AN ASSESSMENT OF FACTORS INFLUENCING CLINICAL LEARNING AMONG DIPLOMA NURSING STUDENTS AT MOI TEACHING AND REFERRAL HOSPITAL ELDORET, KENYA.

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

JUNE, 2025

DECLARATION

This 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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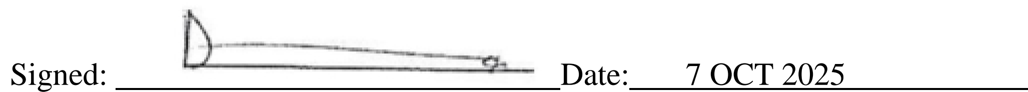
We confirm that the work reported in this thesis was carried out by the candidate under our supervision.



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DEDICATION

To my husband who has been a great pillar and support during the entire process.

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I would like, foremost, to thank God for granting me the opportunity, strength, resources and perseverance to undertake this research study.

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ABSTRACT

Clinical learning is a critical component of nursing education worldwide, enabling students to develop practical skills through supervised patient care. Globally and regionally, nursing students face challenges such as inadequate supervision, resource shortages, and a persistent theory-practice gap, particularly in low- and middle-income countries. In Kenya, despite nurses demonstrating strong overall competencies, diploma nursing students often underperform in clinical placements compared to theoretical assessments, highlighting a pressing need for context-specific investigation. This study assessed factors influencing clinical learning among 304 diploma nursing students at Moi Teaching and Referral Hospital (MTRH), Kenya. The objectives were to: (a) identify student-related factors; (b) evaluate training institution-related factors; (c) examine clinical setting-related influences; and (d) explore students' experiences with the preceptorship model. Using an explanatory sequential mixed-methods design, the study samples 304 nursing students by census sampling to complete questionnaires as well as 24 students participating in a total of 4 Focus Group Discussions (FGD). Quantitative data were analyzed with SPSS version 27 using descriptive statistics, chi-square tests for associations, and multivariate regression to identify predictors of clinical performance ($p \leq 0.05$). Qualitative data underwent thematic analysis to enrich understanding of preceptorship experiences. Among the 304 respondents, key quantitative findings included: 37.83% (n=115) strongly disagreed that clinical supervision was adequate ($\chi^2=15.7$, $p=0.001$); 36.51% (n=111) reported ineffective teaching methods ($\chi^2=12.4$, $p=0.004$); and 33.88% (n=103) experienced poor cooperation with clinical staff ($\chi^2=10.8$, $p=0.013$). Anxiety and financial constraints were notable student-related barriers (anxiety $\chi^2=11.5$, $p=0.009$). Regression analysis revealed that training institution-related ($\beta=0.32$, $p=0.002$) and clinical setting-related factors ($\beta=0.28$, $p=0.005$) significantly predicted clinical performance, explaining 12.5% of variance ($R^2=0.125$, $F=7.64$, $p=0.003$). Qualitative themes included supportive preceptorship fostering confidence and skills, resource limitations such as PPE shortages, and the persistent theory-practice gap due to inconsistent clinical guidance. In conclusion, inadequate supervision, poor teaching methods, and resource scarcity are significant barriers to effective clinical learning at MTRH. Strengthening supervision, enhancing teaching strategies, and improving clinical resources are essential to bridge the theory-practice gap and improve nursing students' clinical competence.

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LIST OF ABBREVIATIONS

CSR	Clinical Setting Related
CTA	Clinical Teaching Associate
KEMU	Kenya Methodist University
KMTC	Kenya Medical Training College
MTRH	Moi Teaching and Referral Hospital
NACOSTI	National Commission for Science and Technology and Innovation
NCK	Nursing Council of Kenya
NHS	National Health Service
SPSS	Statistical Package for Social Sciences
SR	Student Related
TIR	Training Institution-Related
UHC	Universal Health Coverage
WHO	World Health Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Clinical placements are a vital component of nursing education because they provide students with opportunities to apply theoretical knowledge and acquired skills in real-world healthcare environments. Globally, recent studies have highlighted multiple factors that promote or hinder effective clinical learning. For instance, Arkan et al. (2018) identified positive interpersonal relationships, student engagement, and supportive learning environments as key facilitators, whereas poor staff attitudes, lack of supervision, and limited learning opportunities were major hindrances. Similarly, George et al. (2017) emphasized that infrastructural challenges—such as inadequate supplies and staffing—negatively affect students' clinical experiences. Despite these constraints, Millanzi et al. (2021) observed that student motivation and active engagement can mitigate difficult clinical environments. Inocian et al. (2022) further underscored the importance of cultivating motivation and resilience among nursing students as a strategy to improve learning outcomes. Moreover, Addisie et al. (2022) noted that collaboration between academic institutions and healthcare facilities is crucial for bridging the gap between classroom knowledge and real-world patient care. Collectively, this global evidence underscores the multidimensional nature of clinical nursing education, where learning environments, interpersonal relationships, institutional support, and student attributes interact to shape learning outcomes.

Effective nurse training thus requires a balance between theoretical instruction and practical experience. While theoretical learning provides foundational knowledge necessary for patient care, the clinical component allows students to translate theory

into practice (Millanzi et al., 2021). Without this practical application, theoretical understanding remains abstract and limited in relevance to healthcare delivery (Saifan et al., 2021). Clinical placements, therefore, form the core of professional nursing education worldwide, fostering accountability, responsibility, and independence among trainees (Gemuhay et al., 2019).

In Kenya, accredited nursing schools are typically situated within or near hospitals to ensure students have direct access to clinical training opportunities. For instance, the Kenya Medical Training College (KMTC) campuses are often co-located with major hospitals, and Moi Teaching and Referral Hospital (MTRH) serves as a major clinical training site offering supervised, hands-on experience. Nursing education in Kenya follows the preceptorship model (Nyaga & Kyololo, 2017), guided by the standards of the Nursing Council of Kenya (NCK). However, despite this structure, several challenges persist that hinder the full realization of clinical learning benefits. The present study therefore seeks to examine these factors comprehensively and propose actionable recommendations to strengthen clinical learning among nursing students in Kenya.

1.2 Statement of the Problem

Despite Kenyan nurses exhibiting strong overall competencies, persistent concerns remain about nursing students' weak performance and experiences in clinical placements (Lewis et al., 2019). Research attributes these challenges to interrelated factors within training institutions, hospital environments, and student attributes. Key barriers include inadequate supervision, limited learning opportunities in under-resourced hospitals, and misalignment between theory and practice (Addisie et al., 2022). Moreover, static instructional approaches and unclear evaluation methods further hinder learning motivation and skill development (Rahimi & Ahmadi, 2005;

Zaighami et al., 2004). The problem is particularly acute in Kenya, where poor clinical performance remains a widespread concern (Elmwafy et al., 2020). Evidence from KMTC Eldoret highlights a consistent disparity between higher theoretical and lower practical assessment scores, suggesting that students struggle to translate classroom knowledge into clinical competence.

At MTRH, several systemic barriers exacerbate this challenge. Inadequate supervision, heavy patient workloads, and limited resources constrain the time available for hands-on learning and feedback (Addisie et al., 2022). Clinical activities often emphasize routine nursing tasks rather than the application of higher-level competencies, reinforcing the theory-practice gap and diminishing student motivation (Zaighami et al., 2004). Consequently, many students feel underprepared for professional duties, contributing to consistently low clinical performance. This study, therefore, seeks to identify the factors influencing effective clinical learning among diploma nursing students at MTRH. By addressing these issues, training institutions and hospitals can develop targeted strategies to improve supervision, enhance clinical exposure, and align theory with practice—ultimately strengthening nursing competence and patient care quality in Kenya.

1.3 Objectives of the Study

1.3.1 Broad Objective

1. To assess the factors influencing clinical learning among diploma nursing students at the Moi Teaching and Referral Hospital.

1.3.2 Specific Objectives

1. To identify student-related (SR) factors influencing clinical learning among diploma nursing students at the Moi Teaching and Referral Hospital.

2. To determine training-institution related (TIR) factors influencing clinical learning among diploma nursing students at the Moi Teaching and Referral Hospital.
3. To establish clinical placement institution related (CSR) factors that influence clinical learning among diploma nursing students at the Moi Teaching and Referral Hospital.
4. To investigate student's perspectives on the facilitators of clinical learning at the Moi Teaching and Referral Hospital.

1.4 Research Questions

1. What student-related (SR) factors influence clinical learning of diploma nursing students at Moi Teaching and Referral Hospital?
2. What training-institution related (TIR) factors influence clinical learning of diploma nursing students at Moi Teaching and Referral Hospital?
3. What clinical placement institution related (CSR) factors influence the clinical learning of diploma nursing students at Moi Teaching and Referral Hospital?
4. What are students' perspectives on the facilitators of clinical learning at the Moi Teaching and Referral Hospital.

1.5 Purpose of the Study

The purpose of this study is to identify key factors influencing the quality of clinical learning among diploma nursing students in Kenya. Effective clinical training is imperative for producing competent nursing graduates who can provide high-quality care. However, persisting gaps between theory and practice highlight a need to improve nursing clinical education. By exploring clinical learning challenges and enablers from the student perspective, this study aims to delineate specific areas needing improvement by training institutions and health facilities to foster optimal clinical learning environments. The insights can inform targeted strategies and policies to enhance nursing clinical training quality in Kenya and strengthen graduates' readiness to address evolving community healthcare needs. The overall objective is to assess diploma nursing students' perceptions of factors affecting their clinical learning experiences.

1.6 Justification of the Study

Learning is the process of acquiring, comprehending, applying, and extending knowledge, skills, concepts, and attitudes (Qvortrup et al., 2016). Based on this definition, clinical apprenticeship used in training nurses in Kenya is a form of learning. Dukes and Clément (2019) categorize learning as a social and affective process affected by social and cultural factors shaping an individual's ideas, concepts, comprehension of their immediate world, and interpretation and application of the learned materials. Therefore, clinical learning as a social and affective cognitive process is affected by factors influencing the students' comprehension, application, and extension of the theoretical knowledge acquired in nursing education. It is necessary to determine factors that lead to poor performance to ensure continuous improvement in nursing education and, consequently, healthcare provision in general. Although numerous studies have been carried out internationally, there is a shortage of literature on clinical learning in Kenya. To the best of our knowledge, there is no other study that has considered the subject of factors affecting clinical learning among diploma nursing students at MTRH, which is the second largest referral facility in Kenya.

1.7 Limitations of the Study

This study’s findings are constrained by its focus on diploma nursing students within a single referral hospital and its affiliated nursing colleges, which may limit the applicability of results to other educational institutions or regions with differing clinical training environments. The reliance on self-reported data, gathered through questionnaires and focus group discussions, introduces the possibility of response bias, as participants may consciously or unconsciously provide socially desirable answers. Additionally, the cross-sectional nature of the data collection over a three-month period

may not capture variations in clinical learning experiences that occur over longer durations or different academic cycles. Finally, while thematic analysis of qualitative data provides in-depth insights, it remains subject to the researcher's interpretive influence despite measures taken to ensure objectivity and credibility.

1.8 Delimitations of the Study

This study was intentionally delimited to second- and third-year diploma nursing students to concentrate on individuals who had sufficient clinical placement experience, thereby excluding first-year students and those enrolled in degree programs. Geographically, the research was confined to Moi Teaching and Referral Hospital and its associated nursing colleges in Eldoret, Kenya, reflecting a specific contextual setting that may not represent broader national or international nursing education environments. Furthermore, the use of a cross-sectional mixed-methods design provided a snapshot of the factors influencing clinical learning at a specific point in time, foregoing longitudinal examination of changes over time. The choice to utilize structured questionnaires and focus group discussions as primary data collection tools, while effective for the study's aims, excluded other qualitative approaches such as individual interviews or observational studies, which might have yielded additional perspectives.

1.9 Significance of the Study

This study reveals the shortcomings in clinical learning leading students to struggle applying theory. The results could guide nursing education administrators and mentors to target investments for quality clinical instruction. They may inform strengthening clinical experiences to effectively translate knowledge into skilled practice. Moreover, findings will build evidence to help regulators like the Ministry of Education and the

Nursing Council of Kenya evaluate and enhance clinical teaching and experiential learning. The study aims to sustain robust clinical education. It may also suggest curriculum updates to address evolving healthcare needs. Ultimately, identifying gaps through this research can focus efforts to assure excellent clinical training that equips students for the complex healthcare environment. The insights are valuable for educators, mentors and regulators seeking to improve clinical learning and skill development. The results of this study can also be utilised at the national and county levels to guide policy formulation and at the hospital and college levels for policy, implementation to improve students' clinical performance through better clinical training, thus producing fully competent nurses. Generally, this study will enhance the understanding of factors affecting nursing education, particularly clinical learning, potentially improving healthcare outcomes.

1.10 Assumptions of the Study

The study significantly relied on the honesty of the participants' responses. Specifically, the research assumed the factuality and truthfulness of the information provided by the study sample. This study also assumed that the students were willing to provide truthful details on their socioeconomic backgrounds.

1.11 Operational Definition of Key Terms

Clinical Learning: The process involved in nursing students learning from experts in the hospital setting and gain practical experience through the application of their learned knowledge and acquired skills in caring for real patients under the supervision of a preceptor or clinical instructor.

Student-related (SR) factors: Traits, attitudes, circumstances and experiences intrinsic to the nursing student that influence their capacity for growth and development

in clinical environments. In this study, these encompass attributes such as motivation, confidence, anxiety, communication abilities, financial constraints, and readiness.

Training institution-related (TIR) factors: Structural, resource and capacity elements stemming from nursing colleges that shape the clinical teaching and learning process. The factors studied in this research include faculty competencies, skills lab infrastructure, simulation technology, theory-practice integration, and quality assurance.

Clinical setting-related (CSR) factors: Aspects inherent to the healthcare facility environment and culture that impact nursing student experiences, satisfaction and knowledge/skills acquisition during placements. These include staff behaviors, workload, supervision models, infrastructure, exposure opportunities, and workplace policies.

Preceptorship Model: A clinical education approach where an experienced registered nurse within a healthcare facility mentors an individual nursing student to provide supervision, teaching and assessment with the aim of positively building competencies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Globally, clinical learning forms the cornerstone of nursing education, bridging theoretical instruction and practical application in real healthcare environments. It equips students with essential competencies for safe and effective patient care and prepares them to adapt to complex clinical demands (Amini et al., 2020). However, studies across diverse contexts continue to reveal a persistent gap between classroom learning and clinical performance, largely due to limited supervision, inadequate resources, and inconsistent mentorship structures (Cant et al., 2021). In high-income countries, structured mentorship models and simulation technologies have improved student preparedness, yet challenges such as workload pressures and learner anxiety still persist (Cant et al., 2021).

Across Africa, similar barriers are amplified by resource limitations and understaffed facilities, which constrain practical learning opportunities and supervision quality (Panda et al., 2021). Regional studies highlight that many nursing students experience stress, low confidence, and skill deficits due to insufficient clinical exposure (Arkan et al., 2018). In Kenya, where nursing remains a central pillar of the healthcare workforce, the gap between theory and practice remains a major concern (Lewis et al., 2019). Despite nursing being a predominantly hands-on profession, inadequate supervision, overcrowded hospitals, and resource shortages continue to hinder students' acquisition of clinical competence. Improving clinical learning is therefore essential to strengthen nursing education and enhance healthcare delivery outcomes.

2.2 Theory-Practice Gap in Nursing

The theoretical aspects of nursing education involve knowledge and concepts relayed in classrooms. Theoretical knowledge endows nursing students with an understanding of professionalism, nursing history, human anatomy, nursing procedures and diseases (Kertu & Nuuyoma, 2019). Kertu and Nuuyoma (2019) argue that, clinical learning enhances clinical skillsets and other attributes of nursing practice through the application of classroom learning into practical clinical settings with real patients. Diverse researchers have established that there exists a gap between classroom or theoretical learning and the translation of this knowledge into practical skills for patient care. The classroom-practice gap is the discrepancy existing between classroom learning and the experiences of nursing students in clinical placements. Greenway et al. (2019) and Falk et al. (2016) describe the theory-practice gap as failure to translate classroom knowledge into practical skills. According to Manning and Craxon as cited in Kertu and Nuuyoma (2019), nursing is task-centred; however, students often graduate without sufficient experience in comprehensive patient care, which leads to theory-practice gap. That is, nursing students graduate with theoretical competence and fail in clinical practice.

Theory-practice gap makes nurses vulnerable in terms of criticism and loss of confidence in their ability to care for patients (Abdullahi et al., 2022). Abdullahi et al. (2022) add that the attending consequences of theory-practice gap include lack of awareness of developments, advancement and findings of research by nurses. One of the main reasons why theory practice gap persists is the reliance on traditional approaches in care and education, whereby intuition is followed instead of empirical research findings, evidence-based practices are not integrated into the nursing

curriculum or healthcare, and poor coordination between academics and clinical setting (Agbedia et al., 2014)

In a study conducted by Chan (2013), nursing students in clinical settings are required to conform to the nursing practices there without assistance; consequently, the failure to conform leaves them vulnerable and feeling isolated, hence the failure to transition from theory to practice. Kertu and Nuuyoma (2019) found that what students learnt in class and simulated clinical settings contradicted nursing practices in clinical settings. This leaves the students confused, anxious, and stressed, which indicates inadequate training and teaching of nursing students for professional practice. According to Tiwaken et al. (2015), clinical setting factors that affect the nursing students' experiences during clinical practice include the attitudes of healthcare workers, state of the equipment, and behaviour of patients and their family members. Additionally, the clinical setting is different from classrooms and simulation laboratories. Nursing students can experience major shock as they deal with death and real suffering of patients, which affects their transition from theory to practice (Kertu & Nuuyoma, 2019).

The transition of nursing students from theoretical education to clinical practice is often hindered by insufficient clinical teaching, a lack of mentorship, and high levels of stress, which are exacerbated by unsupportive management attitudes in clinical settings (Subramanian & Kleib, 2023). Theoretical knowledge provides the essential framework for clinical reasoning and cannot be isolated from practical experience; therefore, systemic issues that hinder theoretical education also contribute significantly to the theory-practice gap. These issues include a shortage of teaching staff, limited equipment, and financial constraints, which also burden healthcare providers in clinical settings (National Advisory Council on Nurse Education and Practice, 2021). This

environment means experienced staff are overworked, leaving them with limited time and energy to guide nursing students (Bodine, 2022). Consequently, students can become isolated and frustrated by the lack of learning opportunities, which directly affects their ability to integrate theoretical knowledge into clinical practice. Therefore, organized clinical support and access to effective mentorship are essential for improving learning and bridging the theory-practice gap.

To this end, students require dedicated clinical facilitators and supervisors to support their integration into clinical settings and the application of theory to practice (Kamolo et al., 2017). The preceptorship model is a key approach, where a preceptor acts as a role model and teacher. However, for this model to succeed, preceptors themselves require specific training and support to be effective (Bengtsson & Carlson, 2015; Griffiths et al., 2022). A positive and supportive preceptor-student relationship is fundamental for student development and preparedness for the challenges of the nursing profession (Subramanian & Kleib, 2023). The theory-practice gap is frequently evidenced by students' poor performance in clinical settings, where they struggle to transfer theoretical knowledge into practice. The preceptorship model remains a vital strategy for improving this transfer of knowledge into practical skills.

2.3 Preceptorship Model in Nursing Education

As a learning model, preceptorship is a globally recognized clinical teaching approach in nursing education (Hugo & Botma, 2020). Although widely used, researchers have found that the model is often less supported and understood by stakeholders (Dube & Rakhudu, 2021). A preceptor is an experienced and competent nurse formally assigned the role of mentoring nursing students (preceptee) in their professional development (Fedele, 2020). England's National Health Service (NHS) states that the aim of the model is to support, guide, and develop confidence and competence as they transition

from students to professionals (National Health Service [NHS], 2022). Sigei et al. (2022) describe preceptorship as a teaching method applied in clinical education of health professions focussing on clinical and ethical development. According to Kang et al. (2016), the preceptorship teaching-learning model enhances collaboration between academic institutions and healthcare-providing institutions. Therefore, it increases the number of healthcare workers and the delivery of healthcare services.

The preceptors and students are involved in close relationships in the preceptorship to facilitate role modelling (Girotto et al., 2019). However, a significant challenge is that many preceptors lack the necessary training and preparation to be effective in their role (Cosme & Valente, 2013; Forber et al., 2016). Consequently, this lack of preparation can sometimes derail the clinical learning process. Existing literature indicates that it is time-consuming and stressful for experienced and competent nurses to develop into effective preceptors, particularly in clinical settings with limited support and resources (Bodine, 2022). These and many other context-specific challenges affect the effectiveness of the preceptorship model in the clinical training of nurses.

The preceptorship learning model in nursing education has had significant success in developed countries because of proper arrangements between the training institution and the site of clinical placement to ensure clear and effective placement of nursing students and sufficient preparation of preceptors (L'Ecuyer et al., 2018). In the strategies for Universal Health Coverage (UHC), the World Health Organization (WHO) has placed preceptors as critical in the development of the nursing and midwifery labour force (Hugo & Botma, 2020). Hugo and Botma (2020) add that preceptors emphasise the clinical competence and utilisation of inter-professional strategies in healthcare training. L'Ecuyer et al. (2018) argued that preceptorship programs for nursing students are effectively organised between training schools and

healthcare centres in developing countries. However, the efficiency of the organisation in Africa is generally affected by the lack of enough trained preceptors. L'Ecuyer et al. (2018) add that the shortage of preceptors leads to the reduced preceptor-preceptee contact time, which affects mentorship and student nurse development of practical skills. Sigei et al. (2022) argue that nursing education in Kenya is faced with similar challenges in terms of preceptorship due to a lack of proper organisation, guidelines, and policies on preceptorship programs. For example, in Tenwek Hospital's clinical teaching program for nursing students, the number of students has increased over time which has led to an increase in the preceptor-student ratio, resulting in increased workload for the preceptors and poor performance of students in clinical learning due to decreased preceptor student contact (Sigei et al., 2022). Different preceptor models are adopted based on the available resources and the situation-specific need.

One of the most common preceptor models involves a single preceptor (a professional nurse) and a single preceptee (nursing student). Nightingale's idea underpins the contemporary models of clinical preceptorship as a time-limited one-to-one relationship between the student and an expert nurse employed in a clinical setting (Missen et al., 2018). Over the clinical practicum, the student is scheduled to work in the clinical setting on the same work shift as the preceptor to enable collaboration to meet the student's clinical learning needs as they transition into clinical practice (Brown & Walker, 2020). This model is applicable in clinical settings where sufficient resources are available; the ratio between nursing students and preceptors is 1:1. Since this is not the case in many countries and most certainly not in developing countries, such as Kenya (Sigei et al., 2022; Nyaga & Kyololo, 2017), where the shortage of qualified staff faces clinical settings. In this preceptor model, the nurse is responsible for the general clinical experience of the student as the clinical teacher, mentor and role

model. At the same time, the faculty member acts as a resource for the preceptor and the student.

Another preceptor model is the Clinical Teaching Associate (CTA) Model. In the CTA model, a single preceptor is in charge of a group of students. The preceptor (hospital nurse) assists clinical instructors (faculty member) in providing clinical instruction and guiding nursing students and supervising in the absence of the instructor from the clinical setting (Nielsen et al., 2013). Additionally, the preceptor provides feedback to the students and helps the students to come up with solutions to problems and improvements under the close supervision of the instructor (Nielsen et al., 2013). The CTA preceptorship model can narrow the theory-practice gap in nursing education because it merges theoretical learning and practical instructions to prepare expert nurses (Namadi et al., 2019). According to Griffiths et al. (2022), structured models like the CTA enhance the clinical learning environment and support the preceptor's role. In the application of these models in developing countries, researchers have found a lack of collaboration between preceptors and faculty members, low motivation, and improper supervision as some of the challenges in preceptorship programs (Subramanian & Kleib, 2023).

2.4 Empirical Literature Review

Student performance in clinical learning is a multifactorial phenomenon. For the purpose of this study, factors that affect clinical learning are categorised into student-related, clinical setting-related, training institution-related (Gemuhay et al., 2019; Mhango et al., 2021). The researcher considers the four categories of factors to have a positive or negative effect on nursing students' clinical performance.

2.4.1 Student Related Factors

A multitude of student-related factors significantly shape nursing students' clinical education experiences and outcomes. Key influences include motivation levels, anxiety, self-esteem, confidence, and economic background (Fatima et al., 2019; Rezakhani Moghaddam et al., 2020). Of these, self-confidence holds particular import, with greater self-assuredness in clinical competencies positively associated with supportive supervision from nursing instructors and preceptors (Abdelkader et al., 2021). However, traditional didactic teaching methods, lack of constructive feedback, and theory-practice gaps can impede confidence-building in applying classroom knowledge to patient care (Fatima et al., 2019). Beyond intrinsic personal qualities, nursing students' attitudes and learning are impacted by the prevailing workplace culture and norms, effective communication with staff, and facilitator attitudes (McTier et al., 2023). Challenging organizational climates involving inappropriate social cues, resource limitations, and inadequate infrastructure can further complicate student learning (Rezakhani Moghaddam et al., 2020). Ultimately, optimized clinical learning necessitates training institutions and health facilities jointly addressing this spectrum of student-related barriers through interventions targeted at boosting learner confidence, motivation and resilience while also fostering positive, supportive placement environments.

Student readiness for the complex demands of clinical placements holds critical importance for effective learning. Key determinants of readiness include having sufficient prerequisite theoretical knowledge, clinical skills preparation through simulation activities, technological capabilities, strong communication competencies, and self-directedness (Mbawonimana, 2021; Sum & Sim, 2021). However, heavy reliance on traditional lecturing pedagogies can impede development of students'

critical thinking, decision-making, and self-regulated learning skills needed in practice environments (Mbawonimana, 2021). Furthermore, lacking fluency with information communication technologies prevents maximizing learning opportunities from online knowledge sources at clinical sites (Sum & Sim, 2021). Other readiness gaps encompass suboptimal listening, documentation, and teamwork capabilities - largely stemming from minimal opportunities to hone these abilities on campus (Marriott et al., 2024). Ultimately, training institutions must strengthen pre-clinical courses, simulation training, and digital literacy curricula to equip novice students with multifaceted competencies that enable adaptation to demanding, fast-paced hospital settings. Failing to sufficiently ready learners risks disengagement, attrition, and poor performance during placements (Marriott et al., 2024). A comprehensive readiness-focused approach can thus help overcome student-related impediments and build resilient nursing graduates.

2.4.2 Training Institution-related (TIR) Factors

A predominant training institution-related factor impacting nursing clinical education is inadequate staffing and instructor capabilities. Studies across multiple countries highlight insufficient quantities of qualified clinical instructors as well as overreliance on didactic teaching that fails to bridge theory-practice gaps as key barriers (El-tahan et al., 2023; Gemuhay et al., 2019). In Kenya, the shortage of competent instructors also manifests in insufficient supervision and feedback during student placements, negatively affecting learning and skill development. Beyond staffing deficits, some analyses point to suboptimal attitudes of nursing faculty towards clinical teaching roles as affecting student motivation and self-directed learning (Talato et al., 2022). Furthermore, training institutions struggling with resource constraints face challenges

in ensuring quality skills labs and accessible learning reference materials to prepare students for patient care responsibilities (McTier et al., 2023).

While clinical learning challenges related to home institutions are multifaceted, studies also elucidate facilitating factors. Structured interventions by training programs, encompassing preparatory classes, detailed procedural guidelines, enhanced technology access and communication platforms to support on-site learning can help alleviate prevalent barriers students face (Gemuhay et al., 2019). Additionally, adopting more interactive competency-based clinical models focused on empowering student learning autonomy versus dependence on instructors also shows promise for stronger educational outcomes (El-tahan et al., 2023). Ultimately dynamic, responsive and student-centred approaches by nursing schools are required to improve clinical learning environments for producing practice-ready future graduates.

2.4.3 Clinical Setting-related (CSR) Factors

The clinical environment encompassing infrastructure, workplace culture, staff attitudes and support mechanisms significantly impacts nursing student learning and experiences during placements. Studies emphasize that positive, collaborative environments facilitate learning, while stressful settings involving lack of trust, constant scrutiny and ineffective communication impedes skill development (Amimaruddin & RuditaIdris, 2021; Bhurtun et al., 2019). In particular, countries facing nurse staffing shortages on wards struggle with excessive student loads for already overburdened staff; this manifests in inadequate supervision and guidance alongside impatience towards perceived slow learner performance (El-Ashry et al., 2022). Even optimal instructor knowledge and skills may be hampered in facilities struggling with resource constraints like missing supplies, outdated technology and substandard building infrastructure (Rojo et al., 2020). Such limitations can not only

directly reduce learning opportunities but also negatively affect staff behaviours towards students.

However, research also delineates clinical setting factors promoting student development. Facilitation encompasses nurses demonstrating positive attitudes, patience and constructive feedback alongside purposeful efforts to involve students in diverse learning experiences suited to their level (Amimaruddin & RuditaIdris, 2021). Additionally, hospitals actively fostering cultures of interprofessional education see enhanced collaborative practice capabilities among graduating nursing students (Bhurtun et al., 2019). Thus, despite facing increasing workplace demands, health facilities focused on engaging nursing learners via targeted initiatives centred on effective staff-student relationships and communication may see dividends both in optimized clinical training and workplace readiness of future new hires.

The layout, workflow, and care models utilized within clinical environments also significantly impact opportunities for nursing students to develop key competencies. For instance, wards designed with open patient rooms facilitate instructor oversight and easy access to charting stations for teaching documentation skills (El-Ashry et al., 2022). However, crowded hallways, insufficient meeting spaces, and distant nursing units hamper both formal and impromptu student-staff interactions critical for experiential learning (Amimaruddin & RuditaIdris, 2021). Additionally, complex conditions and specialized interventions at tertiary hospitals, alongside rotating shifts, make comprehending holistic care delivery challenging (Rojo et al., 2020). While such settings provide exposure to high-acuity cases, the fragmented learning can overwhelm novice students. Hence, health facilities must evaluate how care delivery models, patient conditions, physical infrastructure, and work processes either enhance or inadvertently hinder achievement of clinical education goals. Addressing limitations

via incremental improvements aligned with pedagogical priorities carries potential to markedly strengthen nursing training quality.

2.4.4 Markers of Clinical Learning of Nursing Students

The literature on the measurement of nursing students' performance in clinical settings highlights the importance of a comprehensive assessment tool that includes both task and contextual performance items (Kahya & Oral, 2018). The learning experience of student nurses in these settings is influenced by the learning environment, with collaborative learning, trust, and mutual respect being key factors (Amimaruddin & RuditaIdris, 2021). Nursing students tend to rate their own competencies as higher than their actual role, indicating a potential gap between self-perceived and actual performance (Amilia & Nurmalia, 2020). Despite generally positive ratings of their clinical placement experiences, there is still room for improvement, particularly in the role of the nurse teacher (Cant et al., 2021).

Many studies examined the connection between clinical learning performance and academic performance among nursing students. Nosheen and Hussain (2020) found a positive correlation between learning styles, learning strategies, and academic performance. Panimdim and Ismael (2018) similarly reported a significant correlation between classroom and clinical performance, suggesting that good academic standards and sufficient clinical exposure are crucial for future nursing professionals. Also, Kim and Kim (2021) identified a weak positive correlation between academic achievement and clinical competence, with high academic achievement leading to better clinical performance. Oducado (2021) further emphasized the role of self-directed learning readiness, self-esteem, and grit in influencing academic performance among nursing students. These findings collectively highlight the importance of academic performance and various factors in shaping clinical learning performance among nursing students.

2.5 Theoretical framework

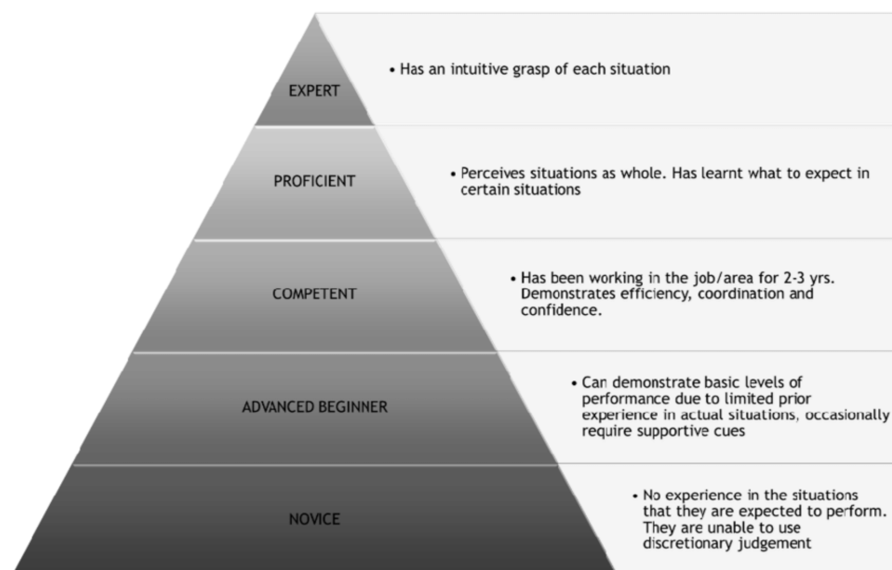
This study is based on two theories of teaching and learning: the Novice to Expert theory of teaching and learning and the social learning theory.

2.5.1 Novice to Expert Theory

Patricia Benner, a renowned nursing theorist, formulated the theory delineated in her seminal work "From Novice to Expert: Excellence and Power in Clinical Nursing Practice." Widely acknowledged as a pivotal theoretical framework, this model serves as a cornerstone for assessing nurses' developmental trajectories (Petiprin, 2023). Benner's theory, grounded in the Dreyfus model of skill acquisition, posits that nurses accrue expertise and comprehension of patient care through a confluence of education, background, and experiential learning (Benner, 1982). According to this theory, nurses traverse five distinct stages from novice to expert, elucidated below:

Figure 2.1:

Novice to Expert Theory



Source: Murray et al. (2019)

Benner's theory outlines five stages of professional growth for nurses: novice, advanced beginner, competent, proficient, and expert (Benner, 1982). While developed based on qualified nurses, this framework is still highly relevant for exploring clinical learning among student nurses. Nursing students enter clinical placements at the novice level, with little real-world experience to apply classroom teachings about patient care. Through sufficient support and repeated exposure caring for patients in various situations under guidance of instructors and preceptors, nursing students can begin advancing towards higher competence and confidence levels described by Benner (Petiprin, 2016). Thus, Benner's theory provides an applicable lens for assessing nursing student development along this continuum during clinical rotations. Exploring challenges and enablers at different student stages can help identify specific interventions needed to aid their progression into advanced beginners and ultimately competent practicing nurses.

2.5.2 Social Learning Model

Albert Bandura proposed the social learning theory to build on the existing theories of learning by adding emphasis on observation, modelling, and imitation. Social learning theory considers the interactions between environmental factors (stimuli) and cognitive factors and how they affect human learning. Bandura's theory postulates learning as a purposeful and active task that enhances deep learning and development (Bandura, 1977). In the theory, observation is core to the learning process and in a similar manner, it is essential to clinical learning. Student nurses in clinical practice can learn through observing and modelling observed procedures and practices. Observation and modelling allow nursing students to observe the interactions between experienced nurses and patients and try to model and imitate those practices. According to Bandura, there are four meditational processes: attention, retention, reproduction, and

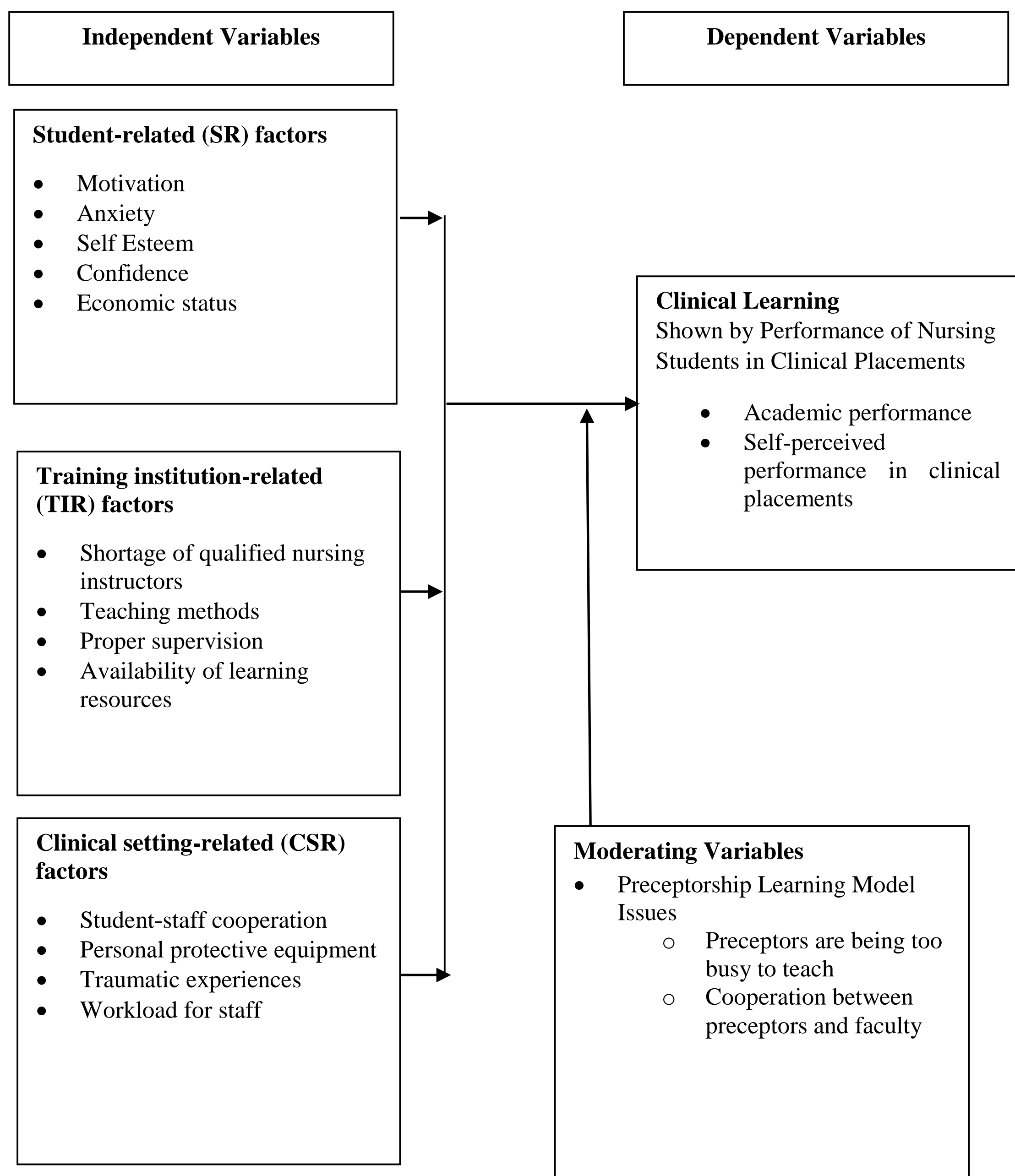
motivation. In 1986, Bandura modified the theory and renamed it social cognitive theory to reflect more on learning through social experiences (Bandura, 1986). Bandura's arguments were based on the idea that people need direct experiences to learn, which explains the purpose of clinical learning, to provide nursing students with the experience to develop into professional nurses. Role modelling is an essential component of social learning theory (Aliakbari et al., 2015); this underlies the importance of clinical learning in a preceptorship environment. Quinn and Hughes (2007) argue that observing the behaviour of other people creates an efficient and safe manner of acquiring complex behavioural patterns compared to trial and error; therefore, instead of trial and error, the nursing student can learn the complexities of nursing practice from experienced nurses instead of through trial and error, which would put patients' lives and healthcare in danger.

2.6 Conceptual Framework

The conceptual framework in this study explains the relationship between variables in the study. The illustration below shows the conceptual framework of the study.

Figure 2.2

Conceptual framework



2.7 Research Gap

While extensive literature exists on nursing clinical education globally, regionally and within the Kenyan context, there remains minimal evidence regarding the clinical learning experiences and influencing factors specifically at the Moi Teaching and Referral Hospital (MTRH) from the diploma nursing student perspective. As one of the largest public hospitals and nursing training institutions in the country, the clinical learning environment at MTRH holds immense significance for producing practice-ready nurses able to address local and national health needs. However, no known prior study has consolidated an in-depth investigation of the multiple interrelated facility-level, student-cantered and training institution-based dynamics affecting clinical education quality at this teaching hospital. This gap in context-specific evidence tailored to MTRH's clinical setting prevents targeted quality improvement strategies to optimize student learning and competency development during placements. The current study addresses this knowledge gap by exploratorily examining, through the lens of diploma nursing students trained at MTRH, the spectrum of barriers and enablers stemming from the training institution, clinical environment and student-related domains that shape clinical education processes and outcomes. Findings can inform fit-for-purpose interventions by both MTRH and its affiliated nursing colleges to enhance clinical teaching capacity, bridge theory-practice disconnects, and foster positive workplace cultures; ultimately benefiting nursing training quality and graduate readiness to address local healthcare service delivery challenges.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the procedures and methods that were be used to carry out this research. It covers the research design that was employed in the study, the target population, sampling procedure, instrumentation, data collection, data analysis, and ethical considerations that were accounted for in the study. The chapter provides the logic behind the application of particular techniques to study the objectives of the study compared to other techniques available.

3.2 Research Design

The research design provided a coordinated framework of conditions for data collection, measurement, and analysis to effectively address the stated research problem. This study adopted a mixed methods research design, which integrates both quantitative and qualitative approaches to generate a more comprehensive understanding of the phenomenon under investigation. The first three objectives were investigated using a quantitative cross-sectional design, which allowed for the measurement of variables at a single point in time to determine existing relationships and patterns among them. The final objective was explored through qualitative inquiry by Focus Group Discussion, which provided deeper insights into participants' experiences and perceptions related to clinical learning. Employing both methods strengthened the study's validity and enabled triangulation of data from different perspectives. Because the qualitative phase followed the quantitative phase to further interpret and explain the statistical findings, the study specifically adopted an explanatory sequential design, ensuring logical integration between quantitative outcomes and qualitative explanations.

3.3 Study Area

This study focused on Moi Teaching and Referral Hospital (MTRH), located in Eldoret town, Uasin Gishu County, Kenya. MTRH hosts a College of Health Sciences. The college began as an enrolled community health nurse training centre in 2004 before adding other fields of training in 2009 (Moi Teaching and Referral Hospital [MTRH], 2019). MTRH also received diploma nursing students from KMTC as well as other private training institutions who were placed for their clinical rotations.

3.4 Target Population

The target population for this study comprised all diploma nursing students in their second and third years who were undergoing clinical rotations at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. According to institutional enrollment records from both MTRH College of Health Sciences and Kenya Medical Training College (KMTC) Eldoret campus, the total number of eligible students was 676. Specifically, 356 students were registered at MTRH College of Health Sciences, while 320 students were enrolled at KMTC Eldoret campus. These students were undertaking two academic programs designed to prepare them for practical nursing roles, with clinical placements at MTRH integral to their training. The inclusion of both institutions ensured that the study encompassed a broad representation of diploma nursing students within the region's key clinical training sites.

3.5 Study Population

From the target population, the study population was defined as the subset of students who were accessible, met the established eligibility criteria, and were actively engaged in clinical placements at MTRH during the study period. Institutional data indicated that 304 students fit these parameters, comprising 102 students from MTRH College

and 202 students from KMTC Eldoret. This accessible population represented those available for recruitment and data collection, thereby ensuring the feasibility of the study. The demographic diversity of this group reflected the typical nursing student cohort in the region, enabling relevant and generalizable insights into the factors influencing clinical learning experiences.

3.6 Eligibility Criteria

3.6.1 Inclusion Criteria

Participants were eligible to participate if they met all of the following criteria: First, only those who were enrolled as diploma nursing students in their second or third year of study at Moi Teaching and Referral Hospital (MTRH) College of Health Sciences or Kenya Medical Training College (KMTC) Eldoret campus were included. Second, only learners who were actively undergoing clinical placements at MTRH during the study period to ensure relevant, current clinical learning experience were included.

3.6.2 Exclusion Criteria

Participants were excluded if they declined or were unwilling to provide informed consent to participate in the study, ensuring respect for voluntary participation and ethical research practices.

3.7 Sampling

3.7.1 Sample Size Determination

For the quantitative component, the study adopted a census sampling approach owing to the relatively small and well-defined population of 304 eligible diploma nursing students at MTRH. All students who met the inclusion criteria were invited to participate, thereby maximizing representativeness and minimizing sampling bias. The

census approach ensured comprehensive coverage of the target population, improving the reliability and generalizability of findings within the study context (Mugenda & Mugenda, 2019).

For the qualitative component, four FGDs were conducted, each comprising six participants, resulting in a total of 24 students. Two FGDs were held at each of the three participating nursing colleges affiliated with MTRH. The number of FGDs was determined based on the principle of data saturation, where additional discussions were not expected to yield new themes or insights. This ensured the adequacy and depth of qualitative information collected to complement the quantitative findings.

3.6.2 Sampling Procedure

For the quantitative phase, all second and third-year diploma nursing students undertaking clinical placements at MTRH were included through a census approach. Before the administration of self-completed questionnaires, students were briefed on the study objectives, procedures, and ethical safeguards, after which those who consented participated voluntarily. This inclusive process ensured that all eligible participants were represented, reflecting the diversity of clinical learning experiences across the group (Turner, 2020).

For the qualitative phase, participant recruitment for FGDs was voluntary. Students who had completed at least one full clinical rotation and expressed willingness to share their clinical learning experiences were invited to join. The research team ensured equitable representation by selecting volunteers from each participating college until the desired number for each FGD was reached. The FGDs were conducted physically within private seminar rooms at the MTRH training complex, providing a conducive environment for discussion and observation of non-verbal cues. Each session lasted

approximately 60–90 minutes and was facilitated by the researcher using a semi-structured interview guide, supported by a trained note-taker. This procedure ensured authenticity, comfort, and rich interaction among participants while safeguarding confidentiality.

3.7 Instrumentation

Data for this study were collected using both quantitative and qualitative instruments aligned with the study objectives. To address the first three objectives, a structured questionnaire was employed. The questionnaire comprised two main sections: the first captured respondents' demographic and background information, while the second contained closed-ended items on a five-point Likert scale. These items were developed from themes identified in previous research and were designed to measure key constructs such as supervision quality, learning environment, and student motivation.

For the fourth objective, which sought to explore students' experiences under the preceptorship model, qualitative data were obtained through focus group discussions (FGDs). Each FGD consisted of six to eight participants and was guided by a semi-structured interview guide developed by the researcher. The guide contained open-ended questions and probes covering themes such as students' perceptions of mentorship, challenges encountered, learning opportunities, and suggestions for improvement. The semi-structured format ensured consistency across discussions while allowing flexibility for participants to express unique perspectives. The qualitative instrument was reviewed by experts in nursing education to ensure content validity.

3.8 Validity and Reliability of Research Instruments

3.8.1 Validity

Validity refers to the extent to which an instrument accurately measures what it is intended to measure and ensures that the data collected truly represent the concept under investigation (Polit & Beck, 2021). In this study, several strategies were employed to enhance both content and face validity of the instruments. During the questionnaire development phase, an extensive review of relevant literature and previously validated tools was undertaken to ensure that each item corresponded directly to the study objectives and captured all essential dimensions of the constructs being measured. The draft questionnaire and interview guide were subsequently reviewed by subject matter experts, including the study supervisors and experienced nursing educators, to assess clarity, comprehensiveness, and relevance of the items. Their feedback was incorporated to refine wording and eliminate ambiguity. This expert validation process ensured that the tools adequately covered the domain of interest, thereby improving their precision, consistency, and overall validity for data collection.

3.8.2 Reliability and Pretesting

Before the main data collection, the questionnaire was pretested with 33 nursing students from Iten County Referral Hospital, representing approximately 10% of the total study population. This pretesting aimed to identify and correct any unclear or ambiguous questions, improving the clarity and relevance of the instrument.

Reliability was assessed using Cronbach's Alpha to measure internal consistency. The questionnaire demonstrated high reliability with a Cronbach's Alpha value of 0.850, while the standardized item analysis yielded a slightly lower but still strong value of

0.840 across 41 items (see Table 1). These results indicate that the instrument was reliable and consistent for collecting data on factors affecting clinical learning among diploma nursing students. The pretesting and reliability assessment process was essential to refine the tool and ensure its effectiveness for the larger study population.

Table 3.1:

Reliability of the Instrument

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.850	.840	41

3.9 Data Collection

3.9.1 Questionnaire Administration Procedure

The finalized questionnaire was converted into an online survey using Google Forms to enable efficient and accessible data collection from diploma nursing students. The survey link was distributed to eligible participants through QR codes and direct messages via social media platforms commonly used by the students. Prior to completing the questionnaire, participants received detailed information about the study and provided electronic informed consent. Students completed the questionnaire remotely at their convenience within the designated data collection period. All responses were securely collected and stored via Google Forms, allowing for streamlined data management and subsequent analysis.

3.9.2 Focus Group Discussion Procedure

FGDs were conducted to investigate student's perspectives on the facilitators of clinical learning at MTRH. Two FGDs were held with students from KMTC Eldoret campus and two with students from MTRH College of Health Sciences, with each group consisting of six participants, totalling 24 students. The discussions took place in quiet,

convenient locations near the respective clinical sites to ensure participant comfort and accessibility. Prior to each session, participants were provided with detailed information about the study's aims and ethical considerations, including confidentiality and voluntary participation, after which written informed consent was obtained. To maintain anonymity and facilitate clear identification during analysis, participants within each group were assigned identifiers from Student A to Student F. The sessions were guided by a semi-structured interview guide containing open-ended questions designed to elicit rich, detailed insights into the challenges, supports, and overall experiences related to the preceptorship learning approach. Each FGD lasted approximately 45 to 60 minutes and was audio-recorded with participant permission. Following the discussions, recordings were transcribed verbatim and subjected to thematic analysis to identify key themes and patterns relevant to the study objectives.

3.10 Data Management and Analysis

3.10.1 Data Entry, Transcription, and Cleaning

Quantitative data collected through the online questionnaires were assigned unique numeric study identifiers and coded numerically for electronic entry into Excel spreadsheets. To ensure accuracy, data entries were cross-checked against the online records. Qualitative data from focus group discussions were audio-recorded and transcribed verbatim into digital documents. Each transcript was labeled with unique participant alphanumeric identifiers corresponding to their focus group and individual code. Transcripts were reviewed and verified against the audio recordings to ensure fidelity. Both quantitative and qualitative datasets underwent rigorous data cleaning to identify and rectify errors such as missing responses, inconsistencies, or ambiguous terms before final analysis.

3.10.2 Data Analysis

Appropriate analytical techniques consistent with the mixed-methods design were applied to the datasets to address the study objectives comprehensively. Quantitative data from the closed-ended questionnaire items were analyzed using SPSS version 27. Univariate analysis produced descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize demographic variables and responses across the three quantitative domains corresponding to objectives one, two, and three. Bivariate analysis utilizing chi-square tests assessed differences between respondent subgroups. Multivariate analyses, including correlation and regression modeling, explored relationships and predictive effects of various factors on student self-perceived clinical performance.

Qualitative data from the focus groups were analyzed thematically. Transcripts were coded, and emerging patterns were organized into key themes reflecting nursing students' experiences with and influences of the preceptorship model on clinical learning. The integration and triangulation of quantitative and qualitative findings enabled a richer, more nuanced understanding of the factors influencing clinical learning, enhancing the study's validity and reliability. Statistical significance was set at $p \leq 0.05$ for all tests.

3.10.3 Data Presentation

Findings from quantitative analyses were presented using tables and charts to display frequencies, percentages, and inferential statistics clearly. Descriptive summaries contextualized the data, while results from chi-square and regression analyses were reported with corresponding test statistics and significance values. Qualitative results were presented through detailed thematic narratives, including illustrative quotes from participants coded by focus group and individual identifiers. The combined

presentation of quantitative and qualitative findings provided a comprehensive and coherent picture of the clinical learning environment, facilitating the drawing of well-supported conclusions aligned with the study objectives.

3.11 Ethical Considerations

This study adhered to fundamental ethical principles and regulatory requirements governing research involving human participants. Ethical clearance was first obtained from Kenya Methodist University (KEMU) after a thorough institutional review of the research proposal. Following this, a research licence was acquired from the National Commission for Science, Technology and Innovation (NACOSTI) to authorize data collection. Permission was further sought from the management of the study site and respective departmental heads to ensure institutional accountability. These steps demonstrated compliance with both national and institutional ethical standards that guide student research in Kenya. The process ensured that the study design and implementation respected the rights, safety, and welfare of all participants while maintaining scientific integrity. By obtaining these approvals prior to data collection, the researcher ensured that all study activities met the ethical expectations of transparency, responsibility, and respect for persons in academic and healthcare research environments.

Informed consent was obtained from all participants before their involvement in the study. The researcher clearly explained the study objectives, data collection procedures, potential benefits, and minimal foreseeable risks to ensure understanding and voluntary participation. Participants were informed that their involvement was entirely optional and that they could withdraw from the study at any stage without fear of penalty or academic consequence. Written consent forms were signed prior to completing

questionnaires or taking part in focus group discussions. This process promoted ethical participation and safeguarded participants' autonomy. By emphasizing voluntariness and comprehension, the researcher upheld the principle of respect for persons and ensured that participation reflected informed choice rather than coercion. The consent process also served to build trust and transparency between the participants and the researcher, strengthening the ethical foundation of the study.

Confidentiality and anonymity were maintained throughout the research process using several protective measures. Questionnaires and focus group transcripts were coded using unique alphanumeric identifiers instead of personal details to preserve anonymity. The principal investigator securely stored the key linking participants to their codes, with access strictly limited to verification purposes when necessary. All raw data, including digital recordings, were encrypted and stored in password-protected files to prevent unauthorized access. Data analysis and reporting were conducted in aggregated form, ensuring that no individual could be identified from the findings. These procedures upheld the principles of confidentiality and beneficence by minimizing risks of privacy breaches or psychological harm. Collectively, these ethical safeguards ensured that participants' rights were fully protected while promoting the credibility, trustworthiness, and overall integrity of the research.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the study on the assessment of factors influencing clinical learning among diploma nursing students at Moi Teaching and Referral Hospital. This chapter is split into four sections, each presenting the findings following the primary goal of the study. While analyzing the work of other researchers from other subject fields in the literature, pertinent comparisons and noteworthy linkages have been highlighted. This chapter provides a complete interpretation and cross-analysis of the findings.

4.2 Response Rate

The study achieved a high response rate, with 304 out of the 304 expected respondents participating, resulting in a response rate of 100%. On the other hand, 24 students participated in the FGDs. This high response rate suggests a strong level of engagement and interest in the research topic among the respondents. It also enhances the reliability and validity of the findings, as the large proportion of respondents closely reflects the target population, thereby minimizing potential response bias. The high participation rate is essential for ensuring that the data collected is representative and that the conclusions drawn apply to the broader group of nursing students at Moi Teaching and Referral Hospital and the Kenya Medical Training College.

4.3 Demographics of Study Participants

The study sample consisted of a total of 304 respondents. In terms of age distribution, the majority of participants were between 20-24 years, accounting for 229 (76.8%) of the total sample, followed by 52 (17.4%) who were in the 25-29 age bracket, and 17 (5.7%) who were aged 15-19 years. Regarding gender, female participants made up 184

(60.5%) of the respondents, while 120 (39.5%) were male. As for the institutions of study, students from the Kenya Medical Training College (KMTC) formed the larger group, with 202 (66.4%) participants, while 102 (33.6%) were from Moi Teaching and Referral Hospital (MTRH) College of Health Sciences. This demographic distribution reflects a youthful cohort predominantly in the early stages of their professional training, with a higher representation of females, and a significant portion attending KMTC (Table 2).

Table 4.1:

Demographic characteristics of Respondents

Variable	Particulars	Frequency (n)	Percentage (%)
Age	15-19	17	5.70
	20-24	229	76.85
	25-29	52	17.45
Sex	Female	184	60.53
	Male	120	39.47
Institution	KMTC	202	66.45
	MTRH CHS	102	33.55

4.5 Self-Perceived Performance in Clinical Placements

Self-perceived performance in clinical placements revealed several notable trends. A significant portion of respondents, 146 (48.03%), strongly agreed that they effectively applied nursing knowledge during clinical placements, with a mean score of 4.27 (SD=0.95). Similarly, 148 (48.68%) strongly agreed that their clinical reasoning abilities enabled effective patient assessment and care planning, reflecting a high mean of 4.26 (SD=0.90). However, in managing complex patient cases, a smaller percentage, 99 (32.57%), strongly agreed, indicating slightly lower confidence in this area, with a mean of 3.99 (SD=0.93). Notably, the ability to integrate evidence-based knowledge showed more neutral responses, with 54 (17.76%) neither agreeing nor disagreeing and a mean of 3.97 (SD=0.99). Overall, the students reported high confidence in their

clinical skills, but areas such as managing complex cases and integrating evidence-based care showed room for improvement (Table 3).

Table 4.2:
Likert Scale Response on Self-Perceived Performance in Clinical Placements

Statement	Opinion	Frequency (n[%])	Mean	σ
I effectively apply nursing knowledge learned in class during clinical placements	Strongly Disagree	13 (4.28)	4.270	0.951
	Disagree	4 (1.32)		
	Neutral	17 (5.59)		
	Agree	124 (40.79)		
	Strongly Agree	146 (48.03)		
I can proficiently demonstrate most of the clinical skills required with minimal supervision	Strongly Disagree	8 (2.63)	4.253	0.947
	Disagree	14 (4.61)		
	Neutral	17 (5.59)		
	Agree	119 (39.14)		
	Strongly Agree	146 (48.03)		
I am able to integrate evidence-based knowledge into clinical care decisions	Strongly Disagree	9 (2.96)	3.967	0.998
	Disagree	16 (5.26)		
	Neutral	54 (17.76)		
	Agree	122 (40.13)		
	Strongly Agree	103 (33.88)		
My clinical reasoning abilities enable me to effectively assess patients and plan appropriate care	Strongly Disagree	4 (1.32)	4.257	0.901
	Disagree	12 (3.95)		
	Neutral	34 (11.18)		
	Agree	106 (34.87)		
	Strongly Agree	148 (48.68)		
I am confident in my ability to manage complex patient cases during clinical placements	Strongly Disagree	7 (2.30)	3.993	0.933
	Disagree	11 (3.62)		
	Neutral	58 (19.08)		
	Agree	129 (42.43)		
	Strongly Agree	99 (32.57)		
I have strong psycho-motor skills in giving patient care during clinicals	Strongly Disagree	7 (2.30)	4.039	0.984
	Disagree	18 (5.92)		
	Neutral	45 (14.80)		
	Agree	120 (39.47)		
	Strongly Agree	114 (37.50)		
My communication and interpersonal skills with patients are highly effective during placements	Strongly Disagree	14 (4.61)	4.217	1.024
	Disagree	9 (2.96)		
	Neutral	22 (7.24)		
	Agree	111 (36.51)		
	Strongly Agree	148 (48.68)		
I am able to meet the clinical learning objectives successfully by the end of my rotation	Strongly Disagree	4 (1.32)	4.480	0.836
	Disagree	8 (2.63)		
	Neutral	20 (6.58)		
	Agree	78 (25.66)		
	Strongly Agree	194 (63.82)		
My training has empowered me to practice safely as a student nurse in the clinical environment	Strongly Disagree	5 (1.64)	4.418	0.808
	Disagree	6 (1.97)		
	Neutral	14 (4.61)		
	Agree	111 (36.51)		
	Strongly Agree	168 (55.26)		

Overall, I rate my performance in clinical placements so far as very good	Strongly Disagree Disagree Neutral Agree Strongly Agree	6 (1.97) 5 (1.64) 29 (9.54) 109 (35.86) 155 (50.99)	4.322	0.864

4.6 Student-Related (SR) Factors

The analysis of student-related factors in clinical placements revealed several notable insights. A significant proportion of students, 99 (32.57%), agreed that they were highly motivated during their placements, with a mean score of 3.65 (SD=1.27). In contrast, anxiety negatively impacted performance for 67 (22.04%) of the respondents, with a lower mean score of 2.90 (SD=1.37). Confidence in clinical abilities was relatively high, with 132 (43.42%) agreeing and 74 (24.34%) strongly agreeing, yielding a mean of 3.75 (SD=1.05). On the other hand, low self-esteem was a major issue, with 108 (35.53%) strongly disagreeing that it affected their skills acquisition, but 56 (18.42%) agreeing that it was a challenge. Financial constraints also presented challenges, as 58 (19.08%) strongly disagreed and 59 (19.41%) strongly agreed, reflecting mixed experiences and a mean score of 3.06 (SD=1.41). These findings highlight both strengths and areas for improvement in students' clinical placements (Table 4).

Table 4.3:

Descriptive Statistics on Student-Related (SR) Factors

Statement	Opinion	Frequency (%)	Mean	σ
I am highly motivated during my clinical placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	27 (8.88) 35 (11.51) 49 (16.12) 99 (32.57) 94 (30.92)	3.651	1.270
I have high anxiety levels during clinical placements which negatively impacts my performance	Strongly Disagree Disagree Neutral Agree Strongly Agree	67 (22.04) 55 (18.09) 69 (22.70) 67 (22.04) 46 (15.13)	2.901	1.373

I have high levels of confidence in my abilities during clinical placements	Strongly Disagree	13 (4.28)	3.750	1.051
	Disagree	26 (8.55)		
	Neutral	59 (19.41)		
	Agree	132 (43.42)		
	Strongly Agree	74 (24.34)		
I feel I have low self-esteem which negatively impacts my skills acquisition in the clinical setting	Strongly Disagree	108 (35.53)	2.306	1.254
	Disagree	79 (25.99)		
	Neutral	47 (15.46)		
	Agree	56 (18.42)		
	Strongly Agree	14 (4.61)		
Financial constraints negatively affect my ability to maximize learning in clinical placements	Strongly Disagree	58 (19.08)	3.063	1.407
	Disagree	58 (19.08)		
	Neutral	54 (17.76)		
	Agree	75 (24.67)		
	Strongly Agree	59 (19.41)		
I am able to integrate theory learned in class during clinical placements	Strongly Disagree	17 (5.59)	4.026	1.163
	Disagree	23 (7.57)		
	Neutral	30 (9.87)		
	Agree	99 (32.57)		
	Strongly Agree	135 (44.41)		
Personal problems and worries distract me during my clinical placement time	Strongly Disagree	61 (20.07)	2.875	1.349
	Disagree	65 (21.38)		
	Neutral	78 (25.66)		
	Agree	51 (16.78)		
	Strongly Agree	49 (16.12)		
I struggle with certain skills and procedures which negatively impacts my learning.	Strongly Disagree	63 (20.72)	2.819	1.321
	Disagree	71 (23.36)		
	Neutral	65 (21.38)		
	Agree	68 (22.37)		
	Strongly Agree	37 (12.17)		
My communication skills make it difficult to engage with clinical staff and patients.	Strongly Disagree	131 (43.09)	2.200	1.368
	Disagree	80 (26.32)		
	Neutral	23 (7.57)		
	Agree	41 (13.49)		
	Strongly Agree	29 (9.54)		
I lack self-directedness and independence in my learning approach during clinical.	Strongly Disagree	150 (49.34)	2.026	1.302
	Disagree	75 (24.67)		
	Neutral	24 (7.89)		
	Agree	31 (10.20)		
	Strongly Agree	24 (7.89)		

4.7 Training Institution Related (TIR) Factors

The analysis of training institution-related factors highlighted several challenges faced by students during clinical placements. A significant number of respondents, 115 (37.83%), strongly disagreed that they received proper supervision from their instructors, with a mean score of 2.37 (SD=1.37). Similarly, 111 (36.51%) strongly disagreed that instructors used effective teaching methods, resulting in a low mean score of 2.47 (SD=1.45). Many students, 94 (30.92%), strongly disagreed that sufficient learning resources, such as skills labs and simulation equipment, were available, with a mean score of 2.43 (SD=1.32). Furthermore, 96 (31.58%) strongly disagreed that there were enough practical rehearsal opportunities before entering clinical settings, yielding a mean of 2.48 (SD=1.35). In addition, 86 (28.29%) strongly disagreed that there were enough qualified nursing instructors, indicating a major concern with faculty support, with a mean score of 2.70 (SD=1.46) (Table 5). These findings suggest gaps in training resources and instructional quality.

Table 4.4:

Likert Scale on Training Institution Related (TIR) Factors

Statement	Opinion	Frequency (%)	Mean	σ
There is shortage of qualified nursing instructors to facilitate my learning in clinical placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	86 (28.29) 73 (24.01) 41 (13.49) 53 (17.43) 51 (16.78)	2.704	1.462
The instructors use poor teaching methods that do not prepare me adequately for clinics	Strongly Disagree Disagree Neutral Agree Strongly Agree	111 (36.51) 72 (23.68) 26 (8.55) 57 (18.75) 38 (12.50)	2.470	1.453

There is improper supervision by my instructors during clinical placement	Strongly Disagree Disagree Neutral Agree Strongly Agree	115 (37.83) 70 (23.03) 38 (12.50) 55 (18.09) 26 (8.55)	2.365	1.367
There are insufficient learning resources (skills labs, simulation equipment etc) provided to support my clinical skills acquisition	Strongly Disagree Disagree Neutral Agree Strongly Agree	94 (30.92) 96 (31.58) 28 (9.21) 62 (20.39) 24 (7.89)	2.428	1.323
There is lack of practical rehearsal opportunities in simulation labs/skills labs before going to actual clinical setting	Strongly Disagree Disagree Neutral Agree Strongly Agree	96 (31.58) 85 (27.96) 30 (9.87) 68 (22.37) 25 (8.22)	2.477	1.352
The training curriculum does not adequately cover all the skills required during clinical placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	91 (29.93) 99 (32.57) 37 (12.17) 54 (17.76) 23 (7.57)	2.405	1.286
There are too few opportunities for instructors to provide feedback on my performance during clinical placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	97 (31.91) 76 (25.00) 47 (15.46) 55 (18.09) 29 (9.54)	2.484	1.352
There is lack of constructive feedback from my instructors on areas of weakness to improve my clinical practice	Strongly Disagree Disagree Neutral Agree Strongly Agree	92 (30.26) 91 (29.93) 42 (13.82) 56 (18.42) 23 (7.57)	2.431	1.296
Communication and information sharing between my training institution and the clinical placement sites is ineffective	Strongly Disagree Disagree Neutral Agree Strongly Agree	98 (32.24) 104 (34.21) 36 (11.84) 39 (12.83) 27 (8.88)	2.319	1.287
There is lack of training on use of technological equipment I encounter during clinical placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	102 (33.55) 83 (27.30) 38 (12.50) 43 (14.14) 38 (12.50)	2.447	1.399

4.8 Clinical Setting-Related (CSR) Factors

The analysis of clinical setting-related factors revealed several key concerns among students. A notable 103 (33.88%) of respondents strongly disagreed that there was cooperation between clinical staff and students, with a low mean score of 2.40 (SD=1.33). Similarly, 82 (26.97%) strongly disagreed that adequate personal protective equipment was available at clinical sites, yielding a mean of 2.61 (SD=1.37). Traumatic experiences were reported by 61 (20.07%) of respondents who strongly agreed, reflecting a higher mean of 3.02 (SD=1.45). Additionally, 96 (31.58%) strongly disagreed that there were enough opportunities to apply knowledge and develop clinical skills at placement sites, with a mean score of 2.31 (SD=1.20). Structured orientation programs were lacking according to 82 (26.97%) of students, resulting in a mean of 2.34 (SD=1.15). These findings indicate significant challenges in student engagement and the adequacy of clinical placement conditions. For further details, please refer to the table provided (Table 6).

Table 4.5:

Likert Scale on Clinical Setting-Related (CSR) Factors

Statement	Opinion	Frequency (%)	Mean	σ
There is a lack of cooperation between clinical staff and students during my placement	Strongly Disagree	103 (33.88)	2.609	1.372
	Disagree	77 (25.33)		
	Neutral	50 (16.45)		
	Agree	47 (15.46)		
	Strongly Agree	27 (8.88)		
The clinical placement sites lack adequate personal protective equipment for students	Strongly Disagree	82 (26.97)	3.023	1.445
	Disagree	89 (29.28)		
	Neutral	32 (10.53)		
	Agree	68 (22.37)		
	Strongly Agree	33 (10.86)		
I have witnessed or undergone traumatic experiences at the clinical placement sites	Strongly Disagree	65 (21.38)	2.339	1.155
	Disagree	57 (18.75)		
	Neutral	49 (16.12)		
	Agree	72 (23.68)		

	Strongly Agree	61 (20.07)		
There is lack of structured programs to orient students at each new clinical placement site	Strongly Disagree Disagree Neutral Agree Strongly Agree	82 (26.97) 107 (35.20) 61 (20.07) 38 (12.50) 16 (5.26)	2.309	1.204
There are too few opportunities facilitated at the sites to apply my knowledge and develop clinical skills	Strongly Disagree Disagree Neutral Agree Strongly Agree	96 (31.58) 95 (31.25) 50 (16.45) 49 (16.12) 14 (4.61)	2.839	1.378
The number of students placed clinically at any one site exceeds capacity of staff to adequately supervise learning	Strongly Disagree Disagree Neutral Agree Strongly Agree	63 (20.72) 81 (26.64) 48 (15.79) 66 (21.71) 46 (15.13)	2.674	1.265
There is lack of inter-professional education between students of different cadres at the clinical sites	Strongly Disagree Disagree Neutral Agree Strongly Agree	66 (21.71) 81 (26.64) 72 (23.68) 56 (18.42) 29 (9.54)	2.319	1.256
The staff have unwelcoming attitudes towards students hindering my engagement at clinical sites	Strongly Disagree Disagree Neutral Agree Strongly Agree	99 (32.57) 95 (31.25) 45 (14.80) 44 (14.47) 21 (6.91)	2.563	1.314
There are communication barriers between students and clinical staff due to hierarchy / intimidation	Strongly Disagree Disagree Neutral Agree Strongly Agree	79 (25.99) 88 (28.95) 56 (18.42) 49 (16.12) 32 (10.53)	2.434	1.236
There is lack of consistent preceptorship by specific clinical staff members during placements	Strongly Disagree Disagree Neutral Agree Strongly Agree	83 (27.30) 97 (31.91) 53 (17.43) 51 (16.78) 20 (6.58)	2.609	1.372

4.9 Student's Perspectives on the Facilitators of Clinical Learning

4.9.1 The Influence of Clinical Setting and Resources on Learning

4.9.1.1 Workload and Understaffing

Students frequently reported that the clinical workload and understaffing had a significant impact on their learning opportunities. With too few nurses and too many patients, there was often little time left for proper teaching and guidance. For instance, Student A from FGD 3 observed, *"The nurses have a lot of responsibilities, so they*

don't have much time to teach us." Similarly, Student C from the same FGD mentioned, *"When there are fewer patients, we have more time to learn."* This indicates that patient-to-nurse ratios were directly linked to how much learning students were able to engage in. In high-pressure wards, students often found themselves performing tasks without adequate instruction, which reduced the quality of their learning experience. This imbalance between staffing and patient care responsibilities created a gap where students felt they were missing out on essential learning. In essence, students perceived that when there were fewer patients and a lower workload, they had more opportunities to absorb the lessons and skills taught by preceptors.

4.9.1.2 Lack of Resources

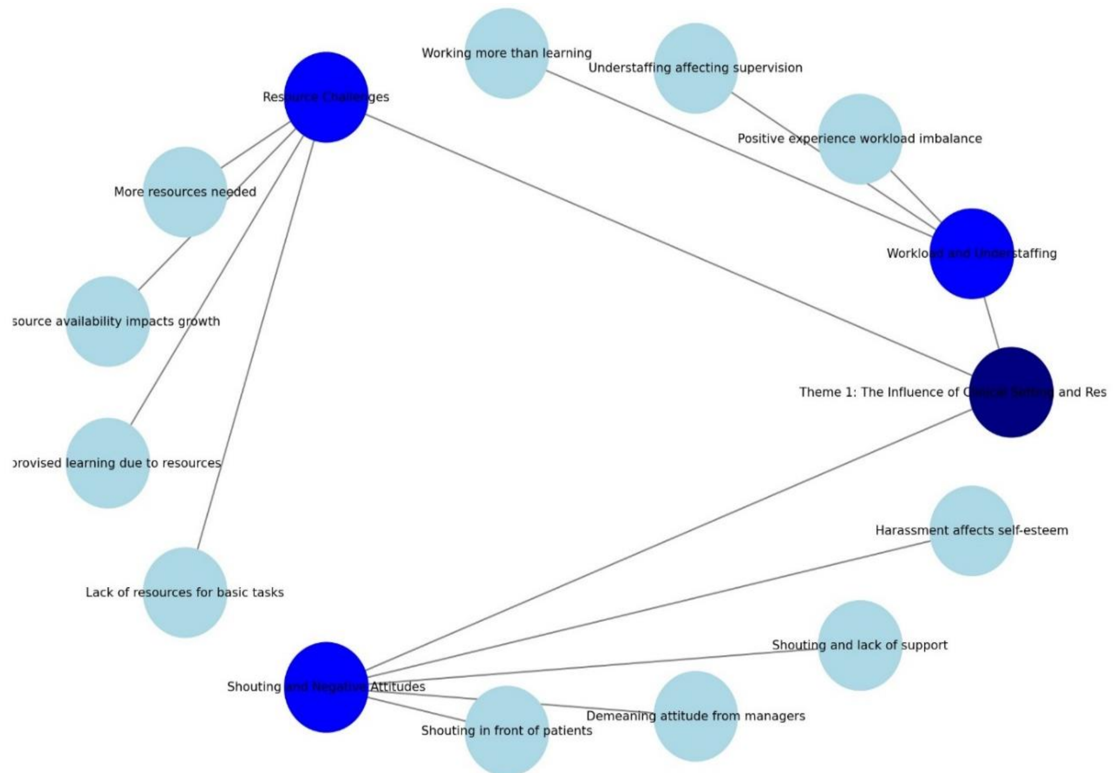
The availability of basic resources was a recurring concern for students across the focus groups. Many found themselves unable to properly execute procedures due to a lack of essential items such as sterile equipment and protective gear. Student F from FGD 4 shared their frustration with the lack of resources, particularly pointing out that *"We are doing bed-making without gowns."* Student A from FGD 1 echoed this sentiment, saying, *"Due to the lack of sterile equipment, we sometimes have to improvise procedures."* These challenges not only limited students' ability to follow proper protocols but also reduced the quality of their clinical education. The lack of resources forced them to adapt in ways that compromised the learning process, with some students feeling that they were being trained in suboptimal conditions. As future healthcare providers, these students recognized the importance of practicing in well-resourced environments, which would allow them to carry out procedures correctly and confidently.

4.9.1.3 Shouting and Negative Attitudes

A hostile learning environment created by certain nurses was another barrier frequently mentioned by students. Rather than fostering a supportive atmosphere, some preceptors resorted to shouting, which hindered students' confidence and growth. Student B from FGD 2 noted, *"Sometimes students are shouted at instead of being explained things in a better way, even in front of patients."* This public scolding not only undermined the student but also affected their relationship with the patients. Additionally, Student F from FGD 4 added, *"If you do a procedure wrong, you get harassed, which lowers your self-esteem."* Such negative encounters discouraged students, making them reluctant to seek guidance or clarification for fear of being reprimanded. These instances of shouting and impatience left a lasting impact on their confidence, making the clinical learning environment feel intimidating rather than educational. For students, learning requires an environment where mistakes are opportunities for growth, not occasions for public embarrassment.

Figure 4.1

Clinical Setting and Resources as a Facilitator of Clinical Learning



4.9.2 The Role of Preceptors in Shaping Learning Outcomes

4.9.2.1 Preceptor Availability and Attitude

The role of preceptors was critical in shaping students' clinical experiences, but their availability and attitudes varied widely, affecting how much students could learn. Some preceptors were simply too busy to guide students effectively. As Student B from FGD 3 observed, *"Some preceptors are not available, and some nurses even shout at us, which is demeaning."* Student A from FGD 4 added that preceptors tended to focus on students' negative behavior rather than celebrating successes, sharing that *"Preceptors only report students when they miss shifts, never praising them for good work."* This

lack of engagement and recognition left students feeling unsupported in their learning journeys. Instead of fostering growth, these preceptors often left students to fend for themselves, which diminished the effectiveness of the learning process. The unavailability of preceptors, coupled with negative reinforcement, made the clinical environment more challenging for students, who needed both instruction and encouragement during their rotations.

4.9.2.2 Learning vs. Assisting

A recurring concern raised by students was the tension between learning and assisting with staff shortages. Many felt that instead of being given opportunities to learn, they were often used to fill gaps in the workforce. Student B from FGD 3 expressed frustration, stating, *"We sometimes cover staff shortages instead of learning, which reduces our learning experience."* In these situations, students were performing tasks that were more about maintaining hospital operations than enhancing their educational experience. They were assigned duties typically meant for nurses rather than being allowed to observe and learn new skills. This expectation to step in as temporary staff limited their exposure to valuable learning moments, as preceptors prioritized patient care over teaching. The balance between assisting and learning was thus skewed, leaving students feeling overworked and under-instructed. This arrangement created a dynamic where the focus was on completing tasks rather than on enhancing students' knowledge and competencies.

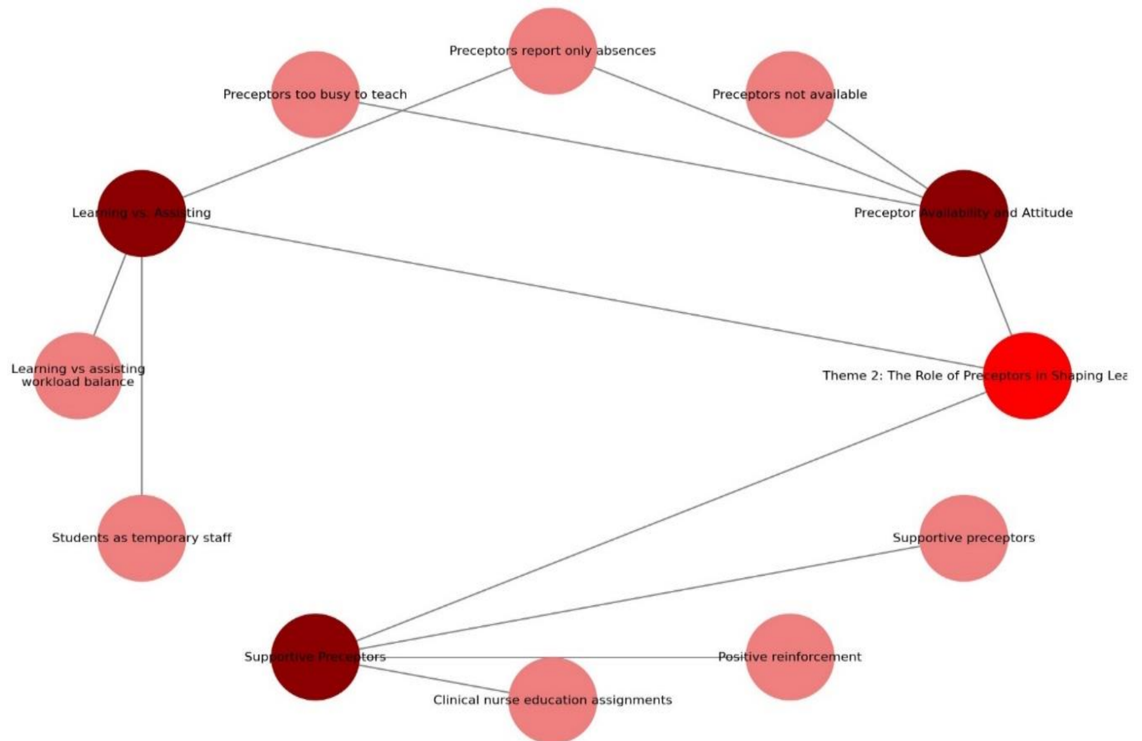
4.9.2.3 Supportive Preceptors

While some preceptors were unavailable or disengaged, others played a crucial role in enhancing students' clinical learning experiences. Supportive preceptors took the time to provide structured learning opportunities, such as assigning students tasks that required research and presentation. Student E from FGD 4 explained, *"Nurses*

sometimes give us assignments, which we present as clinical nurse education, and correct us if we're wrong." These interactions allowed students to engage deeply with clinical content, applying their theoretical knowledge in a practical setting. In these cases, preceptors not only taught the students procedural skills but also helped them develop critical thinking by guiding them through case-based learning. The feedback students received from supportive preceptors helped them refine their skills and build confidence. These preceptors created an environment where students felt encouraged to ask questions and make mistakes, knowing they would receive constructive feedback. This highlights the profound impact that engaged preceptors can have on student learning and development.

Figure 3.2

The Role of Preceptors in Shaping Learning Outcomes



4.9.3 Self-Directed Learning and Attitude Changes

4.9.3.1 Confidence and Skill Development

For many students, the clinical setting provided a unique opportunity to build their confidence and develop essential skills. As they gained more hands-on experience, their ability to perform clinical tasks improved significantly. Student A from FGD 3 reflected on this growth, noting, *"For me, the experience has boosted my confidence in fixing branulars, a procedure many fear."* Likewise, Student C from FGD 3 added, *"Confidence has increased with more hands-on experience, especially in procedures like administering medication."* These experiences highlight the importance of practical exposure in building students' confidence and competence. When given the

opportunity to practice independently, students were able to refine their skills and take ownership of their learning. This shift from theory to practice allowed them to transition from hesitant beginners to more self-assured practitioners. The confidence gained from performing real-world procedures played a significant role in their professional development, equipping them with the skills and self-assurance needed to thrive in future clinical settings.

4.9.3.2 Self-Directed Learning

Students repeatedly emphasized the importance of taking initiative and responsibility for their learning. Many acknowledged that they needed to approach clinical rotations with a proactive mindset in order to maximize their educational experiences. Student A from FGD 3 expressed this sentiment, saying, *"Students should take clinical rotations seriously and be self-directed in learning."* By adopting a self-directed approach, students were able to seek out learning opportunities even when preceptors were unavailable or disengaged. This attitude of personal responsibility was essential in clinical environments where structured teaching was not always guaranteed. Students realized that they had to actively engage in their own education, whether by asking questions, seeking feedback, or practicing tasks independently. This self-motivated learning allowed them to fill the gaps left by preceptors, ensuring that they still gained valuable knowledge and experience despite the challenges. For many, the ability to be self-directed was key to navigating the complexities of the clinical learning environment.

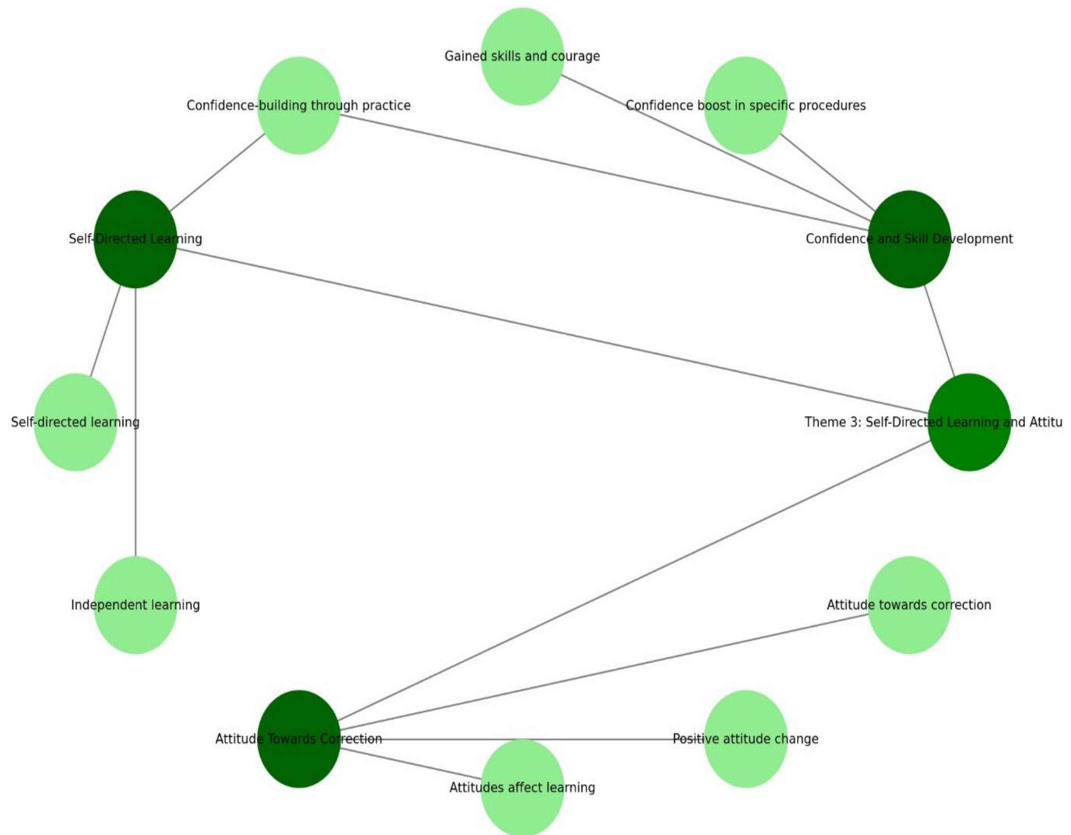
4.9.3.3 Attitude Towards Correction

Another important theme that emerged was the shift in students' attitudes toward receiving feedback and correction. Initially, many students struggled with accepting criticism, particularly when it was delivered harshly. However, over time, they began

to see correction as a necessary part of their growth as healthcare professionals. Student B from FGD 4 shared, *"It has improved my attitude, for example, towards correction—you should accept correction and move on without having hard feelings."* This shift in perspective allowed students to view feedback as an opportunity for improvement rather than as a personal attack. As their clinical experiences progressed, students became more open to constructive criticism, recognizing its value in helping them develop their skills. This change in attitude not only improved their learning outcomes but also prepared them for the realities of working in a demanding healthcare environment, where continuous feedback is a crucial part of professional development.

Figure 4.3

Self-Directed Learning and Attitude Changes



4.10 Inferential statistics

Before conducting the inferential statistics, we created composite scores for three categories: student-related factors, training institution-related factors (TIR), and clinical setting-related factors (CSR). Each composite score was calculated by averaging responses to questions under each category, simplifying the analysis by condensing multiple variables into a single score per category. These composite scores were then used as predictors in the regression analysis to assess their relationship with student performance.

4.10.1 Correlation Analysis

The correlation analysis revealed that training institution-related factors had a low, statistically significant negative relationship with student performance (($r = -0.31$), ($p < 0.0001$)), indicating that challenges such as inadequate feedback or poor supervision are associated with lower performance. Similarly, clinical setting-related factors also showed a significant negative correlation with performance (($r = -0.29$), ($p < 0.0001$)), suggesting that issues like lack of resources or cooperation in clinical environments negatively impact student outcomes. In contrast, student-related factors (e.g., motivation, anxiety) showed no significant relationship with performance (($r = -0.004$), ($p = 0.937$)), indicating minimal influence on the overall performance of students in this study (Table 7).

Table 4.6

Correlational Analysis

Factor	Correlation Value	P-value
Student-related	-0.00451	0.9376
Training institution-related	-0.31422	0.0000

Clinical setting-related	-0.28979	0.0000

4.10.2 Multiple Linear Regression

The model summary showed that the predictors (student factors, clinical setting-related factors, and training institution-related factors) together explained 12.5% of the variance in student performance, as indicated by the R-squared value of 0.125. The adjusted R-squared value of 0.116 accounted for the number of predictors in the model, slightly reducing the explanatory power. The standard error of the estimate was 0.57492, representing the average distance between the observed and predicted values in the model. Overall, the model indicated a moderate relationship, with an R-value of 0.353, reflecting the strength of the association between the predictors and student performance (Table 8).

Table 4.7

Multiple Linear Regression; Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.125	.116	.57492

a. Predictors: (Constant), Clinical setting-related factors, Student-related factors, Training institution-related factors.

The ANOVA table indicated that the regression model, which included clinical setting-related factors, student factors, and training institution-related factors, was statistically significant. The regression sum of squares was 13.311 with 3 degrees of freedom, while the residual sum of squares was 93.209 with 282 degrees of freedom. The model had a mean square of 4.437 for the regression and 0.331 for the residuals. The F-statistic was

13.424, with a p-value of less than 0.001, showing that the model significantly predicted student performance based on the included predictors (Table 9).

Table 4.8:

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.311	3	4.437	13.424	.000[b]
	Residual	93.209	282	.331		
	Total	106.520	285			

a. Dependent Variable: Student Performance

b. Predictors: (Constant), Clinical setting related factors, Student-related factors, Training institution related factors

The coefficients table showed that all three predictors (student factors, training institution-related factors (TIR), and clinical setting-related factors (CSR)) significantly influenced student performance. The constant was 4.502, with a significant p-value (<0.001). Student factors had a positive unstandardized coefficient (B = 0.124), a t-value of 2.285, and a p-value of 0.023, indicating a positive relationship with performance. Training institution-related factors had a negative unstandardized coefficient (B = -0.148), a t-value of -3.018, and a p-value of 0.003, showing a significant negative relationship with performance. Clinical setting-related factors (CSR) also had a negative unstandardized coefficient (B = -0.112), a t-value of -2.133, and a p-value of 0.034, indicating a significant negative effect on student performance (Table 5.0). These results suggest that while student factors positively impact performance, challenges related to the training institution and clinical setting negatively influence outcomes.

Table 4.9:

Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.502	.167		26.974	.000
	Student Factors	.124	.054	.135	2.285	.023
	TIR	-.148	.049	-.240	-3.018	.003
	CSR	-.112	.053	-.165	-2.133	.034

a. Dependent Variable: Student Performance

4.11 Discussion of Findings

This section presents the discussion of the findings of the study exploring student-related, training and institution-related, and clinical setting-related factors that influence the clinical performance of nursing students. Qualitative and quantitative findings have been synthesized and contextualized within existing literature to comprehensively analyze the factors influencing clinical learning among diploma students at MTRH.

4.11.1 Student-Related Factors and Clinical Performance

The findings of this study revealed that student-related factors, such as motivation, confidence, anxiety, and self-esteem, played a nuanced role in influencing clinical performance ($p<0.05$). This agreed with findings from other studies reporting student factors as key determinants in the learning process (Fatima et al., 2019; Rezakhani et al., 2020). Motivation was relatively high, with 32.57% of respondents agreeing that they were highly motivated during clinical placements ($p<0.05$). This finding is

congruent with existing literature that underscores the importance of intrinsic motivation in learning outcomes. Ryan and Deci (2000) suggest that motivation is the single most important determinant of clinical competency, with motivated learners more engaged and likely to perform better due to an internal drive for excellence.

Analysis of the qualitative data from the focus group discussions also revealed that motivated students who were proactive in their learning experienced a boost in confidence over time. For instance, Student C from FGD 3 pointed out, "Confidence has increased with more hands-on experience, especially in procedures like administering medication." This observation is consistent with experiential learning, which emphasizes that practical exposure enables students to integrate theoretical knowledge into real-world scenarios. As students gained more practice, their confidence in their ability to independently perform clinical tasks grew.

Conversely, the findings indicate that anxiety negatively influenced performance, with slightly more than a quarter of the respondents revealing a detrimental effect on students' ability to engage in clinical activities ($p<0.05$). Qualitative data from this study also highlighted anxiety as a significant barrier to learning. For example, Student B from FGD 2 reported, “Sometimes students are shouted at instead of being explained things in a better way, even in front of patients.” Similar to a study in Pakistan, anxiety played out as a significant barrier to effective learning and clinical decision-making (Bibi et al., 2023). Anxiety can interfere with cognitive functions, thus decreasing the ability to apply theoretical knowledge in practice, which is an essential component in the clinical environment. High levels of anxiety can result in avoidance behaviors, where students may refrain from fully engaging in clinical activities for fear of making mistakes (Al-Ghareeb et al., 2019). These negative interactions not only increased

anxiety but also undermined students' confidence, making them hesitant to seek help or ask questions.

While motivation positively influenced clinical performance, self-esteem issues were apparent. This contrasts with a descriptive analysis, which suggests that self-esteem is critical for the success of nursing students, particularly in clinical environments that demand a high level of confidence and autonomy (Cheraghi et al., 2019). The inconsistency may be attributed to cultural factors or lack of awareness among nursing students, especially regarding the impact of self-esteem on their performance.

Confidence also emerged as a critical student-related factor, with nearly half of the students agreeing that they were confident in their clinical abilities. This agrees with the qualitative findings, with confidence as one of the sub-themes. Student A from FGD 3 shared, “For me, the experience has boosted my confidence in fixing branulars, a procedure many fear.” The findings highlight the essential role of hands-on skills and clinical preceptors in bolstering students' self-assurance, especially in tasks initially perceived as challenging. This aligns with a study conducted in Botswana, which revealed that clinical exposure through preceptorship enhances confidence, particularly in procedural skills (Dube & Rakhudu, 2021).

As students gain independence and practice tasks repeatedly, they become more skilled and less apprehensive about errors. Self-confidence holds particular importance. Literature shows that greater self-assuredness in clinical competencies is positively associated with supportive supervision from nursing instructors and preceptors (Abdelkader et al., 2021). However, traditional didactic teaching methods, lack of constructive feedback, and theory-practice gaps can impede confidence-building in applying classroom knowledge to patient care (Fatima et al., 2019). This heightened

confidence improves their clinical performance, equipping them for future roles as healthcare professionals. Furthermore, students with higher confidence tended to exhibit a more positive attitude toward learning, underscoring the clear connection between self-efficacy and motivation (Fatima et al., 2019).

Despite the challenges, many students demonstrated resilience, reflected in their ability to adapt to stressful situations over time. Some students reported that their confidence increased as they became more familiar with the clinical environment. Student C from FGD 1 noted, "I have learned a lot, like the procedures I could not have done before. I have gained the courage to do procedures like wound dressing." This suggests that resilience, or the ability to bounce back from setbacks, is critical in helping students overcome initial fears and anxieties. This is consistent with Thomas and Revell's (2016) findings, which highlight the importance of resilience in nursing education. Resilient students are better equipped to handle the stressors of clinical practice, including the high demands and pressures of patient care. Over time, these students develop coping mechanisms to thrive in challenging environments. Nonetheless, it is essential to note that resilience may vary among students, with some needing more support than others to develop these adaptive skills.

Interestingly, student-related factors did not show a statistically significant relationship with performance ($p>0.05$). . While motivation and confidence are essential for student engagement, the lack of significant correlation may indicate that external factors, such as institutional support and clinical environment, play a more dominant role in determining performance outcomes (Gemuhay et al., 2019; Mbakaya et al., 2020). This suggests that even highly motivated students may struggle to perform well if placed in environments lacking sufficient support and resources. Therefore, enhancing external

factors such as supervision and learning resources could be a more effective strategy for improving clinical performance than focusing solely on individual motivation (Kim & Kim, 2019).

4.11.2 Training and Institution-Related Factors

The quantitative data revealed that supervision and feedback mechanisms significantly negatively impact clinical performance ($p<0.05$). This was consistent with Arkan et al. (2018) who reported that approximately a notable proportion of student respondents strongly disagreed that they received proper supervision during their clinical placements in Turkey. Inadequate supervision is a significant barrier to effective student learning in clinical environments. Supervision is essential for providing students with guidance, feedback, and opportunities for reflection, all necessary for developing clinical competence (Panda et al., 2021). Students may feel lost and uncertain about applying theoretical knowledge in natural clinical settings without adequate supervision. This lack of direction ultimately reduces the effectiveness of clinical placements, limiting students' ability to develop crucial nursing skills.

Qualitative data further highlighted the role of preceptors in molding students' clinical experiences. Many students expressed frustration with the lack of consistent supervision and feedback. For instance, Student B from FGD 3 shared, "Some preceptors are not available, and some nurses even shout at us, which is demeaning." This lack of engagement from preceptors left students feeling unsupported, which, in turn, hindered their learning. Student A from FGD 4 also noted, "Preceptors only report students when they miss shifts, never praising them for good work." This one-sided feedback can demoralize students and prevent them from recognizing their strengths, exacerbating feelings of incompetence (Panda et al., 2021). Over time, such negative

experiences can erode students' confidence, making them less likely to engage fully in future clinical opportunities. Without active and supportive preceptors, students may struggle to integrate their classroom learning with clinical practice.

While feedback is a crucial component of clinical education, helping students identify areas of improvement while reinforcing positive behavior, quantitative and qualitative data found this factor to be critically wanting. Student C from FGD 2 noted that some preceptors “do not point out areas of weakness; they just finish their duties and go.” This lack of feedback left students uncertain about their progress and how to improve. Without clear feedback, students cannot gauge their clinical performance and may continue making unaddressed errors. The absence of feedback also undermines the reflective learning process, which is critical for professional growth in healthcare.

Providing constructive feedback is crucial in helping students develop critical thinking and reasoning skills (Sellberg et al., 2020). Lack of regular feedback leads to students making the same mistakes, leading to a cycle of underperformance. Additionally, the absence of positive reinforcement can hinder students' motivation to learn, as they may feel that their efforts are not being recognized (Nuuyoma, 2021). Balanced feedback encourages students to continue working on their strengths while addressing their weaknesses, fostering a more holistic development. This process improves students' clinical competence and prepares them to work effectively in high-pressure environments.

Consistent with Kenya being an LMIC, the students highly perceived insufficient learning resources, leading to poor support for their clinical learning. Qualitative data further cemented this finding; for example, Student F from FGD 4 noted, “We are doing bed-making without gowns,” and Student A from FGD 1 added, “Due to the lack of

sterile equipment, we sometimes have to improvise procedures.” These challenges compromise the quality of student's learning experiences and put them at risk of developing unsafe practices. Inadequate resources can prevent students from following proper protocols, which may lead to mistakes and potentially harm patients. Furthermore, resource shortages reduce students’ exposure to essential tools and procedures, hampering their ability to develop practical skills. The lack of materials also forces students to compromise on the quality of care, which may affect their professional ethics and long-term learning outcomes.

Low resources compounded with low institutional support further jeopardizes the clinical learning of these nursing students. Nursing students rely on well-structured clinical environments where they can receive guidance from preceptors and access the necessary resources for safe patient care. When these elements are lacking, students cannot fully develop their clinical skills, ultimately impacting their performance and confidence. Koukourikos and colleagues emphasize the need for well-resourced simulation labs and clinical spaces to ensure students can bridge the gap between theory and practice (Koukourikos et al., 2021). Institutions that fail to provide such support may inadvertently reduce the preparedness of future nurses, affecting patient safety and the overall quality of healthcare services. Therefore, investing in better infrastructure and learning environments is crucial for educational outcomes and public health.

4.11.3 Clinical Setting-Related Challenges

Clinical setting-related factors also showed a statistically significant negative impact on student performance ($p<0.05$). Slightly more than a third of the respondents reported a lack of cooperation between clinical staff and students, suggesting a disconnect between educational institutions and clinical sites. Similarly, a study in Tanzania

revealed that lack of cooperation led to an unengaging learning process, resulting in reduced performance (Gemuhay et al., 2019). When students feel unsupported by clinical staff, they are less likely to engage in the learning process, which can reduce their confidence and performance. This lack of engagement can also discourage students from asking questions, which limits their opportunities to clarify uncertainties and develop their clinical reasoning skills (Amimaruddin & RuditaIdris, 2021; Bhurtun et al., 2019). Over time, these missed opportunities can accumulate, leaving students feeling less prepared for future clinical responsibilities.

Additionally, 26.97% of respondents cited insufficient personal protective equipment (PPE) as a significant concern. This is particularly relevant in the context of global health crises, such as the COVID-19 pandemic, where the availability of PPE is critical for ensuring the safety of healthcare workers, including students (World Health Organization [WHO], 2021). The lack of PPE endangers students and reduces their ability to participate fully in clinical activities, further hampering their learning experience. Without proper PPE, students may be restricted from engaging in critical clinical procedures, which limits their exposure to essential learning opportunities. The fear of contracting infections due to inadequate protection may also increase students' anxiety levels, further diminishing their performance.

The study also identified traumatic experiences at clinical sites as a notable issue, with 20.07% of students reporting such events. The literature suggests that exposure to traumatic situations, especially without adequate support, can lead to psychological distress and burnout (Thomas & Revell, 2016). This may explain why students experiencing trauma might struggle with their performance, as the emotional toll of such events can overshadow learning opportunities. Traumatic experiences can also

lead to long-term mental health issues, such as anxiety or depression, which may persist beyond the clinical training period. If unaddressed, these emotional challenges may affect students' future ability to function effectively in high-stress healthcare environments.

The correlation and regression analyses provided additional insights into how these factors collectively influence clinical performance. Both training institution- and clinical setting-related factors were found to have statistically significant negative relationships with student performance. This is consistent with previous research indicating that structural challenges, such as inadequate resources and poor supervision, are critical barriers to effective learning in clinical environments (Gemuhay et al., 2019; Mbakaya et al., 2020). These findings suggest that improving institutional structures and clinical environments could significantly enhance students' learning experiences and performance outcomes. Addressing these challenges would likely require reforms at both institutional and clinical levels to foster more supportive and resource-rich learning environments.

4.11.4 The Role of Preceptors in Shaping Learning Outcomes

The findings of this study align with studies on the impact of preceptorship on nursing students' clinical performance. Slightly more than a third of the respondents strongly disagreed that they received proper supervision (mean score of 2.37, SD=1.37), which mirrors findings from studies conducted in similar contexts. For instance, Arkan et al. (2018) identified inadequate supervision as a significant barrier to effective student learning, concluding that insufficient supervision impairs students’ ability to integrate theoretical knowledge with practical skills in clinical settings. Similarly, Gemuhay et al. (2019) found that the absence of preceptor guidance in Tanzania resulted in

unengaging learning experiences, negatively impacting students' confidence and overall performance. These studies reinforce the idea that students struggle to navigate complex clinical environments without proper supervision and support, which diminishes their ability to develop essential competencies.

Consistent with other studies, findings in this study reveal ineffective teaching methods in the study setting (mean score of 2.47, SD=1.45). For example, Mbakaya et al. (2020) found that nursing students in Malawi were often dissatisfied with the teaching methods employed by clinical instructors, mainly when feedback was either absent or overly focused on criticism rather than constructive guidance. Similar to the findings from this study, where students noted that preceptors tended to emphasize negative behaviors, this approach hinders students' motivation and engagement in clinical practice. As highlighted by Panda et al. (2021), effective teaching methods are crucial for fostering students' clinical reasoning and decision-making skills, which are necessary for professional development.

Furthermore, the lack of cooperation between clinical staff and students identified in this study (33.88% strongly disagreed, M=2.40) reflects similar challenges in other low-resource settings. Levett-Jones et al. (2009) emphasized the importance of collaboration and communication between students and clinical staff, noting that a lack of cooperation often leads to alienation among students, reducing their engagement and learning outcomes. This is consistent with the findings of Gemuhay et al. (2019), who observed that poor cooperation between students and clinical staff in Tanzanian hospitals resulted in an unwelcoming learning environment that hampered students' ability to gain practical experience. It demonstrates that when preceptors provide structured learning opportunities and foster open communication, students are more

likely to excel in clinical settings. This highlights the critical role of supportive preceptors in enhancing students' learning, reinforcing the need for active mentorship in clinical education.

The findings of this study are consistent with empirical literature indicating that inefficient preceptorship is a significant barrier to nursing students' clinical learning. These barriers are particularly pronounced in low- and middle-income countries (LMICs), where human and financial resource constraints and poor organization and policies further exacerbate the challenges of clinical education. (L'Ecuyer et al., 2018) The existing literature underscores the need for improved supervision, more effective feedback mechanisms, and more vital collaboration between educational institutions and clinical sites to create conducive learning environments for nursing students (Nyaga & Kyololo, 2017).

The multiple regression analysis showed that the predictors explained 12.5% of the variance in student performance, suggesting that while these factors are essential, other unexplored variables may contribute to student success. For instance, personal characteristics such as resilience, prior clinical exposure, or social support networks may influence performance but were not captured in this study (El-Ashry et al., 2022). Further research exploring these variables could provide a more comprehensive understanding of the factors contributing to student success in clinical settings. Additionally, investigating the impact of mentorship programs and peer support groups may reveal new strategies for fostering resilience and improving overall performance among nursing students.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the key conclusions drawn from the study on factors influencing clinical learning among diploma nursing students at Moi Teaching and Referral Hospital. It provides evidence-based recommendations aimed at improving clinical education practices, addressing gaps identified in supervision, teaching methods, and clinical environments. The chapter highlights practical steps for training institutions, healthcare facilities, and policymakers to enhance student learning experiences and bridge the theory-practice gap. These recommendations seek to foster improved clinical competence and better prepare nursing graduates to meet Kenya's healthcare demands effectively.

5.2 Summary of Key Findings

5.2.1 Student-Related Factors Influencing Clinical Learning

The study found that student-related factors significantly influenced clinical learning experiences. Approximately 32.57% of students reported being highly motivated during their clinical placements, which supports better engagement. However, anxiety was a notable barrier, negatively affecting performance for 22.04% of students, a statistically significant association ($\chi^2=11.5$, $p=0.009$). Confidence in clinical abilities was relatively strong, with 43.42% agreeing and 24.34% strongly agreeing to feeling confident (Mean=3.75). Financial constraints also emerged as a challenge, affecting 19.41% of students and potentially limiting their ability to fully benefit from clinical learning opportunities.

5.2.2 Training Institution-Related Factors Affecting Clinical Learning

Training institution-related factors were major determinants of clinical learning outcomes. More than one-third of the students (37.83%) strongly disagreed that they received adequate clinical supervision during their placements (χ^2=15.7, p=0.001). Additionally, 36.51% of students indicated that teaching methods employed were ineffective (χ^2=12.4, p=0.004). These findings point to gaps in instructional support and teaching quality. Multivariate regression analysis showed that these institutional factors significantly predicted clinical performance (β=0.32, p=0.002), highlighting the urgent need to enhance supervision and teaching strategies within nursing training programs.

5.2.3 Clinical Setting-Related Factors Influencing Clinical Learning

Clinical setting challenges had a significant impact on student learning outcomes. About 33.88% of students reported poor cooperation with clinical staff during placements (χ^2=10.8, p=0.013). Resource limitations, such as shortages of personal protective equipment (PPE), and high workloads for nursing staff, were commonly cited barriers. Regression results confirmed that clinical setting factors significantly predicted students' clinical performance (β=0.28, p=0.005). Together with student and institutional factors, clinical setting-related variables explained 12.5% of the variance in clinical learning outcomes (R^2=0.125, F=7.64, p=0.003), underscoring their critical role in shaping practical nursing education.

5.2.4 Students' Perspectives Regarding Clinical Learning Facilitators

The qualitative analysis revealed that supportive preceptorship played a vital role in enhancing nursing students' confidence and practical skill acquisition. Students valued constructive feedback and role modeling by experienced nurses, which fostered their development. However, persistent challenges included resource shortages and inconsistent supervision, which hindered optimal learning. Many students perceived

their preceptors as too busy or overburdened to provide adequate teaching and mentorship, limiting the effectiveness of the preceptorship model. These insights highlight the need for better support and training for preceptors to strengthen clinical teaching environments.

5.3 Conclusions

5.3.1 Student-Related Factors Influencing Clinical Learning

The study concluded that student-related factors such as motivation, confidence, anxiety, and financial challenges played a crucial role in shaping clinical learning outcomes. While motivation and confidence facilitated effective learning, anxiety and financial constraints presented significant barriers. Addressing these psychological and economic challenges through supportive interventions was necessary to enhance students' ability to engage fully and perform competently in clinical settings. Nursing programs were recommended to incorporate strategies aimed at reducing anxiety and providing financial support to optimize student readiness and success during clinical placements.

5.3.2 Training Institution-Related Factors Affecting Clinical Learning

It was concluded that inadequate clinical supervision, ineffective teaching methods, and resource limitations within training institutions significantly hindered nursing students' clinical learning. These deficits negatively impacted students' skill development and confidence, highlighting the need for enhanced faculty capacity, improved teaching approaches, and better resource allocation. Strengthening institutional support mechanisms was essential to provide quality clinical education that aligned theory with practice, ultimately preparing students for the demands of professional nursing practice.

5.3.3 Clinical Setting-Related Factors Influencing Clinical Learning

The study found that clinical environments characterized by poor staff cooperation, resource shortages, and high workloads adversely affected nursing students' ability to learn and apply clinical skills. These setting-related challenges contributed substantially to the theory-practice gap and reduced the quality of clinical education. Improving workplace culture, ensuring availability of essential resources such as PPE, and fostering collaborative relationships between clinical staff and students were identified as critical for creating a supportive learning environment that promoted clinical competence.

5.3.4 Students' Perspectives Regarding Clinical Learning Facilitators

From the students' perspective, effective preceptorship was identified as a key enabler of clinical learning, providing essential mentorship, feedback, and role modeling. However, limitations such as insufficient preceptor availability and resource constraints hindered the full potential of this model. Enhancing preceptor training, reducing workload pressures, and ensuring consistent supervision were necessary steps to improve the preceptorship experience and, consequently, nursing students' clinical learning and professional development.

5.4 Recommendations

5.4.1 Recommendations for Education

1. **To Nursing Schools:** Implement structured supervision and mentorship programs to ensure that preceptors receive adequate training and are consistently available to support students throughout their clinical placements.

2. **To Nursing Education Administrators:** Provide regular, targeted training for preceptors focusing on effective teaching methods, constructive feedback, and strategies to create positive and supportive clinical learning environments.

3. **To Regulatory and Accreditation Bodies:** Develop and enforce clear, standardized supervision guidelines to ensure uniformity, accountability, and high-quality support for nursing students in all clinical settings.

4. **To Healthcare Facilities and Teaching Hospitals:** Strengthen collaboration with nursing schools to provide adequate learning materials, updated clinical tools, and fully equipped simulation laboratories that reflect current healthcare practices.

5. **To Policymakers and Institutional Managers:** Allocate sufficient resources to improve the availability and accessibility of clinical learning materials and environments to enhance students' hands-on experience.

6. **To Hospital Administrators and Training Coordinators:** Ensure a balance between nursing students' learning needs and their service contributions within healthcare facilities, preventing exploitation and preserving educational quality.

5.4.2 Recommendations for Research

1. **To Academic Researchers and Research Institutions:** Conduct longitudinal and interventional studies to evaluate the long-term effects of preceptorship and supervision on nursing students' academic performance and professional competence.

2. **To Nursing Education Scholars:** Explore how supervision quality, teaching approaches, and institutional resources influence nursing graduates' transition into the professional workforce.

3. **To Behavioral and Educational Researchers:** Examine the role of individual student attributes—such as resilience, motivation, and stress management—in shaping clinical learning outcomes and adaptation to challenges.

4. **To Research Funders and Institutions:** Support the development of tailored interventions designed to address specific barriers nursing students face during clinical training.
5. **To Innovators in Nursing Education:** Investigate modern, technology-enhanced teaching and feedback strategies to improve student engagement, enhance skill acquisition, and strengthen overall clinical education frameworks.

REFERENCES

Abdelkader, A., Abed El-Aty, N. S., & Abdelrahman, S. M. (2021). The relationship between self-confidence in learning and clinical educators' characteristics by nursing students. *International Journal of Nursing Education*, *13*(2), 1–10. https://doi.org/10.37506/ijone.v13i2.14614

Abdullahi, K. O., Ghiyasvandian, S., & Hasanpour, M. (2022). Theory-Practice Gap: The Knowledge and Perception of Nigerian Nurses. *Iranian Journal of Nursing and Midwifery Research*, *27*(1), 30–34. https://doi.org/10.4103/ijnmr.IJNMR_294_19

Addisie, A., Cherie, A., Gela, D., & Ataro, B. A. (2022). *Challenges Faced during Clinical Placement among Nursing Students. A Mixed Study Conducted at Highest Institutions in Addis Ababa City, Ethiopia, 2020*. https://doi.org/10.21203/rs.3.rs-1376645/v1

Agbedia, C., Okoronkwo, I., Onokayeigho, E., & Agbo, M. A. (2014). Nurses' perspective of the research-practice gap in nursing. *Open Journal of Nursing*, *04*(02), 95–100. http://dx.doi.org/10.4236/ojn.2014.42013

Al-Ghareeb, A., McKenna, L., & Cooper, S. (2019). The influence of anxiety on student nurse performance in a simulated clinical setting: A mixed methods design. *International journal of nursing studies*, *98*(1), 57–66. https://doi.org/10.1016/j.ijnurstu.2019.06.006

Aliakbari, F., Parvin, N., Heidari, M., & Haghani, F. (2015). Learning theories application in nursing education. *Journal of Education and Health Promotion*, *4*(2), 2. https://doi.org/10.4103/2277-9531.151867

Amilia, R., & Nurmalia, D. (2020). A comparison of patient safety competencies between clinical and classroom settings among nursing students. *Nurse Media Journal of Nursing*, *10*(1), 66–75. https://doi.org/10.14710/nmjn.v10i1.25231

Amimaruddin, D. K. S. N. M. P., & RuditaIdris, D. (2021). Exploring student nurses' learning experience in the clinical setting: A literature review. *International Journal of Nursing Education*, *14*(1), 31–37. https://doi.org/10.37506/ijone.v14i1.17733

Amini, A., Bayat, R., & Amini, K. (2020). Barriers to Clinical Education from the Perspective of Nursing Students in Iran: An Integrative Review. *Archives of Pharmacy Practice*, *11*(1), 73-79. https://archivepp.com/article/barriers-to-clinical-education-from-the-perspective-of-nursing-students-in-iran-an-integrative-review

Arkan, B., Ordin, Y., & Yılmaz, D. (2018). Undergraduate nursing students' experience related to their clinical learning environment and factors affecting to their clinical learning process. *Nurse Education in Practice*, *29*(1*)*, 127–132. https://doi.org/10.1016/j.nepr.2017.12.005

Bandura, A. (1977). Social Learning Theory. Prentice Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. https://psycnet.apa.org/record/1985-98423-000

Bengtsson, A., & Carlson, E. (2015). Knowledge and skills needed to improve as a preceptor: Development of a continuous professional development course. *Journal of Continuing Education in Nursing, 46*(11), 511–518. https://doi.org/10.3928/00220124-20151020-03

Benner P. (1982). From novice to expert. *The American journal of nursing*, *82*(3), 402–407. https://pubmed.ncbi.nlm.nih.gov/6917683/

Bhurtun, H. D., Azimirad, M., Saaranen, T., & Turunen, H. (2019). Stress and coping among nursing students during clinical training: An integrative review. *Journal of Nursing Education*, *58*(5), 266–272. https://doi.org/10.3928/01484834-20190422-04

Bibi, A., Santiago, K. S., Yeh, J. M., & Chen, H. H. (2024). Correction: Bibi et al. Valorization of Agricultural Waste as a Chemiresistor H_2S-Gas Sensor: A Composite of Biodegradable-Electroactive Polyurethane-Urea and Activated-Carbon Composite Derived from Coconut-Shell Waste. *Polymers*, *16*(17), 2504. https://doi.org/10.3390/polym16172504

Bodine, J. (2022). The preceptor challenge: Role unpreparedness and the effect on the preceptor experience. *Journal for Nurses in Professional Development, 38*(4), 245–246. https://doi.org/10.1097/NND.0000000000000898

Bodine, J. (2022). The preceptor challenge: Role unpreparedness and the effect on the preceptor experience. *Journal for Nurses in Professional Development, 38*(4), 245–246. https://doi.org/10.1097/NND.0000000000000898

Brown, K., & Walker, M. (2020). A Critical Analysis of the Use of Preceptorship as a Clinical Teaching Methodology. *International Journal of Innovative Science and Research Technology*, *5*(5), 1-5. https://ijisrt.com/assets/upload/files/IJISRT20MAY667.pdf

Cant, R., Ryan, C., & Cooper, S. (2021). Nursing students' evaluation of clinical practice placements using the Clinical Learning Environment, supervision and nurse teacher scale – a systematic review. *Nurse Education Today*, *10*(2*)*, 104983. https://doi.org/10.1016/j.nedt.2021.104983

Chan, Z. C. Y. (2013). A systematic review of creative thinking/creativity in nursing education. *Nurse Education Today*, *33*(11), 1382–1387. https://doi.org/10.1016/j.nedt.2012.09.005

Cheraghi, R., Ebrahimi, H., Kheibar, N., & Sahebihagh, M. H. (2023). Reasons for resistance to change in nursing: an integrative review. *BMC nursing*, *22*(1), 3-10. https://doi.org/10.1186/s12912-023-01460-0

Cosme, F. S. M. N., & Valente, G. S. C. (2013). The development of competencies for nursing preceptorship in the primary health care environment: a descriptive-exploratory study. *Online Brazilian Journal of Nursing*, *12* (2) 602–604. https://www.redalyc.org/pdf/3614/361433918010.pdf

Dube, A., & Rakhudu, M. A. (2021). A preceptorship model to facilitate clinical nursing education in health training institutions in Botswana. *Curationis*, *44*(1). https://doi.org/10.4102/curationis.v44i1.2182

Dukes, D., & Clément, F. (2019). *Foundations of Affective Social Learning: Conceptualizing the Social Transmission of Value.* Cambridge University Press.

El-Ashry, A. M., Harby, S. S., & Ali, A. A. (2022). Clinical stressors as perceived by first-year nursing students of their experience at Alexandria Main University Hospital during the COVID-19 pandemic. *Archives of Psychiatric Nursing*, *41*(1), 214–220. https://doi.org/10.1016/j.apnu.2022.08.007

Elmwafy, R., Abed, N., & Adam, S. (2020). Factors affecting safe clinical practices as perceived by students at technical nursing institute in port-said. *Port Said Scientific Journal of Nursing*, *7*(4), 184–203. https://doi.org/10.21608/pssjn.2020.127061

El-tahan, L., Eid, N., & El-Shrief, H. (2023). Clinical training factors that hinder or facilitate nursing students' learning: Its effect on their clinical performance. *Menoufia Nursing Journal*, *8*(3), 21–43. https://doi.org/10.21608/menj.2023.320789

Falk, K., Falk, H., & Jakobsson Ung, E. (2016). When practice precedes theory – A mixed methods evaluation of students' learning experiences in an undergraduate study program in nursing. *Nurse Education in Practice*, *16*(1), 14–19. https://doi.org/10.1016/j.nepr.2015.05.010

Fatima, N., Gilani, M. A., Afzal, M., & Hussain, M. (2019). Nursing students challenges at educational and clinical environment. *Journal of Health, Medicine and Nursing*, 62(1), 108. https://doi.org/10.7176/jhmn/62-06

Fedele, R. (2020, May 7). *What Is a Preceptor.* https://anmj.org.au/what-is-a-preceptor/

Forber, J., DiGiacomo, M., Davidson, P., Carter, B., & Jackson, D. (2015). The context, influences and challenges for undergraduate nurse clinical education: Continuing the dialogue. *Nurse education today*, *35*(11), 1114–1118. https://doi.org/10.1016/j.nedt.2015.07.006

Gemuhay, H. M., Kalolo, A., Mirisho, R., Chipwaza, B., & Nyangena, E. (2019). Factors affecting performance in clinical practice among Preservice diploma nursing students in northern Tanzania. *Nursing Research and Practice*, *2019*(1*)*, 1–9. https://doi.org/10.1155/2019/3453085

George, L. S., Lakra, A. J., & Kamath, A. (2017). Factors affecting learning among undergraduate nursing students: Cross-sectional survey. *Journal of Clinical and Diagnostic Research, 11*(11), JC01–JC04. https://doi.org/10.7860/JCDR/2017/29111.10823

Girotto, L. C., Enns, S. C., de Oliveira, M. S., Mayer, F. B., Perotta, B., Santos, I. S., & Tempski, P. (2019). Preceptors' perception of their role as educators and professionals in a health system. *BMC medical education*, *19*(1), 203-209. https://doi.org/10.1186/s12909-019-1642-7

Greenway, K., Butt, G., & Walthall, H. (2019). What is a theory-practice gap? An exploration of the concept. *Nurse Education in Practice*, *34*(1), 1–6. https://doi.org/10.1016/j.nepr.2018.10.005

Griffiths, M., Creedy, D., Carter, A., & Donnellan-Fernandez, R. (2022). Systematic review of interventions to enhance preceptors' role in undergraduate health student clinical learning. *Nurse education in practice*, *62*(1), 103349. https://doi.org/10.1016/j.nepr.2022.103349

Hugo, L., & Botma, Y. (2020). The contribution of nursing preceptors to the future nursing workforce. *African Journal of Health Professions Education*, *12*(3), 109-115. https://doi.org/10.7196/ajhpe.2020.v12i3.1372

Inocian, E. P., Hill, M. B., Felicilda-Reynaldo, R. F., Kelly, S. H., Paragas, E. D., & Turk, M. T. (2022). Factors in the clinical learning environment that influence caring behaviors of undergraduate nursing students: An integrative review. *Nurse Education in Practice*, *63*(2), e103391. https://doi.org/10.1016/j.nepr.2022.103391

Kahya, E., & Oral, N. (2018). Measurement of Clinical Nurse Performance: Developing a tool including contextual items. *Journal of Nursing Education and Practice*, *8*(6), 100 -112. https://doi.org/10.5430/jnep.v8n6p112

Kamolo, E., Vernon, R., Head, A., & Toffoli, L. (2017). A Critical Review of Preceptor Development for Nurses Working with Undergraduate Nursing Students. *International Journal of Caring Sciences*, *10*(2), 1-12. https://internationaljournalofcaringsciences.org/docs/50_kamolo_special_10_2.pdf

Kang, C.-M., Chiu, H.-T., Lin, Y.-K., & Chang, W.-Y. (2016). Development of a situational initiation training program for preceptors to retain new graduate nurses: Process and initial outcomes. *Nurse Education Today*, *37*(1), 75–82. https://doi.org/10.1016/j.nedt.2015.11.022

Kertu, H. S., & Nuuyoma, V. (2019). Theory – Practice Gap: Challenges Experienced by Nursing Students at the Satellite Campus of a Higher Education Institution in Namibia. *International Journal of Higher Education*, *8*(5), 21-29. https://www.sciedu.ca/journal/index.php/ijhe/article/view/15844

Kim, H.-W., & Kim, M.-G. (2021). The relationship among academic achievement, clinical competence, and confidence in clinical performance of nursing students. *The Journal of Korean Academic Society of Nursing Education*, *27*(1), 49–58. https://doi.org/10.5977/jkasne.2021.27.1.49

Koukourikos, K., Tsaloglidou, A., Kourkouta, L., Papathanasiou, I. V., Iliadis, C., Fratzana, A., & Panagiotou, A. (2021). Simulation in Clinical Nursing Education. *Acta informatica medica : AIM : journal of the Society for Medical Informatics of Bosnia & Herzegovina : casopis Drustva za medicinsku informatiku BiH*, *29*(1), 15–20. https://doi.org/10.5455/aim.2021.29.15-20

L'Ecuyer, K. M., Hyde, M. J., & Shatto, B. J. (2018). Preceptors' Perception of Role Competency. *The Journal of Continuing Education in Nursing*, *49*(5), 233–240. https://doi.org/10.3928/00220124-20180417-09

Levett-Jones, T., Hoffman, K., Dempsey, J., Jeong, S. Y., Noble, D., Norton, C. A., Roche, J., & Hickey, N. (2010). The 'five rights' of clinical reasoning: an educational model to enhance nursing students' ability to identify and manage

clinically 'at risk' patients. *Nurse education today*, *30*(6), 515–520. https://doi.org/10.1016/j.nedt.2009.10.020

Lewis, T. P., Roder-DeWan, S., Malata, A., Ndiaye, Y., & Kruk, M. E. (2019). Clinical performance among recent graduates in nine low- and middle-income countries. *Tropical Medicine & International Health*, *24*(5), 620–635. https://doi.org/10.1111/tmi.13224

Marriott, P. H. M., Weller-Newton, J. M., & Reid, K. J. (2024). Preparedness for a first clinical placement in nursing: A descriptive qualitative study. *BMC Nursing, 23*(1), 345-349. https://doi.org/10.1186/s12912-024-01916-x

Mbakaya, B. C., Kalembo, F. W., Zgambo, M., Konyani, A., Lungu, F., Tveit, B., Kaasen, A., Simango, M., & Bvumbwe, T. (2020). Nursing and midwifery students' experiences and perception of their clinical learning environment in Malawi: a mixed-method study. *BMC nursing*, *19*(1), 87-92. https://doi.org/10.1186/s12912-020-00480-4

Mbawonimana, S. (2021). Narrowing the theory practice gap in undergraduate nursing education in Rwanda: Empowering students for self-directed clinical learning. *Journal of Nursing Education and Practice, 11*(3), 1-8. https://doi.org/10.5430/jnep.v11n3p1

McTier, L., Phillips, N. M., & Duke, M. (2023). Factors influencing nursing student learning during clinical placements: A Modified Delphi Study. *Journal of Nursing Education*, *62*(6), 333–341. https://doi.org/10.3928/01484834-20230404-01

Mhango, L., Baluwa, M., & Chirwa, E. (2021). The Challenges of Precepting Undergraduate Nursing Students in Malawi. *Advances in Medical Education and Practice*, *12*(1), 557–563. https://doi.org/10.2147/amep.s306661

Millanzi, W. C., Herman, P. Z., & Hussein, M. R. (2021). The impact of facilitation in a problem-based pedagogy on self-directed learning readiness among nursing students: A quasi-experimental study in Tanzania. *BMC Nursing*, *20*(1), 1-11. https://doi.org/10.1186/s12912-021-00769-y

Missen, K., Jacob, E., & McKenna, L. (2018). The status of preceptorship in undergraduate nursing education: A systematic review. *Journal of Advanced Nursing, 74*(2), 271-281. https://doi.org/10.1111/jan.13429

Moi Teaching and Referral Hospital. (2019). *MTRH College of Medicine*. Moi Teaching and Referral Hospital. https://www.mtrh.go.ke/mtrh-college-medicine/

Mugenda, O.M. & Mugenda, A.G. (2019) *Research Methods: Quantitative, Qualitative & Mixed Methods Approaches* (3rd ed.). Centre for Innovative Leadership & Governance

Murray, M., Sundin, D., & Cope, V. (2019). Benner's model and Duchscher's theory: Providing the framework for understanding new graduate nurses' transition to practice. *Nurse Education in Practice*, *34*(1), 199–203. https://doi.org/10.1016/j.nepr.2018.12.003

Namadi, F., Cheraghi, R., & Jasemi, M. (2019). Effectiveness of the clinical teaching associate model in clinical nursing education. *Nursing and Midwifery Studies*, *8*(3), 132-136. https://nmsjournal.kaums.ac.ir/article_129621_29630367912c1d5db3938cdf26620550.pdf

National Advisory Council on Nurse Education and Practice. (2021). *Preparing nurse faculty, and addressing the shortage of nurse faculty and clinical preceptors*. Health Resources and Services Administration. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/nursing/reports/nacnep-2021-seventeenth-report.pdf

National Health Service. (2022). *NHS England» National preceptorship model for nursing*. Www.england.nhs.uk. https://www.england.nhs.uk/long-read/national-preceptorship-model-for-nursing/#:~:text=The%20purpose%20of%20the%20preceptorship

National Health Service. (2022). *Overview: The NHS in England*. National Health Service. https://www.england.nhs.uk/about/what-we-do/

Nielsen, A. E., Noone, J., Voss, H., & Mathews, L. R. (2013). Preparing nursing students for the future: An innovative approach to clinical education. *Nurse Education in Practice*, *13*(4), 301–309. https://doi.org/10.1016/j.nepr.2013.03.015

Nosheen, N., & Hussain, M. (2020). The association between learning style, learning strategies with academic performance among nursing students. *Journal of Health, Medicine and Nursing*, 72(1), 62-67. https://doi.org/10.7176/jhmn/72-08 .

Nyaga, E. M., & Kyololo, O. M. (2017). Preceptor Knowledge on Preceptorship in an Academic Hospital in Kenya. *The Journal of Continuing Education in Nursing*, *48*(11), 496–500. https://doi.org/10.3928/00220124-20171017-06

Oducado, R. M. (2021). Academic performance and the role of self-directed learning, self-esteem, and grit among nursing students. *Jendela Nursing Journal*, *5*(1), 1-9. http://doi.org/https://doi.org/10.31983/jnj.v5il.6634

Panda, S., Dash, M., John, J., Rath, K., Debata, A., Swain, D., Mohanty, K., & Eustace-Cook, J. (2021). Challenges faced by student nurses and midwives in clinical learning environment – A systematic review and meta-synthesis. *Nurse Education Today*, *101*(1), 104875. https://doi.org/10.1016/j.nedt.2021.104875

Panimdim, C. Y., & Ismael, J. D. (2018). The correlation of academic and clinical performance among nursing students of batch 2015–2017. *Proceedings of the 2018 2nd International Conference on Education and E-Learning (ICEEL 2018)*. https://doi.org/10.1145/3291078.3291122

Petiprin, A. (2023). *Benner's From Novice to Expert - Nursing Theory*. Nursing Theory. https://nursing-theory.org/theories-and-models/from-novice-to-expert.php

Polit, D. F., & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Lippincott Williams & Wilkins.

Quinn, F. M., & Hughes, S. J. (2007). *Quinn's principles and practice of nurse education | WorldCat.org*. https://silo.tips/download/licensed-to-cengagebrain-user-23

Qvortrup, A., Wiberg, M., Cristensen, G., & Hansbøl, M. (n.d.). *On the Definition of Learning*. University Press https://www.sdu.dk/-/media/files/om_sdu/institutter/ikv/forskning/forskningsprojekter/on+the+definition+of+learning/book+chapters/chapter+2.pdf (Original work published 2016)

Rahimi, A., & Ahmadi, F. (2005). The Obstacles and Improving Strategies of Clinical Education from the Viewpoints of Clinical Instructors in Tehran's Nursing Schools. *Iranian Journal of Medical Education*, *5*(2), 73–80. https://ijme.mui.ac.ir/browse.php?a_id=115&sid=1&slc_lang=en

Rezakhani Moghaddam, H., Aghamohammadi, V., Jafari, M., Absalan, M., & Nasiri, K. (2020). <p>challenges faced by nursing students to work with nursing personnel: A qualitative study</p>. *Advances in Medical Education and Practice*, *11*(1), 313–319. https://doi.org/10.2147/amep.s246901

Rojo, P., Piguillem, L., García, M. M., del Río, M., Dulanto, A., & Monistrol, O. (2020). Nursing students' perceptions of the clinical learning environment and supervision in hospital settings: A transversal study. *Nurse education today, 95*(1), 104547. https://doi.org/10.1016/j.nedt.2020.104547

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Saifan, A., Devadas, B., Daradkeh, F., Abdel-Fattah, H., Aljabery, M., & Michael, L. M. (2021). Solutions to bridge the theory-practice gap in nursing education in the UAE: A qualitative study. *BMC Medical Education*, *21*(1), 1-11. https://doi.org/10.1186/s12909-021-02919-x

Sellberg, M., Palmgren, P. J., & Möller, R. (2022). Balancing acting and adapting: A qualitative study of medical students' experiences of early clinical placement. *BMC Medical Education, 22*(1), 65-69. https://doi.org/10.1186/s12909-022-03714-y

Sigei, G., Matiang'i, M., & Kangethe, S. (2022). Predictors of Effective Preceptorship among Nurses in Clinical Teaching at Tenwek Hospital, Bomet Kenya. *IOSR Journal of Nursing and Health Science*, *11*(6), 1–15. https://doi.org/10.9790/1959-1106050115

Subramanian, S., & Kleib, M. (2023). Facilitators of and barriers to effective preceptorships for prelicensure nursing students: A practice update. *SAGE Open Nursing,10*(1), 1-7, 23779608241279148. https://doi.org/10.1177/23779608241279148

Sum, J. & Sim, J. (2021). Nursing students' readiness for blended learning during clinical placements. *Nurse Education in Practice, 19*(4), 11-17. https://doi.org/10.1016/j.teln.2024.05.010

Talato, T., Patrice, N., PILABRE, A. H., Yacouba, P., Téwendé, K. A., Abibata, B., Doulaye, T., Nestor, B., & Dieudonné, S. (2022). Barriers and facilitators of the effectiveness of the clinical pedagogical supervision of Nursing and obstetric students in sub-Saharan africa: A systematic review. *Journal of Nursing Education and Practice*, *12*(6), 35. https://doi.org/10.5430/jnep.v12n6p35

Thomas, L. J., & Revell, S. H. (2016). Resilience in nursing students: An integrative review. *Nurse education today*, *36*(1), 457–462. https://doi.org/10.1016/j.nedt.2015.10.016

Tiwaken, S. U., Caranto, L. C., & Jose, J. (2015). The Real World: Lived Experiences of Student Nurses during Clinical Practice. *International Journal of Nursing Science*, *5*(2), 66–75. http://article.sapub.org/10.5923.j.nursing.20150502.05.html

Turner, D. P. (2020). Sampling Methods in Research Design. *Headache: The Journal of Head and Face Pain*, *60*(1), 8–12. https://doi.org/10.1111/head.13707

World Health Organization. (2021). *World health statistics 2021: Monitoring health for the SDGs, sustainable development goals*. World Health Organization. https://www.who.int/publications/i/item/9789240027053

Zaighami, R., Faseleh, M., Jahanmiri, S. H., & Ghodsbin, F. (2004). Nursing students' viewpoints about the problems of clinical teaching. *Journal of Inflammatory Diseases*, *8*(1), 51–55. https://brieflands.com/articles/jid-155019

APPENDICES

Appendix 1: Data Collection Questionnaire

Demographic Data

1. What is your age? …………………………
2. What is your sex?
   - ☐ Male
   - ☐ Female
3. What is your institution of Study
   - ☐ KMTC
   - ☐ MTRH CHS

Self-perceived performance in clinical Placements

On a 1-5 scale, indicate the extent to which you agree or disagree with the following statements. 1 - Strongly disagree with the statement, 2 - Disagree with the statement, 3 - Neither agree nor disagree (Neutral view), 4 - Agree with the statement, and 5 - Strongly agree with the statement.

Code	Statement	1	2	3	4	5
PP1	I effectively apply nursing knowledge learned in class during clinical placements					
PP2	I can proficiently demonstrate most of the clinical skills required with minimal supervision					
PP3	I am able to integrate evidence-based knowledge into clinical care decisions					

PP4	My clinical reasoning abilities enable me to effectively assess patients and plan appropriate care					
PP5	I am confident in my ability to manage complex patient cases during clinical placements					
PP6	I have strong psychomotor skills in giving patient care during clinicals					
PP7	My communication and interpersonal skills with patients are highly effective during placements					
PP8	I am able to meet the clinical learning objectives successfully by the end of my rotation					
PP9	My training has empowered me to practice safely as a student nurse in the clinical environment					
PP10	Overall, I rate my performance in clinical placements so far as very good					

Student-Related (SR) Factors

On a 1-5 scale, indicate the extent to which you agree or disagree with the following statements. 1 - Strongly disagree with the statement, 2 - Disagree with the statement, 3 - Neither agree nor disagree (Neutral view), 4 - Agree with the statement, and 5 - Strongly agree with the statement.

Code	Statement	1	2	3	4	5
SR1	I am highly motivated during my clinical placements					
SR2	I have high anxiety levels during clinical placements which negatively impacts my performance					

SR3	I have high levels of confidence in my abilities during clinical placements					
SR4	I feel I have low self-esteem which negatively impacts my skills acquisition in the clinical setting					
SR5	Financial constraints negatively affect my ability to maximize learning in clinical placements					
SR6	I am able to integrate theory learned in class during clinical placements					
SR7	Personal problems and worries distract me during my clinical placement time					
SR8	I struggle with certain skills and procedures which negatively impacts my learning.					
SR9	My communication skills make it difficult to engage with clinical staff and patients.					
SR10	I lack self-directedness and independence in my learning approach during clinical.					

Training Institution Related (TIR) factors

On a 1-5 scale, indicate the extent to which you agree or disagree with the following statements. 1 - Strongly disagree with the statement, 2 - Disagree with the statement, 3 - Neither agree nor disagree (Neutral view), 4 - Agree with the statement, and 5 - Strongly agree with the statement.

Code	Statement	1	2	3	4	5
TIR1	There is shortage of qualified nursing instructors to facilitate my learning in clinical placements					

TIR2	The instructors use poor teaching methods that do not prepare me adequately for clinics					
TIR3	There is improper supervision by my instructors during clinical placement					
TIR4	There are insufficient learning resources (skills labs, simulation equipment etc) provided to support my clinical skills acquisition					
TIR5	There is lack of practical rehearsal opportunities in simulation labs/skills labs before going to actual clinical setting					
TIR6	The training curriculum does not adequately cover all the skills required during clinical placements					
TIR7	There are too few opportunities for instructors to provide feedback on my performance during clinical placements					
TIR8	There is lack of constructive feedback from my instructors on areas of weakness to improve my clinical practice					
TIR9	Communication and information sharing between my training institution and the clinical placement sites is ineffective					
TIR10	There is lack of training on use of technological equipment I encounter during clinical placements					

Clinical setting-related (CSR) factors

On a 1-5 scale, indicate the extent to which you agree or disagree with the following statements. 1 - Strongly disagree with the statement, 2 - Disagree with the statement, 3 - Neither agree nor disagree (Neutral view), 4 - Agree with the statement, and 5 - Strongly agree with the statement.

Code	Statement	1	2	3	4	5
CSR1	There is lack of cooperation between clinical staff and students during my placement					
CSR2	The clinical placement sites lack adequate personal protective equipment for students					
CSR3	I have witnessed or undergone traumatic experiences at the clinical placement sites					
CSR4	There is lack of structured programs to orient students at each new clinical placement site					
CSR5	There are too few opportunities facilitated at the sites to apply my knowledge and develop clinical skills					
CSR6	The number of students placed clinically at any one site exceeds capacity of staff to adequately supervise learning					
CSR7	There is lack of inter-professional education between students of different cadres at the clinical sites					
CSR8	The staff have unwelcoming attitudes towards students hindering my engagement at clinical sites					
CSR9	There are communication barriers between students and clinical staff due to hierarchy / intimidation					
CSR10	There is lack of consistent preceptorship by specific clinical staff members during placements					

Appendix 2: Focus Group Discussion Guide

1. Please share a bit about your experience with the clinical learning during your clinical placements at MTRH?
2. How do you feel about the clinical teaching approach overall?
3. In your experience, are the assigned preceptors readily available to guide and teach students? Why or why not?
4. Do preceptors appear too busy with their own work to teaching students adequately? What challenges does this cause?
5. In what ways do preceptors liaise with faculty regarding student learning areas of strength or weakness? Are there gaps?
6. Overall, how does learning under assigned preceptors here impact your knowledge, skills, confidence and attitudes as a nursing student?
7. How would you rate your experience in the clinical settings as regards the benefits of learning in a preceptorship model? Explain
8. What do you think can be done by the students to better facilitate their clinical learning within MTRH?
9. What is do you think can be done by the school to better facilitate your clinical learning within MTRH?
10. What is do you think can be done by the hospital to better facilitate your clinical learning within MTRH?

Appendix 3: Informed Consent Form

Study Title: An Assessment of Factors Influencing Clinical Learning Among Diploma Nursing Students at Moi Teaching and Referral Hospital Eldoret, Kenya.

Information to Participants

Summary: This study seeks to assess student-related, training institution-related, and clinical setting-related factors affecting nursing student clinical learning. It also examines impacts of the preceptorship model on performance.

Participants: Diploma nursing students in their 2nd or 3rd year currently undergoing clinical rotation at Moi Teaching and Referral Hospital.

Participation: Voluntary. You can choose whether to participate. If you decline, there are no penalties and it will not impact your academic status.

What's Involved: Completing a questionnaire on factors influencing learning. Estimated time is 20 minutes. Selected participants will also join a 60–90-minute focus group discussion on the preceptorship model and performance.

Duration: Overall study is estimated to take 3 months from April to June 2024. You may participate one time in either the questionnaire or focus group discussion, or both.

Risks: No foreseeable risks beyond those present in routine activity. Questionnaire questions or focus group discussion topics/procedures don’t pose harm beyond mild discomfort. You can decline responding to any uncomfortable questions.

Benefits: Study findings may guide interventions to enhance clinical learning environment and training approaches for nursing students at MTRH.

Confidentiality: Identifiable data like names won't be collected to maintain anonymity. Signed consent forms will be kept securely and separately from data. Findings will be presented in aggregate without identifying any individual responses.

Results Access: Deidentified summary results can be accessed upon request from the researcher. Findings will inform institutional recommendations to promote conducive clinical training.

Refusal/Withdrawal: You can choose to not participate or withdraw anytime during the research without penalty by simply informing the researcher.

Compensation: No compensation provided for your participation.

Contact Information

Researcher: Salome Nkatha Robert, salomenkatha16@gmail.com, +254 727 940703

Institutional Committee: research ethics committee contacts

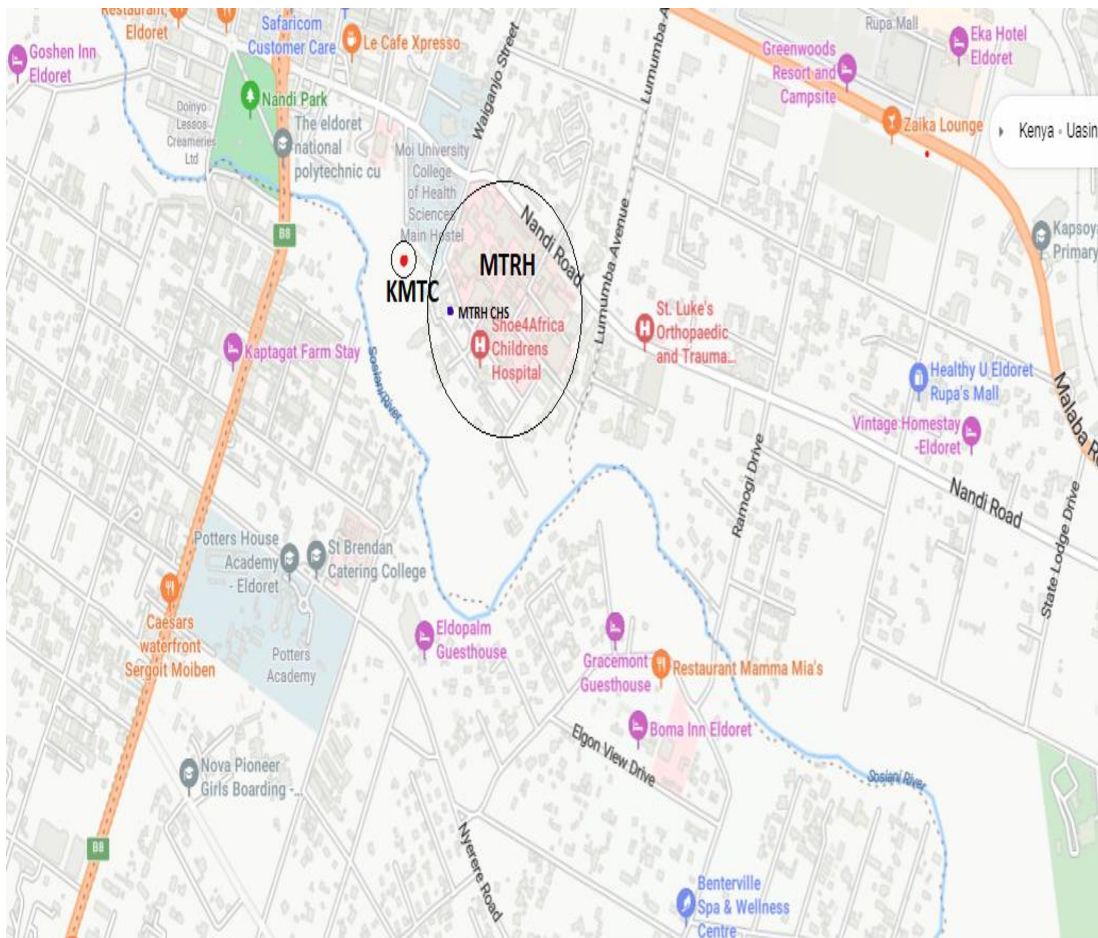
Statement of Consent

I confirm I have read the information in this form; questions have been answered, and I voluntarily agree to participate in the study.

Signature: ________________________ Date: ________________________

Printed Name: ________________________

Appendix 4: Map of Study Sites



Appendix 5: FGD Data Coding and Categorization

Participant	FGD Number	Quote	Open Code	Category
Student C	1	The approach is fair, what we are taught is what we come across in the clinical area.	Clinical theory-practice alignment	Clinical setting-related factors
Student A	1	We haven't reached a point where the school has had to help with clinical weaknesses; the nurses teach us where we don't know.	Nurses fill teaching gap	
Student D	1	The hospital needs more resources and staff to teach us. The school has done its best theoretically.	More resources needed	
Student A	1	Due to lack of sterile equipment, we sometimes have to improvise procedures.	Improvised learning due to resources	
Student B	1	The hospital needs to provide resources to help us grow in learning.	Resource availability impacts growth	
Student A	2	The experience at MTRH has been good, weâ€™ve learnt a lot, but the problem comes when students are given more work than the nurses.	Positive experience, workload imbalance	
Student B	2	Sometimes students are shouted at instead of being explained things in a better way, even in front of patients.	Shouting in front of patients	
Student C	2	We do a lot of procedures but we get shouted at by the managers in front of their colleagues.	Demeaning attitude from managers	
Student A	2	The approach in MTRH has been good, we get exposed to many conditions and patients.	Exposure to many patients	
Student B	2	Some preceptors are not available, and some nurses even shout at us, which is demeaning.	Preceptors not available	
Student C	2	Shouting is a big challenge, and they donâ€™t help us when we are wrong in a procedure.	Shouting and lack of support	
Student A	2	The problem is that nurses expect us to know procedures even if itâ€™s our first time.	Nurses expect prior knowledge	

Student B	2	Some of us face challenges getting forms signed for clinical rotations, even after doing our part.	Difficulty getting forms signed	
Student D	2	Some nurses treat students differently based on their tribe, which I personally faced.	Tribalism in nurse behavior	
Student C	2	Some nurses do not point out areas of weakness, they just finish their duties and go.	Nurses do not provide feedback	
Student A	3	The experience has been challenging because the nurses are too busy or aggressive and tell us to refer to our books.	Challenging experience, busy preceptors	
Student B	3	Different nurses have different teaching methods. Some expect you to know from school while others teach from the basics.	Different teaching methods	
Student C	3	It depends on the workload. When there are fewer patients, we have more time to learn.	Workload affects learning opportunities	
Student D	3	The experience has been good, but the teaching strategies depend on the ward.	Teaching strategies vary by ward	
Student A	3	Some patients refuse to receive treatment from students, which is a challenge in learning.	Patients refuse treatment from students	
Student B	3	We sometimes cover staff shortages instead of learning, which reduces our learning experience.	Working more than learning	
Student C	3	Some nurses project their bad moods onto students, which makes it difficult to learn.	Nurses projecting mood on students	
Student E	3	Nurses sometimes have a bad attitude and expect you to know everything from class.	Nurses expect prior knowledge	
Student A	3	Understaffing is a challenge, with few nurses supervising many students in wards.	Understaffing affecting supervision	
Student B	3	The nurses need to understand that we are here to learn, not just to assist with their workload.	Learning vs assisting workload balance	

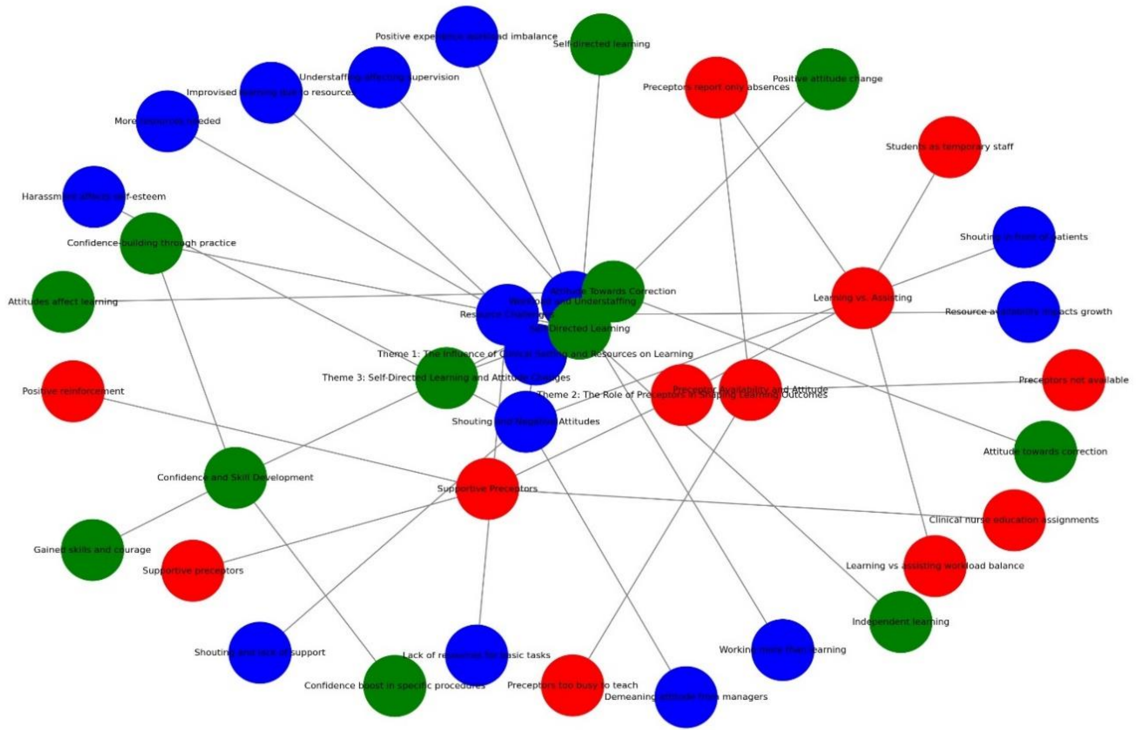
Student E	3	There is a lack of professionalism from nurses when dealing with students.	Lack of professionalism from nurses	
Student D	3	Attitudes affect learning. When a nurse has a bad attitude, it demoralizes students.	Attitudes demoralize learning	
Student A	4	The experience has been good, although I was fearful at first. Now I realize the nurses are knowledgeable and approachable.	Positive experience, initial fear	
Student C	4	Despite some harassment from nurses, interacting with patients has improved my experience over time.	Improved experience despite harassment	
Student A	4	Nurses have a lot of responsibilities, so they don't have much time to teach us.	Nurses too busy to teach	
Student F	4	Some nurses' attitudes lower our self-esteem, especially when we're harassed for making mistakes.	Harassment affects self-esteem	
Student B	4	Preceptors are often busy and do not have time to teach, especially when there are too many patients.	Preceptors too busy to teach	
Student B	4	Nurses should be more understanding and not just focus on perfection, as their high standards often demoralize students.	Nurses' high standards demoralize students	
Student C	4	There is a lack of resources, including gowns, for some basic clinical tasks like bed-making.	Lack of resources for basic tasks	
Student F	4	Nurses' attitudes affect learning, and sometimes they don't have the patience to teach students.	Attitudes affect learning	
Student B	4	Time and resources are inadequate for proper learning during clinical rotations.	Inadequate time and resources	
Student A	1	For me the experience has been good I've learnt a lot yeah I've learnt a lot on Nursing care I've gained.	Positive learning experience	Student-related factors
Student B	1	My experience was kind of traumatic at first with bed sores and everything, but now	Initial challenge, improved skills	

		I can say I'm doing well. I've acquired skills and courage.		
Student C	1	I've learnt a lot, like the procedures that I couldn't have done before. I've gained courage to do procedures like wound dressing.	Gained skills and courage	
Student C	1	I came in with an attitude that I couldn't face some diseases, but now I can face any disease or procedure without issue.	Positive attitude change	
Student B	1	They have added knowledge I didn't have, like new medicines. They've impacted me positively.	Knowledge gain	
Student C	1	I rate my experience an 8 because Iâ€™ve learnt a lot despite challenges.	Positive learning experience despite challenges	
Student A	2	Our tutors have helped build our confidence, knowing someone will correct us if we go wrong.	Confidence building	
Student A	2	The nurses help build our attitudes by praising us when we do well, making us more eager to learn.	Positive reinforcement	
Student D	2	I would rate my experience at 8 because I've learned a lot despite some challenges in certain wards.	Good experience despite challenges	
Student C	3	Nurses sometimes leave us to administer drugs alone, but this helps us learn and build skills.	Learning through independent tasks	
Student C	3	Confidence has increased with more hands-on experience, especially in procedures like administering medication.	Confidence-building through practice	
Student A	3	For me, the experience has boosted my confidence in fixing branulars, a procedure many fear.	Confidence boost in specific procedures	
Student A	3	Students should take clinical rotations seriously and be self-directed in learning.	Self-directed learning	
Student B	4	My clinical experience has been generally good since first year till now.	Consistently good experience	

Student D	4	My clinical experience has been easy, thanks to the support from nurses and senior students.	Support from nurses and senior students	
Student A	4	Theoretical knowledge from class helps when it's applied practically in clinical settings.	Applying theoretical knowledge in practice	
Student A	4	Students need to take their learning seriously and bring all the necessary materials for clinical practice.	Students need to take learning seriously	
Student D	1	The approach is not bad because we apply what we've learnt in our clinical placement. It's fair.	Fair approach to clinical learning	Training institution-related factors
Student A	1	It depends on the tutor. You may find one who's good, or another with an attitude, so it depends on the tutor.	Tutor attitude matters	
Student B	1	The tutor matters. If the tutor has a good attitude, you can learn.	Tutor attitude impacts learning	
Student D	1	When they learn our weaknesses, they are ready to teach us, but liaising with the school isn't necessary.	Teaching based on weaknesses	
Student E	1	Some tutors may not be available, but others are willing to teach and guide us.	Tutor availability varies	
Student A	1	I've learnt things in the hospital I didn't learn in class through tutors.	Learning outside class	
Student E	1	They've taught me many skills I didn't know before, so I've been impacted positively.	Skill development through tutors	
Student B	2	We have learnt a lot from the nurses who have been helping us, but not all are willing to teach us.	Helpful nurses, some unwilling	
Student E	2	The approach is good, and the nurses are teaching us.	Good teaching approach	
Student B	2	For me, the preceptors do not have enough time for us.	Limited preceptor time	
Student C	2	The school should follow up on students and provide a suggestion box for us to air our grievances.	Suggestion box and follow-up	
Student A	3	Preceptors only report students when they miss	Preceptors report only absences	

		shifts, never praising them for good work.		
Student A	4	Some students who come late or miss duties are just sent away without any intervention from the school.	Discipline without school intervention	
Student C	4	There is little follow-up from tutors regarding our weaknesses, except on assessment days.	Lack of follow-up on weaknesses	
Student E	4	Nurses sometimes give us assignments, which we present as clinical nurse education, and correct us if we're wrong.	Clinical nurse education assignments	
Student C	4	Preceptors only report students for missing shifts but never praise them for doing a good job.	Preceptors only report absences	

Combined Tree Diagram



Appendix 6: Plagiarism Check

7% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text
- Small Matches (less than 10 words)

Match Groups

- 87 Not Cited or Quoted 6%
  Matches with neither in-text citation nor quotation marks
- 22 Missing Quotations 1%
  Matches that are still very similar to source material
- 0 Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- 0 Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

6% Internet sources
2% Publications
3% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Appendix 7: Ethical Approval

KENYA METHODIST UNIVERSITY

P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: INFO@KEMU.AC.KE

Our Ref: KeMU/ISERC/MSN/03/2024

August 20, 2024

SALOME NKATHA
MSN-3-1578-1/2021

Dear Salome,

SUBJECT: AN ASSESSMENT OF FACTORS INFLUENCING CLINICAL LEARNING AMONG DIPLOMA NURSING STUDENTS AT MOI TEACHING AND REFERRAL HOPSITAL, ELDORET

This is to inform you that Kenya Methodist University Institutional Scientific Ethics and Review Committee has reviewed and approved your research proposal. Your application approval number is KeMU/ISERC/MSN/03/2024. The approval period is 20th August, 2024–20th August, 2025.

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 Institutional 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 ISERC 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 ISERC 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 ISERC.

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,

MR. HERBERT KIBEBE
CHAIR (ISERC)

Appendix 8: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **722185**

Date of Issue: **13/September/2024**

RESEARCH LICENSE

This is to Certify that Ms.. Salome Nkatha Robert of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Uasin-Gishu on the topic: AN ASSESSMENT OF FACTORS INFLUENCING CLINICAL LEARNING AMONG DIPLOMA NURSING STUDENTS AT MOI TEACHING AND REFERRAL HOSPITAL ELDORET, KENYA for the period ending : 13/September/2025.

License No: **NACOSTI/P/24/39487**

722185

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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.

See overleaf for conditions

Appendix 9: MTRH Permission Letter

An ISO 9001:2015 Certified Hospital

MOI TEACHING AND REFERRAL HOSPITAL

Telephone :(+254)053-2033471/2/3/4
Mobile: 722-201277/0722-209795/0734-600461/0734-683361
Fax: 053-2061749
Email: ceo@mtrh.go.ke/directorsofficemtrh@gmail.com

Nandi Road
P.O. Box 3 – 30100
ELDORET, KENYA

Ref: ELD/MTRH/R&P/10/2/V.2/2010

17th September 2024

Salome Nkatha Robert,
Kenya Methodist University
School of Medicine
P.O. Box 267 – 60200
MERU- KENYA

AN ASSESSMENT OF FACTORS INFLUENCING CLINICAL LEARNING AMONG DIPLOMA NURSING STUDENTS AT MOI TEACHING AND REFERRAL HOSPITAL ELDORET, KENYA

In order to conduct research within the jurisdiction of Moi Teaching and Referral Hospital (MTRH) which includes 22 counties in the Western half of Kenya. You are required to strictly adhere to the regulations stated below in order to safeguard the safety and well-being of staff and patients seen at MTRH involved research studies.

1. The study shall be under Moi Teaching and Referral Hospital regulation.
2. A copy of MU/MTRH-IREC approval shall be provided.
3. Studies dealing with collection, storage and transportation of Human Biological Material (HBM) will not be allowed to export the HBM outside the jurisdiction of **MTRH.**
4. For those tests which are unavailable locally the PI is tasked to ensure sourcing of equipment and subsequent training of staff to build their capacity.
5. No data collection will be allowed without an approved consent form(s) to participants to sign.
6. Take note that **data** collected must be treated with due confidentiality and anonymity.

Permission to conduct research shall only be provided once all the requirements stated above have been met.

DR. PHILIP KIRWA
CHIEF EXECUTIVE OFFICER
MOI TEACHING AND REFERRAL HOSPITAL

c.c. - Senior Director, Clinical Services
- Director of Nursing Services
- HOD, HRISM

All correspondence should be addressed to the Chief Executive Officer
Visit our Website: www.mtrh.go.ke
TO BE THE LEADING MULTI-SPECIALTY HOSPITAL FOR HEALTHCARE, TRAINING AND RESEARCH IN AFRICA

Appendix 10: KMTC Permission Letter

Please address all correspondence to:
Kenya Medical Training College
P.O Box 30195-00100, Nairobi

Tel: 020 - 2725711/2/3/4, 020 - 2081822/3
0737 – 352543/0706 – 541869
Email: info@kmtc.ac.ke
Website: www.kmtc.ac.ke
Kmtc_official
KMTCofficial

Kenya Medical Training College

When replying please quote:
KMTC/ADM/74/VOL.VI (421)

18th September 2024

Salome Nkatha Robert,
Kenya Methodist University,
P.O Box 267 – 60200
MERU

License No: NACOSTI|P|24|39487

Dear Salome,

RE: REQUEST FOR PERMISSION TO COLLECT DATA AT KMTC ELDORET CAMPUS

Reference is made to your letter dated 26th August,2024 requesting for authorization to carry out a study titled*: An assessment of factors influencing clinical learning among diploma nursing students at moi teaching and referral hospital eldoret, kenya*

The pilot study will be carried out in Kenya Medical Training College, Nairobi Campus.

It is noted that the study protocols have received the necessary ethical clearance from the relevant institutions and the required research license by NACOSTI.

The KMTC Research and Ethics Review Committee has also reviewed the proposal and is satisfied that no ethical issues will be violated in the data collection process.

Permission is therefore granted for data collection; should any unanticipated issues arise, please contact the research office.

Upon completion of the study, you are requested to submit one (1) hard copy and soft copy of the research report to the KMTC CEO's office.

Thank you.

Daniel Kipng'etich
For: CHIEF EXECUTIVE OFFICER