills by observing and use of the formulated checklist. It was found that observing them promoted skill acquisition and students passed highly on those specific skills (Hengameh et al., 2015). Evaluation tools used by educators in clinical areas are varied and majorly subjective

using a checklist. Most evaluation tools the study used were standardized comprising five key areas to include appearance, punctuality, students' interpersonal relationship, how they can carry out procedures, and whether they can carry them out scientifically. Responses from the participants suggested that certain components were difficult to evaluate leading to the representation of the student competence (Eyeson, 2017).

Wu et al. (2015) suggested that tools be made more specific and the use of rubric evaluation be adopted but nurse educators thought this needed review as the assessors found it simple and objectivity was minimal. They suggested a scale that tests competency levels to be used and these would enable students to know how they were meeting their objectives. The students further revealed that if their nurse educators are involved to develop the tool, clinical learning would be better.

Engström et al. (2017) on clinical evaluation of undergraduate students, the assessment was conducted against a checklist by the lecturers scoring against the competency under assessment. Various domains were checked and scored which were treatments, management, cooperation, and professionalism on a scale of one to three from low, good, and excellent in relation also to meeting the clinical objectives and competencies. This is done from mid to the end of each placement.

Nurse educators developed a comprehensive evaluation tool called nursing interventions classification with seventy-three indicators divided into nine competencies each. Reliability was achieved by this tool with 100% effectiveness. So, it was adopted as it represented a multidimensional approach to informative and combined assessment (Iglesias-Parra et al., 2015).

Locally in Rwanda, in a study to assess challenges in clinical placements, on assessment and evaluation, educators suggested faculty regularly use skills checklists or clinical logbooks.

This they said would be mandatory because enhances clinical evaluation by nurse educators. This was lacking in their practice (Habimana et al., 2016). Apart from this gap, the literature above highlights the difficulties the educators face in evaluating the different competencies either objectively or subjectively and the solutions to this, which now when implemented by the educators would lead to effective evaluation mechanisms to achieve clinical learning and competency among nurse graduates.

### 2.2.6 Provision of a conducive clinical learning environment

A good learning environment is of the essence to students in the clinical areas. This includes but is not limited to nurse educators and staff being available, approachable, willing, and pleased while dealing with students (Luhanga, 2018). Nurse educators in South Africa stated that in some clinical facilities the numbers of students were overwhelming causing congestion and inability of students to meet set objectives and clinical hours required (de Swardt, 2019).

In Kenya a study on students' perceptions of clinical learning, the majority of students supported an ideal clinical environment if affected will improve their learning especially the duration and length of stay in each placement. Some did concurrently with theory others after theoretical courses thereby influencing learning differently (Wakhungu, 2019). In evaluating clinical learning in undergraduate students it was noted that students were overpopulated thereby competing for learning opportunities in the wards which made students not adequately learn and this demands an available educator on the ground to strategize effectively (Mburu, 2015).

## 2.3 Supportive role of Nurse Educators in clinical learning

Guidance and support for students are vital. Without this, students can be subjected to tension and nervousness, therefore, affecting their clinical learning negatively (Luhanga, 2018).

### 2.3.1 Psychological and social support

Adamson et al.(2018) asserted that a supportive relationship between the educator and learner improves learning outcomes. Jansson and Ene (2016) on supervisor role in Sweden found out that support of nursing students on their practice learning experience enhanced continuity of learning as it enabled them to be independent, responsible, competent, and with improved attitudes. Their behaviors facilitated the learning process leading to an effective preceptor/student relationship.

Luhanga (2018) on the traditional-faculty supervised teaching model, noted that peer learning and support were beneficial. The faculty believed that this provided opportunities to facilitate learning. However, Niederriter et al. (2017) noted that educators must be emulated for the way they personal qualities they possess like professionalism, and socialization among others to effectively support student learning in the clinical areas.

Good communication skills are important in building supportive relationships in learning. If these do not adhere to hinder learning, therefore good relations between the two are key (Adamson et al., 2018).

Despite the role of supervision and support being widely practiced by nurse educators, regionally this has lagged. Kaphagawani and Useh (2018) in Malawi found that this

area was a major concern. The nurse educators only oriented students upon reporting, and only returned to evaluate them at end of the placement. This resulted in the students' dissatisfaction, lack of help when needed, and the supervision being non-individualized, leading to unmet objectives.

Similarly, Muleya et al. (2018) in Zambia on the role of supervision, noted that this was not practiced by the majority of the nurse educators and suggested the provision of support and professional socialization, to improve interpersonal, communication skills, confidence and increase students' reflection thinking, self-evaluation, and decision making. Similarly in Ghana, students reported isolation in clinical areas as the nurse educators did not regularly visit them and their mentors in the wards were too busy leaving them unsupported (Atakro & Gross, 2016).

### 2.3.2 Supervision

The supervisor's role in clinical education is to balance patient care and student learning. Supervisors work with students in clinical learning by planning and overseeing them. In a study on supervisors' role in the clinical setting, educators supervised students by working with them and observing return demonstrations enhancing the personal competence of students and enhancing personalized learning. They allowed them too to work in groups and independently enabling nurse educators to help students meet their objectives promptly (Manninen et al., 2015).

Nurse educators also made care plans and learning plans for learners and patients as per the laid protocols. Supervising students promoted teamwork in the wards and the partnership assisted in facilitating the students' learning and independence. Also, it helped them develop their confidence and understanding more of supporting the students (Omisakin, 2016). Despite this being successful, in Ghana students were not fully supported by

educators and supervision was inadequate, leading to poor application of the nursing process in clinical areas, the inability of students to handle complex medical devices, and complicated conditions (Atakro & Gross, 2016).

Clinical supervisory models when used promote competency among students. In Rwanda, supervisory and preceptor models are utilized. These have promoted real-world clinical learning among students with support and immediate feedback from supervisors. This has resulted in improved student learning (Habimana et al., 2016). Similarly, preceptorship provided independence, technical, emotional, and moral competencies. Knowledge transfer was noted too as students translated what they learned in class into practice (Girotto et al., 2019).

However, in Kenya Waweru et al. (2019) found that clinical models were least used in the supervisory of students. Similarly, in Malawi, the supervisory and support models were suggested (Kamphinda & Chilemba, 2019).

### 2.3.3 Follow up

Eyeson (2017) identified the supervisors' role in follow-up as ward teaching, demonstration, performing a task, and making sure student nurses do the right thing in applying their professional ethics. This means that preceptors and teachers had the responsibility of following up with students to ensure that they acquire the needed skills in performing certain clinical tasks and to ensure that students work at their various units within the stipulated working time.

Akram et al. (2018) in their study on the role of the clinical instructor in nursing education, found out that instructors who were educators were supposed to follow up with students in departments they had allocated them. As they did this, at the end of the rotations, it was

observed that it reduced the theory-practice gap in students, therefore, playing an imperative role in clinical education and skills acquisition. In another study, students with their teachers reported having had a more positive experience with supervisory than those just left to learn on their own among the undergraduate students in Malawi (Kamphinda & Chilemba, 2019).

Follow-up is a mandatory role to clinical educators remains helpful to students, but some of them minimally practice it. On the other hand, Kamphinda and Chilemba (2019) noted nurse educators needed to increase clinical visits to promote student motivation and learning opportunities. The students felt educator's visits were not adequate during the few weeks spent in their placements. They preferred a regular basis to identify solutions to problems and improve their performance and confidence in procedures. The nurse educators did not fully focus on clinical learning and supervisory feedback. Mentors generally said that there was a lack of support from educators. They preferred regular visits to the educators in the clinical environments and their involvement in working alongside students. In Kenya, though follow-up of students is mandatory increased workload and less time allocated to them served as a barrier in facilitating clinical learning (Waweru et al., 2019).

### 2.4 Administrative role of Nurse Educators in clinical learning

The WHO advocates for leadership and administration among nurse educators. Not only in a classroom setting but also in the clinical. Here they are tasked with resource management, managerial positions, and sound ethical decision-making at the same time to maintain professionalism. The ability to develop and maintain these skills is mandatory in clinical settings (WHO, 2016).

### 2.4.1 Developing clinical education guidelines

Clinical guidelines aid in the incorporation of evidence-based practice in clinical sites. Support the integration of evidence-based practice competencies in clinical areas. Clinical nurse educators and nursing staff are involved in clinical care processes like developing guidelines to assist in the orientation, learning, and evaluation of students leading to evidence-based practice and competent graduates (Fiset et al., 2017).

Kpodo et al. (2016) found out that in sub-Saharan Africa that guidelines were developed to guide educators in clinical learning, but the majority were non-utilized. A well-formulated guideline integrates theoretical and clinical placement with a well-outlined roadmap. These include objectives, who support students, when, clinical site, facilitation, planning, support, how the placement will be carried out, timeframe, number of students, evaluation, and feedback. Guidelines served as standards against which the performance was evaluated. In clinical learning programs in SSA, nineteen students were allocated to a single clinical instructor. It was suggested that if more favorable clinical student ratios were implemented they would produce the best opportunity for student learning.

### 2.4.2 Choice of appropriate clinical sites

Choice of a facility is the critical role of educators; it provides essential resources needed for clinical learning. In South Africa, it was suggested that the transportation of the educator and students from college to the placement site be availed by the training institutions. After budgetary allocation to educators, mentors, and clinical sites, the cash is to be given to them promptly. The site should provide conference

rooms and discussion areas, but this was missing and if implemented was meant to enhance clinical learning with the help of the educators (Kgafela, 2013).

Conversely, (Phillips et al., 2019) on clinical teaching found out that students cherished the clinical learning environment of their choice. They proposed an indulgent conducive environment as one where instructors were there for them as it enhanced learning. In communication about students, it was constrained between hospital administration and educators through written means. This led to no formal meeting day before students were done and participants noted that they only met educators when they came to the unit.

Regardless of the choice of the facility is entirely an educator/university role that is too regulated by nursing boards and approval of specific facilities that enhance learning. Sometimes it depends on availability and infrastructure and resources, which limit their full participation as shown in the above studies. In Kenya, a study on clinical faculty participation found that linking nurse educators to the clinical site was a less enabler meaning majority of them were not directly involved in choosing the sites and this affected their participation in clinical learning (Waweru et al., 2019). Also, (Wakhungu, 2019) noted that an effective clinical learning environment would involve a set of activities that included site assignments, preparation for rotations, types of equipment, and duration of the placement. These positively influenced clinical learning as an outcome.

### 2.4.3 Clinical Orientation

Regardless of the clinical setting, and overall orientation to the course expectations a review of skills used frequently in the experiences, and a discussion about

preconceptions and expectations provide students with essential preparation that will enable them to feel confident and prepared for the experience. Student safety during the clinical learning experience is addressed as an administrative issue in all clinical activities too (Oermann et al., 2017).

Educators found out that the unavailability of a planned orientation program contributed to the difficulty in students' first placements. The majority suggested formal orientation course led by educators was important and that an orientation course was essential (Glynn et al., 2014). The above studies have outlined its importance and this is based on agency, site, and student needs. This solely lies on the educator to do prior to and during reporting of the students in the clinical areas with the help of the clinical site management.

### 2.4.4 Planning

Planning is of the essence for nurse educators. (Dağ et al., 2019) found out that ensuring the availability of resources to facilitate student learning is important. Educators need prior visits to the clinical area dependent on the clinical course. The educators suggested the need to have prior arrangements before students' placements. Consequently, they further found out that educators planning for co-supervision need nurse mentors from clinical sites and other staff to effectively reduce their workloads. The majority were responsible for supervising more than one placement, thus more load.

Oermann et al. (2017) identified clinical teacher preparation as vital. Teachers may need additional education, mentoring, and support as they implement clinical learning activities in new and diverse settings. Equally to their students, clinical teachers may

find care settings new to them. They need to prepare students as well as themselves. The provision of specific objectives, learning activities, preparation expectations, activity guides, and written expectations greatly facilitated learning and made the expectations clear. This is especially vital as the faculty member will not be present at the site at all times.

The recruitment of preceptors who are nurses and meet the required qualification should be trained by educators in liaison with the clinical sites. However, this was lacking in SSA, but if implemented enhances current trends in clinical nursing education. It was suggested that if taken into consideration and programs developed would be beneficial to clinical learning (Kpodo et al., 2016). As noted in the literature this improved students learning.

### 2.5 Collaborative role of Nurse Educators in clinical learning

Collaboration acts as a link between the educational institution and the faculty. The partnership of educators and clinical sites is key to meaningful clinical learning as it leads to effective and quality healthcare (Bvumbwe, 2016). Personal benefits would be an outcome, especially to staff to include knowledge and practical skill acquisition and improvement, socialization, knowledge sharing with partners, skill training, competence in service delivery, and organizational benefits (Rakhudu et al., 2016).

#### 2.5.1 Utilization of collaborative forums

In this role, the nurse educator is attached to the clinical site to oversee student learning according to the agreement by the facility. Educators guide and work with mentors and their students for the achievement of the objectives. But in Nigeria, there

was role conflict regarding nurse educators' role in collaboration as they felt this was a duplicate of their duties (Omisakin, 2016).

In the UK, the collaboration model was well implemented and undergraduate students were given support, mentorship, and peer guidance by nurses and other health professionals, as also senior students in clinical sites. Improved learning outcomes were witnessed (Health Education England, 2019). Preceptorship enabled students to be attached to the same preceptor throughout that placement and they worked together from orientation till assessment and evaluation. Educators reported improved competencies in students and meeting objectives (Wu et al., 2015).

In Uganda, a study found that partnership between nurses on the wards and nurse educators is important as nurses need support to execute their clinical teaching role of undergraduate students. Insufficient support through collaboration was noted and the study suggested; continuous staff professional development, nurse educators working in clinical sites on most occasions, and stopping hesitancy of nurses and learners so that enhance clinical learning would be enhanced (Drasiku et al., 2020).

### 2.5.2 Feedback to preceptors, institutions & students

Feedback from students, preceptors, institutions, and educators is paramount as it promotes the evaluation of clinical learning. Nurse educators who had a strong collaborate with the nursing staff in sharing their goals and objectives promoted students' practices (Kamphinda & Chilemba, 2019). Thereby, Wu et al., (2015) on feedback, found this critical as it promoted continuous learning and improvement of skills. The educators were able to teach preceptors how to go about students/own weaker areas, which enhanced competitiveness, and at the same time staff improved their preceptorship skills..

When mentors and educators liaised to give feedback to students, it facilitated positive clinical outcomes (Pollock et al., 2016). Consequently, this enhanced students gaining competence in their skills and as a result acted as a link to shared responsibility for clinical learning (Adamson et al., 2018).

However, in some instances, it has been a challenge for some nurse educators. A local study revealed nurse educators did minimal feedback to students, same to their preceptors and this created low morale in the students' clinical learning. The majority of them felt it was only done late during clinical assessment and evaluation and not during the entire placement (Mburu, 2015).

### 2.5.3 Improvement of communication between educators and placement sites

Communication and partnership are of the essence in students' clinical learning. Farzi et al. (2018) found that this positively impacts clinical learning. Participants said that working together fearlessly, accountably and without pressure from the clinical sites and environment enabled students to relax and alleviate their uncertainties, and reduction of theory to practice gap. Dağ et al. (2019) found a collusive interdependence between the partnership of educators and clinical sites, especially in SSA. It led to better planning and implantation of the placement program together. Another was the use of clinical site resources by students and the benefits of facilities being able to offer employment opportunities to the nurse graduates thereafter.

Consequently, impaired communication can lead to poor student outcomes. Educators were found to be ineffective in this with their partnering institutions in this study seemed to fulfill their role modeling responsibility as perceived by student nurses and themselves, however, their communication with stakeholders on student

matters was ineffective. Conversely, staff nurses due to this felt belittled (de Swardt, 2019). Therefore, communication in partnership is key in enhancing clinical learning as outlined above as stakeholder involvement provides a conducive environment for learning.

### 2.5.4 Assessment and evaluation

Assessment and evaluation require partnership from both parties involved as the process of clinical learning are multifaceted (Wu et al., 2015). Reljić et al. (2017) on the assessment of clinical nursing competencies found that collaboration encouraged faculty to have a plan for the tools to be used, consider the assessment environment and culture, and resources needed, and adhere to national bodies' guidelines. This further made them allowed by their council to develop their tools in collaboration with the relevant bodies in Slovenia.

BSN recommended clinical assessments for mid and intra-clinical experience so that students can be given timely feedback to enable them to work towards improving in their weaker areas. The students were debriefed on how they were performing. The assessors worked in teamwork and collaboration to give the students the feedback required. At the end of the placement, the students provided an evaluation of the placement and the educators and mentors used the report to make adjustments toward students' performance thus enhancing evidence-based practice. This implementation has been effective (Board, 2017).

Despite, collaboration in the evaluation of students in clinical areas being important, there is scarce literature both locally and regionally. It is the major role of the educator to plan with the clinical site to evaluate and assess students objectively and subjectively for better outcomes in clinical learning.

## 2.6 Theoretical Framework

Clinical learning models are categorized into social presence, content, and context. In social entails the people who interact to make clinical learning possible and includes students, clinical, and staff. Content is the method used for learning and context is the setting where learning takes place (Newton & Ashby, 2019).

In this study, the Community of Inquiry (COI) framework was used as it covers all three aspects mentioned above. The COI theoretical framework by John Dewey in 1938 and as cited by (Garrison et al., 2001) for optimizing learning environments. The COI has been applied by various researchers and educators in teaching and learning in clinical areas. It improves learners' participation in learning in both traditional and modern methods thus guiding educators in instructional design, implementation of teaching strategies, improving clinical judgment, competence, and problem-solving in achieving educational experience, and prediction of course outcomes among others. The framework promotes reliability, efficacy, and generalization (Smadi et al., 2019; Van Graan & Williams, 2017). However, it also has its setbacks teaching presence is dependent on cognitive and social presence, and differences in the influence of disciplinary effects on course outcomes especially the pure and applied sciences.

Educators use the COI model to design and guide student learning activities to achieve their educational experience through collaborative, supportive discourse, climate setting, and content selection. The framework is a collaborative model with three interdependent elements: cognitive, social, and teaching presence. All these components are achieved in a learning environment and this study the clinical areas in the following three components.

### 2.6.1 The Cognitive presence

This is the construction and application of knowledge, sustained communication, and curiosity manifested through the four phases of an event exploring, integrating, and resolution. Learners in clinical sites can engage with the content they learned in class. The intellectual environment necessary for the development of student learning is also evident (Garrison et al., 2001). The nurse educator utilizes various forms of clinical teaching methodologies like critical thinking, and reflective journals to teach and evaluate skills learned and attained by learners in this study to achieve this.

The four phases in this study were utilized to attain relevant skills by students as the nurse educator plans for clinical learning activities. In triggering of an event, the student is helped to be able to recognize a problem/need in patient care. Exploration, the educator helps students in brainstorming, and intuitive analysis and exchange of ideas with others. Integration, the student can come up with solutions or synthesis of information about the problem at hand. Finally, resolution, where the student can apply the skill and the lecturer, can evaluate and give feedback at this level.

### 2.6.2 The Social presence

This is the student's ability to actively participate in their learning (Garrison et al., 2001). The learners, educators, and clinical staffs work together collaboratively for effective learning and healthcare resulting in quality education and professional development (Padilla & Kreider, 2018). Mills et al. (2016) emphasize social presence as learners can enjoy consistent interaction with the educators while in the clinical site, and clarity and feedback are immediately enhanced. Communication was easy as the lecturer was approachable and accessible. Students when guided, supported, and

engaged, meet objectives without difficulty. Therefore, nurse educators in this study can apply this by incorporating strategies to facilitate social presence in students, such as promoting an amicable, friendly environment with mutual respect and trust, thereby attaining competencies and mastery of skills and positive attitudes enhancing clinical learning. This ensures that there is constant instillation of communication skills in students. These are achieved in their teaching, collaborative, and supportive roles as outlined above in literature.

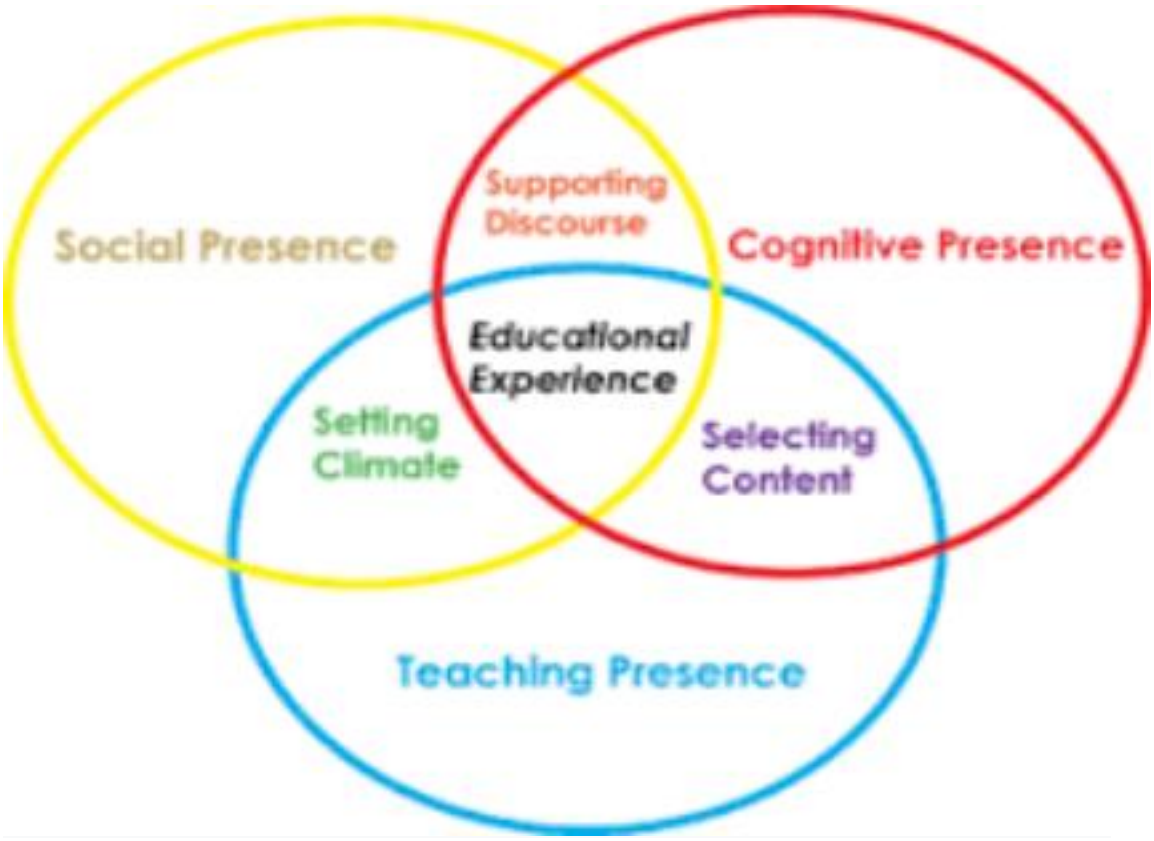
### 2.6.3 The Teaching presence

This is designing, facilitating discussions, organizing, and overseeing learning. This involves engagement with goals or the direction of the course objectives (Garrison et al., 2001). The teacher formulates learning objectives based on student's needs and plans clinical learning. Also assign students or preceptors some learning activities. The role of the teacher is to assess the efficiency and effectiveness of the learning activities rather than to lead students (Padilla & Kreider, 2018).

The nurse educators' role in this study was to design and implement all the activities in clinical teaching as outlined in the literature above. The designing of goals and objectives of the clinical educational experience, and selection and presentation of content. Facilitating collaboration among peers, mentors, preceptors, and institutions to enhance clinical learning too. They are supposed to direct instruction, assess, evaluate, and give feedback to students. Through this consequently, nurse educators meet their role in collaboration, administration, teaching, and supporting students' clinical learning. This at the end of the placement ensures the students achieve their clinical goals and objectives and attain the competencies in skills required.

**Figure 2.1**

***The Community of inquiry framework***




Note. This figure was produced from the three categories of clinical models: "Critical thinking, cognitive presence, and computer conferencing in distance education" by Garrison et al. (2001).

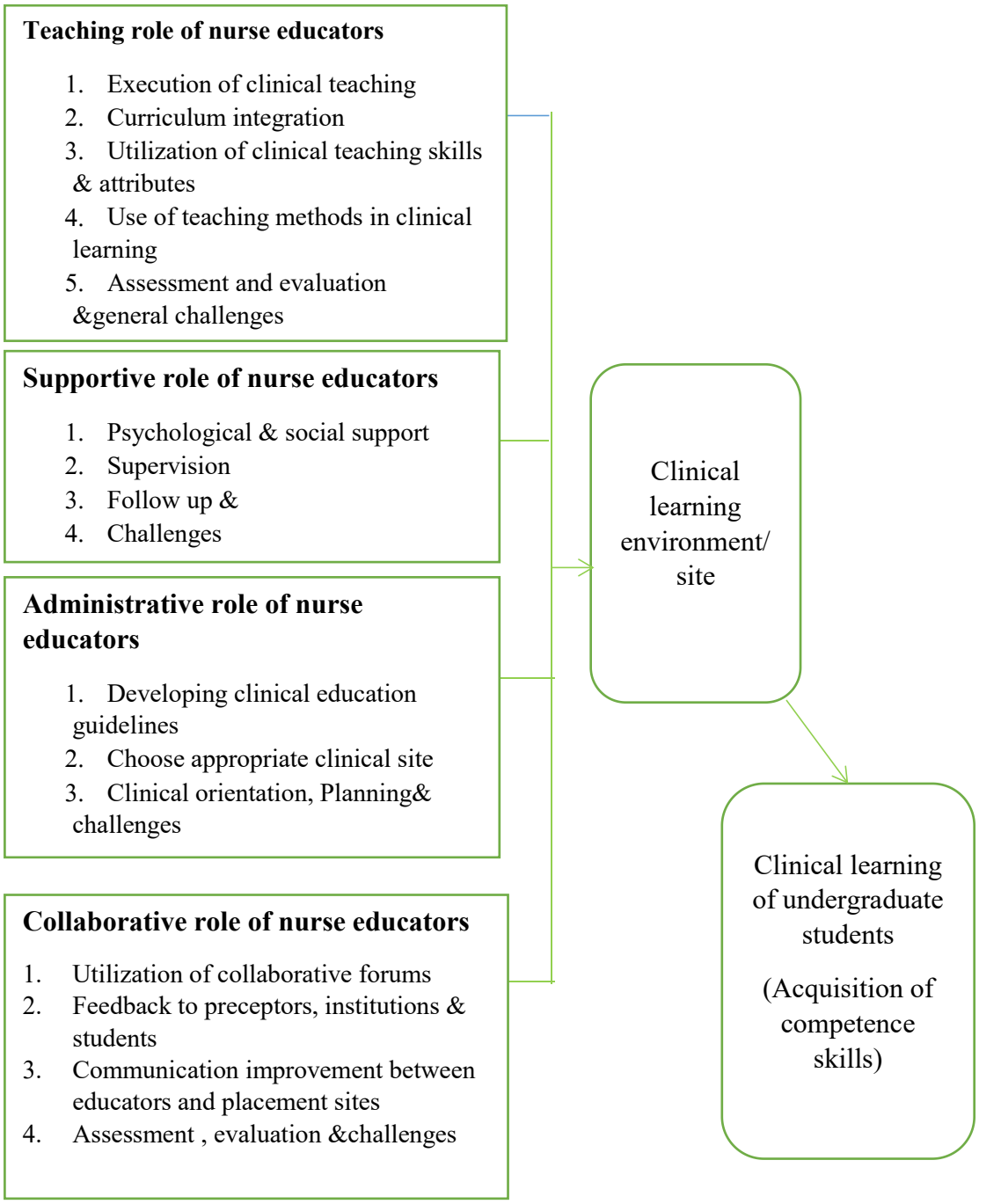
## 2.7 Conceptual Framework

The conceptual framework below was adopted from the literature review above. All three variables affect each other. The independent variables are the different activities that the nurse educator performs to achieve clinical learning of undergraduate students. They include teaching, support, administration, and collaboration. These affect the dependent variable which is the nursing students' clinical learning by directly influencing students' competencies in clinical areas which are measured during each

clinical placement by assessment and evaluation of their clinical skills. The intervening variable acts as a link between the two variables. It is the clinical learning environment and site in which students indulge and interact for both roles of the nurse educator to be achieved and the student acquires skills, knowledge, and attitude.

**Figure 2.2**

***Conceptual framework***



# CHAPTER THREE: METHODOLOGY

## 3.1 Introduction

The methodology consists of the research philosophy, design, study site, population, sample size determination, sampling technique, tools, the data collection process, validity and reliability of instruments, data analysis, and presentation. It also contains ethical considerations and dissemination of the results.

## 3.2 Research Philosophy

This is a belief about how data about a phenomenon is to be gathered, analyzed, and used. Positivism philosophy by Auguste Comte (1798–1857) was adopted in this study. It is a philosophical theory characterized by an emphasis on science and the scientific method as the only source of knowledge. It limits knowledge that can be observed, and tested and causal relationships are established between facts.

The four components of positivism were utilized in this study (Green, 2017). First is ontology which is knowledge of being, it entails social reality or naturalism. Secondly, is epistemology which is the field of knowledge related to the theory of knowledge, scientific knowledge was sought in this study. It also includes the researcher and the participants who are independent as pertains to the source and nature of information being sought. Then, the methodology included qualitative and quantitative data collection and analysis. The fourth is the purpose and, in this study, it was to predict and explain facts from results.

In its application in this study, the research design was from the preset procedure and standardized with specific aims and a random representation of the sample. The reliability or representativeness of the sample was based on probability sampling thus stratified random sampling. Other concepts were the objectivity of this study whereby some objectives represented the variables of the study and hoped to have a social

impact on clinical nursing education. Others were structured of tools i.e. questionnaires and interviews were used, and the mixed methods of data analysis of both qualitative and quantitative. The social impact on policy development was achieved through quantitative data because of collecting empirical information to highlight the social problems in clinical nursing education. Ethically, in the data collection process, social reality was considered in the administration of tools, consent, permission, and authority beforehand. All these set procedures were stated in the relevant areas of this methodology.

### 3.3 Study design

The design was descriptive cross-sectional and Zangirolami-Raimundo et al., (2018) define this as a type of strategy which allows the researcher to integrate the different components of the study logically to be able to address a research problem. Mixed methods of data collection by use of internet-administered questionnaires and interviews were used to describe how, when and why clinical learning took place Quantitative and qualitative data were collected as a result of this. The study took place over a short period and was able to answer questions and describe at the moment, possible behaviors, relationships, and characteristics, which were the roles of the participants in clinical learning at the given point in time.

### 3.4 Operational definition of variables

Variables are characteristics that vary, according to Creswell and Creswell, (2017), the dependent variable reflects the cause-effect of independent variables, independent influence, and affect outcomes and intervening is theoretical and links independent and dependent variables. In this study independent variables will be:

i. **Administrative roles**: they were planning, developing, and executing clinical activities including how they plan for resources, access to clinical site and environment, the orientation of students, and challenges faced by clinical nurse educators.

**ii. The collaborative role** is activities by which clinical nurse educators engage in a partnership with clinical institutions for the clinical education of undergraduate students. They were measured by communication and cooperation with preceptors, an organization for partnership learning forums assessment and evaluation, giving feedback to both, and challenges encountered.

**iii. The collaborative role** is activities by which clinical nurse educators engage in a partnership with clinical institutions for the clinical education of undergraduate students. They were measured by communication and cooperation with preceptors, an organization for partnership learning forums assessment and evaluation, giving feedback to both, and challenges encountered.

**iv .Supportive role**: are tasks the nurse educators do when they supervise students in clinical placements. They were measured by psychological and social support, supervision, follow-up of students and challenges they encounter.

**v. Teaching role**: Tasks nurse educators undertake to the identification of undergraduate students' clinical needs, and outcomes, plan activities, guide, and evaluation of learning. This was measured in this study by how the educators execute clinical teaching by how they accomplish the processes of clinical teaching, curriculum integration, use of clinical teaching skills & attributes use of specific teaching clinical strategies, assessment, and evaluation of students, and maintaining a clinical learning environment and challenges therein.

**Intervening variable** reflected the learning site environments where clinical courses are available, and conducive, with standardized resources for students' educational experience to

occur. The nurse educators ensure this is met by collaborating with the university, facility, staff, and resources for nursing learners to accomplish learning.

**Dependent variable** was clinical learning in undergraduate nursing students. After nurse educators accomplish the above roles, there is an integration of theory to practice. The outcome is, imparting knowledge, and a positive attitude to inform the students' practice and competency in skills for the provision of effective quality nursing care by nursing students/graduates.

### 3.5 Study Area

The study involved the seven universities that take their students at KNH for various nursing clinical courses. Currently, KNH has seven universities that take their students for the specified clinical attachments to including: The University of Nairobi situated in Nairobi County, Kenya Methodist University in Nairobi and Meru County, Jomo Kenyatta University of Science and Technology in Kiambu County, Amref International University in Nairobi County, the Catholic University of Eastern Africa in Nairobi County. Kenyatta University in Nairobi County, and Kabarak University in Nakuru County. The data collection was done at the schools/departments of nursing.

The Kenyatta National Hospital is located in Nairobi County on Hospital road, 3.5 kilometers west of Nairobi city's central business district. It is the largest national referral hospital in Kenya and approved by the Nursing Council of Kenya as the largest clinical learning site for undergraduate students. This making it ideal an ideal referral site for this study because it offers almost all the nursing clinical courses at once and accommodates a large number of students and lecturers, making it representative.

The clinical courses are varied and range from medical-surgical, midwifery, nursing education and administration, and special nursing units. Students are allocated in the sites by the nursing education and standards department. The department does not have a framework to follow students up so universities are required to have their lecturers regularly following up with their students in clinical areas. All the undergraduate sites currently were five to including: medical, surgical, maternity, pediatrics, and special units. Each site at any given time covers a minimum of ten undergraduate students from the above universities at any given time due to Covid -19 restrictions.

### 3.6 Target Population

This represents a whole group of subjects under study. All nurse educators from universities that take students at Kenyatta National Hospital for clinical placements, as per the current updated Memorandum of Understanding, a total of ninety-three. Also, students were included, all undergraduate nursing students, seventy of them who were at KNH that given time from all the universities. They were to provide in-depth information.

### 3.7 Study population

As a subset of the target population, they were the nurse educators from seven universities directly engaged in the follow-up of undergraduate nursing students currently or six months prior, and a total of eighty-two were selected. Undergraduate nursing students were in their third year who was available at the university on clinical placement and fourteen of them were selected because of Covid-19 restrictions.

#### 3.7.1 Inclusion criteria

Nurse educators currently supervising / supervised students over six months ago in the clinical areas and undergraduate nursing students in their third year available at the

university /or six months prior in clinical placement. Both nurse educators and students consented to the study.

### 3.7.2 Exclusion criteria

Nurse educators indirectly involved in clinical learning like the deans, unavailable students affected by the Covid-19 restrictions, and non -consenting nurse educators, and undergraduate third-year nursing students were excluded.

## 3.8 Sample size determination

A sample is individuals for a study chosen from the target population. Among the ninety-three nurse educators, those who follow their students at KNH were eighty-two. The Census method was used and all 82 nurse educators selected Kothari and Garg (2019)who said that complete enumeration of subjects helps in avoiding sampling errors and the ability to collect detailed information. This was a homogenous sample as only nurse educators who had their clinical courses undertaken at KNH were chosen.

For the undergraduate nursing students, they were purposively selected from the monthly average of seventy in the year 2020 (nursing standards and education department at KNH), and two students from each university were conveniently selected to make a sample of fourteen students according to availability because of the Covid-19 restrictions in institutions. This was so as the hospital had limited student numbers to less than half. Kothari and Garg (2019) advocates for this because of convenience purposes.

## 3.8 Sampling technique and procedure

This involves choosing the individual to whom to carry out the study to ensure representativeness and randomization (Creswell & Creswell, 2017). Mixed methods were utilized in this study as follows:

### 3.8.1 Quantitative

For the nurse educators, the method used was stratified random sampling, the strata being the universities offering nursing and sampling frame, the departments /schools that take their students at KNH for undergraduate clinical learning. Purposive sampling was then used as only nurse educators with clinical courses at the study area were selected.

**Table 3.1**

***List and number of Nurse Educators from universities with students at KNH.***

| No. | Name of University/Strata | Population of nurse educators | Stratified Random sampling | Sample size |
|---|---|---|---|---|
| 1. | University of Nairobi | 16 | 16/93x 82 | 14 |
| 2. | Kenya Methodist University | 13 | 13/93x82 | 12 |
| 3. | Jomo Kenyatta University of Science and technology | 16 | 16/93x82 | 14 |
| 4. | Amref International University | 8 | 8/93x82 | 7 |
| 5. | Catholic University of Eastern Africa | 6 | 6/93x82 | 5 |
| 6. | Kenyatta University | 18 | 18/93x82 | 16 |
| 7. | Kabarak University | 16 | 16/93x82 | 14 |
| | **Total** | **93** | **82** | **82** |

**Source –Chair of Departments in the Universities**.

A list of nursing educators was obtained from their respective Deans and a list from number one to ninety was generated as per the above sampling frame and strata. Deans too provided the educators whose courses are not offered at KNH, they were eliminated remaining with the 82. A list was then generated from each university until the sample size was reached and their e-mails and mobile phone numbers were provided.

### 3.8.2 Qualitative

Convenience sampling for the students who were available in school, and on/after placement at KNH in the clinical sites at the time of the study was utilized. Two

students from each university were selected based on their availability and from the list of their nurse educators. They took part in in-depth interviews. Their e-mails and mobile phone numbers were obtained. This was because of the Covid-19 restrictions at the clinical and data collection sites, and until saturation was reached.

### 3.9 Instrumentation

This is a tool to get, measure, and analyze data from the participants and this is according to the type of study being conducted to include quantitative, qualitative, or mixed-method (Creswell & Creswell, 2017).

#### 3.9.1 Tools

The study utilized an internet-administered questionnaire for nurse educators to obtain both quantitative and qualitative data. The questionnaire for nurse educators consisted of open and close-ended questions where quantitative and qualitative data were obtained. It was programmed on Google link. It had five sections including section A, socio-demographic information of the educators, section B their teaching role, section C supportive role, section D administrative, and section E collaborative role and challenges. The items were aligned according to these roles.

A phenomenological approach was used, and thus a structured interview guide for the students was utilized to obtain qualitative data. This was according to the variables under study to understand the meaning participants place on roles being examined by relying on their perspectives to provide insight as key informants. It obtained information on how educators carry out their clinical roles. A list of questions under relevant applicable variables was developed as outlined in appendix III.

### 3.10 Pretesting

Pretesting is preliminarily done on the research tools to measure their validity and reliability (Creswell & Creswell, 2017).

### 3.10.1 Validity

Face validity was done whereby the study instruments were availed to the two supervisors who evaluated them and ensured they captured the variables under study. After that, a psychometrician checked for common errors like double-directed, confusing, and leading questions. The unclear items were reviewed and adjustments were made before the final tools' construction.

### 3.10.2 Reliability

The pretesting is done to ensure the tool yields the same results even after the repeated test. Field pretesting was done on seven nurse educators each from the seven universities who had not had their courses in KNH for one year via email. For the interview guide, two of their students in their fourth year were on placement at KNH a year ago, 10% of the sample size was used. Then, the Cronbach alpha, the coefficient was used as a measure of internal coefficient, checking the correlation between questions loading onto the same factor. It was set at 0.70 at alpha =0.05, the significance level of confidence is acceptable, and was at 0.75, adjustments were also made accordingly to improve reliability.

## 3.11 Research Assistant

There was the training of one research assistant before data collection. A nursing officer from one of the wards at KNH with a master's degree in nursing was purposively selected. This was because she assists in student supervision, teaching, and assessing undergraduate student nurses. She was trained by the principal researcher for one day on the information of the topic under study, recruitment of participants, how to administer the data collection tools, notes taking, recording, and organizing data during collection.

### 3.12 Data Collection Methods

These are means of obtaining and analyzing data to answer questions under study after evaluating the outcomes focusing on the problem and the objectives (Zangirolami-Raimundo et al., 2018). This is achieved by both quantitative and qualitative collection.

#### 3.12.1 Quantitative

After obtaining permission and authority from relevant institutions as outlined in the ethical consideration framework, a list of the generated numbers based on each university as stated above was adopted. Through their Dean or Chair of the department, their e-mail addresses and phone numbers were provided. Consent was obtained from the e-mailed questionnaire. Also, the departmental WhatsApp groups were utilized according to each universities preferences and the questionnaire link was sent to their groups where they were filled and submitted online. Each university was allocated a week, and email and WhatsApp reminders were weekly for those who had not participated till the third week. The fourth week was allocated for checking if all universities and participants had returned their questionnaires. The timing filling each was 20-30 minutes.

#### 3.12.2 Qualitative

After ethical clearance, approval, permission, and authority were obtained students' interviews were commenced during the second month. The relevant university through their deans or chair of departments down to the nurse educators was requested for a list of students on their clinical placement based on master rotations. Two names were randomly chosen with the help of their clinical instructors on rotation/prior. Their phone numbers were availed and the agreed date, time, and venue or/location were booked in their conference room or availed place. Informed consent was obtained both written and verbal from the students on the

interview day. They were informed of audio recording and information confidentiality. The time was twenty to thirty minutes from Monday to Friday until all seven universities were reached. Strict observation of Covid-19 protocols was followed in include temperature check and handwashing, having a 3 -ply face mask on, and a physical distance of 1.5 meters observed.

### 3.12.3 Data editing, cleaning, and storage

Qualitative data from interviews were audio-recorded and notes were taken and then transcribed into written data. After this, the researcher reviewed, organized, and read through the written data. Initial coding and theme development were then done. Participants checking for accuracy of the perception was done during the process too. Review of data and refinement of categories and themes was ongoing until the researcher's satisfaction. The notebooks, audio recorder, and computer were kept by the researcher.

Quantitative data for questionnaires were checked for completeness before and after filling to minimize errors. Online editing was done on the excel sheet to reduce inaccuracies preventing any flaws. Collected data was stored in the computer, email, and google documents that were only accessible by the researcher.

## 3.14 Data Analysis and presentation

This was done in two phases both qualitative and quantitative.

### 3.14.1 Quantitative Data

#### 3.14.1 Quantitative Data and Qualitative data

The analysis of descriptive quantitative data was done by Statistical Package of Social Sciences (SPSS) version 24 where descriptive statistics such as statistics of means, standard deviation, frequencies, and percentages were obtained. Inferential statistics of binary logistic regression by Odds ratio to determine the effect of the variables on each other was utilized. The p-value was set at $<0.05$ level of significance to estimate the clinical learning outcomes

of the undergraduate nursing student, the educators were rated by a binary variable with 1 as competent and 0 as not-competent. Quantitative data obtained was then presented on tables, charts, and graphs. Qualitative data themes were extracted and categorized thematically after coding, reading, re-reading, and presenting through narratives.

## 3.15 Ethical Considerations

The Kenya Methodist University's Postgraduate department through its Scientific Ethics and Review Committee gave authority, ethical clearance, and approval. Also, UON/KNH research committee gave ethical clearance and approval. The National Commission of Science Technology and Innovation (NACOSTI) provided a research permit and thereafter permission from the County Government of Nairobi and all the above universities and nurse educators were granted permission too.

Participants were requested for online written informed consent via email as outlined in Appendix I. The study purpose, procedure, risks, and benefits were explained beforehand too. Voluntary participation was ensured as no coercion of participation was enforced, they were informed that they could decline, withdraw or abandon along the way with no negative impact placed upon them. No enticements were given to participants too. Confidentiality and anonymity were assured through the use of codes and no names. The researcher ensured the data was secured by a password in the computer and inaccessibility of the audio. They were informed that the collected data will be destroyed after two months of completing the studies. To ensure privacy, booked venues for interviews inside the university's conference rooms or offices with convenient timings for participants were done. Academic integrity was adhered to by the researcher following research ethics and values like respect, fairness, and legality in the dissemination of results, and ensured copyrights. Misconduct was avoided by ensuring the work was subjected to anti-plagiarism by the University's library and no piracy was practiced. Professionalism during the entire research process was too practiced by the researcher.

### 3.16 Data Dissemination

The findings from this study were disseminated in the relevant institutions as follows: The ethics committees of Kenya Methodist University Ethics and NACOSTI. Publication of the thesis in peer-reviewed journals. Also presentations in journals and seminars, workshops, and scientific conferences. The findings were relevant to universities schools of nursing, nursing faculty, KNH, and the Nursing Council of Kenya.

# CHAPTER FOUR: RESULTS AND DISCUSSION

## 4.1 Introduction

This chapter describes both qualitative and quantitative data of the study results, interpretation, presentation, and discussion as per the four objectives under study. The study response rate was 92.7 % representing a sample of 76 nurse educators. This was attributed to the fact that the questionnaire was programmed on Google forms and links were sent to educators through emails and on their WhatsApp platforms.

## 4.2 Social-Demographic Characteristics of Participants

The mean age was 43.3 years (SD: 6.27) with the youngest educator being 28 years and the eldest being 58 years. There were 60 (78.9%) female and 16 (16%) male nurse educators, of whom slightly more than half 40 (52.6%) were Ph.D. holders and the rest Masters. In terms of classroom and clinical teaching experience, the minority of the educators had practiced less than 7 years with 23(30.3%) and the majority 53 (69.7 %) having more than 8 years of classroom experience and teaching experience respectively. On the nursing clinical course teaching, 39 (51.3%) were teaching medical-surgical nursing, nursing administration 26(34.2%), 16 (21.1%) teaching methods, and 27 (27.6%) pediatric nursing. The summary is presented in table 4.1.

**Table 4.1**

***Background Information of Nurses Educators***

| Variable | Frequency (n) | Percentage(%) |
|---|---|---|
| **Gender** | | |
| Male | 16 | 21.1 |
| Female | 60 | 78.9 |
| **Education** | | |
| Masters | 36 | 47.4 |
| PhD | 40 | 52.6 |
| **Classroom experience in nursing education** | | |
| 0-3 years | 6 | 7.9 |
| 4-7 years | 17 | 22.4 |
| 8-11 years | 23 | 30.2 |
| 12-15years | 18 | 23.7 |
| 16 years and above | 12 | 15.8 |
| **Clinical teaching experience** | | |
| 0-3 years | 6 | 7.9 |
| 4-7 years | 15 | 19.7 |
| 8-11 years | 27 | 35.5 |
| 12-15years | 16 | 21.1 |
| 16 years and above | 12 | 15.8 |
| **Nursing clinical course/courses teaching** | | |
| Medical-surgical nursing | 39 | 51.3 |
| Midwifery | 14 | 18.4 |
| Teaching methods | 16 | 21.1 |
| Nursing administration | 26 | 34.2 |
| Community Health Nursing | 8 | 10.5 |
| Pediatric Nursing | 21 | 27.6 |
| Critical Care Nursing | 4 | 5.3 |
| Others (Research, Biostatistics, Pharmacology, Mental health) | 26 | 34.2 |

### 4.1.1 Inferential statistics on the effect of Social-demographic Characteristics on students' clinical learning

The study estimated the factors affecting clinical learning outcomes on social-demographic characteristics. The result showed that clinical course taught and classroom experience did not have a significant effect on clinical learning outcomes though they had higher odds of more than 2.0. The Ph.D. level (p=0.046) was significant with a higher odds of 2.3 times having more competent nurse graduates compared to master's level nurses as presented in the 4.2 table.

**Table 4.2**

***Effect of social-demographic characteristics on clinical learning outcomes***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | **Not Competent** | **Competent** | |
| **Social-demographic Characteristics of participants** | | | | |
| Age level | <40 Years | 20 | 30 | 0.5 (0.18-1.29), 0.144 |
| | >=40 Years | 14 | 10 | Ref category |
| Education Level | PhD | 14 | 26 | **2.3** (1.92-5.89)**, 0.046** |
| | Masters | 20 | 16 | Ref category |
| Classroom experience in nursing education | 0-3 | 4 | 2 | Ref category |
| | 4-7 | 8 | 10 | 2.5 (0.36-17.54), 0.357 |
| | 8-11 | 10 | 12 | 2.4 (0.36-16.14), 0.368 |
| | 12-15 | 8 | 10 | 2.5 (0.36-17.54),0.357 |
| | >=16 Years | 4 | 8 | 4.0 (0.49-32.43), 0.194 |
| Clinical Teaching experience | 0-3 | 4 | 2 | Ref category |
| | 4-7 | 6 | 10 | 3.3 (0.46-24.37), 0.236 |
| | 8-11 | 14 | 12 | 1.7 (0.26, 11.18), 0.573 |
| | 12-15 | 6 | 10 | 3.3 (0.46-24.37), 0.236 |
| | >=16 Years | 4 | 8 | 4.0 (0.49-32.43), 0.194 |
| Nursing clinical course/courses teaching | Teaching methods | 12 | 10 | 0.57 (0.209-1.577), 0.278 |
| | Nursing administration | 4 | 10 | 2.3 (0.66-8.34), 0.189 |
| | Medical surgical | 18 | 14 | 0.44 (0.17-1.13), 0.090 |
| | Community Health | 6 | 10 | 1.46 (0.47-4.56), 0.516 |
| | Midwifery | 6 | 8 | 1.1 (0.34-3.57), 0.876 |
| | Pediatric | 12 | 8 | 0.43 (0.15-1.23), 0.117 |

## 4.3 Nurse Educators Teaching Role in Clinical Learning of Undergraduate Nursing Students

In this role, the respondents both the nurse educators and undergraduate nursing students gave responses on whether clinical learning is planned, how planning is achieved, integration of theory together with practice, and orientation. Also, the

teaching methods, skills and attributes of the educators, assessment, evaluation and feedback are presented. Results were all integrated into tables 4.3,4.4, and narrations.

### 4.3.1 Planning and integration of theory into practice

On the type of planning the results showed that all the nurse educators plan for their clinical teaching with 74 (97.3%) planning for evaluation, 69 (90.8%) participating in goal and objective setting and implementation, and 48 (63.2%) participating in the choice of course. In terms of integrating theory into practice, the result shows that 51 (67.1%) of the nurse educators report students completing theory in one semester and then going to clinical areas and 26 (34.2%) reported that students do both theory and clinical work in the same semester. The summary is presented in table 4.3.

### 4.3.2 Planning and participation in orientation for clinical teaching

The majority of nurse educators 69 (90.8%) participate in the planning and orientation of students before clinical placement by setting orientation for students 52 (68.4%), sharing objectives 64 (84.2%), and through communication and visiting clinical sites 55(72.4%). Of those that do not participate in the planning and orientation of nurses 8 (10.5%) reported it's done by the clinical instructor as educators termed this time-consuming. The summary is presented in Table 4.3

Results from in-depth interviews among students support responses from nurse educators. Excerpts of the interviews were*: "Our teachers give us the clinical objectives for that entire rotation to report with them on the wards (Respondent 1) and "our lecturers share with us during the clinical orientation at school a week before reporting and give us the log book which contains all objectives for all rotations (Respondent 2).*

Whether educators involve students during planning responses revealed that not all students are involved. Some of the responses students said include "*Before reporting we normally do courses in class and skills lab, and then there is a road map we follow. After we report to KNH Lecturers don't take us through clinical teaching during placement they only come at*

*end of placement if there's an assessment that week for a few minutes to tell us what is expected of us (Respondent 8).* Those who argued against involvement argued that educators plan and involve the students: *"No planning with them after reporting but before while in school they inform us through a rota when we intend to do our clinical placements. When we report, they come when assessments are due. No comprehensive teaching" (Respondent 13).*

**Table 4.3:**

***Nurse Educators participate in the planning and orientation of students before clinical placement***

| Variable | Frequency(n) | Percentage (%) |
|---|---|---|
| **Do plan for their clinical teaching** | | |
| Yes | 76 | 100 |
| No | 0 | 0 |
| **Planning done by nurse educators for clinical teaching** | | |
| Choice of course | 48 | 63.2 |
| Goal and objective setting | 69 | 90.8 |
| Implementation | 69 | 90.8 |
| Evaluation | 74 | 97.4 |
| Assessment | 2 | 2.6 |
| **How educators integrate theory into clinical practice** | | |
| Students complete theory in one semester then go to clinical areas | 50 | 65.8 |
| They do both theory and clinical in the same semester | 26 | 34.2 |
| **Participation in the orientation of your students before clinical placement** | | |
| Yes | 69 | 90.8 |
| No | 7 | 9.2 |
| **How nurse educators participate in the planning and orientation of students before clinical placement** | | |
| Setting orientation for students | 52 | 68.4 |
| Training | 45 | 59.2 |
| Resource provision | 37 | 48.7 |
| Communication | 58 | 76.3 |
| Sharing objectives | 64 | 84.2 |
| Clinical site | 55 | 72.4 |

*Note***.** Nurse educators gave multiple responses on how they plan and participate in orientation

### 4.3.3 Teaching methods, models, and attributes

The results for these are summarized in table 4.4 collectively. The clinical teaching methods applied by nurse educators include demonstration 70 (92.1%), case study 65(85.5%); nursing care plans 65(85.55); group discussion 62(81.6%), portfolios 17(22.4%) among others as summarized in table 4.4 On teaching methods, models and attributes, for those students whose lecturers come to work with them on the wards had the following to say:

*We do demonstrations, and case presentations, they guide us through procedures, and group presentations of our patients (Respondent 1)*

*We do clinical procedures common in the wards to sharpen our skills, we discuss patient management, and we do nursing care plans (Respondent 6)*

*They guide us to do delivery, physical assessment of newborn and adult patients, wound dressing, and common procedures in the wards (Respondent 10).*

The educators who seldom went to see students, students had this say: *We do own initiative learning as we look at objectives and ask the staffs we work with on how to go about them. Some staff guides us, like doing common procedures, but some say they are too busy, so we try to remember and apply what we learned in the skills lab.* Another one said, *we struggle to learn as what we learned in class is sometimes different from what we are seeing on the ground, so it is our initiative to learn.*

The results from qualitative results from nurse educators found only 19 (25.0%) nurse educators were certain about the nursing clinical models or frameworks they commonly use with students, the rest mentioned models that are general in nursing but not specific to clinical, these included: *Blended Mode, Calista Roy Adaptation Model, Dorothea Orem, Andersen Behavioral Model, Functional Nursing Model, Gordons Functional Patterns, Health Belief Models, Preceptor Learning Model, Primary Nursing Model, Team Nursing Model, and Systems Theory among others.*

In-depth interviews with the students also revealed a majority of them were not sure which model their teachers used, but the supervisory model was evident, "*Among the ways (models)*

*they teach us are supervisory and coming to teach us in clinical areas thus using clinical teaching" (Respondent 12).*

The clinical teaching skills and attributes utilized by nurse educators include professionalism 68 (89.5%), supportive 68 (89.5%), good interpersonal relationships 64(84.3%), friendly 51(67.1%), and innovative 50 (65.8%) among others as presented in table 4.3. The results of the evaluation showed that all 76(100%) educators evaluate their students at the end of the semester, 33 (43.4%) do mid-semester assessments and 6 (7.9%) do it continuously. The results are presented in Table 4.4.

On how educator's teaching skills and attributes affect their students' clinical experience, the study found that educators understand that they play a critical role in the clinical experience with their competence by *improving mastery among students, increasing students' confidence and pro-activeness in the acquisition of nursing skills, and being friendly and supportive enables the learners to have positive learning environment hence better clinical decision making (medical-surgical educators)*

*Nurse educators teaching skills and attributes motivate and create confidence in the learner to learn by doing in the clinical setup. Demonstrations and return demonstrations polish learner's competency (Teaching methods, Nursing Administration, and Community health nursing Educators).*

### 4.3.4 Assessment, evaluation, and feedback

The assessment and evaluation tools utilized by educators included: observation 74 (97.4%), written assignments 64(84.2%), checklists 59, (77.6%), and rating scale 46(60.5%). The feedback is normally done in the middle of placement by 33 (43.4%) educators and 38 (50.0%) educators at the end of the placement as shown in table 4.4.

In-depth interviews with learners on the assessment evaluation and feedback to students by their educators found that the majority of students seemed not well prepared for assessments.

On when the results are released to them, they argued that they are given at the end of placement:

"*They inform us a week before via phone call or class representative and ward in charge that we prepare for assessment, some come and assist us with our difficulty areas before the assessment. After the assessment, they don't give us feedback, we wait for results at school" (Respondent 1 and Respondent 2).*

*"They come a week or few days before the assessment and work with us on what to expect in the assessment. They are then given a co-assessor from the wards and appraise us on assessment. After the assessment, some give us feedback with results, but some tell us to wait for results to come out at the end." (Respondent 3 and Respondent 4).*

"*My lecturers inform us of our assessment dates on the 2nd week upon reporting and work with us weekly giving feedback. They also give us case studies and weekly work where they evaluate and give us marks. There are those placements we are not assessed but they evaluate our assignments via case studies" (Respondent 9).*

Qualities and skills of educators were pointed out by students as good though educators lacked enough time to impart their learners, responses were excerpted as follows, "*For qualities, I think they are caring, and knowledgeable but they lack time to do this to us" and "some are good listeners, patient, hardworking, teaching, support systems in place, communicates in time.*

**Table 4.4**

***Clinical Teaching Methods, Skills, and Attributes Assessment, Evaluation and feedback Utilized by Nurse Educators***

| Variable | Frequency (n) | Percentage(%) |
|---|---|---|
| **Clinical Teaching Methods Applied** | | |
| Case study | 65 | 85.5 |
| Reflection | 42 | 55.3 |
| Demonstration | 70 | 92.1 |
| Group discussion | 62 | 81.6 |
| Patient bed-site presentations | 42 | 55.3 |
| Journaling | 16 | 21.1 |
| Portfolios | 17 | 22.4 |
| Nursing care plans | 65 | 85.5 |
| Conferences | 35 | 46.1 |
| Concept maps | 26 | 34.2 |
| **Which Clinical Teaching Skills and Attributes do you Utilize** | | |
| Professionalism | 68 | 89.5 |
| Teaching | 64 | 84.2 |
| Supportive | 68 | 89.5 |
| Innovative | 50 | 65.8 |
| Friendly | 51 | 67.1 |
| Availability | 52 | 68.4 |
| Good interpersonal relationship | 64 | 84.2 |
| Knowledgeable | 53 | 69.7 |
| **When do you Assess and Evaluate your Students** | | |
| Start of placement | 12 | 15.8 |
| Mid | 33 | 43.4 |
| End | 76 | 100 |
| Continuous | 6 | 7.9 |
| **State all the Assessment and Evaluation Tools you use to select all that apply** | | |
| Written assignments | 64 | 84.2 |
| Checklist | 59 | 77.6 |
| Rating scale | 46 | 60.5 |
| Observation | 74 | 97.4 |
| **State when you give Feedback to Students** | | |
| After assessment | 62 | 81.6 |
| During placement | 34 | 44.7 |
| End of placement | 38 | 50.0 |
| **How Educators ensure Students Learning Environment is Conducive during Placement** | | |
| I am always available at the clinical site | 33 | 43.4 |
| Teachers availability | 46 | 60.5 |
| Uncongested site | 16 | 21.1 |
| Availability of learning resources | 42 | 55.3 |

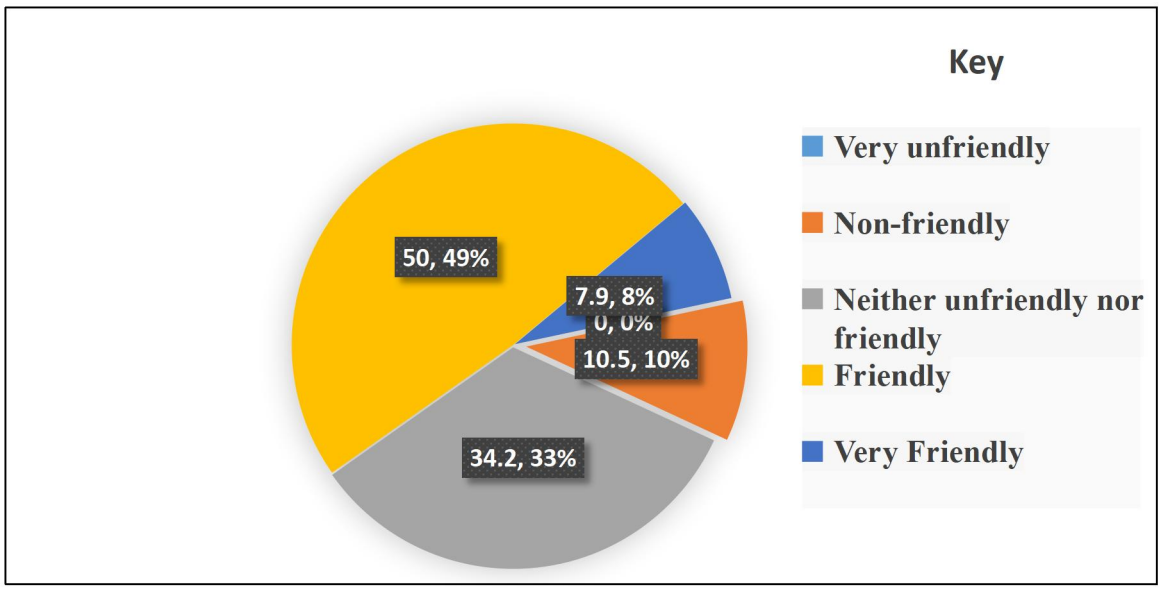
***Note.*** Table 4.4 teaching methods, skills, assessment and evaluation, feedback, and environment the nurse educators gave multiple responses.

### 4.3.5 Clinical environment for students

Educators were asked to rate the clinical environment of their students and 50 (49.0%) regarded the environment as friendly, 34 (33.0%) regarded it as neither friendly nor unfriendly and 11 (10.0%) termed as non-friendly. there were only 8 (8.0%) of the educators that regarded such an environment as very friendly. The summary is presented in figure 4.1 Nurse educators were additionally asked to explain their answers on their rating of the clinical environment of their nurses. Those that gave low ratings pointed out that at the study site *there are no mentors and staff to assist students; learning resources are limited; and that students are left alone to cover the shortage of staff especially the upgrading students. Those who rated highly said that though challenges arise, they are solved, and some staff assists and engages students.*

**Figure 4.1**

*Rating clinical environment of your students*




### 4.3.6 Binary Logistic regression on OR on Teaching Role in Clinical Learning

The study sought to find out the effect of the nurse educators teaching role on clinical learning outcomes. The results are in Tables 4.5 and 4.6. The results showed that educators that use case studies, group discussions as teaching methods, and

preceptor's availability had a significant effect (p=0.03,0.035) on clinical learning outcomes for nursing students. The odds of having very competent nurses were 6.15 times higher for educators using case studies than not and 4.0 times higher for educators using group discussions than not. Preceptor's availability increased the odds of having very competent nurses by 4.6 times compared to preceptor unavailability as shown in table 4.5.

**Table 4.5**

***Odds of Nurse Educators Teaching Role on Clinical Learning***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | Not Competent | Competent | |
| **Teaching methods** | | | | |
| Case study | No | 8 | 2 | Ref category |
| | Yes | 26 | 40 | **6.15 (1.20-31.63), 0.030** |
| Reflection | No | 18 | 16 | Ref category |
| | Yes | 16 | 26 | 1.8 (0.73-4.60), 0.200 |
| Demonstration | No | 4 | 2 | Ref category |
| | Yes | 30 | 40 | 2.7 (0.45-15.72), 0.278 |
| Group discussion | No | 10 | 4 | Ref category |
| | Yes | 24 | 38 | **4.0 (1.11-14.17), 0.035** |
| Journaling | No | 30 | 30 | Ref category |
| | Yes | 4 | 12 | 3 (0.86-10.45), 0.084 |
| Patient bed-site presentations | No | 18 | 16 | Ref category |
| | Yes | 16 | 26 | 1.83 (0.73-4.60), 0.200 |
| Nursing care plans | No | 6 | 6 | Ref category |
| | Yes | 28 | 36 | 1.3 (0.37-4.46), 0.692 |
| Concept maps | No | 24 | 26 | Ref category |
| | Yes | 10 | 16 | 1.45 (0.56-3.90), 0.432 |
| Conferences | No | 18 | 24 | Ref category |
| | Yes | 16 | 18 | 0.84 (0.34-2.11), 0.716 |
| Portfolios | No | 28 | 32 | Ref category |
| | Yes | 6 | 10 | 1.46 (0.467-4.56), 0.516 |
| **How educators ensure the learning environment is conducive** | | | | |
| Preceptors availability | No | 20 | 10 | Ref category |
| | Yes | 14 | 32 | **4.6 (1.70-12.32), 0.003** |
| Available at clinical site | No | 22 | 22 | Ref category |
| | Yes | 12 | 20 | 1.7 (0.65-4.24), 0.284 |
| Availability of learning resources | No | 18 | 16 | Ref category |
| | Yes | 16 | 26 | 1.8 (0.73, 4.60), 0.20 |
| Uncongested site | No | 28 | 32 | Ref category |
| | Yes | 6 | 10 | 1.46 (0.47-4.56), 0.516 |

In planning, orientation, skills, attributes, assessment, evaluation, and feedback, the outcomes were as in table 4.6. The educators who participate in the planning and orientation of students were 4.29 times having competent clinical learning outcomes

for students than those who do not and those with good interpersonal relationships had higher odds of 22.3 times having competent clinical learning outcomes for students. Educators who are supportive, innovative, friendly, or available had higher odds of 4.29 times, 2.84 times, 4.78 times, and 3.78 times having competent clinical learning outcomes for nurses than those who were not respectively. Assessing and evaluating students' mid-placement increased the odds by 2.64 times and providing them with feedback after assessment increased the odds of better outcomes by 10.9 times.

**Table 4.6**

***Odds of Nurse Educators Teaching Role on Clinical Learning***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | Not Competent | Competent | |
| Participates in the planning and orientation | No | 6 | 2 | Ref category |
| | Yes | 28 | 40 | 4.29 (1.855-9.899), 0.001 |
| Teaching skills and attributes utilized | Professionalism | 30 | 38 | 1.27 (0.608-2.640), 0.528 |
| | Teaching | 30 | 34 | 0.57 (0.296-1.085), 0.087 |
| | Supportive | 28 | 40 | **4.29 (1.855-9.900), 0.001** |
| | Innovative | 18 | 32 | **2.84 (1.742-4.643), 0.001** |
| | Friendly | 16 | 34 | **4.78 (2.864-7.981), 0.001** |
| | Availability | 18 | 34 | **3.78 (1.828-7.806), 0.001** |
| | Good interpersonal relationship | 22 | 42 | **22.3 (4.652-43.258), 0.001** |
| | Knowledgeable | 20 | 32 | **2.24 (1.114-4.506), 0.024** |
| When students are assessed and evaluated | Start | 4 | 8 | 1.76 (0.703-40428), 0.226 |
| | Continuous | 4 | 2 | 0.375 (0.107-1.309), 0.124 |
| | Mid | 10 | 22 | **2.64 (1.341-5.196), 0.005** |
| State students are given feedback | After assessment | 22 | 40 | **10.9 (3.544-33.579), 0.001** |
| | During placement | 12 | 22 | **2.02 (1.044-3.896), 0.037** |
| | End of placement | 18 | 20 | 0.81 0.425-1.536), 0.516 |

*Note*. Nurse educators gave multiple responses regarding teaching skills & attributes

## 4.4 Nurse Educators' Supportive Role in Clinical Learning of Undergraduate Nursing Students

The supportive role of nurse educators is important and the results emphasized the psychological, support supervision to include the visits, time spent with the students, and the impact on clinical learning as summarized collectively in Table 4.7.

### 4.4.1 Student psychological support and support supervision.

As part of nurse educators' supportive role in the clinical learning of undergraduate nursing students, 42 (55.3%) of educators provide professional socialization at the site as part of psychological support for students during clinical placement and 66 (86.8%) ensure they are available and reachable. On the clinical support supervision methods, 68 (89.5) use clinical teachings and 40 (52.6%) use preceptor-ship mainly because of the inability to be at the clinical site all the time hence students need to recognize the value and role of clinical practitioners in clinical instructions. *Those who use traditional roles do so because of the non-availability of clinical mentors on the site, it gives hands-on teaching and allows for return demonstration, and enhances theory-to-practice implementation. Educators' preference for preceptorship argued that students learn easily hence enabling maximum skills acquisition and argued such methods work best during semesters they clinical and theory units due to their ability to integrate theory into practice.* There were 58(76.3%) nurse educators that perform clinical supervisory visits weekly with 46 (60.5%) spending an average of 3-5 hours and 22 (28.9%) 0-2 hours. Finally, 30 (39.5%) of educators consider their clinical support and supervision of their students as highly satisfactory and 36 (47.4%) consider it satisfactory. The summary is presented in Table 4.7

In-depth interviews with the *students show that they were dissatisfied with educators for not doing follow-ups or supervision until the last weeks. It was reported that the students reach out to them though they face challenges in finding them hence educators are unable to assist them.* Some were however optimistic reporting that lecturers were available weekly, reviewing objectives, and addressing challenges. “Lecturers *teach us, guide discussions,*

*facilitate demonstrations, Gordons 11 functional patterns, case presentations care plan, and physical exams. They also get placements, pay for us and ensure a conducive environment."*

**Table 4.7**

***Nurse Educators' supportive role in clinical learning of undergraduate nursing students placed at Kenyatta National Hospital, Kenya***

| Variable | Frequency(n) | percentage% |
|---|---|---|
| **How do you psychologically support your students during clinical placement** | | |
| Professional socialization at site | 42 | 55.3 |
| The support system in place | 36 | 47.4 |
| Available and reachable | 66 | 86.8 |
| Encouraging peer learning | 60 | 78.9 |
| **Clinical support supervision** | | |
| Clinical teaching | 68 | 89.5 |
| Preceptorship | 40 | 52.6 |
| Traditional | 8 | 10.5 |
| **How often do you perform your clinical supervisory visits** | | |
| Weekly | 58 | 76.3 |
| Two weekly | 6 | 7.9 |
| Monthly | 12 | 15.8 |
| **How long on average do you spend with your students during support visits** | | |
| 0-2 hours | 22 | 28.9 |
| 3-5 hours | 46 | 60.5 |
| More than six hours | 10 | 13.2 |
| **What has been your impact on clinical support and supervision on your students** | | |
| Satisfactory | 36 | 47.4 |
| Highly satisfactory | 30 | 39.5 |
| Exemplary | 8 | 10.5 |

### 4.4.2 Inferential statistics on the effect of Odds of Nurse Educators' supportive role on clinical learning

The supportive role effect on clinical learning outcomes was analyzed using the odd ratio according to the sub-variables under this objective. The results showed that educators being available and reachable and use of clinical teaching support supervision increases competency of students significantly. Educators being available and reachable offers psychological support for students in clinical placement and increases odds of positive learning outcomes by 2.86 times compared to non-availability. Also using clinical teaching models as support supervision increase the

odds of good learning outcomes by 3.67 times. The results also revealed that having two weekly or monthly clinical supervisory visits reduces the odds of good clinical learning outcomes compared to regular clinical visits as is presented in Table 4.8

**Table 4.8**

***Odds of Nurse Educators' Supportive role on Clinical Learning Outcomes***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | Not Competent | Competent | |
| **How do you psychologically support your students during clinical placement** | | | | |
| Encouraging peer learning | No | 22 | 18 | Ref category |
| | Yes | 12 | 24 | 2.4 (0.96-6.25), 0.062 |
| The support system in place | No | 6 | 4 | Ref category |
| | Yes | 28 | 38 | 2.0 (0.52-7.97), 0.307 |
| Available and reachable | No | 20 | 14 | Ref category |
| | Yes | 14 | 28 | **2.86 (1.11-7.34), 0.029** |
| Professional socialization at site | No | 4 | 0 | Ref category |
| | Yes | 30 | 42 | **5.6 (1.59-9.88), 0.004** |
| **Clinical support supervision use** | | | | |
| Clinical teaching | No | 22 | 14 | Ref category |
| | Yes | 12 | 28 | 3.67 (1.41-9.56), 0.008 |
| Preceptor-ships | No | 18 | 18 | Ref category |
| | Yes | 6 | 2 | 0.33 (0.058-1.92), 0.218 |
| Clinical supervisory visits | Weekly | 24 | 32 | 1.33 (0.644-2.757), 0.438 |
| | Two weekly | 0 | 6 | **0.08 (0.01-0.18), 0.000** |
| | Monthly | 8 | 4 | **0.342 (0.136-0.860), 0.023** |
| Average time spent with students during support visits | 0-2 Hours | 10 | 10 | Reference category |
| | 3-5 Hours | 20 | 26 | 1.3 (0.767-2.202), 0.329 |
| | >6 Hours | 4 | 6 | 1.5 (0.694-3.242), 0.303 |

## 4.5 Nurse Educators' Administrative Role in Clinical Learning of Undergraduate Nursing Students

The administrative role of nurse educators was also analyzed and included clinical guidelines development, access to clinical sites, the orientation of students, resources organization, and co-supervision as outlined.

### 4.5.1 Clinical guidelines and planning

The study showed that 50 (65.8%) of nurse educators develop clinical guidelines for their students, while 26 (34.2%) do not. Those who develop the guidelines gave qualitative responses. On how educators organize the number of students for each site, *they said "they were guided by the standard operating procedures (SOPs) of the institutions which includes nurse population, patient population, and the capacity of the wards for students; institutions are requested to give the number of nurses required per available slots; NCK guidelines on nurse-student ratio; MRP and the MOUs agreements with institutions on the number of students per placement; and the number of students per cohort and the clinical sites available".* More than half of educators that develop rotation guidelines for their students reported to have been "*guided by NCK guidelines and others reported to have been guided by the length of time for specific rotation is normally based on the number and distribution of students, curriculum, and regulator board requirements, examination timetable, and NCK hour's guidelines".*

The majority of study participants plan for the length of time for the specific rotation based on the number and distribution of students, regulatory board requirements, objectives, and as guided by NCK curriculum guidelines. The plan for tools and objectives for the students is based on curriculum, collaboration with departmental lecturers, curriculum and course content, and guidelines by the NCK syllabus. The teaching activities for the majority of educators are guided by objectives, course requirements, and outlines of the curriculum while others plan with the students after searching from journals and textbooks.

The educators who do not develop the clinical guidelines reported that such materials are developed by the departments, clinical instructor, and the head of departments.

### 4.5.2 Access to the clinical site

On access to the clinical site, 64 (84.2%) of the nurse educators said that the choice of a facility is done by the departments or lecturers, and 52 (68.4) are accompanied by educators to the site, whereas 72 (94.7%) ensure the communication is formal. All educators give students contact person who is either a manager or mentor and 54 (71.1%) of students are provided with transport by the institution.

**Table 4.9**

***How Nurse Educators Ensure Student has Access to the Clinical Site***

| Variable | Freq (n) | Percentage (%) |
|---|---|---|
| **Choice of facility** | | |
| Department/Lecturers | 64 | 84.2 |
| Self | 12 | 15.8 |
| Others | 6 | 7.9 |
| **Student Reporting** | | |
| Self | 36 | 47.4 |
| Educator | 52 | 68.4 |
| **Communication** | | |
| Formal | 72 | 94.7 |
| Informal | 6 | 7.9 |
| Both Formal and Informal | 12 | 15.8 |
| **Contact person** | | |
| Manager | 66 | 86.8 |
| Mentor | 12 | 15.8 |
| **Availing student Transport** | | |
| Self | 28 | 36.8 |
| School | 54 | 71.1 |
| Both individuals and School | 8 | 10.5 |

### 4.5.3 How Nurse Educators Accomplish Clinical Orientation at the Clinical Site in the Various Situations

The result shows that 66 (86.8%) of nurse educators accomplish clinical orientation at the site after reporting, 44 (57.9%) both before reporting and after reporting to the site, and the rest orientation before reporting to the site. There were 66 (86.8%) nurse

educators that reported doing a formal orientation and majorly 70 (92.1%) of this being done by the Nurse Manager / in charge. The summary is presented in table 4.10. Results from qualitative responses show that most study participants "*orientate students on all clinical matters, procedures, and protocols, code of conduct and behavior, organograms, professional ethics, timeliness, professionalism, activities to be accomplished, use of clinical logbooks to ensure achievement of objectives and objective of evaluation requirements."*

**Table 4.10**

***Orientation***

| Variable | freq (n) | Percent (%) |
|---|---|---|
| **Timing of orientation** | | |
| Before reporting to the site | 52 | 68.4 |
| After reporting | 66 | 86.8 |
| Both Before reporting to site and After reporting | 44 | 57.9 |
| Orientation happens on 1st day of placement | 2 | 2.6 |
| **How Orientation is Conducted** | | |
| Formal | 66 | 86.8 |
| Informal | 2 | 2.6 |
| Both formal and informal | 8 | 10.5 |
| **Who Orientates students** | | |
| Nurse Manager / in charge | 70 | 92.1 |
| Other students | 14 | 18.4 |
| Mentors | 48 | 63.2 |

*Note***.** Respondents gave multiple responses on timing and who orientates students

### 4.5.4 Who meets the Students' Clinical Resources in Facility Fees and Site Placement

The result shows that majority of students' clinical resources such as facility fees and site placement is met by the institution as provided by 60 (78.9%) and 62 (81.6%) respectively as presented in table 4.11. However, those who reported such costs provided by the institution argued that students pay them as fees.

**Table 4.11**

***Students' Clinical Resources***

| Variable | Institution | | Self | | Don't Know | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Facility fees | 60 | 78.9 | 10 | 7.6 | 2 | 2.6 |
| Site placement | 62 | 81.6 | 8 | 10.5 | 2 | 2.6 |

On the co-supervision, the result shows that on the facility fees, 50 (65.8%) provided that such cost is met by the Clinical institution due to the MoU between the facility and the university and on-site placement, 45 (59.2%) provided that such cost is provided by the university as summarized in table 4.12

**Table 4.12**

***Students' Co-supervision and Clinical Logbooks Resources***

| Variable | Clinical institution instructor | | University | | Self | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Co-supervision | 50 | 65.8 | 26 | 34.2 | 0 | 0 |
| Clinical logbooks | 15 | 19.7 | 45 | 59.2 | 15 | 19.7 |

Excerpt results from in-depth interviews with students, the majority said, "*lecturers give guidelines in log books that are prepared in advance, pay the clinical fees, pay the co-assessor and do clinical orientation before reporting. Also, students reported that lecturers communicate what is expected in the clinic, arrange for the school bus and plan for MOU with the hospital."*

### 4.5.5 Inferential analysis on the effect of Nurse Educators' Administrative Roles on Clinical Learning

The study sought to assess the effect of the administrative role on clinical learning outcomes that affect the competence of undergraduate nursing students from the above sub-variables of this objective.

The result shows that availing transport to students increases the odds of good clinical learning outcomes by 4.8 times compared to allowing students to offer transport for themselves significantly with p=0.03. The result also shows accomplishing timing for clinical orientation after reporting reduces the odds of good clinical learning outcomes by 0.41times compared to accomplishing both before and after reporting. Having both formal and informal orientation increase the odds of good clinical learning outcomes by 3.76 with p=0.001 and being oriented by both in charge and mentors increase the odds of better outcomes by 6.07 times. The summary is presented in table 4.13.

**Table 4.13**

***Effect of Nurse Educators Administrative Roles on Clinical Learning***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | Not Competent | Competent | |
| Communication | Formal | 28 | 32 | 0.69 (0.22-2.14), 0.516 |
| | Both formal and informal | 6 | 10 | Ref category |
| Availing resources transport | School | 16 | 34 | **4.8 (1.71-13.39), 0.003** |
| | Self | 18 | 8 | Ref category |
| Accomplishing timing for clinical orientation | Before reporting to site | 4 | 4 | 0.57 (0.267-1.221), 0.149 |
| | After reporting | 14 | 10 | **0.41 (0.245-0.675), 0.001** |
| | Both before and after reporting | 16 | 28 | Ref category |
| Orientation | Formal | 32 | 34 | Ref category |
| | Both formal and Informal | 2 | 8 | **3.76 (1.67-8.486), 0.001** |
| Who orientates students | In-charge | 20 | 8 | Ref category |
| | In-charge and mentors | 14 | 34 | **6.07 (3.626-10.167), 0.001** |

## 4.6 Nurse Educators' Collaborative Role in Clinical Learning of Undergraduate Nursing Students at KNH

The collaborative role included the use of collaborative forums, partnerships, and interpersonal relationships, and how the educators accomplish this role at the clinical

site to promote clinical learning for competency in their students. The results are as follows.

### 4.6.1 Collaborative forums, interpersonal relationships, and partnership

There were more nurse educators 56 (73.7%) that argued that less often or even none do their institutions use collaborative forums with other universities in the clinical sites than educators that argued it's done either often or more often 20 (26.3%). However, all educators agreed they ensure cooperation and good interpersonal relationship between self and site managers and 74(97.4%) ensure cooperation and good interpersonal relationship between site managers and students. Qualitative responses show that *nurse educators argued some of the benefits of their partnership with the institutions and site managers are that it improves learning, increases resource sharing, and helps students meet clinical objectives. Others argued that it eases the student learning experience by proving students' rapport with institutions and managers, gives them unhindered access, appropriate mentorship occurs and it fosters a good working relationship.*

On how nurse educators partner with institutions to accomplish clinical learning 76 (100%) use assessment and evaluation; 74 (97.4%) have a contract/MoU for clinical practice; 70 (92.1%) use resource utilization (human and material); 68 (89.5%) use feedback to students and university; and 36 (47.4%) training of health care workers, preceptors.

In-depth interviews with students concur with the educator's information as students claimed they have no collaboration with other universities. *Some responses included "we do not have collaboration with other universities nor to other clinical lecturers "and "no formal follow- up channels by the ward managers and our*

*lecturers, so sometimes we get lost in the ward activities as no one is in direct contact for us in the ward." (Respondent 9 and Respondent 11).*

**Table 4.14**

***Nurse Educators' Collaborative Role in Clinical Learning of Undergraduate Nursing Students placed***

| Variable | Freq (n) | Percentage (%) |
|---|---|---|
| **Use collaborative forums with other universities in the clinical sites** | | |
| None | 26 | 34.2 |
| Less often | 30 | 39.5 |
| Often | 14 | 18.4 |
| More often | 6 | 7.9 |
| **Educators on cooperation and good interpersonal relationship between self and site managers** | | |
| Yes | 76 | 100% |
| No | 0 | 0 |
| **Educators ensure cooperation and good interpersonal relationship between site managers and students** | | |
| Yes | 74 | 97.4 |
| No | 2 | 2.6 |
| **How educators partner with institutions to accomplish clinical learning** | | |
| Assessment and evaluation | 76 | 100.0 |
| Contract/MOU for clinical practice | 74 | 97.4 |
| Resource utilization (human and material) | 70 | 92.1 |
| Feedback to students and university | 68 | 89.5 |
| Training of health care workers, preceptors | 36 | 47.4 |

Note. More than one response was given on how educators partner with institutions

### 4.6.2 Inferential statistics on the effect of Nurse Educators Administrative Roles on Clinical Learning Outcomes

Nurse educators' effect on clinical learning was analyzed to find the impact on the competence of undergraduate nursing students during clinical learning. The results were as follows.

Educators ensuring cooperation and good interpersonal relationship between site managers and students increases the odds of good clinical learning outcomes by 5.6 times and training of health care workers by 3.9 times. The result also shows giving feedback to students and the university increases the odds of good learning outcomes by 12.9 times compared to educators that do not give feedback. Educators reported that if collaborative forums were to be done

more often, it would report a higher odd of 2.33 on good clinical outcomes compared to those with no collaborative forums. The summary is presented in table 4.15.

**Table 4.15**

***Effect Nurse Educators Collaborative Roles on Clinical Learning Outcomes***

| Variable | | Clinical Learning Outcomes | | OR (CI), p-value |
|---|---|---|---|---|
| | | Not Competent | Competent | |
| Good cooperation and interpersonal relationship between site managers and students | Yes | 4 | 0 | **5.6 (2.12-17.39), 0.031** |
| | No | 30 | 42 | Ref category |
| Contract/MOU for clinical practice | Yes | 0 | 2 | 0.63 (0.28-2.08), 0.510 |
| | No | 34 | 40 | Ref category |
| Training of health care workers, preceptors | Yes | 24 | 16 | **3.9 (1.48-10.31), 0.041** |
| | No | 10 | 26 | Ref category |
| Feedback to students and university | Yes | 8 | 0 | **12.9 (3.64-28.32). 0.002** |
| | No | 26 | 42 | Ref category |
| Resource utilization | Yes | 4 | 2 | 2.7 (0.452-15.71), 0.198 |
| | No | 30 | 40 | Ref category |
| Collaborative forums | None | 14 | 12 | Ref category |
| | Less often | 12 | 18 | 1.75 (1.028-2.979), 0.075 |
| | Often | 6 | 8 | 1.56 (0.807-2.997), 0.187 |
| | More often | 2 | 4 | **2.33 (0.917-5.936), 0.039** |

### 4.7 Challenges in clinical learning of undergraduate nursing students

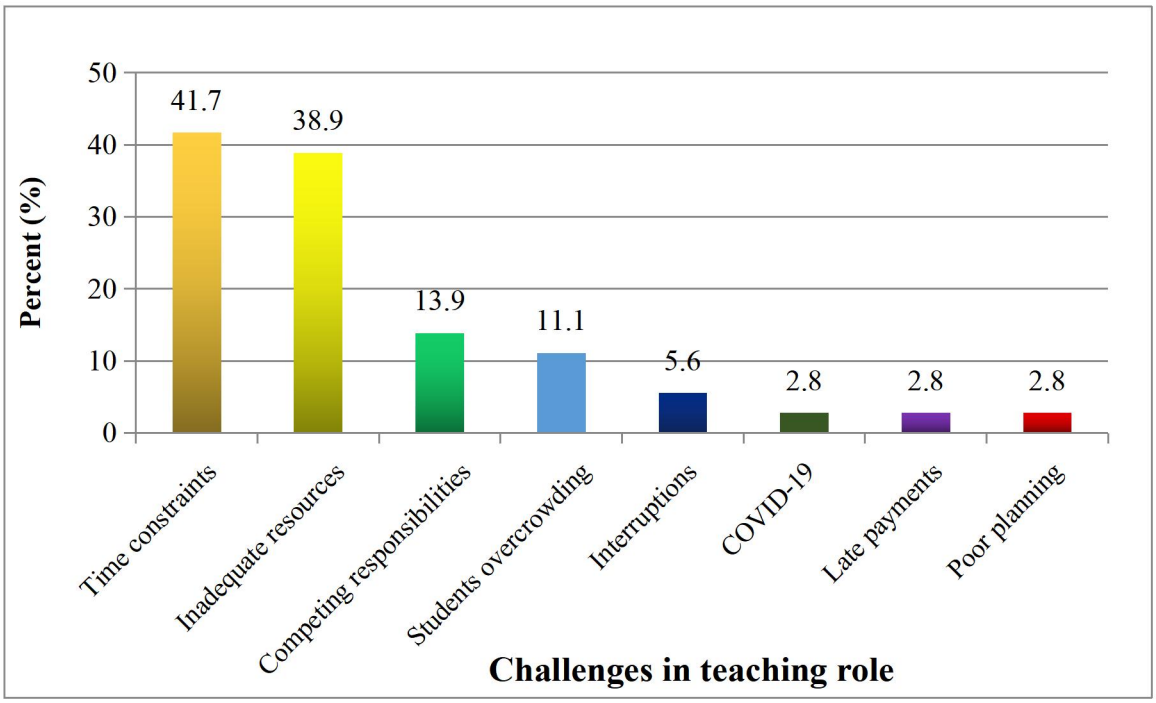
This sub-section represents the responses by both nurse educators and undergraduate nursing students on the challenges they encountered during clinical learning. They are analyzed according to, the four objectives under study.

### 4.7.1 Challenges on the teaching role

On the challenges in the clinical teaching role, 36 nurse educators indicated there exist various challenges and each respondent gave more than one answer and explained each challenge. There were 15 (41.7%) of educators who indicated time constraints as a primary challenge as both clinical and theory courses are not allocated the same hours, often educators are required to be in class and clinical at the same time and they are required to supervise multiple students. There were 14 (38.9%) educators that indicated inadequate resources as a major challenge facing them. The inadequate resources led students toward sharing resources such as clinical aids and thus affecting service delivery. There were 5 (13.9%) nurse educators that indicated competing responsibilities such as student consultation, theoretical unit preparation, and self-professional development. Other challenges pointed out include student overcrowding in wards due to limited facilities 4 (11.1%); interruptions caused by strikes 2 (5.6%) and COVID-19 1 (2.8%) among others summarized in figure 4.2. In in-depth interviews with the students, some of the challenges mentioned by half of the students were lecturers not coming in time to teach and demonstrate skills while on placements and supervision. However, some students reported lecturers coming late at the end of placement and hence having to do a lot within a short period.

**Figure 4.2**

***Challenges in the Clinical Teaching Role***

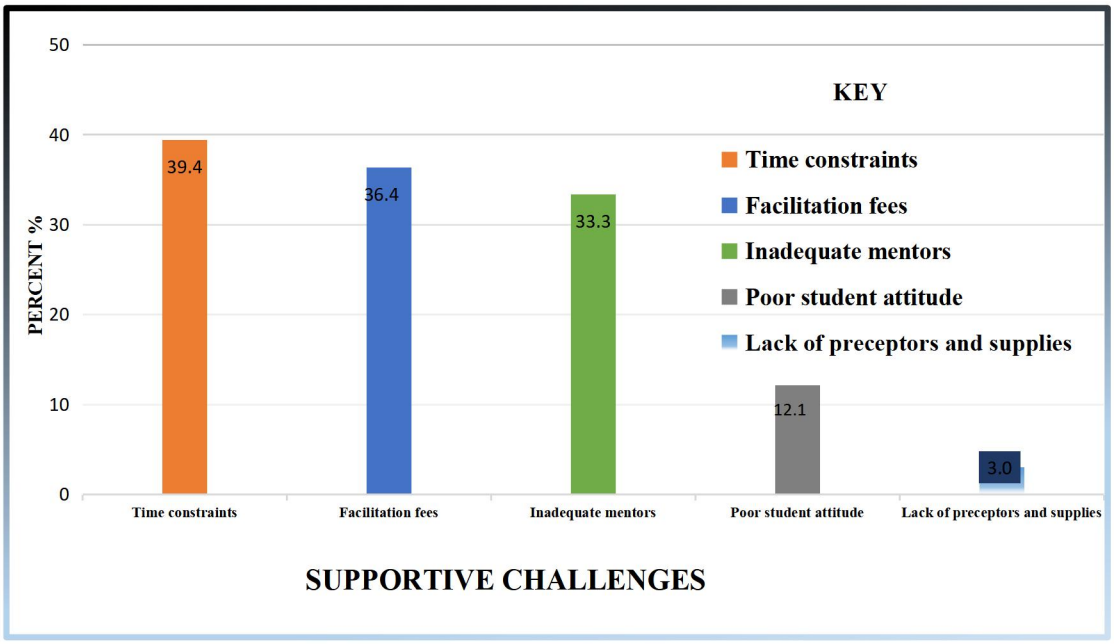



### 4.7.2 Challenges Nurse Educators Face in their Clinical Supportive Role

The educators indicated to face challenges in their clinical support role. The result shows that 13 (39.4%) face time constraints as their primary challenges due to overlapping roles as a result of teaching different cohorts and levels of students as well as other assigned duties such as meetings/conferences and workshops/training. The second primary challenge pointed out by 12(36.4%) of nurse educators is the untimely payment of facilitation fees such as clinical facilitation fee payments and student transport fees by universities making lecturers struggle to meet finance their own and hindering timely support to students. The third challenge as pointed out by 11 (33.3%) of nurse educators is inadequate mentors due to the high student-mentor ratio and other duties assigned to mentors. The summary is presented in figure 4.3 below. In-depth interviews with students showed *that there are inadequate mentors in the wards and students find it hard to learn as their lecturers are not always available and ward staffs are often overworked to always offer needed support to students.*

**Figure 4.3**

***Clinical supportive challenges***




*Note.* Multiple responses on supportive challenges

### 4.7.3 Challenges in Clinical Administrative Role

On the challenges encountered in a clinical administrative role, nurse educators pointed out the following: non-involvement in the administrative role by the head of the department; untimely signing of MOU making students delay learning; over-reliance on the university for transport which delays students or making them unable to attend daily placements; the poor relationship between the universities and institutions due to pending bills; unavailable managers on the sites to direct students; delays with scheduling assessments due to delayed payments of the co-assessors; limited placement due to the high number of students and delays in financing students in the sites. In-depth interviews with students revealed that both students are overworked on the wards than learning or meeting their objective.

### 4.7.4 Challenges in Clinical Collaborative Role

On the challenges encountered by nurse educators in their clinical collaborative role, the following challenges were pointed out: Unwillingness of other universities to collaborate; violations of the MoUs between parties; late payments by the universities affect collaboration with nurses; negative attitude among nurse mentors demanding payments to offer services to students; shortage of preceptors during clinical teaching session and lack of collaboration structure. Results from in-depth interviews an excerpt with students show that *all respondents attested there are no collaborative forums from other students, from the medical field, lecturers nor universities and recommended that the hospital needs a partner with us and give us mentors to guide us.*

## 4.8 Discussion

### 4.8.1 Introduction

This section contains a discussion of the above findings of both the qualitative and quantitative data based on the objectives under study, incorporating the literature reviewed. Also, the challenges in each objective are discussed.

### 4.8.2 Teaching Role of Nurse Educators

Nurse educators need to conform to this role in their clinical teaching. In planning for their clinical teaching, all educators do so, with goal setting and orientation both at (90.8%) and evaluation (at 97.4%). These two were perceived to affect students' clinical outcomes significantly (p=0.001) respectively with odds of 4.29 times higher positively affecting clinical outcomes than the rest. Those that do not participate said it was time-consuming. Also, some students confirmed planning and orientation were done by their educators. This was in agreement with (Oermann et al., 2017) who suggested that strategies for clinical teaching were among others goal setting and implementation, and evaluation. This role was well

executed as each university in this study has a master rotation plan that stipulates when the students do clinical placements, also each has a clinical log with already formulated objectives.

In terms of integrating theory into practice, the majority (65.8%) complete classroom teaching than its respective clinical. This was contrary to a study that found that learners felt that their teacher should design their clinical course appropriately to include preparing them on what to expect from the entire course in class before embarking on implementation ((Farzi et al., 2018). Integrating both courses ongoing at the same time sometimes confuses students or leaves them stranded in the wards, as it is challenging to apply a skill they have not been taught yet.

Of nurse educators who do the orientation of students as above, (76.3%) communicate their visit with the clinical site and share objectives at (84.2%). This is in agreement with Akram et al. (2018) on clinical activities preparation, which revealed that there was a positive correlation between teachers planning clinical activities before learning. It is therefore mandatory for an educator to orientate students before placement as it motivates them to learn as prepares them psychologically on their objectives and expectations and how to go about achieving them.

Clinical teaching methods varied from one educator to another, the traditional ones taking the highest scores while the innovative ways were least utilized. Among the less used were portfolios (22.4%) and journaling (21.1%). The statistically significant ones were case study p=0.030 and group discussion p= 0.035 with six and four times more likely to affect competence among students. This was in agreement with Lewallen and Van Horn ( 2019) who found out that the majority of innovative ways were used and lecturers revealed that it was more effective, reliable, and valid. Majority of these methods the nurse educators used at KNH probably is because they

are less time-consuming. Also, nursing students currently need to embrace problem-based learning and competency-based ways to enhance high-level practice.

On implementation of clinical models, the majority used the general nursing models, but only (25.0%) were certain of the actual nursing clinical models or frameworks they use. This is in agreement with Waweru et al. (2019) in a study in Kenya that found out that clinical models were the least used in supervisory of students. In Rwanda, preceptor models were used and they have promoted real-world clinical learning among students with support and immediate feedback from supervisors observed (Habimana et al., 2016). In this study educators being uncertain may also mean they are not competent to use them or other logistics like increased workload, time constraints and lack of mentors at KNH could contribute to this.

The clinical teaching skills and attributes utilized were professionalism ranked highest (89.5%) and friendliness (67.1%) and innovation (65.8%) being the least, good interpersonal relationships had 22 times higher impact on clinical competencies of students and all attributes were significant at (p=0.001), apart from teaching skills and professionalism. Some students also mentioned the majority of these attributes were possessed by their educators. Similarly, Bifftu et al. (2018) identified teaching behaviors in undergraduate students in clinical teaching modified and facilitated learning they included teaching ability and personal traits. Consequently, in this study at KNH, those educators showed these essential personal attributes and assisted students to develop a positive attitude, readiness to learn, and improve on their skill acquisition with eagerness.

In assessment, evaluation, and feedback (43.4%) of educators evaluate students at the middle of the placement while all, in the end, but the mid evaluation was significant (p=0.005) and more than two times more affecting clinical outcomes than the rest. After the assessment

majority (81.6.0%) of educators do so while only (44.7%) of educators give feedback during the placement. Giving feedback during placement (p=0.037) affects clinical outcomes. An excerpt from the students said some teachers give feedback, but others don't until results come out at end of all placements. Both summative and formative are used equally in clinical learning with all the learning domains incorporated enabling learning more and acquiring knowledge, skills, and attitude (Lewallen & Van Horn, 2019). This was contrary in this study as summative was highly used though found insignificant. Evaluating during placement is important as it helps the educator identify students' weaknesses in advance and be able to help them improve before the placement ends.

On the tools and feedback, the tools utilized were observation (97.4%), the majority, and the least rating scale (60.5%). The feedback to students was given by half of them (50.0%) at the end of the placement. This was in line with the students' sentiments above. This was in agreement with a study that found that the current tools used were observation, and giving feedback and grading of students were found inadequate and inappropriately done as students were not communicated to on time (Eyeson, 2017). Tools used for evaluation are dependent on the type of course used, observation is the most common, and immediate feedback is essential for the student to be able to discuss areas of weaknesses and how to improve with the help and the assessors effectively.

The clinical environment had a mean rating of 3.5 with (33.2%) of the educators stating as neither unfriendly nor friendly. The educators who gave low ratings pointed out a lack of mentors to assist students, limited learning resources, and overcrowding among others. Educators' availability was (43.4%), and significant at p=0.003 and more than 4 times affecting clinical competency. This concurs with a study that revealed that a good clinical learning environment involves nurse educators and staff availability, approachable, willing, and pleased while dealing with students (Luhanga,

2018). While another cited overwhelming numbers of students in clinical facilities causing congestion and inability of students to meet set objectives (de Swardt, 2019). This is also true with KNH because of lack of mentors and also it is a national and largest referral hospital, but educators' unavailability at the site could be so as they could be having to compete for classroom teaching concurrently.

The teaching role had challenges too, and time constraints were at (41.7%) as a primary challenge as both clinical and theory courses are not allocated the same hours, often one is required to be in class and clinical at the same time and they are required to supervise multiple students. Inadequate clinical teaching resources at KNH due to increasing student numbers, competing responsibilities for students, and self-career development and interruptions caused by strikes and COVID-19 among others. Students too cited lecturers not coming in time /or not at all to teach and demonstrate skills, while those who come somehow want to bombard them with too much in a short time which was hard to comprehend once. This concurs with Wakhungu, (2019) that concurrent theory and clinical was a challenge to educators as it led to time constraints. Mburu, (2015) noted overpopulation of students led to overcrowding and competing for resources. This led to a lack of educators utilizing innovative ways of teaching (Lewallen & Van Horn, 2019; Phillips et al.,2019), which affected educators in planning, availability, and implementation of clinical learning as cited by Luhanga (2018). Efficient engagements of Universities and KNH into these valid problems educators are facing are key, and this would improve planning, execution, and evaluation of clinical learning for a competent nurse graduate.

### 4.8.3 The supportive role of Nurse Educators

As part of nurse educators' clinical teaching, a supportive role is vital. In the supportive role, more than half (55.3%) of educators provided professional socialization at the site as part of psychological support and was 5.6 times likely to influence clinical outcomes and significant at p= 0.004. Also being reachable and available affected clinical learning outcomes significantly (p=0.029). Support systems were the least at (47.4%). On the clinical support supervision, the majority (89.5%) said they accomplished it. This was in contrast with the majority of students as they said their educators don't follow them up or supervise, so minimally support them. These were in agreement with students' findings by Muleya et al. (2018) whose findings stated that the role of supervision was not practiced by the majority of the nurse educators and suggested provision of support and professional socialization. At KNH the educators were aware of the provision of support and support systems being in place, but not fully implemented. These can lead to students not meeting objectives and poor clinical skills. If educators are there to guide students and also professionally socializing with students, clinical learning with skill mastery will be improved.

On the clinical support supervision models majority (89.5%) use clinical teaching which affects learning significantly at p=0.008 and 3.68 times. All students reported a lack of mentors at KNH. This concurred with a study in Rwanda where supervisory and preceptor models were mainly utilized (Habimana et al., 2016). Educators who engaged in clinical supervision regularly had to use clinical teaching as KNH doesn't offer mentors, therefore this can highly improve students' skills, knowledge, and attitude acquisition.

The educators who came for supervisory visits were (76.3%), with an average of 3-5 hours spent on students. Educators' fortnight visits p=0.001 and monthly 0.023 were

thought to positively impact skills to students. For students, the majority who were not supervised reported educators only come the last week for supervision, no regular follow-ups. This partly concurred with Kamphinda and Chilemba (2019) who noted nurse educators needed to increase clinical visits to promote student motivation and learning opportunities. The students felt educator's visits were not adequate and preferred regular visits to improve their performance and confidence. At KNH, the educators' findings were contrary to the majority of students, this probably was because the educators knew that it is an NCK requirement to supervise students weekly. Also because of other teaching loads they have, they assumed 2-4 weeks' supervision could be effective.

Students who were supervised, being a minority said their lecturers teach, guide in discussions, demonstrations, Gordons 11 functional patterns, case presentations care plans, and physical exams. This was in agreement with Eyeson (2017) whose findings identified the supervisors' role in follow-up as ward teaching, demonstration, performing a task, and applying professional ethics. The educators at KNH could be faced with both institutional challenges limiting the majority of them from accomplishing the above.

The nurse educators faced the following challenges among others, (39.4%) time constraints. They said this was because of overlapping and parallel in teaching different cohorts and levels of students, other assigned duties like meetings/conferences and workshops/training. Untimely payment of clinical facilitation fees by universities was at (36.4%) and lack of mentors by KNH was at (33.3%). Also, students said *ward staffs were sometimes rude and don't /guide them thus lacking sufficient support from both sides.* The findings concur with a study that revealed that increased workload and less time allocated to them served as a barrier to facilitating clinical learning (Waweru et al., 2019). Challenges faced by both

respondents warrant follow-up by the relevant institutions to improve clinical learning for better competence and skill acquisition by students.

### 4.8.4 Administrative role of Nurse Educators

The nurse educator's administrative role is important as it guides and informs the availability of clinical placements and sites. In this study, the majority (65.8%) of nurse educators develop clinical guidelines for their students. On how they do it, the majority said they were guided by master rotation plans, MOUs, and NCK guidelines. *S*tudents agreed with this as the guidelines were in their clinical logbooks. This was in agreement with the study findings that showed clinical nurse educators and nursing staff were involved in developing guidelines to assist in the orientation, learning, and evaluation of students leading to evidence-based practice and competent graduates (Fiset et al., 2017). This role was well executed by the educators as it is a mandatory NCK requirement and part of curriculum development guidelines that every university adheres to.

Ensuring access to the clinical site was appropriately done by the majority, (84.2%) who said departments or lecturers themselves do this, whereby (68.4%) educators accompany students, and the majority (94.7%) ensuring formal communication among other duties done before students reported. This was contrary to Waweru et al.(2019) whose findings revealed that majority of nurse educators were not directly involved in choosing the sites and this affected their participation in clinical learning. At KNH this is followed to the core through the MOUs and if a university doesn't comply then they risk not taking their students for placements.

On the orientation of students, both formal and informal at the site was significant, with p=0.001 and 3.76 more likely to improve clinical learning outcomes some

students also were in agreement with this. This was however contrary to the findings by (Glynn et al., 2014) who stated educators found out that the unavailability of a planned orientation program contributed to the difficulty in students' first placements. The majority suggested formal orientation course led by educators was important and that an orientation course was essential. In KNH this too is mandatory and the educators must report to their students. Having nurse managers do the orientation to both the educator and student enables quick settling down of students as they understand ward layout and activities early enough and enable them to meet objectives effectively as they are in line with these activities.

Universities availing students resources like transport was significant p= 0.003 and was 4.8 times affecting clinical outcomes. Also accomplishing orientation on time and when it charges and if mentors were availed were significant. This was in agreement with Dağ et al. (2019) who found out that ensuring the availability of resources to facilitate student learning is important. The educators suggested the need to have prior arrangements before students' placements. This is a motivating factor to being ready and available to learn, also timing enables them to plan prior and make necessary logistical arrangements so as not to delay the achievement of objectives.

In the qualitative responses by educators on what they orientate students on, the majority of them said all clinical matters, procedures, protocols, code of conduct and behavior, organograms, professional ethics, timeliness, activities to be accomplished, achievement of objectives, and evaluation requirements. This was in agreement with Oermann et al. (2017) who suggested the provision of specific objectives, learning activities, preparation expectations, activity guides, and written expectations to facilitate clinical learning. The nurse educators at KNH need to incorporate with nursing managers to accomplish this because it is too a mandatory requirement.

Clinical fees, site placement, and supervision fees are majorly met by the universities at (78.9%), (81.6 %) and (65.8%) respectively. This was however lacking in a majority of studies especially in SSA, as this study suggested that the transportation of the educator and students to be done and budgetary allocation to educators, mentors, and clinical sites, be given to them promptly (Kgafela, 2013). The universities did these at KNH as part of the MOU.

On the challenges encountered in a clinical administrative role, nurse educators pointed out the following: untimely signing of MOU; over-reliance on the university for transport which delays; unavailable managers on the sites to direct students; delays with scheduling assessments due to delayed payments of the co-assessors; limited placement due to the high number of students. Students also said they are overworked on the wards than learning or meeting objectives, and delays in reporting because of institutional fee payments to KNH. This was evident too in the study above by (Kgafela, 2013). Administrative delays in finances delay student learning and educator preparation thereby impacting negatively objectives achievement and student learning.

### 4.8.5 Collaborative role of Nurse Educators

Collaborative forums with other universities were not fully impressed by nurse educators as the majority (73.7%), p= 0.075 said they less often and more often 0.039 were found significant. Students also confirmed this by all of them said, *"we do not have collaboration with other universities nor to other clinical lecturers, and also."* In Uganda similar sentiments were voiced as respondents in a study revealed insufficient support through collaboration was noted on continuous staff professional development, nurse educators working in clinical sites with their students only

(Drasiku et al., 2020). Clinical forums help in learner motivation and equipment of vast knowledge and skill acquisition; this could also bridge the gap of clinical supervision if embraced by universities. Educators believed that if they were utilized more often these will automatically improve clinical outcomes.

However, all educators despite them not practicing this agreed collaboration is important as reported by the majority, also enhances cooperation and good interpersonal relationship between students and site managers and was significant p =0.031. They also went ahead to mention the benefits which were improvement of student learning, resource sharing, and helping students meet clinical objectives easing student learning experience and, giving them unhindered access, appropriate mentorship occurs and it fosters a good working relationship. This was in agreement with a study in the UK, where a collaboration model was well implemented and undergraduate students were given support, mentorship, and peer guidance by nurses, other health professionals, and senior students which improved learning outcomes (Health Education England, 2019). Partnership at KNH is important because it will improve supervisory and supportive deficits.

Partnership with KNH to accomplish other components in clinical learning was well executed as all of them, use of assessment and evaluation, and (97.4%) contract/MoU for clinical practice, though all were insignificant. Training of health care workers, and preceptors were significant at p=0.031 thus affecting clinical learning outcomes. These findings agree with the study that found that assessment and evaluation require partnership from both parties involved as the process of clinical learning is multifaceted (Wu et al., 2015). This is also a key aspect of NCK and KNH requirements. But educators felt that healthcare workers through training by universities especially preceptors will positively enhance students learning outcomes.

Challenges encountered by nurse educators in this role included the unwillingness of other universities to collaborate; violations of the MoUs between parties; late payments by the universities that affect collaboration with nurses; negative attitudes among nurses. While students said, a lack of formal follow-up channels by the ward managers and lecturers, no direct contact for them in the ward, the inferiority of diploma staff, and a superiority complex among medical students. Despite challenges encountered there is proof that collaboration has positive outcomes, as outlined in a study which stated personal benefits would be an outcome, especially to staff to include knowledge and practical skill acquisition and improvement, socialization, knowledge sharing to partners, skill training, competence in service delivery, and organizational benefits (Rakhudu et al., 2016).

# CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

## 5.1 Introduction

This last chapter contains a summary, conclusions, recommendations from these findings, and future research. This has been accomplished based on the study objectives and findings.

## 5.2 Summary

This study aimed to explore the role of nurse educators in the clinical learning of undergraduate nursing students at KNH. The objectives were to determine the teaching, supportive, collaborative and administrative role of nurse educators in undergraduate nursing students placed at KNH. Literature on these variables was done and some similarities and differences were noted globally in how these educators execute their roles. The study adopted a descriptive cross-sectional design with the participants selected from the seven universities that take their students for clinical

placements at KNH. A sample of eighty-two nurse educators and fourteen undergraduate third-year nursing students were targeted. Multiple sampling techniques were used and qualitative and quantitative data were obtained. Both types of data were analyzed and presents on tables, graphs, and narratives. The study findings are to be used by various stakeholders in the universities, NCK, CUE, and KNH for policy formulations to assist nurse educators in implementing clinical learning and teaching.

### 5.2.1 Nurse Educators Teaching Role in Clinical Learning in Undergraduate Nursing Students placed at Kenyatta National Hospital, Kenya

The findings showed when nurse educators through their teaching do the planning, which includes setting goals and objectives, orientation, and implementation will positively affect and improve students learning outcomes. Educator skills and attributes like interpersonal relationships, support, availability, and friendliness are also key to clinical learning. Clinical models were least utilized compared to general nursing models which are imperative when applied. Teaching methods are essential for the proper incorporation of skills to enhance competence. Case studies and group discussions were found to have direct effects on this. Feedback during a student's placement with evaluation coming in the middle highly affects the acquisition of clinical skills and knowledge. The clinical environment was rated low because of the lack of mentorship and limited resources at KNH, but the availability of educators was found significant. Challenges in this role were time constraints as educators' role conflict of theory and practice loads, inadequate resources, competing responsibilities, and interruptions caused by strikes and COVID-19.

### 5.2.2 Nurse Educators' Supportive role in Clinical Learning of Undergraduate Nursing Students placed at Kenyatta National Hospital, Kenya

The nurse educators' supportive role in the clinical learning of undergraduate nursing students affects clinical outcomes. This is directly linked to professional socialization at the site and is available and reachable. Though students felt this was not well practiced by their lecturers. Clinical model teaching and being able to perform supervisory visits fortnightly and monthly also affect clinical learning outcomes. The challenges nurse educators face in this role were time constraints, untimely payment of clinical facilitation fees and student transport fees by the universities, and inadequate instructors due to the high student-mentor ratio.

### 5.2.3 Nurse Educators' Administrative Role in Clinical Learning of Undergraduate Nursing Students Placed at KNH

The administrative role, availing of transport to students, the orientation of students after reporting at clinical sites, and orientation being both formal and informal affect student achievement of clinical goals. Also orientation by ward managers as they know the general layout of units/wards, and activities. Student clinical resources such as facility fees, logbooks, and co-supervision are vital and they are normally well implemented when they are met by the Universities themselves. Administrative challenges that were witnessed were; non-involvement in the administrative role by educators; untimely signing of MOU making students delay learning; over-reliance on the university for transport; the poor relationship between the universities and institutions due to pending bills; unavailable managers and mentors on the sites to direct students.

### 5.2.4 Nurse Educators' Collaborative Role in Clinical Learning of Undergraduate Nursing Students placed at KNH

The study found that less often do institutions use collaborative forums with other universities, but if they would use them more often too these encourage students to

learn. In addition to this, cooperation and good interpersonal relationship between site managers and students, training of health care workers, and feedback to students and universities will improve clinical learning outcomes. The role challenges faced by nurse educators include unwillingness by other universities to collaborate, violations of the MoUs between parties, late payments by the universities, and negative attitudes among nursing staff.

### 5.3 Conclusions

The study findings conclude that nurse educators teaching role in clinical learning in undergraduate nursing students placed at KNH include planning orientation, good interpersonal relationships, clinical teaching methods to include a case study and group discussion, mid evaluation giving feedback during placement, and a conducive environment with educators' availability is significant in the achievement of clinical learning outcomes.

On the supportive role in clinical learning of undergraduate nursing students placed at KNH, it was concluded that providing psychological support by professional socialization at the site, being available and reachable, use of clinical teaching model and 2-4 weekly supervisory visits improves clinical learning outcomes in students.

The study findings conclude that the nurse educators' administrative role in clinical learning whereby orientation at the site in partnership with ward managers and mentors both formal and informal, and facilitating students' access to clinical resources by transport provision, impacts clinical learning.

The study findings conclude the nurse educators' collaborative role in the clinical learning of undergraduate nursing students placed at KNH include the use of collaborative forums,

ensuring cooperation and good interpersonal relationship, training of health care workers especially preceptors and mentors, and feedback to students, and university.

## 5.4 Recommendations

### 5.4.1 Recommendations on Research Findings

Universities to readjust their policies and during curriculum review on the clinical component, to include mandatory clinical orientation and planning. This is to ensure that implementation of the clinical teaching role is accounted for by each educator.

Mid-assessment and evaluation are to be introduced formally so as they add up to the final grades of the students. This also includes continuous feedback to students on how they are progressing in their clinical learning.

The universities through the deans, heads of departments, and clinical coordinators when reviewing the curriculum to incorporate the implementation of appropriate clinical models, innovative and problem-based clinical teaching methods.

Strategies by the departmental heads through the university management on supportive role, supervision guidelines as outlined by NCK and advised by CUE to be fully implemented in terms of supervisory visits, employment of each specialty clinical instructor.

On unavailable mentors and managers on the sites to direct students, KNH and its stakeholders to redesign a mentorship program in the MOUs or Universities to employ each specialty's clinical instructor as advised by NCK to promote continuous learning of students as nurse educators cannot supervise students daily.

On collaboration, the seven Universities' nursing schools through to partner by coming up with a collaboration structure in the supervision of appropriate courses like

in clinical activities to include discussions, demonstrations, and clinical teaching. Also, Universities in the MOUs to do regular training to ward nurses on preceptorship/mentorship to equip them with skills and knowledge on clinical learning so as to oversee student clinical learning effectively.

### 5.4.2 Recommendations for Further Research

From the study findings and recommendations further research can be done on:

1. Strategies to improving clinical learning of undergraduate by nurse educators.

2. A large-scale study on all nurse educators at different clinical sites across Kenya as this study only focused on one site on specific universities.

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# APPENDICES

## Appendix I: Consent Form

My name is Claire Luseno Otunga (MSN-3-9205-2/2018) a student at Kenya Methodist University pursuing a Master of Science in Nursing Education (MScN). I am carrying out a research study on "Assessment of the Role of Nurse Educators in clinical learning of undergraduate nursing students placed at Kenyatta National Hospital, Kenya."

**Purpose**: The purpose of this study will be to determine the role of Nurse Educators in clinical learning of undergraduate nursing students placed at Kenyatta National Hospital, Kenya. The study findings will be used to formulate new strategies and policies in improving and promoting clinical nursing education in undergraduate nursing students. This will in turn improve healthcare service delivery and quality nursing care.

**Procedure:** I am requesting you to participate in this research by giving me your views and opinions on the above subject. Our interaction through the online questionnaire will take 20-25 minutes, interview, 30 minutes to one hour. All information will be confidential as your identity and information you give will not be disclosed to anyone. Informed consent will be obtained by signing the consent form and identified by the use of codes and not names. The data collected will be kept under key and lock only accessible to the researcher. Your participation in this study will be voluntary. There will be no penalties for declining and you can withdraw at any stage of the study under no intimidation.

**Benefits:** The study is purely academic and has no monetary, individual benefits, or compensation for participation. However, the study will help in answering the

research questions under study. The document will be published and future references could be made from it by other researchers or the community.

**Risks**: There will be no harm or risks associated with your participation in the study.

**Participant Declaration**

I have read and understood the explanation and I agree by consenting to voluntarily participate in the study. I understand that I can withdraw from the study at any time and I will not undergo any intimidation or penalties for doing so.

In case of any concerns contact:

**The Chairman, Ethics Review committee**

Kenya Methodist University

P.O Box 267 -60200

Meru.

**Principal Investigator**

Claire Otunga

Mobile no.: 0733558803

E mail:clotunga@gmail.com

Participant Initials:…….. Signature……Date: …May 2021……

Research Assistant's Name: Lilian Akoth Signature…LAO Date May 2021….

**Appendix II: Questionnaire**

**CODE……**

I am carrying out a study to assess the Role of Nurse Educators in Clinical Learning of Undergraduate Nursing Students Placed at Kenyatta National Hospital, Nairobi County, Kenya. You are kindly requested to provide the information required by the questionnaire. Your cooperation is highly appreciated and the findings of this research are entirely for this study and no one will be penalized or intimidated for the responses provided. The findings shall be availed to the interested parties upon request.

**INSTRUCTIONS**

1. Do not write your name
2. Please tick ( ) in the boxes provided or explain your opinions in the space provided.

**Section A: Social-demographic Characteristics of participants**

1. **Gender**: i. Male ( ) ii. Female ( )
2. **Age in years**: **----------**
3. **Highest nursing level of education** i. ( ) Degree ii. ( ) Masters iii.( ) Ph.D. iv. Others ( ) Specify …….
4. University currently teaching. Name…….
5. Classroom experience in nursing education i. 0-3 years ( ) ii. 4-7 years ( ) iii. 8-11 years ( ) iv. 12-15years ( ) v. 16 years and above ( )
6. Clinical teaching experience i. 0-3 years ( ) ii. 4-7 years ( ) iii. 8-11 years ( ) iv. 12-15years ( ) v. 16 years and above ( )

7. Nursing clinical course/courses teaching **Choose all that apply**

i. Medical-surgical nursing ( ) ii Midwifery ( ) iii. Teaching methods ( )

iv. Nursing administration ( ) Pediatric Nursing ( ) Other Specialties List all ( ) ……

**Section B: Teaching role in clinical nursing education**

8 a) Do you plan for your clinical teaching? i. Yes, ( ) ii. No ( )

b) If Yes, **Choose all that apply** i) Choice of course ( ) ii) goal and objective setting ( ) iii ) implementation ( ) iv evaluation ( ) v Others, specify ( )

c) If No, **Choose all that apply** i) Time constrains ( ) ii) not my work ( ) iii) department already done ( )

9 . How do you integrate your theory into clinical. **Tick one that applies**

a) Students complete theory in one semester then go to clinical areas ( )

b) They do both theory and clinical in the same semester ( )

10 a). Do you participate in the planning and orientation of your students before clinical placement? i. Yes, ( ) ii. No ( )

b). If Yes, Select all that apply i) Setting orientation for students ( ) ii) Training ( ) iii)resource provision ( ) iv) Communication ( ) v) Sharing objectives ( ) vi)Clinical site ( ) vi) Others ( ), list them ……

c). If No, why i) The clinical instructor does ( ) ii. Time consuming ( ) iii) Others ( )……

11 . Which clinical teaching methods do you apply? **Select all that apply**

i) Case study ( ) ii)reflection ( ) iii) Demonstration ( ) iv)Group discussion

( ) v) Patient bedsite presentations ( ) vi) Journalling ( ) vi) Portfolios ( ) vi)nursing care plans ( ) vii Conferences ( ) viii)Concept maps ( ) Others ( ), list them **…..**

12 State any nursing clinical models or frameworks you use…….

13 a.) Which clinical teaching skills and attributes do you utilize? **Tick all that apply**

i. Professionalism ( ) ii. Teaching ( ) iii. Supportive ( ) iv. innovative ( ) v. Friendly ( ) vi. Availability ( ) vii. Good interpersonal relationship ( ) viii. Knowledgeable ( ) ix. Others, specify( ) ……

b). How do your teaching skills and attributes affect your students' clinical experience? Explain…..……

13. a.) When do you assess and evaluate your students (Tick all that apply) i. Start of placement ( ) ii. Mid ( ) iii) End ( ) Others, specify ……

b) State all the assessment and evaluation tools you use, select all that apply i) Written assignments ( ) ii) checklist ( ) iii) rating scale ( ) iv) Observation ( ) v) Others ( ) Specify……..

c) State when you give feedback to students on this select all that apply i) After assessment ( ) ii) During placement ( ) iii) end of placement ( ) iv)Others ( ) ……

14. a) During student placement how do you ensure your students learning environment is conducive. **Tick all that apply** i) I am always available at clinical site ( ) ii) Preceptors availability ( ) iii) Uncongested site ( ) iv) Availability

oflearning resources ( ) v) Others ( ) State any.....

b). How will you rate the clinical environment of your students? i. Friendly ( ) iron-friendly ( ), Explain your answer…….

**Section C: Supportive Role in clinical education**

15a). How do you psychologically support your students during clinical placement, Tick all that apply **i**) Encouraging peer learning ( ) ii) support system in place ( ) iii)Professional socialization at site ( ) iv) Available and reachable ( ) v) Effective Communication mechanisms ( ) vi)Others, specify ( )……

16). Which clinical support supervision ways do you use and why? **Choose one that applies i.** Preceptorship ( ) ii. Traditional ( ) iii. Clinical teaching ( ) other **Reasons**……

17. a). How often do you perform your clinical supervisory visits? **Tick one that apply**

i. Weekly ( ) ii. Two weekly ( ) iii. Monthly ( ) iv. Others ( )

b). How long on average do you spend with your students during support visits?

i.) 0-2 hours ( ) ii. 3-5 hours ( ) iii. More than six hours ( ) iv. Others ( )

c). What activities do you carry out during your clinical supervisory visits? **List them**

d) What has been your impact on the clinical support and supervision of your students? Explain your answer i) Satisfactory ( ) ii) Highly satisfactory ( ) iii) Exemplary ( ) ……

**Section D: Administrative role of nurse educators**

18a). Do you develop the clinical guidelines for your students (if Yes complete the questions below, if no skip to the next question).

i. How do you organize the number of students for each site, Explain……

ii. How do you plan for the length of time for the entire rotation, Explain……

iii. How do you plan for the availability of tools/objectives for students, Explain.

iv. How do you organize the teaching activities/strategies to be used, Explain

v. If No, explain who does it and how?

19. Indicate who/how you do to ensure student appropriate access to the clinical site in the following.

a) **Choice of facility:** i. Self ( ) ii. Lecturer ( ) iii. Others( ), specify…….

b) **Student self or accompanied**: i. Self ( ) ii. Educator ( ) iii. Others( ), specify…….

c) **Communication-** i. Formal ( ) ii. Informal ( ) iii. Others( ), specify…….

d) **Contact person**: i. Manager ( ) ii. Mentor ( ) iii. Others( ), specify……..

e) **Availing student Transport:** i. Self ( ) ii. School ( ) iii. Others( ), specify…….

20. How do you accomplish your clinical orientation at the site in the following situations: **Tick or explain**

a) **Timing:** i Before reporting to site ( ) ii. After reporting ( ) iii. Both i & ii ( ) iv) Other ( ) specify ……..

b) **Orientation:** i. Formal ( ) ii. Informal ( ),

c) What do you orientate students on, **Explain**……..

d) Who else orientates students? **Choose all that apply**. i. Nurse Manager / in charge ( ) ii. Other students ( ) iii. Mentors ( ) iv. Others ( )

21.). Indicate who meets the students' clinical resources under the following:

a) Facility fees……

b) Site placement ……

c) Co-supervision ……

d) Clinical logbooks……

**Section E: Collaborative role of nurse educators**

22. State any use collaborative forums with other universities in the clinical sites i) None ( ) ii) less often ( ) iii) often ( ) iv) More often ( )

23. Do you ensure cooperation and good interpersonal relationship between site managers and students? **State YES or NO**

i)Self and site managers ……..ii) Site managers and students, **……..**

iii). What are the benefits of your partnership with the institutions and site managers? **State one reason** ……

24 How do you, partner, with institutions to accomplish clinical learning under the following? **State YES/NO in each**

i. Contract/MOU for clinical practice…….
ii. Training of health care workers, preceptors…….
iii. Assessment and evaluation…….
iv. Feedback to students and university…….
v. Resource utilization (human and material)……

25.i) What challenges do you face in your clinical teaching role, Explain……

ii) What challenges do you face in your clinical supportive role, Explain……

iii) What challenges do you face in your clinical administrative role, Explain…….

iv) What challenges do you face in your clinical administrative role, Explain……

26. How would you rate the overall clinical learning outcomes of students at KNH in terms of skills acquisition, knowledge application, and attitude development on a scale of 1-5,1 not competent, with 5 as very competent).

**Thank you for your participation**

## Appendix III: Interview guide for students

1. How do your clinical nurse educators execute their teaching role during your clinical learning (Objectives for your clinical learning, planning for your clinical learning, clinical teaching methods used, assessment evaluation, and feedback)
2. How do they execute their support and clinical roles?
3. What administrative duties do they do before and during your clinical learning?
4. How do they collaborate with the institution and clinical site during your placement?
5. How do you benefit from their roles as above?
6. What challenges have you seen them encounter during executing the roles above?

## Appendix IV: KeMU SERC Approval letter

KENYA METHODIST UNIVERSITY
P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: serc@kemu.ac.ke

February 26, 2021

KeMU/SERC/MSN/7/2021

Claire Otunga
Kenya Methodist University

Dear Claire,

**SUBJECT: EXPLORATION OF THE ROLE OF NURSE EDUCATORS IN CLINICAL LEARNING IN UNDERGRADUATE NURSING STUDENTS AT KENYATTA NATIONAL HOSPITAL, KENYA.**

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your above research proposal. Your application approval number is KeMU/SERC/MSN/7/2021. The approval period is 26th February 2021 – 26th February 2022.

This approval is subject to compliance with the following requirements

I. Only approved documents including (informed consents, study instruments, MTA) will be used.

II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Scientific Ethics and Review committee.

III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU SERC within 72 hours of notification.

IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU SERC within 72 hours.

V. Clearance for export of biological specimens must be obtained from relevant institutions.

VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal

VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU SERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

**Dr. A. WAMACHI**
**Chair, SERC**

## Appendix V: UON/KNH ERC Approval Letter

UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
Tel:(254-020) 2726300 Ext 44355

KNH-UON ERC
Email: uonknh_erc@uonbi.ac.ke
Website: http://www.erc.uonbi.ac.ke
Facebook: https://www.facebook.com/uonknh.erc
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC

KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

APPROVED 03 JUN 2021 KNH/UoN-ERC P. O. BOX 20723 - 00202 NAIROBI

Ref: KNH-ERC/A/188

3rd June 2021

Claire Otunga Luseno
Reg. No.MSN-3-9205-2/2018
School of Nursing
Kenya Methodist University

Dear Claire

**RESEARCH PROPOSAL – EXPLORATION OF THE ROLE OF NURSE EDUCATORS IN CLINICAL LEARNING IN UNDERGRADUATE NURSING STUDENTS AT KENYATTA NATIONAL HOSPITAL, KENYA (P172/03/2021)**

This is to inform you that the KNH- UoN Ethics & Research Committee (KNH- UoN ERC) has reviewed and **approved** your above research proposal. The approval period is 3rd June 2021 – 2nd June 2022.

This approval is subject to compliance with the following requirements:

i. Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
ii. All changes (amendments, deviations, violations etc.) are submitted for review and approval by KNH-UoN ERC before implementation.
iii. Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
iv. Any changes, anticipated or otherwise
v. e that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH- UoN ERC within 72 hours.
vi. Clearance for export of biological specimens must be obtained from KNH- UoN ERC for each batch of shipment.
vii. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (*Attach a comprehensive progress report to support the renewal*).
viii. Submission of an *executive summary* report within 90 days upon completion of the study.

This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/ or plagiarism.

Protect to discover

For more details consult the KNH- UoN ERC website **http://www.erc.uonbi.ac.ke**

Yours sincerely,

**PROF. M. L. CHINDIA**
**SECRETARY, KNH-UoN ERC**

c.c. The Principal, College of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Assistant Director, Health Information Dept, KNH
Supervisors: Dr. Winfred Kathambi Kithinji, Kenya Methodist University
Dr. Joyce Jebet Cheptum, School of Nursing Sciences, UoN

## Appendix VI:NACOSTI Research License

REPUBLIC OF KENYA

NAIROBI CITY COUNTY
RECEIVED
16 MAR 2021
EDUCATION DEPARTMENT
DISPATCH UNIT
TIME:
P. O. Box 30124 - 00100 NAIROBI

NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **948000**

Date of Issue: **15/March/2021**

**RESEARCH LICENSE**

**This is to Certify that Miss.. CLAIRE LUSENO OTUNGA of Kenya Methodist University, has been licensed to conduct research in Nairobi on the topic: EXPLORATION OF THE ROLE OF NURSE EDUCATORS IN CLINICAL LEARNING IN UNDERGRADUATE NURSING STUDENTS AT KENYATTA NATIONAL HOSPITAL, KENYA. for the period ending : 15/March/2022.**

License No: **NACOSTI/P/21/9409**

**948000**

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341666

Recommended
19/3/21

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

## Appendix VII: Nairobi County Research Authorization

NAIROBI CITY COUNTY

Telegraphic Address
Email: info@nairobi.go.ke
Web: nairobi.go.ke

CITY HALL ANNEXE:
P .O. BOX 30298 GPO – 00100.
NAIROBI, KENYA

EDUCATION, SOCIAL SERVICES AND GENDER

Ref: GL/NC/141 VOL. VI/350

16th March, 2021

Claire Luseno Otunga
Methodist University
P.O. Box 267 – 60200
MERU - KENYA

RE: RESEARCH AUTHORIZATION

Following your application to carry out Research and Subsequent approval by National Commission for Science, Technology and Innovation vide letter Ref: NACOSTI/P/21/9409 dated 15th March, 2021;

I am pleased to inform you that authority has been granted to you to carry out research on *"Exploration of the Role of Nurse Educators in Clinical Learning in Undergraduate Nursing students at Kenyatta National Hospital, Nairobi, Kenya"*, for the period ending 15th March, 2022.

On conclusion of the study, you are expected to submit a copy of the research findings to the undersigned:

RAPHAEL K. KINYUNGU
DEPUTY DIRECTOR EDUCATION, PROJECTS, PARTNERSHIP, POLICY & PLANNING

Copy to: Ag. Chief Officer – Education, Social Services & Gender
Nairobi City County

*"The City of Choice to Invest, Work and Live in"*