

**LEARNING EXPERIENCES OF FINAL YEAR NURSING STUDENTS DURING
CLINICAL HANDOVER IN CENTRAL REGION NURSING COLLEGES**

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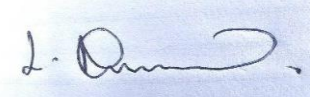
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DECLARATION

I, Lydia Nkhoma, hereby declare that this is my original work and it has not been presented for any other awards at any other institution. Work of other people used in this research report has been appropriately acknowledged.

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CERTIFICATE OF APPROVAL

The undersigned certify that this dissertation represents the student's work and it has been submitted with our approval.

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DEDICATION

This scholarly work is dedicated to my sons: Odala Praise and Okondeledwa Saint (ODK). You give me hope.

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LIST OF ABBREVIATIONS

CBT	Case Based Teaching
CHAM	Christian Health Association of Malawi
CM	Concept Mapping
CT	Critical Thinking
EAL	Expert Assisted Learning
F2F:	Face to Face interview
FC	Flipped Classroom
FGD:	Focused group discussion
IPE	Inter-professional Education
IPSE	Inter-Professional Simulation Based Education
ISBARR:	Identify, Situation, Background, Assessment, Recommendation, and Repeat)
LBL	Lecture Based Learning
MMLT	Mind Mapping Learning Technique
MZUNIREC:	Mzuzu University Research Ethics Committee
NMCM:	Nurses and Midwives Council of Malawi
PAL	Peer Assisted Learning
PBL	Problem Based Learning
SGD	Small Group Discussion
TBL	Team Based Learning
TTM	Traditional teaching methods

OPERATIONAL DEFINITIONS

For the purpose of this research, clarification of terms is needed to state the meaning as it relates to this study.

NURSING STUDENT: A person who is studying nursing at a college or university who meets the requirements of the Nurses' Council. In this study nursing students are referred to final year students enrolled at Nkhoma College of Nursing and Midwifery and Deayang College.

NURSING COLLEGE: An institute, which imparts nursing or midwifery education at various levels according to the nursing regulations. The nursing institutions accredited and licensed in Malawi carry out nursing or midwifery education, which includes selecting practical clinical sites that meet the criteria of Nurses Midwives Council Of Malawi (NMCM, 2013). Nkhoma College of Nursing and Midwifery and Deayang College in the central region of Malawi are the Nursing Colleges used in this study.

CLINICAL HANDOVER: It is the transfer of essential information, professional responsibility and authority for care of the patient in varying quantities, between shifts or locations, from one health care provider to another (Seada & Bayoumy, 2017; David et al., 2018). This process mainly happens for the purpose of ensuring the continuity and safety of the patient's care (Joint, 2017). In the study 'Handover' is the verbal handover in nursing station, written handover in the report book and handover at bedside.

EXPERIENCE: Experience means a practical contact with and observation of facts or events (Cambridge English Dictionary, n.d). It can also be described as familiarity with a skill or knowledge acquired over a period of time through practice or observation. This study focused

on the learning experiences of nursing students during clinical handover.

LEARNING:

The process of gaining attitudes, knowledge and skills that cannot be attributed to inherited behaviour patterns or physical growth rather changes in behavior is as a result of an experience (De Houwer et al., 2013).

ABSTRACT

BACKGROUND: Numerous learning opportunities exist in clinical handover but accessing them requires effort and careful planning since the primary goal of clinical handover is ensuring patient safety rather than teaching and learning. Clinical handover is the communication of vital information, professional accountability and authority for treatment of the patient from one healthcare provider to another. This study was done to explore the learning experiences of final year Malawian Central Region Nursing College students in clinical handover.

METHODS: The study which was descriptive and phenomenological was carried out among the final year nursing students in Central Region Nursing Colleges in Malawi. To recruit the study participants, 28 in total, purposive sampling was used. The data collected in this study was done through face to face (F2F) interviews and focus group discussions (FGD). Colaizzi's (1978) seven step approach was used for the data analysis and it was done manually.

RESULTS: The four themes that were identified included student teaching and learning strategies, facilitators to learning during clinical handover, barriers to learning during clinical handover and improvement strategies for maximum learning. Among the most utilised teaching methods during clinical handover were question and answer, discussions and lecture method. Factors that facilitated student learning during clinical handover were student involvement, comprehensive sharing of knowledge and skills and presence of different health professionals. Poor time management, incompetent clinical teachers, limited resources, poor clinical handover attendance and poor relationships between nurses and students were the most attributable barriers to student learning.

CONCLUSION: Interventions like clinical teachers' acquisition of recent knowledge, skills, and attitudes, nurse or students' motivation to learn, and the fundamental establishment of a conducive learning environment should be encouraged so that students can maximize the teaching and learning potentials that clinical handover provides.

KEYWORDS: Clinical handover, Clinical teacher, Learning, Nursing, Student, Facilitator

CHAPTER ONE

INTRODUCTION AND BACKGROUND INFORMATION

1.0 INTRODUCTION

Clinical handover refers to the exchange of critical information, professional accountability, and authority over patient care in different amounts, between shifts or locations, from one healthcare provider to another (Seada & Bayoumy, 2017; David et al., 2018). They serve as one of the most effective open platforms for education and understanding in the advancement of clinical practice (Piper, 2017; Duff et al., 2023). Clinical handovers happen frequently while providing care to patients. Generally, in an average teaching hospital, over 4,000 clinical handovers occur on a daily basis (Alert, 2017; Kim et al., 2019). Efficient clinical handover is essential for maintaining patient safety and continuity of care (Malone et al., 2016, Seada & Bayoumy, 2017). Although patient safety is the primary concern during clinical handover, the assimilation of knowledge serves as a secondary purpose of this process (Bradley et al., 2018). Learning during clinical practice is essential in nursing. It involves both experience through performance and application of knowledge (Kim et al., 2019).

Education during clinical handover can be either formal or informal. In formal education, instruction and learning are intentionally structured, whereas in informal education, they are not. Informal learning encompasses opportunistic, reflective, and implicit types (Ooi et al., 2020). In opportunistic learning, clinical educators use a described scenario or clinical issue to involve nursing students in educational moments. An example of opportunistic learning in clinical handover is the application of case-based teaching. Pun (2023) noted that students are motivated to engage in critical thinking when faced with different situations. Opportunistic learning improves students' ability to identify shortcomings and correct deficiencies (Ooi et al., 2020).

Reflective learning during clinical handover involves analysing experiences to improve future performance, by making one's learning a more conscious process. Reflective learning aids in critical thinking skills (Kim et al., 2019). An example of reflective learning is when a scenario discussed during clinical handover leaves members contemplating on their own clinical practice while comparing it to the one recently presented during the clinical handover (Ooi et al., 2020). Implicit learning also happens during clinical handovers. Members share experiences from

practice. For example, how other cases were handled or treated in the past. The repeated exposures to different cases though not seen by members themselves helps learning to take place (Ooi et al., 2020).

Nevertheless, at times clinical handovers are performed too informally and this makes it difficult for students to learn and thereby compromising patient safety (Joint, 2017). This behavior is harmful since many students are not formally educated to understand clinical handover; instead, on-the-job training serves as the primary learning method (Hanley-Gumbs, 2019). Park et al. (2015) also found that 62.6% of nursing students lacked handover education. Another study by Kim et al., (2019) demonstrated that most nurses (92%) in their study were not formally trained such that they relied on observing colleagues or receiving verbal instructions from seniors in order to familiarise themselves with handover practice.

Likewise, the final year nursing students in Malawi's central region learn the process of delivering and receiving clinical handover reports during their clinical practice. Kim et al., (2019) found that students learn how to perform clinical handovers during their clinical practice through observation and participation, which is not easy for them as clinical handover practices vary widely across clinical settings. Students are therefore likely to encounter clinical handovers that are not educative (Chung et al., 2021). This means that the final year nursing students may find themselves ill-prepared for the task as they graduate. Bradley et al., (2018) noted that the lack of preparation in clinical handover procedures results in challenges in nursing student's ability to give complete clinical handover reports. Chung et al. (2021) also discovered that inability to perform clinical handovers often leads to errors during clinical handover which may cause psychological distress to nursing students.

Several teaching strategies aimed at enhancing clinical handover reporting are available to assist students in mastering this skill. Nevertheless, the optimal approach for clinical handover programs is not explicitly defined, yet simulation-based training and role-playing are commonly employed to enhance clinical handover proficiency (Gordon et al., 2018). Furthermore, many clinical handover interventions primarily assess self-reported attitudes and confidence rather than measuring advancements in knowledge or performance (Kim et al., 2019; Gordon et al., 2019).

There is a worldwide dedication to enhance the performance of student clinical handover reporting. Nevertheless, minimal research has been conducted to enhance learning opportunities for nursing students during clinical handover. In Africa at large, there are a few studies that address the teaching and learning of nursing students during clinical handover. In Malawi, there is likewise a scarcity of research conducted on the topic thus highlighting the pressing necessity for the study. This document contains details of the descriptive phenomenological research conducted with final year nursing students in the Central Region of Malawi. The research sought to investigate the educational experiences of nursing students during clinical handover.

1.1 BACKGROUND INFORMATION

Clinical practice is essential in nursing education as it allows students to achieve professional competence by integrating theory with practice (Bvumbwe et al., 2015; Bux et al., 2021). Clinical competence in nursing is essential as it aids in delivering high-quality care. Conducting clinical handover is a critical skill in the clinical field (Duff et al., 2023; Mahdy, 2020). Proficiency in nursing involves a nurse's capacity to execute nursing responsibilities safely and ethically by utilising scientific knowledge, skills, abilities, and judgment (Seada & Bayoumy, 2017; Joint 2017).

Clinical competencies are divided into two categories (Lenburg, 1999 cited in Manby, 2020; Khatiban & Sangestani, 2014). The initial category encompasses general competencies, which consist of management, leadership, instruction, and knowledge integration. The second category consists of particular competencies, which encompass assessment and intervention, communication, critical thinking, as well as human care and relationship skills. Handover is a key skill that nursing students in their final year must possess before qualifying as nurses.

A nurse becomes competent through experience and learning (Mahdy, 2020). Nursing students acquire several clinical competencies during their study life and continue to do so throughout their work life. The clinical handover experience offers students with insights into clinical practice, patient care management, critical thinking and problem-solving capability, communication skills as well as teamwork (Duff et al., 2023). Students' presence and participation during clinical handover enables them to be exposed to the clinical reasoning skills of experienced nurses who are able to prioritise information given at clinical handover and patient condition in order to make proper decisions (Piper, 2017). For instance, during clinical

handover, experienced nurses gather patient's data and interpret it. For example, they use the patient's vital signs, symptoms and history to understand the patient's condition and diagnosis. Therefore, by observing how this is done, students' skills in patient assessment are enhanced.

Good evidence of effective learning exists when students are allocated in clinical settings that enhance learning during care delivery (Bvumbwe, 2016). However, research findings show that there are a lot of challenges in healthcare, and in educating nursing students while caring for patients (Fan et al., 2015; Reynolds et al., 2020). Several global findings corroborate that creating capacity for teaching and learning is challenging during clinical practice (Reynolds et al., 2020; Attenborough, 2019; Basheer, 2021).

In theory, there are numerous clinical learning opportunities, but in practice, many of these opportunities are overlooked (Attenborough, 2019). Numerous learning opportunities exist in clinical handover as well, but accessing them requires effort and careful planning. This is due to the fact that the primary goal of clinical handover is ensuring patient safety rather than focusing on teaching and learning. Similarly, the main goal of health institutions is to provide quality care and not to teach students (Fan et al., 2015). Unfortunately, students, clinical staff and teachers think learning opportunities in the clinical area are obvious, such that daily routine activities like clinical handover go unrecognised as teaching and learning opportunities. Global research further revealed that clinical handover is one of the underused educational tools (Sadideen et al., 2014). Similarly, a study from the United Kingdom on clinical handover practice amongst the trainees at the Oxford School of Surgery found that 38% of the students strongly felt that clinical handovers that they engaged in were not helpful to their training (Sadideen et al., 2014). In addition, Piper (2017) noted that ineffective clinical handovers with no education still happens in the hospitals.

Taking into account the educational limitations in the Malawian clinical environment, daily procedures such as clinical handovers might be integrated as chances in the clinical setting that can be used to offer final year nursing students valuable learning experiences. This research report on a descriptive phenomenological study provides additional insights into the learning experiences of nursing students during clinical handovers conducted at Nkhoma and Deayang Nursing Colleges in Malawi's Central Region.

Although numerous international studies have documented the clinical handover experiences and performance of healthcare personnel and medical students, there is still limited research specifically addressing nursing students in the context of learning. The research thus sought to investigate final year nursing students' learning experiences during clinical handover.

1.2 STATEMENT OF THE PROBLEM

Recently there has been incompetence in most nursing graduates, which has raised an alarm in the nursing profession (Pereira, 2014). Many employers are disappointed with recent graduates as they cannot competently perform basic tasks and their education level does not match the demonstrated work competencies (Fan et al., 2015; Khatiban & Sangestani, 2014; Pereira, 2014). Students pursuing nursing acquire skills, knowledge and attitudes in the clinical area, which has more limited opportunities, resources and time than before due to increased student numbers and shortage of staff (Bifftu, 2016; Basheer, 2021).

The shortage of clinical staff has consequently resulted in work overload such that clinical patient care is often prioritised over safety care, teaching and learning (Reynolds et al., 2020; Basheer, 2021). Malawi, for example, has a critical shortage of nurses, the current nurse to population ratio being 3:10,000 (Bradley et al., 2015). The National Nurse Scale Up Operational plan tried to resolve the human resource crisis in health by doubling the nursing intake such that through the Emergency Human Resource for Health Programme, Malawi increased the number of nurses from 575 in 2004 to 699 in 2009 (Bandasi et al., 2013; Bradley et al., 2015). Unfortunately, the number of clinical sites where these students are allocated is the same.

The increased enrollment of new students in the nursing colleges in Malawi has resulted in overcrowding of students in the clinical area such that students scramble for learning resources and opportunities thereby contributing to failure to achieve the study outcomes (Bvumbwe & Mtshali, 2018). This is also the case with South Africa where it was noted that there is lack of learning opportunities for students due to overcrowding of students in public hospitals (Motsaanaka, 2020). This, in return has resulted in nursing students finding it difficult to meet the required learning outcomes of the nursing programme (Fan et al., 2015; Khatiban & Sangestani, 2014; Pereira, 2014). Given the high activity levels in clinical settings and the limited learning opportunities available in clinical areas, it is essential to find innovative approaches or explore new possibilities for teaching and learning. It is against this backdrop, that

this research was undertaken to investigate the learning experiences of final year nursing students during clinical handover.

1.3. BROAD OBJECTIVE

This study aimed at exploring the learning experiences of final year nursing students during clinical handover in two Central Region Nursing Colleges.

1.4 SPECIFIC OBJECTIVES

- To explore the teaching and learning strategies utilised during clinical handover to promote student learning
- To assess the perceived factors underpinning nursing students' learning during clinical handover
- To describe the perceived barriers to nursing students' learning during clinical handover

1.5 RESEARCH QUESTIONS

- What teaching and learning strategies are utilised during clinical handover to promote student learning?
- What are the factors that facilitate learning during clinical handovers?
- What are the barriers to learning during clinical handover?

1.6 SIGNIFICANCE OF THE STUDY

It is highly expected that the findings from this study will add to the body of knowledge in clinical teaching and learning as well as patient safety and research.

1.6.1 EDUCATION

The findings have disclosed practices and teaching methods that are most effective in ensuring learning during clinical handover. Therefore, clinical teachers are likely to adopt teaching strategies that promote active teaching –learning during clinical handover.

The colleges' management, in conjunction with the hospitals are also likely to facilitate training of clinical teachers on appropriate clinical teaching and learning strategies and set up quality audit programmes to ensure that clinical teachers are using teaching strategies that enhance participation during clinical learning. Furthermore, the study results can assist clinical teachers to be more aware of the qualities that nursing students value as important and which are necessary for their teaching and learning, thereby helping them to engage in self- assessment to acquire and

maintain effective teaching characteristics. Findings will also promote and strengthen teamwork among clinical teachers, students and nurse educators in clinical setting through collaboration and active involvement in student teaching and learning.

Insights from the study may foster maximum utilisation of time in the clinical sites. Clinical teachers will not focus on ‘ideal’ teaching time, but they will use any available time like clinical handover to impart knowledge and skills which would otherwise not be possible considering the fact that the best time may not be found due to different responsibilities and busy schedules in hospitals.

1.6.2 PRACTICE

Whilst the nurses improve clinical handover teaching and learning, they will concurrently be improving their own practices during clinical handover. This study has highlighted communication issues that will not only help student teaching and learning, but they will also help in ensuring patient safety; for example, the use of appropriate clinical tools during clinical handover.

The results may also foster discipline and team work among professionals since they understand the value of attending and contributing during clinical handover. Comprehensive clinical handover with presence of different professionals does not only benefit students, but also clinical nurses by improving their knowledge, which is necessary to patient care. Additionally, the care provided by students to patients will be enhanced. The standard of care can be enhanced as effective education and training narrow the theory-practice gap for nursing students.

1.6.3 RESEARCH

The research is revealing as it has underscored how knowledge is gained during clinical handover. For that reason, the researcher is convinced that this study will provide a fresh perspective to the nursing literature about the value and efficacy of utilising any available time in the clinical setting to instruct students.

1.6.4 POLICY

The feedback from the study provides understanding on learning opportunities and challenges that students encounter during clinical handover including gaps in their knowledge or skills. This

can help inform curriculum adjustments, whereby better targeted training programs and educational materials addressing specific areas in which students require support or more practice before entering the workforce may be included. Insights from the research would be used in developing guidelines for teaching students.

1.7 SUMMARY

This chapter has provided an introduction and background of the research regarding nursing students' learning experiences during clinical handover in two nursing colleges in the Central Region. The aim of the research was to evaluate learning experiences of nursing students during clinical handover. The study results will enrich the body of knowledge in nursing education and practice for teaching and learning during clinical handover and thus, contribute to nursing education and practice.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter aims to describe the related literature review that was conducted for this study. Literature review involves going through significant writings done by other authors and then gauging them against researcher's specific topic. Literature review helps identify current information, so that relevant theories, methods and gaps in the existing research are recognised (McCombes, 2021).

In this research, the literature review has examined and addressed information that is accessible regarding clinical handover in nursing and the health care system. The literature review emphasises the learning experiences of nursing students in clinical handover situations. This chapter will deliver a succinct overview of teaching and learning in the context of clinical handover and examine the literature on the approaches utilised in instructing nursing students, the factors that aid learning during clinical handover, obstacles to learning, as well as strategies for enhancement.

2.1 TEACHING AND LEARNING DURING CLINICAL HANDOVER

Instruction and studying are essential elements of the educational process. Teaching is an action performed by the educator to convey knowledge, foster attitudes, and enhance skills in a learner (Billings & Halstead, 2009). Learning results from effective teaching through the enhancement of activities and progressive behavioural change stemming from students' cognitive processes (Ozcan, 2023). Kolb (2015, p.49) similarly characterised learning as 'the process in which knowledge is generated by transforming experience'.

Clinical training is fundamental to nursing education. In Malawi, learners dedicate greater amounts of time in clinical settings compared to their time spent in the classroom (Mbakaya et al., 2020). Malawi's nursing and midwifery education standards require students to allocate 60% of their study time to clinical practice and 40% to classroom learning (Nurses and Midwives Council of Malawi, 2013).

Clinical nursing education offers students' chances of learning in various patient care environments, receiving suitable mentorship, and promoting the growth of clinical skills and professionalism. Nursing students enhance their skills and cultivate their professional identity by applying theoretical and practical knowledge acquired in the classroom and practiced in simulation laboratories to clinical environments (Estrada et al., 2015). The nursing students additionally acquire skills to handle situations they face in the clinical setting. This supports their growth and evolution into capable, self-sufficient professionals (Mukan et al., 2020). Consequently, clinical experiences enhance the acquisition of psychomotor, cognitive, and affective skills in nursing students for proficient practice (Antohe et al., 2016).

A significant factor influencing nursing education is the quality of students' clinical training or their clinical experiences (Nazari & Mohammadi, 2015). As noted by Dag (2019), clinical settings possess a complex and multi-faceted social framework. Clinical instructors, nursing learners, and educational institutions frequently have little influence over the factors that make up the clinical setting. Consequently, these conditions can influence learning (Papastavrou et al., 2010; Gorgulu 2002, as cited in Dag 2019). These elements encompass the aspects of the clinical teaching and learning setting, the traits of the students and educators, as well as the interaction between clinical teachers and students. Students are strongly advised to take advantage of these factors and conditions (Gorgulu 2002 as cited in Dag 2019).

Clinical educators are accountable for fostering an atmosphere that supports students in achieving their academic objectives (Dag et al., 2019). Clinical instructors assist students in integrating classroom knowledge into real-world practice, instruct on clinical skills, evaluate clinical competencies, and improve students' problem-solving and critical thinking abilities. Students acquire new knowledge, process it through contemplation, and then take steps to enhance patient care. Consequently, it is vital for nursing students to be ready for their real future professional responsibilities in the clinical setting, such as conducting clinical handovers. Research show that the majority of nursing personnel and students consider clinical handover essential for patient care and safety. In a descriptive phenomenological study investigating the experiences of newly graduated nurses regarding clinical handover in Hong Kong, participants regarded clinical handover as a vital nursing activity (Chung et al., 2021). In a comparable phenomenological study conducted in the United States investigating and interpreting student

nurses' experiences with clinical handover, it was found that students regarded clinical handover as significant (Hanley-Gumbs, 2019).

Nurses and nursing students are usually involved in clinical handover at the beginning and ending of their shift. During the clinical handover process, the outgoing nurse provides patient information, in which the key aspects of care during the shift are explained. In addition, should there be need for clarification and additional details, the incoming nurse requests more information from the outgoing nurses. The verified information is concisely repeated to ensure accuracy and completeness (Streeter et al., 2015). Depending on the policies of the hospital, it is important to clearly define the transfer of responsibility and the exact time and situation when it needs to happen.

Clinical handover is performed in different ways in Malawi. The first way is through verbal communication which is often done in nursing stations. Verbal handover is the most commonly used method during clinical handover (Kim & Oh, 2016) and it remains irreplaceable as it uniquely allows for the comprehensive identification and application of various aspects of nursing science and patient care (Birmingham et al., 2015). It involves the transfer of patient care from one nurse to another (Monaco, 2021). Its interactive nature provides a suitable environment for discussions and deeper understanding of patients as it encapsulates comprehensive information and reveals the current health status of patient; thus, allowing a team approach in the plan of care (Chaboyer et al., 2010). Verbal handover provides nurses with a unique platform to discuss, note and address information that may not be suitable for written documentation. For example, non-verbal cues from nurses can elicit other areas of a patient's psychological well-being that would otherwise be missed (Kim & Oh, 2016). Verbal handover also enables catchup time on individual nurse updates, informal debriefing and day-to-day team support (Scovell, 2010).

However, there are some challenges with verbal handover. Johnson and Cowin (2013) argued that verbal handover is time consuming. People also view that the information exchanged during verbal handover can simply be integrated into evidence-based nursing practices. Several studies have indicated that during verbal handover, information or outcomes of handover deliberations are not shared and they are easily lost (Poletick & Holly, 2010). This means that only those that are present during clinical handover benefit. This is because usually there is no documentation.

The second form of clinical handover is the written handover. The written handover is a handover where specific documents like report books are used to document the intended report. This form enables a permanent availability of information as nurses can re-read the report and double check the information (Vretare & Anderzen-Carlsson, 2020). Written handover comes in the form of nursing documentation. Nursing documentation is essential because it establishes a permanent record of nursing interventions and their impact on patient outcomes. Nursing documentation ought to be in chronological order, indicating how nursing interventions align with the broader patient care plan (Kelley et al., 2011).

The advantages of written handover include facilitating continued patient care by communicating the patient's condition and treatment to a team of health professionals, providing legal evidence of care rendered, serving as reference material for future use, for example, in student learning or patient rights assessment, and lastly, serving as a basis for monitoring and evaluation of patient care (Kelley et al., 2011). Written handover focuses primarily on task completion rather than conveying meaningful information to the incoming team on a shift. Thus, overlooks important data (Kelley et al., 2011).

The third form of clinical handover is the bedside handover. It occurs when the outgoing nurse transfers responsibilities to the incoming nurse directly by the patient's bedside (Tobiano et al., 2017). It involves face to face interaction between two or more nurses with the patient also actively participating (Tobiano et al., 2017). During bedside handover, nurses walk from patient to patient. This is usually the moment to confirm what had been discussed during the nurse station/conference rooms handover.

Bedside handover is recommended as the ideal type of clinical handover by several studies (Barker 2013; Sherman et al., 2013). A cross –sectional survey of Irish doctors found that bedside handover was the number one location preferred clinical handover seconded by the conference rooms (Murphy et al., 2011). Bedside handover ensures that patients and their guardians get firsthand information about the patient's condition and the plan of care and treatment from health workers that is relevant, accurate and up to date (Irish National Guidelines 2015). The other advantages of bedside handovers are; increased patient/nurse satisfaction, improved patient/nurse relationship, enhanced reporting and improved prioritisation (DeCelie, 2020; Sherma et al., 2013). Furthermore, bedside handover promotes patient centred approach

and it aids in increasing patient safety, ultimately leading to better outcomes (Tobiano et al., 2017; Ofori-Atta et al., 2015; Bressan et al., 2019).

Bedside handovers also have several disadvantages, the first being that they are time consuming. Further, there may be communication breakdown with patients during the handover due to the use of medical jargons (DeCelie, 2020). Bedside handover can also be a source of anxiety as there may be too much, incorrect or sensitive information that may require privacy (Sherman et al., 2013). Therefore, to ensure privacy, it is recommended that confidential information like test results, psychiatric issues, communicable diseases and, social and family issues be shared among health workers away from the patient; for example, at the nurses' station (Queensland Health, 2013).

Verbal and written handovers complement each other. In general, organised verbal and written handovers are strongly advised as they create a chance for clarity in situations where others may be confused. It is linked to improved information retention; promotes teamwork, decreases work-related stress, and ensures job satisfaction (Merten, 2017). Clinical handovers should be supported with formal documentation from both the outgoing and incoming staff. Those receiving clinical handovers must fully understand, acknowledge and accept responsibility for the patients (Department of Health South Australia, 2013; Siemsen et al., 2012; Irish National guideline 2015). Information that is included in a clinical handover comprises the patient's current health status, medications, and treatment plans plus advance directives and changes in patient's status (Merten, 2017; Roslan & Lim, 2017) which provide an opportunity for a multi-disciplinary team to share notes and discuss a program of care for patients. Defining the content to be shared during clinical handover has several benefits for example; reducing the chances of outgoing staff from assuming that the incoming staff already know the patient such that other information is not included in handover. As highlighted by Thomson et al., (2018) alteration in communication during clinical handovers has the potential to jeopardise patient safety which can result in undesirable outcomes like loss of life. Therefore, ensuring thorough and accurate clinical handovers is not just a procedural formality but a vivacious safeguard in healthcare delivery.

Nursing students watch how nurses, doctors, anaesthetists and others collaborate in patient care and learn the nurses' role in a multidisciplinary team. For smooth, effective and safe transition of

responsibility to take place, all relevant information of the patient has to be provided (Merten, 2017). Therefore, it is necessary that there are proper guiding tools like checklists or structured form or mnemonic to be utilised during clinical handovers (Illan et al., 2012; Poot et al., 2013; Irish national guidelines, 2015). The information that is transferred during clinical handover may vary. Nurses differ in setting a value or priority on the information shared during clinical handover (Goncalves et al 2016). Similarly, the proper utilisation of information being shared is dependent on competence of the members, team organisation and time management (Bras & Ferreira, 2016). Therefore, incoming nurses are encouraged to conduct their own clinical assessment following handovers to verify and determine the appropriate course of action as per the clinical situation as well as their roles and responsibilities (Irish national guideline, 2015).

2.2 TEACHING AND LEARNING STRATEGIES USED DURING CLINICAL HANDOVER

The learning process may be influenced by the learning strategy chosen by the teacher for teaching and learning (Ioannou & Iordanou, 2020). Clinical teachers should always look for the strategy that is most advantageous for all students. The teaching strategies can be grouped into participatory/innovative and traditional teaching approaches. Madar (2015) describes participatory teaching as a learning approach where students are a focal point of teaching and learning process, they are active in their own learning and the teachers act as facilitators.

Traditional strategies are teaching methods in which students often receive information which is considered definite and unchanging from the teachers and all they need to do is to memorise with no participation from their end (Akcoban, 2023). A distinctive feature of traditional strategy is that the interaction is often dominated by the teacher (Mbirimtengelenji & Adejumo, 2015).

Literature indicates that in various contexts one approach may be better than another; however, a study comparing traditional and innovative teaching methods for learning advanced nursing skills in skills laboratories suggested utilising two or more types of strategies to enhance active learning in nursing skills (Staykova, 2021). This study elaborates teaching strategies based on Bloom's knowledge dimensions, which comprise four primary types of knowledge: factual, conceptual, procedural, and metacognitive (Billings & Halstead, 2009).

2.2.1 FACTUAL KNOWLEDGE

2.2.1.1 Lecture method

The lecture method is the oldest way of teaching in which the lecturer makes use of verbal messages to present information to students (Yadav et al., 2023; Amtamwa, 2019). Schwartzstein and Roberts (2017) recommend that lecture-based learning methods are appropriate for attaining the cognitive goals of lower levels of Bloom's Taxonomy and not for teaching higher levels. The lecture method is economical; it allows delivery of content to a lot of people at the same time (Yadav et al., 2023; Amtamwa, 2019). However, it reduces student participation (Billings & Halstaed, 2009; Amtamwa, 2019). A study conducted to assess the impact of traditional instruction versus cooperative learning techniques on nursing students' communication abilities with patients revealed that those who attended traditional lectures were passive participants (Baghcheghi et al., 2011).

Research shows that lecture method can be used with other means of communication/methods to provide more clarity on the information being shared (Billings & Halstead 2009; Subhan, 2014). A study conducted to investigate classroom instructional activities in relation to students' critical thinking skill acquisition through qualitative non-participant observation revealed that active student involvement and curiosity are enhanced during lectures when the teacher integrates the lecture method with question and answer periods, connects lessons to real-world scenarios such as clinical stories, and moves around the classroom during the session (Boso et al., 2019). The lecture method influences learning in various ways.

2.2.1.1.1 Knowledge

A number of studies have been conducted to understand how students interpret lectures in learning. Research performed at Emory University's Atlanta location investigated the benefits that problem-based learning provides versus standard lecture techniques. Research results demonstrated that problem-based instruction stands as an effective pedagogical model to teach acute nursing care students (Zhang, 2014). The problem-solving teaching approach enabled students to obtain new educational information according to research. A quasi-experimental research investigation was also conducted at the University of Medical Sciences in Tehran, Iran which evaluated the learning outcomes and satisfaction levels concerning lessons on

Tuberculosis disease among students who received traditional lectures or blended teaching approaches. The study found that initial assessment of the students' knowledge about Tuberculosis in both groups had average scores however similar to the earlier study findings, there was more increase in knowledge in the blended group compared to the lecture group after the training (Sedaghat et al., 2014). Another study result of a randomised controlled trial also proved team based learning a success in teaching nursing students other than lecture-based learning (Zhang, 2023). Furthermore, research from Sudan also examined student achievement in team-learning compared to conventional lecturing without influence from the gender of a student (Salih, 2021). It was found that students' performance using team-based learning was superior to lecture based learning.

Amin et al. (2023) conducted quantitative research in Indian institutions to determine how well nursing students studied myocardial infarction when using Problem Based Learning and traditional lecture methods within Indian institutions. Research results indicated that nursing students who received problem-based learning education achieved higher knowledge scores than students taught by traditional method of lectures. Research also investigated both the effects of simulation-based learning methods and lecture-based learning approaches on conventional Japanese Kampo medical education. The researchers found that simulation-based instruction surpassed traditional lecture teaching in teaching students about the adverse effects of Kampo medicine (Nogami et al., 2020).

However, contrary to other studies, some researchers also implemented a quasi-experimental, causal comparative, repeated measures research design study to investigate differences between students who received collaborative instruction and those using traditional lectures in their pre and post-tests of personal community health assessment. Student academic achievement improved under both teaching approaches of collaborative learning and traditional lectures (Vaughn, 2020). Another research study assessed student nurse awareness of central line-associated bloodstream infection prevention guidelines through assessment of university-based training from two Jordanian institutions. The study used pre- and post-tests to analyse the two-arm randomised controlled trial study design findings. Results from the pre-test showed student nurses displayed insufficient knowledge about proper central line associated bloodstream infection prevention procedures. Post-test results demonstrated that classroom instruction along

with simulation or lectures were equally influential on knowledge improvement. Even though simulation group students performed better on test items, the overall statistical comparison showed no meaningful difference (Aloush, 2018).

2.2.1.1.2. Knowledge retention

A quantitative study of nursing students' immediate knowledge retention at Dire Dawa University in Ethiopia demonstrated that lecture-based learning stands as the most effective method and is the preferred approach among students in retaining information (Solomon, 2020). Contrary to the study however, a study to analyse the effects of traditional lectures against flipped classrooms when educating operating room students proved that flipped classroom approach is more efficient than traditional lectures in improving student satisfaction as well as short-term and long-term learning (Abarbhouie et al., 2020). Kantar and Sailian, (2018) in an attempt to discover the influence of case based and lecture-based learning on information retention further found that there was no noteworthy difference regarding students' information maintenance between the case-based learning and lecture groups.

2.2.1.1.3 Critical thinking and problem solving

A research project was conducted by Al-Naja (2019) to investigate the outcome of skills such as critical thinking, problem solving, and self-directed learning in nursing students who experienced problem-based learning compared to traditional lectures, and to explore the relationships among these outcomes. The research results indicated that problem-based learning fosters efficient teamwork and boosts active learning as well as critical thinking. Similarly, a randomised controlled trial conducted to investigate the impact of team-based learning on problem-solving skills and educational results of nursing students in Korea showed that team-based learning is a successful instructional approach for improving problem-solving skills and clinical performance relative to the lecture method (Kim et al., 2016).

Nonetheless, in contrast to previous studies, Kim and Oh's (2016) study which compared the impact of simulation-based and conventional teaching methods on students' critical thinking and self-confidence during electrocardiogram interpretation sessions found no significant differences in outcomes between the simulator-based group and the traditional teaching method group.

2.2.1.1.4 Passion and satisfaction

In a quasi-experimental research study comparing lecture and flipped classroom teaching strategies on students' theoretical desire and responsibility, Liu et al. (2023) revealed that flipped classroom instruction increased students' academic passion and responsibility beyond the lecture method. Similarly, a descriptive investigation analysing how lecture instruction coupled with role-playing and peer learning affected Bachelor of Medicine and Bachelor of Surgery students' knowledge development and satisfaction in Indian medical programs demonstrated preference for participatory approaches that included role playing rather than the lecture method (Yadav, 2023).

2.2.1.2 Discussion method

Discussion is a teaching strategy that involves written or spoken expression of an individual's understanding of a topic/issue in a given situation (Cashin, 2011). Gaeberson and Oermann (2010) identified various types of learning encouraged by the discussion method, relating to the objectives and framework of the discussions: enhancement of problem-solving, critical thinking, and clinical judgment abilities, reflection on clinical experiences and subsequent simulations, along with the improvement of verbal communication skills. Nonetheless, a single discussion does not generate all forms of learning; the educator merely steers the conversation toward reaching a specific goal. There are a variety of discussion methods. Some of these include group discussions (small, large groups), deliberative discussions, panel discussions and so many more. Discussion method can affect learning in the following ways:

2.2.1.2.1 Knowledge

A study at Avalon University School of Medicine in Netherlands investigated whether small group discussions can enhance the assimilation of specific pharmacology topics and furthermore witness the improvement in the performance of the students during assessments. The results indicated that small group discussions are effective in pharmacology course; students grades greatly improved, and students are satisfied with the use of small group discussions (Arja et al., 2020). Similarly, using Kirkpatrick's model to evaluate and assess the perceptions and effectiveness of small group discussions (SGDs) over lecture method in learning the principles of family medicine among second year Bachelor of Medicine, Bachelor of Surgery students

established that SGD is a more superior method of teaching in enhancing student's attention span, understanding the principles of family medicine and also recall. The study also demonstrated that students were more satisfied with SGD compared to lectures (Roshni & Rahim, 2020). Correspondingly, in reviewing other methods of learning in midwife students in Iran, a study was conducted to compare the impact of the student group discussion and lecture strategy. It was found that group discussions improved learning and retention of material learnt (Aghapour, 2015).

Contrary to the findings however, a mixed method study compared instructive lecturing with small group discussions among undergraduate medical students. The study findings indicated that students preferred didactic lectures more than small group discussions (Qamar et al., 2012).

2.2.1.2.2 Communication

Nayereh et al. (2010) conducted a study in which they sought to compare the effect of teaching by using lecture and group discussion methodologies on nursing student's communication skills with patients was done. The study found that employing group discussion method helps in fostering nursing students' communication skills. Similarly, a study conducted to scrutinise various areas of the discussion teaching method and its impact and role in underscoring students' language and academic skills as well as its shortcomings at a university in Malaysia discovered that discussions improve students' communication skills; students are able express their thoughts and views, and their language proficiency is amplified through constant reinforcement and use (Abdulbaki et al., 2018).

2.2.1.2.3 Participation

Research conducted utilising the Strategy for Learning Scale (MSLS) to measure nursing students' learning motivation at the nursing faculty of Alexandria University, Egypt found that discussions served as an active teaching strategy that enhanced student involvement throughout learning progress (Ibrahim, 2016). Similarly, research done at Kasturba Gandhi Nursing College determined how panel discussions impact subject knowledge and participant involvement when teaching about Dengue and Malaria to second-year nursing students (Angelline et al., 2015). It was found that panel discussions improved the knowledge and students' participation during learning (Angelline et al., 2015). Furthermore, research investigation at a Malaysian university

studied various discussion teaching approach components to understand both its effectiveness on student language and academic development and its identified constraints. Discussions were found to enhance student involvement among students in educational settings (Abdulbaki et al., 2018).

2.2.1.2.4 Critical thinking

A research experiment applied a pseudo experimental design to analyse the following: (1) critical thinking differences between debate and discussion methods and (2) critical thinking performance of students with divergent versus convergent learning styles and (3) the relationship between learning styles and methods on critical thinking ability. Results proved that students who take classes through debate method and discussion method display equivalent critical thinking skills (Fuad, 2020). Tests indicated that educational approaches based on convergent learning styles help students develop higher critical thinking abilities than students who take divergent learning styles. Critical thinking skills also display interaction effects regarding learning methods and learning styles (Fuad, 2020).

2.2.1.3 Peer assisted learning

The teaching method of peer assisted clinical learning enables students to learn from others of an equal training level for example through analysing clinical cases (Ramachandran et al., 2024). Through Peer Assisted Learning (PAL) students obtain new knowledge coupled with skills development because of their active peer support (Amer et al., 2021). There are several learning experiences that students gain when peer assistance methods are implemented.

2.2.1.3.1 Knowledge

Research based on systematic meta-analysis established PAL as an essential educational method for medical education through quantitative evaluation. The study indicated that students may gain better learning experiences through PAL strategy inclusion (Abdalla, 2020). Similarly, results from a meta-analysis examining PAL impact on clinical knowledge and skills acquisition among medical students established that peer teaching delivers superior learning results than passive teacher instruction (Zhang & Maconochie, 2022). Furthermore, research conducted by Zakaria (2022) in a systematic review confirmed that PAL enhances medical student knowledge and produces moderate improvements in their academic achievements.

In addition, a case control trial examining middle to long term educational method effects of combining PAL with different educational approaches, thus, simulation and lecture methods found that peer learning assists with improved medical students' clinical knowledge when lessons are delivered through consolidation of the teaching strategies (Murakami et al. 2023). Medical students in Malaysia involved in a cross-sectional study also responded positively to peer assisted learning along with integrated clinical sessions because they connected fundamental and clinical scientific concepts (Ramachandran et al., 2024). Furthermore, another research study, qualitative in nature investigated the benefits and drawbacks of PAL as well as identified key elements contributing to its effectiveness in dental undergraduate education. The research demonstrated that PAL generated enhanced learning experiences which brought value to students and teaching faculty members (Varghese & Zijlstra-Shaw, 2020).

However, a randomised controlled study with the goal of understanding knowledge acquisition through virtual chest X-ray (CXR) interpretation assessed the effectiveness between PAL and Expert Assisted Learning (EAL) (Alsulmi et al., 2022). The research results demonstrated no meaningful variations across the PAL and EAL participant groups.

2.2.1.3.2 Communication

A study review revealed that PAL programs produced positive effects on peer mentors in medical faculty for both their academic performance and communication abilities (Zoraya, 2021). Similarly, research investigation was carried out in India to explore peer assisted learning's function in medical education. Medical students regarded peer assisted learning as an important opportunity to acquire educational experience through teaching practice. The interactive teaching approach helped students to develop stronger communication skills as well as teaching abilities (Garkal et al., 2019).

2.2.1.3.3 Satisfaction with the method

An analysis focused on determining how peer instruction affects clinical research abilities in Saudi Arabian settings revealed that students expressed favourable opinions about peer assisted learning because more than 90% of them chose it over traditional teaching methods (Jawhari et al., 2021). Similarly, another research conducted to develop case-based PAL sessions demonstrated that students considered simulations experienced during PAL better than

traditional simulations for learning (Jauregui et al., 2017). The study indicated that brief student-assisted low-fidelity simulation case methods required minimal resources and costs while remaining time-efficient (Jauregui et al., 2017). Further, research by Lee and Kim (2020) South Korea to build an education program based on peer assisted learning (PAL) for implementation within core nursing skills instruction and evaluated its impact upon three main outcomes including self-efficacy and satisfaction and confidence demonstrated that scores linked to the intervention revealed higher statistical significance when the peer assisted learning method formed part of an educational program within the treatment combination compared to the scores from the control combination based on traditional educational methods. Through self-efficacy, nursing students developed assurance that they could accomplish their duties and maintain a drive to learn (Lee & Kim, 2020). In addition, a systematic review combined available research evidence about PAL effectiveness in health professional education to establish broader findings demonstrated that PAL usage presented obstacles but the technique remains highly useful for educational purposes especially in health sciences as it can enable students to academically benefit in their health professional education curriculum (Feng et al., 2024).

2.2.2 CONCEPTUAL KNOWLEDGE

2.2.2.1 Mind mapping

Educational experts use a mind map as a methodology to divide extensive information amounts into smaller understandable sections. The trainer uses these minor sub concepts to establish connections which enable students to completely absorb the knowledge (Mohammed et al., 2022). The mind map operates as a strong imagery method which enables users to develop better learning alongside better cognitive organization. According to Mohammed et al. (2022), users of mind maps can understand challenging concepts through this tool as a self-learning device. These are the ways in which concept maps affect clinical practice and teaching along with learning:

2.2.2.1.1 Knowledge/skill

Researchers performed quasi-experimental research in Egypt to evaluate how mind mapping influenced nursing practice especially maternal satisfaction in labour management. According to the study findings, mind maps helped maternity nurses to improve their care management skills while providing patient care, such that women treated by nurses who received mind mapping

training experienced satisfaction (Ashour et al., 2023). Similarly, exploratory descriptive research by Jayanthi et al. (2023) examining how nursing students perceived mind mapping as an instructional learning method, established that nursing students found mind mapping beneficial while also determining that it helped improve their education. Furthermore, descriptive correlational design study, evaluated nursing students regarding their understanding of mind maps and their perception about mind maps and their relationship with teaching effectiveness. Research results showed that nursing students were satisfied with mind map knowledge delivery and teaching effectiveness thereby graded the method as beneficial to their learning (Mustafa et al., 2022). A study was also conducted to determine whether mind map use improved performance among nurses regarding infection control practices within surgical departments across Egypt. The research findings demonstrate that mind mapping techniques enhanced the knowledge and clinical practices of medical surgical nurses (Mohammed et al., 2022). Similarly, an investigation explored the effect of mind mapping strategies on infection control performances among paediatric nurses operating in neonatal intensive care units. The implementation of mind mapping strategy demonstrated positive results on how paediatric nurses performed infection control functions in neonatal intensive care units (Ayed et al., 2022).

Furthermore, a study on nursing students in the first year of their bachelor nursing program who were involved in mind mapping training showed that they produced better post-test results than their peers who received traditional training (Kaddoura et al., 2016). The effectiveness of using concept mapping as a teaching method for nursing students also received evaluation in an Iranian study through a quasi-experimental crossover design. The research data demonstrated mind mapping method effectiveness exceeded traditional teaching methods because post assessment scores from the mind mapping intervention were superior to scores from the other methods. (Jaafarpour et al., 2016). Furthermore, a research investigation evaluated the effectiveness of mind mapping learning technique (MMLT) for nursing student educational gains. The research study results demonstrated that mind mapping learning showed excellent acceptance from nursing students along with improved effective learning compared to typical educational approaches (Atia, 2017). In addition, quasi-experimental research evaluated the knowledge retention in students following the use of mind mapping and traditional approaches among Iranian nursing students (Zadeh et al., 2015). The initial assessment scores of the research groups remained unchanged between the methods. However, the post-test scores obtained by students in

the mind mapping group proved significantly higher compared to those in the control group (Zadeh et al., 2015).

2.2.2.1.2 Knowledge retention

Research examined mind mapping as a learning methodology for nursing education as it sought to replace traditional instructional methods to boost knowledge retention and critical thinking abilities. The research indicated that mind mapping leads to better knowledge retention than traditional learning methods (Jabade & Ndaf, 2024). Similarly, another study with a focus on the impact of teaching methods particularly mind mapping learning techniques on undergraduate nursing student performance found that students found success in their subjects through mind mapping as an educational approach as it addressed their memory retention problems and forgetfulness (Elsayed et al., 2022).

2.2.2.1.3 Critical thinking

A quasi-experimental research method examined how mind mapping influenced nursing students' cognitive achievements and their critical thinking abilities. The test results indicated that students who participated in mind mapping achieved higher satisfaction ratings and better cognitive achievement scores than students in the control group (El-Sayed et al., 2023). Similarly, another research conducted in the United States also revealed that students benefit from mind mapping because it strengthened their critical thinking competencies in addition to improving their knowledge and practice levels (Bixler et al., 2015).

Furthermore, another research explored how the mind mapping technique affected sensitive critical nursing students' abilities through pre/post-test measurements in a quasi-experimental design. Mind mapping instruction led to nursing students achieving better critical thinking results and increased knowledge than during their baseline assessment. (Elasrag & Elsabagh, 2020). In addition, researchers examined how mind mapping served as a teaching instrument and affected clinical critical thinking competencies among nursing students. Research results showed that mind mapping creates favourable conditions for clinical nursing students to develop their critical thinking skills (Wu & Wu, 2019).

2.2.2.1.4 Combining mind mapping with other methods

Gao et al. (2022) conducted a study to evaluate the effects of using the problem-based learning teaching model with mind mapping implementation for nursing instruction in Chinese schools. Data demonstrated that problem-based learning strategies with mind mapping produce successful student education because they enhance self-learning skills which enables students to understand theoretical and practical information.

Similarly, Ibrahim et al. (2024) in randomised experimental research analysed whether mind mapping integration with flipped approaches enhances nursing student learning outcomes. The research's findings indicated that most students attained better cognitive performance and self-directed learning skills through the combination of flipped selection and collaborative mind mapping than through traditional blended techniques.

2.2.2.2 Concept mapping

Concept Mapping (MC) is an active teaching method with a diagrammatic representation of topic content in the form of linked graphic presentations whereby students are expected to form connections and relationships between new concepts and previous illustrations (Kaddoura et al., 2016; Aslami et al., 2020). It can be used to plan and create nursing care through a diagrammatic representation of patient problems and nursing interventions. Concept mapping affects learning in various ways.

2.2.2.2.1 Clinical judgement

Research study examined how Baccalaureate junior nursing students perceived concept mapping effects on their clinical judgment abilities in United States nursing curricula. It was found that concept maps function as an educational tool that builds clinical judgment capabilities and teaches self-directed learning to nursing students (Kaddoura et al., 2016). Furthermore, concept mapping has demonstrated to be probably one of the appropriate tools which nursing students can employ to enhance their clinical decision-making competence and independent learning abilities (Rababah & Al-Hammouri, 2023).

2.2.2.2.2 Critical thinking

In a study investigating how the implementation of concept mapping affects critical thinking motivation among nursing students, results showed that the students experienced increased

motivation for critical thinking after using concept mapping (Dirgar et al., 2024). Furthermore, researchers performed a quasi-experimental investigation to assess concept mapping methods' impacts on nursing students' critical thinking development together with their independent knowledge acquisition. The data revealed positive changes in both nursing student critical thinking skills and their ability to acquire independent knowledge (Abdallah et al., 2023). In another study, implementation of concept mapping as an intervention was evaluated through a quasi-experimental design whereby critical thinking abilities among medical students in Iran was scrutinised. The research study used random distribution to position lecture-based participants in the control group whilst the others joined the concept mapping intervention group. The study results showed that concept mapping instruction created measurable improvements for medical students in critical thinking abilities that exceeded the mental growth of students compared to those taught by tradition teaching method (Aslami et al., 2020). In addition, a quasi-experimental study to determine how concept mapping affects critical thinking abilities among Jordanian nursing students was done. The study discovered that student performance in critical thinking reached higher levels within the group that combined mapping activities with their course delivery compared to students who received traditional lectures only (Khrais & Saleh, 2020). Accordingly, research involved a systematic review to enhance understanding about concept mapping effectiveness for undergraduate medical education through an assessment of present knowledge. The study determined that concept maps serve as instructional resources that assist medical students to create effective critical thinking abilities (Fonseca et al., 2020).

2.2.2.2.3 Knowledge

A quasi-experimental study aimed at assessing concept mapping as a teaching method on the academic success of nursing students indicated a positive effect of concept mapping on students' academic achievement (Jaafarpour et al., 2016). A qualitative descriptive study in Namibia investigated nursing student's perception and experience of using concept mapping as a learning tool in a human physiology course. (Nuuyoma & Fillipus 2020). Study results showed student contentment with concept mapping as a learning tool in the human physiology course since it augmented learning. Unlike the study described above, a qualitative study to explore and describe nursing students' experiences in the use of concept maps as a learning method in human anatomy and physiology was done. It was revealed that both positive and negative experiences by nursing students were encountered when using concept maps (Ashipala et al., 2020).

2.2.3 PROCEDURAL KNOWLEDGE

2.2.3.1 Demonstrations

Demonstration is a teaching method that shows learners how to perform psychomotor skills and/or why things occur (Veeresh, 2024). Billings and Halstead (2011) noted that showing a process often aids in retention. Demonstrations can influence learning in different ways.

2.2.3.1.1 Knowledge and skill

The effectiveness of live demonstration on nursing students' knowledge in surgical management of inguinal hernia was reviewed in a study. The pretest knowledge of the nursing students regarding surgical management of inguinal hernia repair were found to be insufficient but after live demonstration, the knowledge improved which indicated that live demonstrations were a good teaching learning activity (Veeresh, 2024). Similarly in Iran researchers compared the association of role play simulation with demonstration on strengthening of the skill of paediatric peripheral venous catheter insertion in nursing students. It was found out in the study that both roleplay simulation and demonstration significantly enhanced paediatric Peripheral Venous Catheter insertion skill among nursing students. (Valizadeh et al., 2021).

However, there was a study done to evaluate the effect of case-based learning versus demonstration and re-demonstration on nursing student's performance and critical thinking. According to Ali and Elhadary (2019), the results of the study revealed that case-based learning method improve students' clinical performance above the control group (demonstration).

2.3.3.1.2 Modern demonstrations versus tradition demonstrations

Multiple studies have been conducted to investigate the effectiveness of tradition demonstration techniques against modern demonstration approaches. Researchers investigated how student nurses learn clinical competencies by using demonstration training alongside video display and virtual social space atmosphere. Research data revealed that participants using virtual social networks developed superior practical abilities when compared to both video display and demonstration groups. Virtual social network also proved to be a cost-effective method (Ghahfarokh, 2022). Similarly, a research study evaluating the efficiency of an indigenous procedural video as an educational intervention compared to the traditional demonstration

method in enhancing nursing students' knowledge, performance, retention skills and motivation levels in Nigeria indicated that intervention involving the indigenous procedural video attested a significant augmentation in students' knowledge, performance, retention skills and motivation levels compared to the traditional demonstration method (Oloruntola & Ishola, 2024). Another study investigated how students would respond to a model demonstration presented during debriefing sessions for simulated learning experience and their assessment of clinical judgment and satisfaction with learning and self-confidence levels. The study participants completed a simulation and received either standard structured debriefing or standard structured debriefing which included a pre-recorded model demonstration of the simulation scenario. The study indicated that using model demonstrations during debriefing sessions effectively developed clinical judgment (Weaver, 2014). Similarly, researchers investigated the differences between traditional physiology laboratory demonstrations and video demonstrations of the same laboratory work through their experimental study. Education research demonstrated that video presentations of practical work for laboratory education provide instructors a space to monitor their teaching methods while delivering superior student-centered instruction than traditional methods (Laxman & Santosh, 2018). In addition, a study done to assess for the best method to use to teach the sterile surgical technique, either video education or skill demonstration showed that video is better than tradition skill demonstration in providing medical students with information on sterile surgical technique (Pilienci et al., 2017).

Contrary to the above studies, another research evaluated the learning capacity of nursing students regarding oral medication administration guidelines by using two training methods: video-based instruction and traditional classroom demonstrations. The study assessed student preferences toward educational approaches. Research data confirmed that lecture-demonstration as well as video demonstration serve equally well to instruct oral medication administration (Sugathapala & Chandrika, 2021). Similarly, another research study done through videos presented on smartphones evaluated how these videos fostered nursing students' skill competence and confidence level. According to Chuang et al. (2018) self-confidence exhibited no change between the participants who downloaded the skill demonstration video and the comparison group that discounted the video.

2.2.3.1.3 Critical thinking and reasoning

Pingue- Raguini (2020) in a research examining satisfaction levels of nursing students with skill demonstrations specifically related to debriefing and reflection as well as clinical reasoning and clinical learning revealed that nursing students experienced satisfaction regarding clinical reasoning along with clinical learning obtained from skills demonstration. Similarly, a quasi-experimental design research study assessed how simulation-based problem learning and demonstration-based approaches influenced student self-confidence and learner satisfaction and critical thinking when teaching to nursing students. The research utilised a questionnaire to gain data during both pretest and post-test. A self-reported questionnaire assessed the students' self-confidence together with their learner satisfaction and critical thinking. The research demonstrated that simulation problem-based learning delivers better outcomes for self-confidence and learner satisfaction and critical thinking than traditional demonstrations when teaching in nursing situations (Lee & Son, 2021).

2.2.4 METACOGNITIVE KNOWLEDGE

2.2.4.1 Question and answer

Questioning is defined as instructional prompts which convey to the students the content elements to be learned as well as directions on what ought to be done (Astrid et al., 2019). The advantages of questioning strategies include the ability to examine ideas, facts, information, knowledge, experience as well as promoting communication (Astrid et al., 2019; Ma 2008 as cited in Ndun, 2015).

Loefgren and Anderzén-carlsson, (2020) found that learning takes place in clinical handover due to sharing of knowledge and experience through asking questions. Similarly, a participant observation design study, exploring the conditions of oral handovers between shifts in a hospital setting, and the impact that they have on patient safety and quality of care was performed. The study noted that oral handovers give students the chance to ask questions and be part of professional discussion thus promoting learning (Giske et al., 2018). Additionally, questioning during nursing handovers in specialty settings was also the topic of study. An ethnographic study concluded that questions during nursing handovers help solve questions as well as aid in teaching and learning, thereby maintaining patient's safety (Rixon et al., 2017).

2.2.4.1.1 Critical thinking

Developing critical thinking competence represents a fundamental skill which requires training in every student. Critical decision-making/reasoning requires students to evaluate situations while they communicate and participate in decision-making processes. Research indicates that the Socratic question technique remains efficient for teaching critical thinking skills to students (Ho, 2023; Badil et al., 2023). A research investigation confirmed that Socratic inquiry serves as a tool for critical thinking advancement in nursing education which both classroom and clinical spaces can utilize to develop problem-solving solutions through critical thinking abilities (Makhene, 2019). According to Kusmaryani (2020) and Sahamid (2016) the proper process of Socratic questioning through proper inquiry questions leads to better critical thinking stimulation. Furthermore, a qualitative case study investigated students' encounters with Socratic questioning and critical thinking abilities at the work integrated learning phase of acupuncture at a South African educational institution. The research results showed that Socratic questioning enhances critical thinking abilities of students while they learn through work integrated experiences (Hu, 2023).

In addition, the influence of questioning as a problem-based teaching/learning strategy on clinical reasoning in undergraduate nursing students underwent quantitative comparative study assessment. Student participants experienced Lasater's clinical judgment assessment before and after completing simulation exercises with questioning according to the rubric. The analysis showed how questioning aids pre-licensure nursing students to improve clinical reasoning. This was shown through enhanced scores on the Lasater clinical judgment rubric (LCJR) after the intervention (Brown 2021). Similarly, a quasi-experimental study compared problem-based learning strategy to question-answer strategy for environmental health students' critical thinking. Students underwent critical thinking attitude assessments before and after receiving an intervention by the use of the California critical thinking disposition inventory (CCTDI). The research demonstrated that both question-answer teaching methods and problem-based instruction developed critical thinking abilities among students (Salehi et al., 2015).

2.2.4.1.2 Questioning technique

The learning process requires questioning according to Socratic principles (Hu, 2023). Qualitative research investigated teacher opinions and implementation barriers associated with

Socratic Method (Dalim et al., 2022). Research showed that the Socratic Method received generally positive evaluations from teaching professionals. The majority of survey respondents demonstrated shortcomings when it came to content knowledge as well as understanding questioning strategies and managing class interaction and deciding suitable topics and timeframes (Dalim et al., 2022).

Another study focused on describing clinical teachers' question types, levels, and quantity to investigate student experiences with teachers' questions (Cook et al., 2019). Data from the study showed that teachers preferred asking low level questions over high level questions. Similarly, a descriptive online survey confirmed that clinical facilitators who support undergraduate nursing students find problems with questioning high order questions as evidenced by generally knowledge questions from the cognitive domain being utilised during assessments (Phillips et al., 2017). Furthermore, research was conducted to investigate how teachers in public sector universities used their questioning practices (Bibi et al., 2020). Analysis, synthesis and evaluation questions formed only a small percentage of the questions that teachers asked in their classrooms while knowledge and comprehension questions made up the majority of their instructional questions. It was further noted that teaching and learning processes heavily relied on proper question methods used (Bibi et al., 2020). Tofade et al. (2013) investigated how well teachers' classroom questioning methods are implemented by teachers and their outcomes. Research outcomes revealed that creating suitable questions for learners at their respective skill level remains a difficult task. Further research findings established that student motivation and learning through question-and-answer strategy increases through questioning skills which combine attention techniques like changes in voice delivery, controlled questioning duration and appropriate question distribution according to different student academic levels (Shanmuggavule et al., 2020).

2.2.4.2 Problem based learning method

This teaching method enables students to comprehend their own learning process through use of scientific methodologies in solving fresh challenging and complicated problems (Caliskan, 2018; Sharma, 2017). This approach therefore seeks to help students gain critical thinking abilities as well as problem solving expertise and research experience. Several research findings have demonstrated that problem-based learning surpasses traditional lecture methods in producing

superior outcomes across many disciplines, for example in learning, team work and problem-solving abilities, factors of analysis, moral development, knowledge acquisition together with application of skills and communication capabilities (Liu et al., 2019; Khatiban et al., 2019).

2.2.4.2.1 Critical thinking

Researchers performed a study to evaluate how problem-solving in inter-professional education affected critical thinking skills and student satisfaction with their learning experiences among nursing and midwifery students. Critical thinking abilities of students demonstrated improvement throughout the study especially regarding analysis and inference abilities and deductive reasoning while students-maintained satisfaction with their educational experiences (Aein et al., 2020). Similarly, another study examined how a Flipped Classroom (FC) approach that incorporated small private online course (SPOC) and Problem-Based Learning (PBL) techniques worked in medical nursing education. Teaching mode recognition evaluation together with critical thinking measurement and student academic achievement results determined the teaching effect. Findings revealed that a combination of FC with SPOC and PBL method can promote students' clinical and critical thinking which in turn advanced students' academic performance and they were fulfilled with the learning method (Chi et al., 2022). In addition, another study found that the application of problem based psycho education programs led to improved problem-solving skills and university adaptation among first-year nursing students (Yuksel & Oz, 2018). Therefore, the study demonstrated that problem-based learning offers potential application for student counselling and mentorship services.

2.2.4.2.2 Readiness to learn

An investigation sought to determine if facilitation in problem-based instruction methods affect undergraduate nursing student readiness for self-directed learning (Hussein, 2021). Student readiness for self-directed learning in nursing education improved when nursing educators used facilitation approaches within their problem-based learning classes. Similarly, quasi-experimental research analysed how problem-based learning (PBL) impacted self-directed learning readiness (SDLR) of Nigerian nursing students enrolled in research methodology classes. The results demonstrated that the PBL group maintained higher self-directed learning readiness compared to the Traditional Teaching Methods (TTM) group, showing PBL's positive benefits (Ma et al., 2023). However, contrary to the findings, Choi et al. (2014) noted that first-

year nursing student self-directed learning was unaffected by the use of either problem-based learning or lecture method.

2.2.4.2.3 Competence

Research explored team-oriented problem-based learning with emergency care simulation to determine how this integrated method would enhance core nursing competencies and teaching abilities among students (Huang & Wang, 2020). The research showed that nursing students develop core competencies better through a teaching plan which integrates curriculum with team based and problem-based learning employing scenario simulations rather than traditional lecture methods (Huang & Wang, 2020). Similarly, a research study investigated how Problem Based Learning (PBL) and Simulation Based Learning (SBL) affect undergraduate nursing students' performance outcomes in surgical nursing education. The study results showed that both PBL and SBL enhanced students' core competence, satisfaction and confidence (Ma et al., 2024).

2.2.4.2.4 Communication

A study investigated enhancement of nursing student communication skills following an application of problem-based methodology in teaching and learning paediatrics course. The study findings demonstrated that problem-based methodology fosters the development of interpersonal communication skills among students than conventional teaching and learning (COTL) (Salari 2021). Similarly, a study assessed student nurses' communication abilities in maintaining patient safety as a result of problem-based education on safety. The findings showed that student nurses who were taught using problem-based method were more likely to provide safe care to patients due to their ability to communicate effectively about patient care than those taught using other teaching methods (Jamshidi et al., 2021).

2.2.4.3 Case based learning method

It is an approach whereby cases that mimic student's future clinical environment are presented in the actual practice of students as it allows them to become ready for clinical practice by replicating real practice conditions (Shohani, 2023; Sood, 2021). Multiple international research investigations confirm the benefits of case-based learning which promotes the connection between theory and practice (Sood, 2021; Challa, 2021). Studies worldwide validate that authentic case engagement allows students to learn theoretical concepts and practical skills

thereby promoting their educational development (Procaccini et al., 2016). Research encompassing global literature assessment about the current usage of Case Based Learning (CBL) was conducted in United States of America. Results showed that CBL functions as a tool to enhance both theoretical application in medical practice and overall knowledge growth in the medical field. (McLean, 2016). However, reports indicate that Case based learning requires an extended amount of time during implementation (Sood, 2021; Challa, 2021).

Instructors require diligence when choosing education cases, in order to choose those appropriate to the chosen complexity level. Furthermore, caring case development should be done using realistic situations that link to education while also being rational and meaningful and challenging to students (McCabe et al., 2009). A research study conducted at a tertiary children's hospital highlighted that case selection acts as an essential deciding factor in patient handover learning within groups. Research findings further recommended that an interesting case should be utilised (Duff et al., 2023).

2.2.4.3.1 Problem solving and critical thinking

A study in India was conducted in which case-based learning was introduced into second year medical students' pharmacology education. It assessed student performance and gained students and teachers feedback regarding case-based teaching approach. According to the research results many students stated that Case based learning provides helpful tools for clinical problem solving (Sood, 2021). Similarly quasi-experimental research evaluated how case-based learning (CBL) and multi-episode case studies and lecture-based learning (LBL) influenced undergraduate nursing students perceived problem-solving ability and learning motivation in their emergency care course. Gholami et al. (2021) established that nursing students obtain enhanced problem-solving abilities and learning motivation through the implementation of case-based learning (CBL) methods with multi-episode cases. In addition, researchers conducted a global testing procedure that employed the California critical thinking skills test (CCTST) to measure critical thinking abilities. Under the case-based learning approach students who collaborated with peers to reach objectives resulted in superior critical thinking test performance as compared to traditional lecturing methods (Kaddoura, 2011).

2.2.4.3.2 Knowledge and communication skills

Researchers conducted a study to assess the effectiveness and efficiency of problem-based learning and case-based learning mixed teaching methods in thyroid surgery as well as gathering observations from students about their learning process satisfaction. Students who received lessons through problem-based learning along with case-based learning teaching methods achieved better learning outcomes and developed enhanced clinical capabilities for thyroid disease knowledge. The students showed improved results in their pre-class work as well as their understanding abilities and their interactions with teachers and development of self-learning capabilities and teamwork abilities and knowledge assimilation (Zhao et al., 2020).

Similarly, descriptive qualitative research in the Middle East examined the success of case study analysis through teacher-led facilitation in undergraduate nursing programs. Research results indicated that case study promotes knowledge acquisition and it enhances the development of communication skills and teamwork abilities (Seshan et al., 2021). Furthermore, research based on a quasi-experimental design established that case study teaching methods positively impacted nursing students' perceptions on teaching effectiveness evaluations evidenced by positive results. The research showed that case-based learning helps nursing students develop their social competencies along with communication abilities (Abdelkader & Aimefarfesh, 2020).

A number of studies have been done across Africa to investigate and understand how case-based study increase knowledge in students during their course work. The findings indicate that case studies increase participants reading comprehension, retention of knowledge and student motivation to learn (Ghafourifard et al., 2013; Majeed, 2013).

2.2.4.3.3 Self-confidence and satisfaction

Research at St George's, University of London (SGUL) within the United Kingdom (UK) studied how the reformed written cases enabled students to build positive attitudes. Student performance with the modified case studies demonstrated positive results and enabled student's smooth transition to clinical roles and settings (Al-bedaery, 2024). Observational descriptive research took place at the Nursing and Midwifery school in Illam, Iran. The research sought to figure out the rate at which nursing students placed case-based learning in relation to lecture-based learning for their education experience. CBL was found to produce higher satisfaction and

increased self-confidence within students than traditional lectures specifically for specialized subjects (Shohani, 2023).

Similarly, research investigated how use of both Case Based Teaching (CBT) and Flipped Classroom (FC) affected learning and satisfaction for students engaged in department of general surgery's internship program at the Isfahan University of medical sciences in Iran. The research results demonstrated that teaching and learning quality reached higher standards with both CBT and flipped classroom strategies. Students found Case Based Teaching and Flipped Classroom more satisfactory than traditional lecture format (Kolahdouzan et al., 2020). Furthermore, research examined facilitator and student conclusions about Team Based Learning (TBL) and Case Based Learning (CBL) approaches through experience-based learning (ExBL) theoretical framework, in medical education programs. Findings indicated that medical curriculum can achieve improved delivery through optimal implementation of team-based learning (TBL) with case-based learning (CBL). The research further identified the ability to use TBL in the initial stages of the program that teaches basic scientific material in medicine while CBL becomes active when students advance through the clinical academic ladder (Burgess, 2021).

2.2.4.4 Inter-professional education (ipe)

Inter-professional education (IPE) is a practical pedagogical approach that enhances higher education learning thus developing better student competencies (Hu et al., 2020). Inter-professional education according to World Health Organisation (as cited in Green & Johnson, 2015) represents educational learning activities where students from at least two different professions study together for collaborative healthcare delivery enhancement. Learning through inter-professional education takes place across multiple settings such as big-group lectures and small group tutorials, as well as clinical settings that include the exchange of patient information (Diggele et al., 2020). The main agenda of inter-professional education is to enable different categories of healthcare students to perform to the highest potential of their training and education through collaborative skill-sharing that develops effective inter-professional relationships (Sullivan et al., 2015).

The educational approach of inter-professional education provides students with direct connections to actual healthcare practices. The input of different professional faculty members into program development through this approach supports collaboration and team dynamics

which enhances patient safety thereby resulting in better outcomes (Chitsulo, 2021; Buller et al, 2021). Quasi-experimental research investigated simulation-based inter-professional educational results together with video-enhanced interactive discussions. The research study discovered that simulation based inter-professional education together with video- enhanced interactive discussion proved successful in enhancing the performance of medical and nursing students for their designated tasks and critical tasks as well as team behaviour performance (Wu, 2022). Similarly, researchers performed an integrative literature review which evaluated the role of inter-professional education in nursing education regarding developing competent undergraduate nursing students. Research evidence demonstrated that nursing students develop both communication excellence and secure high-quality patient outcomes when participating in IPE and becoming more proficient as they accept their professional identity and responsibilities (Zenani et al., 2023).

An experimental study was conducted in Korea to examine how inter-professional education (IPE) impacts self-efficacy and attitude between uni-professional medical students (UP group) and inter-professional (IP group) comprising medical students and nursing students. Research results established equal outcomes between the examined groups. Self-efficacy and attitude improved to the same degree in individuals from both UP-group and IP-group (Park & Park, 2021). Another study used mixed methods to examine how early undergraduate nursing students studying Baccalaureate of Science in Nursing degrees along with those enrolled in Doctorate of Physical Therapy perceived their immersive inter-professional education experience. Results showed that students gained better knowledge about the other profession and they found inter-professional learning valuable so they wanted more IPE simulation learning experiences (Koplow et al., 2020). Similarly, a review conducted systematic assessments of inter-professional educational effectiveness for nursing and medical professionals as well as students regarding inter-professional educational outcomes which included attitudes, perceptions, skills, knowledge, behaviours along with organisational and patient outcomes. All of the inter-professional educational outcomes showed enhancements based on the study data. Inter-professional education success resulted from using high-experience simulations with various case studies and standardized communication resources together with didactic and hands-on teaching approaches framework structures along with debriefing sessions and educator training (Shuyi et al., 2023).

Furthermore, a systematic narrative review analysed different approaches for inter-professional education (IPE). It was noted that undergraduate health education settings frequently use simulation as an educational tool for IPE educators who aim to modify inter-professional learning attitudes of their participants. Roleplay along with group discussions and case studies regularly appeared in educational programs to enhance communication and collaboration abilities. Research findings indicated that there was no dominant teaching method for enhancing inter-professional learning results among health discipline students (Kong et al., 2025).

Research using qualitative methods with descriptive characteristics investigated how South Korean undergraduate nursing and medical students built an inter-professional simulation-based education (IPSE) program and what modifications occurred in their professional perspectives toward one another because of this training. Findings showed that nursing and medical students began to consider each other equal after their participation in IPSE. The practical experiences established better inter-professional collaboration between nursing and medical students (Lee et al., 2020).

Reliable survey data was gathered from students of nursing and medicine who engaged in a simulation-based collaborative education program in South Korea. The study was conducted to validate inter-professional education impact by examining student attitudes before and after simulation based inter-professional education as well as physician-nurse teamwork and perception and student-reported competency levels in inter-professional practice. The study results revealed that students acquired self-confidence skills and learned about essential inter-professional relationships between medical staff which generated positive views about inter-professional education. The survey further revealed that inter-professional education failed to modify healthcare students' beliefs about different healthcare groups' roles during team collaboration (Yu et al., 2020).

2.3 FACILITATORS TO NURSING STUDENTS LEARNING DURING CLINICAL HANDOVER

Clinical teaching basically involves three partakers; the teacher, the students and patients (Donan et al., 2019; Hassan et al., 2022). The effectiveness of clinical teaching and learning therefore is

influenced by the three, either individually or through the nature of interaction between them and the learning context (d'Entremont-Harris et al., 2021; Van Der Leeuw, 2016).

2.3.1 ADEQUATE PREPARATION

Phillips et al., (2009) stated that with adequate planning and preparation of the instructor, the learning experience for everyone involved is successful. According to Burgess and McGregor (2018) a systematic review carried out to help determine rational, design of content and evaluation of student peer teacher training skills programs in the health professions found that planning, structuring and linking practice in the clinical environment to curriculum and assessment aids in learning. A similar study called 'building strong teaching and learning strategies through teaching innovations and learners' creativity; a study of Vietnam universities' used a survey to explain the link between the lecturer and students. From the study findings, teachers can ascertain goals, subject objectives and teaching contents that are clear and based on students' needs, level and interest, which are all designed to build positivity in the teaching and learning process (Hang & Van, 2020). Other studies also mentioned that when the educators initiate the anticipated learning session and set clear goals with the learner, learning becomes easier (Buckley et al., 2020; Vy & Tien 2016). In addition, a study with an aim of assessing the effect of structured preparation and briefing prior to simulation on nursing students' learning outcomes concluded that structured preparation and briefing prior to simulation can impact positively on nursing students' self-confidence regarding problem solving, clinical judgment and clinical decision making (Kim et al., 2019). Correspondingly, another global study's results showed that teaching scripts development and reviewing of different abilities for any kind of teaching enhances teacher assurance (Rousseau et al., 2018).

Furthermore, the role of the teacher on online teaching readiness towards medical students' online learning perceptions, and learning outcomes was studied. Findings from the study showed that the teachers' ability to set the learning objectives and expected learning outcomes as well as determining students' readiness to learn are all key to positive learning (Sarfraz et al., 2022).

2.3.2 ROLE MODELLING

A teacher who is a role model for students is more likely to enhance learning (Billings & Halstead, 2009). A research investigation studied diploma nursing students who evaluated the

importance of effective clinical teaching behaviour in helping their educational development. The research showed that nursing competence, alongside clinical skill and judgment, together with being a good role model led to student learning (Mukan et al., 2020). In a similar vein, a research project was conducted to discover qualities and instructional strategies of excellent clinical educators for student nurse clinical training enhancement. It was noted that learning becomes more effective when teachers demonstrate organisational, professional and socialising skills as well as the ability to multitask (Niederriter et al., 2017). Furthermore, a research study offered an overview of basic clinical teaching guidance to both health professional students and new health professionals who take part in peer or near-peer educational programs. Research concluded that role modelling positively shapes student learning through its effect on healthcare student professional abilities and values together with their behavioural patterns (Burgess et al., 2020).

2.3.3 POSITIVE EMOTIONAL/PHYSICAL ENVIRONMENT

A welcoming and safe learning environment is essential for student learning. Several studies have proven this. A study was done to examine nursing students' perception of essential elements needed for strong teacher-student relationships which enhance resilience between students and teachers. According to the study findings, students require both physical elements such as ample space and proper illumination and ventilation as well as an emotionally supportive learning environment to achieve academic success (Froneman, 2016). Similarly, positive attitudes expressed through verbal and nonverbal communication was found to facilitate learning (Giske, 2018). In addition, a study aimed to find out the determinants of learning and the content learnt during a clinical handover in a tertiary children's hospital established that non-threatening clinical handover contexts support learner safety and enable free student participation (Duff, 2023). Furthermore, the findings indicated that proper seating plan during clinical handover also has the potential to facilitate communication (Duff, 2023). Another research study also concurs as it evaluated learning experiences during paediatric handover. The research further studied on the facilitating factors and hindrances to learning. The study finding highlighted that one of the facilitating factors was a U-shaped seating layout which enabled maximum information assessment and review thus promoting learning (Ooi et al., 2020). Furthermore, the

implementation of a circular seating arrangements according to Kalsoom (2020) provides an effective method to boost teaching operations by fostering mutual teacher-student interaction.

Research investigated university nursing and midwifery students' observation of faculty caring and uncaring behaviours that affect their educational experiences. The results showed that availability of lecturers to talk about students' personal problems helped students to be comforted from the stress that affect them and were then motivated to study more (Chipeta et al., 2021). Similarly, other studies also identified several attributes of a clinical teacher necessary for learning, which include; being genuine, spending time with the students, providing opportunities for the student to talk and being emotionally and physically available (Collier, 2018; Froneman 2016). Amarimuddin and Ruditaldris (2022) also noted that the best results from student nurse clinical learning experience happens in environments that establish respectful relations with trust and promote teamwork. Furthermore, research conducted on diploma nursing students to identify enabling behaviours of clinical teachers during clinical handover learning, identified respectful care combined with supportive techniques and personal motivational strategies and effective communication methods as essential for their clinical learning success (Mukan et al., 2020). In addition, being respectful to students, correcting mistakes without belittling and being supportive and understanding positively enhanced learning (Dahlke et al., 2012; Billings & Halstead, 2009). Research has also shown that careful consideration before uttering words to students by clinical teachers create positive effects on students during clinical interactions (Baraz, 2015). Research was done to find out the benefits of clinical handover communication between medical personnel (Bertrand et al., 2020). Results showed that effective communication during handover produced superior clinical performance when working in clinical teams (Bertrand et al., 2020). Another study simply concluded that students ought to be respected and helped during the learning process to ensure success implementation of an education programme (Valiee et al., 2016).

2.3.4 HELPING RELATIONSHIPS

Personal relationship between a student and an experienced clinical instructor facilitates teaching and learning (Hudson et al., 2015). A qualitative study noted that mutual student-teacher connections are necessary for academic progress as they help to boost students' positive self-image (Collier, 2018). However, it should be noted that the relations between student nurses and clinical teachers should have guiding principles to avoid misuse of the relation moments which

can be damaging to both parties (Collier, 2018). Positive relationships are nurturing, they enhance learning therefore teachers should thrive to promote supportive and collegial relationships (O'Mara et al., 2014). Moreover, numerous study findings also noted that constructive and, safe relationships with teachers and with peers facilitate learning (Xuan et al., 2019; Bernson- Leung & Urion, 2018).

Similarly. in a study to evaluate the residents' ability to recognise and reflect on education instants, it was found out that a community of friends provides a sense of easiness and security during learning such that it is easy for students to fully utilise education moments (Mordang et al., 2020). In addition, research studies show that an effective support system help to reduce anxiety, enhance feeling of belonging, boost self-confidence and esteem which fuel clinical learning (Mbakaya, 2020; Papastavour, 2010).

In addition, a study which explored the factors that impact clinical teaching and then propose the potential recommendations to overcome found that learning objectives are achieved easily when the kind of relationship the teacher has with students is good, this is because students are comfortable to interact and learn from a teacher who is approachable (Xuan et al., 2019). Similarly, a study was done to examine nursing students perception of essential elements needed for strong teacher-student relationships which enhance resilience between students and teachers. It was noted that collaboration relationships and effective interpersonal communication foster learning (Froneman, 2016).

Furthermore, a research project was conducted to discern qualities and instructional strategies of excellent clinical educators for student nurse clinical training enhancement. The findings identified trusting relationship as a component for effective learning. It was noted that the clinical teacher should be approachable, available, with clear expectations and willing to teach (Niederriter et al., 2017). In addition, research to evaluate learning environments among students was performed. Study results showed that regular educative meeting between the learner and the clinical teachers can facilitate learning thereby increasing the student satisfaction with learning. Bvumbwe et al., (2015) also accentuated that the supportive relationship is crucial for smooth transition in learning.

2.3.5 ACTIVE PARTICIPATION

Literature review on nursing students' involvement in both classroom and clinical site was conducted among students, in which it was indicated that they perceive active participation in the learning process as being important (Hudson et al., 2015). According to Dornan et al. (2019) and d'Entremont-Harris et al. (2021), learning and teaching is smoothened when a teacher supervises, offers an option for participation and conducts the learning and teaching session on the students' level. Furthermore, a research study in Indonesia was conducted on 30 midwifery students to evaluate the impact of clinical handover standard implementation for midwifery students as an effort to enhance safety attitudes in maternity services (Muchlis & Indriasih, 2018). The research found that student involvement in student handover significantly improved students' self-confidence, thereby promoting competency in students' clinical care and experiences (Muchlis & Indriasih., 2018).

However, research studies have revealed decreased confidence in students who have not participated or had the chance to learn about clinical handover. To describe a teaching intervention, a study used a pre-test/post-test interventional design and involved teaching students in United States of America hand off skills (Lee et al., 2016). The study discovered that when students did not have the chance to practice clinical handover during their clinical training then, clinical handover contents became inexplicable such that they become uncertain, confused and nervous thus becoming stressed during the clinical handover (Lee et al., 2016). Another global research that aimed at finding out how best to prepare new doctors for handover also found that junior doctors feel unprepared for handover as they described handover experience as very stressful (Cleland et al., 2009). In a descriptive study to understand the actual experience of handovers communication in the clinical practice for nursing students in South Korea, the experience of communication during clinical handovers showed that students felt uncomfortable and less confident with handovers (Yu & Kang, 2015). Furthermore, an Italian cross sectional research study which involved 27 universities targeting 95 three-year nursing programs with 9607 undergraduate nursing students was conducted. It was deduced that limiting participation of students in handover inhibit the development of communication skills and the professional socialization processes (Palese et al., 2019).

Participation of a clinical teacher is important. A study evaluated clinical handover practices, in which facilitators and barriers to effective evidence-based practices was analysed in order to provide solutions. It was noted that the presence and participation of senior nurses in clinical handovers made evidence-based nursing handover a consistent practice (Hada et al., 2019). Watson et al., 2014 also concur as it was noted that the representation of multidisciplinary team during clinical handovers helps in sharing vast information.

2.3.6 READINESS TO LEARN BY STUDENTS

A study was done to examine nursing students' perception of essential elements needed for strong teacher-student relationships which enhance resilience between students and teachers. The study results showed that some of the student's qualities that were judged to foster learning were versatility, being ready for the class, paying attention in class, and taking initiative (Froneman, 2016). Similarly, a study was done in Vietnam to define the relationships that exist between a teacher and the learner. The study results showed that students' activeness was often motivated by their purpose in life and career choice (Hang & Van 2020). Furthermore, the research results surmised that the learning inspirations of the majority of students were positive learning motivations that would aid in learning. Students with a serious study attitude prepared a favourable milieu of knowledge reception (Hang & Van 2020).

2.3.7 CONSTRUCTIVE EVALUATION AND FEEDBACK

A study was performed to determine what characteristics and teaching technique could be used or implemented in an attempt to improve the student nurse clinical experience (Niederriter et al., 2017). Findings indicated that use of coaching techniques like providing constructive criticism could assist with learning (Niederriter et al., 2017). Similarly, research was conducted on diploma nursing students to identify enabling behaviours of clinical teachers during clinical handover learning (Mukan et al., 2020). The study found evaluation as one of the facilitators of learning. Constructive evaluation was considered to be advantageous as it fostered students to become active in contributing, observing, and taking part in performing various activities. In addition, evaluation helped students and teachers to objectively isolate student's strength and limitations for effective learning (Mukan et al., 2020).

A study evaluated the challenges to nursing education in the clinical setting. Study findings showed that evaluation based on educational standards in the clinical setting is able to increase students' motivation and interest (Jasemi et al., 2018). The study adds that the mentioned requisites further result in the application of theoretical knowledge in practice leading to a more appropriate educational environment (Jasemi et al., 2018). In addition, research investigated the feedback currently provided by the clinical teachers to the dental students in various parts of Europe. Findings showed that giving constructive feedback to students and encouraging them to reflect raised their level of learning (Leung et al., 2021). A study was done to give health professional students and early career health professionals who are involved with peer and near peer teaching in the clinical setting an overview of the approaches and key tips to teaching in the clinical setting (Burgess et al., 2020). Results showed that feedback is critical in the learning process, because it helps connect the actual and desired performance (Burgess et al., 2020). Similarly, several studies reported that feedback enhances the self-confidence of the students as it emphasises good performance and improvement areas (Hardavella et al., 2017; Jahanpour et al. 2016; Burgess and Mellis, 2015).

2.3.8 EXPERTISE OF CLINICAL TEACHER

A study was performed to determine what characteristics and teaching technique could be used or implemented in an attempt to improve the student nurse clinical experience (Niederriter et al., 2017). Results showed that learning could be facilitated by a clinical teacher who is familiar with and who practices within the learning domain (Niederriter et al., 2017). Similarly, Hayajner (2011) found that students benefit with clinical teacher who has appropriate clinical skills, actively practices in the clinical setting and encourages students to watch for and utilise opportunities when in the practice area. Significantly students considered the teachers' ability to pose case appropriate question as the primary characteristic attributed as being an effective clinical teaching and also students held highly the teachers who were well conversant with training and practice in the hospital (Hayajner, 2011). As stated by Billings and Halsted (2009), an effective educator should be up to date about the clinical practice area, clinically competent, know how to teach, relate effectively to the students, and be enthusiastic about clinical teaching.

Research investigated university nursing and midwifery students' observation of faculty caring and uncaring behaviours that affect their educational experiences in Malawi. Findings showed

that appropriate demonstration of a skill by a clinical teacher to nursing students enhance confident and competence in nursing students (Chipeta et. al, 2021). Similarly, research was conducted on diploma nursing students to identify enabling behaviours of clinical teachers during clinical handover learning (Mukan et al., 2020). The study finding noted that the ability of the clinical teacher to demonstrate a skill to students promote learning. In addition, students found it important for a clinical teacher to communicate what is important in their learning and they also appreciated when they were supported by allowing independence in learning (Mukan et al., 2020).

Furthermore, the clinical teacher's scientific knowledge and the ability to properly share knowledge, skills and attitudes to students during clinical area improves learning (Billings & Halstead, 2009). A study aimed to find out the determinants of learning and the content learnt during a clinical handover in a tertiary children's hospital was conducted. The findings indicated that learning during clinical handover was enhanced through interactions in form of questions or discussions initiated by highly ranked officials like consultants. According to the study the 'expert' case presentations which are often focused, concise, relevance and shared by consultants during clinical handover motivated the learners (Duff, 2023).

2.3.9 PASSION OF THE CLINICAL TEACHER

When there is active involvement, close working with a motivated clinical teacher who always encourages and encourages learning and is always available to support learning, student nurses learn easily (Doyle et al., 2017).

A study was conducted on diploma nursing students to identify enabling behaviours of clinical teachers during clinical handover learning (Mukan et al., 2020). Findings showed that personal characteristics of a clinical teacher like self-confidence, being organized and having passion supported clinical practice learning (Mukan et al., 2020). Similarly, Amimaruddin and Ruditaldris, (2022) noted that clinical teachers who are motivated to teach students and are passionate about patient care aid in positive learning experiences in the clinical environment. In addition, in another study, clinical teachers' behaviour like showing interest in students by being attentive to student's questions and concerns was noted to have good teaching and learning outcomes (Parvan, 2018).

Furthermore, a study was undertaken on medical students who had recently completed a specific English language programme that had a particular focus on clinical placement. It was noted that despite the programmes' interest to ensure English proficiency in the clinical teachers, students considered the following attributes as of great importance to their learning experiences; dedication, interactivity, and desire to teach (Rashid et al., 2020).

2.4 BARRIERS TO NURSING STUDENT LEARNING DURING CLINICAL HANDOVER

Four clinical environment attributes that contributed to student learning are the physical space, psychosocial and interaction factors, organisation culture and teaching and learning components. (Flott & Linden, 2016).

2.4.1 THE PHYSICAL SPACE

The physical space includes the environment and resources that influence learning for example amenities, equipment, learning tools and standard procedures (Bisholt et al., 2014; Haraldseid et al., 2015).

2.4.1.1 Inadequate learning tools and standard procedures

Global findings have shown lack of standardised tools for use in clinical handover (Fealy et al., 2018). A study examining challenges of nursing students in the clinical environment in Ethiopia was done. Findings showed that shortage of materials and equipment deterred students from having effective learning (Berhe & Gebretensaye, 2021).

Similarly, Sub-Saharan Africa integrated review was conducted to find out barriers to effective nursing education in the Sub-Saharan Africa and development of a model to proposed solutions at local level (Bvumbwe & Mtshali, 2018). Results indicated that serious problems in nursing education are due to the deficiency of material resources (Bvumbwe & Mtshali, 2018). Correspondingly, another study investigated nursing and midwifery students' experiences with Malawi's clinical learning environment (Mbakaya et al., 2020). Findings showed that lack of human and material resources in health setting impedes student clinical learning and may consequently result in students feeling unsupported (Mbakaya et al., 2020). Furthermore, a study conducted in Namibia to evaluate barriers in clinical teaching affecting registered nurses in

undertaking clinical teaching surmised that lack of necessary apparatus and resources hindered effective clinical teaching (Hoebes & Ashipala, 2023).

Global research conducted to find out clinical handover practices in acute care services in Ireland, found that there was a lack of structured handover tools or protocols for interdepartmental transfers to support clinical handover, and hence, challenges in handover process (Fealy et al., 2018). Additionally, according to Lim and Pajarillo (2016), the proper handover communication for the student nurses and novice nurses is also difficult because there is no standard handover or definition of guidelines of the handover. Furthermore, Avallone, (2015) discovered that nursing clinical handover is also poorly performed by nursing students, when such students do not receive structured handover education (Avallone, 2015).

A study on factors impacting the effective clinical handover on critically ill patients among health care providers in intensive care units in western region of Kenya was carried out (Odhiambo, 2023). Findings showed that the non-availability of the integrated protocols impede standardization of the shift handover (Odhiambo, 2023). Furthermore, the study noted that due to unsuitable international handover formats, standard handover performance in all health settings proves to be futile (Odhiambo, 2023). Global findings too state that the majority of the clinical staff are unaware of the existence of a handover protocol in their institutions (Ryan, 2024). Another study was also undertaken to identify the clinical handover practices in acute care services. Results showed that members of staff were ignorant of the institution's formal organisation level policy on clinical handover (Giske, 2018).

A large number of students are not taught in classrooms on how to give a handover report however most students learn how to perform a handover through observations from colleagues in the clinical sites (Hanley–Gumbs, 2019).

A study evaluated prioritisation of patient in handover through improved communication, organisation and cultural practices of handover process (Chien et al., 2021). Research results showed that the patients' information flow when giving handover report was compromised due to lack of handover protocols which in turn resulted in students failing to effectively learn due to omission of the patient's information thus posing risks to continuity of care (Chien et al., 2021). Similalry, Joint (2017), also observed that handover process is supposed to be done systematically however other clinical environments lack seriousness such that clinical handover

process is not given priority and it is marked by inconsistency thereby putting patients at risk and rendering student learning during clinical handover unreliable (Joint, 2017).

Clinical teachers who do not follow protocols when performing procedures affect students in achieving their clinical competencies because students do not learn the ideal practices (Mbakaya, 2020). Failing to give comprehensive care to the patients or the use of shortcuts by clinical teachers cause confusion, stress, anxiety among students in the sense that they might not correlate the ideal nursing practices that are taught in the classroom with what they are practicing in the clinical area (Jamshidi, 2012). For instance, a study investigated nursing students' experiences of the clinical learning environments and the factors that affect the clinical learning process. Findings showed that many times, what is being taught at the nursing school is not what is experienced in the area of a practice, therefore nurse students become diffident to perform the practice (Arkan et al., 2018). In addition, the theory practice gap can cause students to fail to appreciate the content taught in class or read from books or other source thus the need to promptly address the issue (Bux, 2021).

2.4.1.2 Insufficient infrastructure and equipment for students and staff

Research evaluated student nurses' encounters with qualified nurses. Results found that physical space of hospitals affected learning negatively (Moghaddam et al., 2020). Similarly, a study conducted to assess nursing students' perception of the clinical environment within Vietnam discovered that there is not enough space for students within the clinic sites (Truong, 2015). Based on the study, the rooms were small and each student was given limited seats.

Furthermore, in a study conducted to understand the teacher led clinical practice from the side of the staff nurses it was noted that there is scrambling of physical space and resources like chairs between nurses and students especially because of the growing numbers of students (Neal, 2016).

2.4.2 PSYCHOSOCIAL AND INTERACTION FACTORS

Communication style between clinical staff and students, behaviours and the attitude of clinical staff and students are described as psychosocial and interaction factors that influence clinical learning.

2.4.2.1 Discrimination against students

A study to examine challenges of nursing students in the clinical environment in Ethiopia noted that discrimination between student nurses and students from other disciplines was a hindrance for learning (Berhe & Gebretensaye 2021). In addition, the study showed that nursing profession was undermined (Berhe & Gebretensaye 2021). Similarly, a study was undertaken to identify the student nurses' challenges in the clinical sites. Study findings, also indicate that the nursing students were less dignified than the medical students, who had to be offered seats by the nursing students while in the clinical area. Such a behaviour results in low self-esteem (Jamshidi et al., 2016). In another study, the nursing students did not have access to the dressing rooms as well as the rest room and the library, while access was granted to medical students (Mamaghani et al., 2018).

Furthermore, a study to investigate and explain the experiences of the undergraduate student nurses while they are on clinical practice in the healthcare facilities, in Boland and Overberg in the Western Cape, South Africa was able to demonstrate that student nurses were being discriminated against due to the college they were being trained (Fadana & Vember, 2021). Similarly, Engelbrecht et al. (2017) noted that students were supervised in clinical sites depending on their place of training and it was observed that staff were eager to help students being trained at their hospital nursing schools.

2.4.2.2 Ineffective communication

A research finding in Iran on facilitators and inhibitors in developing professional values in nursing students indicated a deficit in the knowledge and skills on communication in student nurses (Shafakhah et al, 2015). Gaps in communication during clinical handover arise in a variety of healthcare settings and may be created by people of different professions or different forms of handover (Lewis et al., 2020; Muchlis & Indriasih, 2018). Communication failures remain among the highest cause of adverse events in patient care (Joint, 2017). A study done in medical and surgical departments in Canada assessed nurses' experience of handoffs. Results showed that lack of communication skills was one of the attributing factors to overall poor handover performance by student nurses and/or newly graduated nurses (Lavoie et al., 2021).

Numerous studies have been done on nursing students which have shown that other factors like fear and anxiety stemming from low self-confidence contribute to poor communication among nursing students (Joolaei et al., 2016; Edwards et al., 2010). There is ineffective communication in most clinical handover which is as a result of limited understanding of what needs to be communicated, how to communicate and who to communicate during handover sessions (Hanley Gumbs, 2019). The study further highlighted that there is lack of educative specificity in terms of handover as a communicative events in the clinical sites in the nursing curriculum. This therefore means that students learn the skill through other means like informal education (Hanley Gumbs, 2019).

Several studies have underlined the existing gap in the nursing training on clinical handover. (Lee et al., 2016; Grant and Jenkins, 2014). However, despite this discrepancy students and newly graduating nurses are expected to know how to conduct handover sessions as they take up their role as nursing professionals. (Lee et al., 2016; Grant & Jenkins, 2014). There has been several negative outcomes due to lack of formal education in handover like passive receivers of handover who are not aware of what is expected of them (Avallone & Weideman, 2015).

Specifically, Watson et al., (2015) states that there are two aspects of handover that are associated with ineffective communication, consequently affecting teaching and learning. The first aspect is that handover is both diverse and complex. The second aspect involves the relationship and hierarchical nature of the hospital system. The handover quality may be determined by the relationship amongst the professionals involved in the handover process (Watson et al., 2015). Leonard et al., 2004 as cited in Watson et al., (2015) identified three major sources of poor communication in the hospital. The first one is nurses and doctors' different communication styles, which is due to their different profession backgrounds. The difference has been widened due to lack of inter-profession education in health. The second source is authority and rank differentials between professional groups. This has the potential to restrain lower status groups from taking part in important decisions by not speaking out, which may unfortunately include students who need to learn during handovers. Finally, the third source of inefficient communication is the culture of blaming each other which impede communication on problems and errors (Leonard et al., 2004 as cited in Watson et al., 2015). Watson et al. (2014) also noted

that nursing profession lacked willingness to involve other health disciplines during nursing handover.

A study analysing poor communication during handover with more than 700 health professionals using a language and social psychology approach determined that poor inter professional relationships and hierarchy of an institution can have a negative effect on handover communication (Watson et al., 2015). A qualitative–descriptive study on clinical handover practices by professionals in acute care services in Ireland likewise concluded that insufficient interdisciplinary communication obstructs mutually enriching discourse between care providers (Fealy et al., 2018). In addition, educational experience of participants in a study based on a paediatrics handover as well as the facilitators and barriers to teaching and learning during handover were examined. It revealed that paediatrics handovers were generally dominated by consultants in such a way that even the moments when teaching and learning could occur were apparently identified and prioritized by them (Ooi et al., 2020). This thus affected involvement of the members present, for example, unless prompted or questioned, medical students did not participate enough during handover (Ooi et al., 2020). Consequently, to tackle the communicate problems in bedside handover and organisational and cultural practices that shape handover, the study was undertaken to improve the patient prioritisation during nursing handover (Chien et al., 2021). Study findings showed that ranks in the profession restrict speaking up during clinical handover for example student nurses failed to communicate concerns or ask questions due to internal hierarchies (Chien et al., 2021). Robeertson et al., (2014) recommended that during handover attention to barriers of communication like differences in training, communication styles, lack of confidence and hierarchy especially when there are different professionals should be taken into account.

In a study done to find out more about the learning problems of nursing students in a clinical environment, nurses were found to be disrespectful to students at bedside handovers (Baraz et al., 2015). Findings showed that, nursing instructors confronted nursing students in front of patients and care givers (Jamshidi et al., 2016). Further research findings also showed that the nurses expected too much from nursing students (Baraz et al., 2015). According to Arkan et al. (2018), high expectations from instructors results in fatigue and loss of motivation. Similarly, a study to identify the student nurses' encounters in the clinical sites was done. Additionally, a

study investigated nursing students' experiences of the clinical learning environments and the factors that affect the clinical learning process. Study results indicated that during bedside handover, question and answer was extensively used by clinical teachers such that students became uncomfortable (Arkan et al., 2018). Students were more concerned when they did not respond correctly to questions being asked in front of patients (Arkan et al., 2018).

2.4.2.3 Distractions

Certain handovers also happen in spaces prone to noise and distractions. For example, emergency departments or the bedside (Watson, 2015). Research employing cross sectional descriptive design was conducted to explore the characteristics of clinical handover and hindrances to clinical handover process in Singapore. It was found that distractions occur in half of the observed handovers (Kowitlawakul et al., 2015). Similarly, research to evaluate handover practices in Ireland's acute care services departments was carried out. Results showed that the setting in which handovers happen for instance the ward station, posed a threat on communication through the presence of interruptions (Fealy et al., 2018). Several studies have shown the following as the most common distractions during handover process; pagers, telephone calls, interruptions from residents/medical students, staff conversations/noise as well as the arrival of late comers (Anderson et al., 2015; Ofosu et al., 2021).

Furthermore, Clanton et al. (2017) noted that interruptions during handover often happened during teaching and learning, thereby negatively affecting the handover process. Similarly, a study investigated verbal handover moments and its influence on patient safety and quality nursing care. Results indicated that student's attention on handover content shifted with presence of distractions (Giske, 2018). In addition, another research study evaluated learning experiences during paediatric handover including the facilitating and hindering factors. Findings revealed that interruptions of handovers affect efficacy and learning (Ooi et al., 2020).

However, contrary to the above findings, a prospective observational study in the United States of America aimed at assessing the impact of interruptions during handover and how often they occur was performed. The study results indicated that the quality of the handover was not affected in any way by the presence of interruptions (Anderson et al., 2015). However, according to the study distractions were very common during handover carried by junior residents and consequently increased the time taken to finish the handover. Similarly, other studies also noted

that residents were often interrupted and this resulted in prolonged handovers (Date et al., 2013; Kowitlawakul et al., 2015).

2.4.2.4 Limited time

Several studies have shown that limited time during handover results in omission of information and impede participation in questions, offering opinion and eliciting feedback (Horwitz et al., 2009; Rice et al., 2010). Research evaluated discussion findings from health workers experiences on communication facilitators and constraints during handover. The study used in-depth interviews. Study findings showed that if time is not enough for handover process other things are skipped. Limited time produces a feeling to rush the handover so that other activities are also accommodated in a defined period (Watson et al., 2014). Similarly, a study evaluated prioritisation of patient in handover through improved communication, organisational and cultural practices of handover process (Chien et al., 2021). It was revealed that inconsistency in handover resulted in lengthy meetings. Prolonged handovers do not yield intended purpose and are not recommended especially during teaching and learning sessions. Furthermore, the study noted that handover started late which also resulted in untimely finishing as well as increased interruptions (Chien et al., 2021).

2.4.3 ORGANISATION CULTURE

The organisation culture includes the organisations' insight of nursing clinical practice, the organisation's rules and regulations regarding the student nurse practice and how they deliver quality nursing care (Baraz, 2015). Therefore, Nurse Managers have a role to support the clinical teachers for them to be able to facilitate students learning.

In a study carried out in Ireland, contemporary surgical handover practices were investigated and barriers and facilitators of effective handover assessed. Study results showed that there was a lack of institutional support for handover, for example time for handover was not prioritised, there was lack of resources and staff training (Ryan et al., 2024). Similarly, research evaluated discussion findings from health workers experiences on communication facilitators and constraints during handover (Watson et al., 2014). Findings indicated that there are organisational hurdles like making sure that the handover takes place with the right health

professionals and difficulties to finding sufficient time to complete a full handover (Watson et al., 2014).

2.4.3.1 The teaching and learning component

The teaching and learning component also impact learning in the clinical area. It involves the step-by-step proceedings in teaching as well as learning to ensure transfer of knowledge and skill. Furthermore, students are monitored and evaluated to measure progress so as to assess relevance of the programme.

Several studies have shown that nursing students lack clinical monitoring and evaluation because teachers are too busy such that they spend less time with the students during clinical practice (Donough & Heever, 2018; Gemuhay et al., 2019). Similarly, in a study carried out in Ireland, where contemporary surgical handover practices were investigated and barriers and facilitators of effective handover assessed, it was surmised that handover is not prioritised by hospital managers and other clinical team such that there is poor attendance of even senior members of the teams like the consultants (Ryan et al., 2024). Furthermore, a study which investigated nursing students' experiences of the clinical learning environments and the factors that affect the clinical learning process found that other nurses disregarded students in the clinical sites such that students feel sidelined and therefore are affected psychologically and this disturbs their learning motivation (Arkan et al., 2018).

2.4.3.2 Increased workload

Research findings have also shown that clinical teachers feel exhausted and they fail to help students achieve clinical practice objectives because of high workloads (Bradley et al., 2015).

Educational experience of participants in a study based on a paediatrics handover as well as the facilitators and barriers to teaching and learning during handover were examined in New Zealand. The study results noted that when clinical workload is high, safety of patients is prioritised over teaching of students (Ooi et al., 2020). Similarly, a study conducted to assess nursing students' perception of the clinical environment within Vietnam agreed that workload due to a lot of patients, lack of clinical staff and lack of resources results in despair in clinical

setting, such that clinical nurses are not motivated to spend time to teach students (Truong, 2015).

Similarly, a study aimed at evaluating clinical practices of lecturers at public nursing teaching institutions in South Africa found that workload negatively affected nursing education (Gcawu et al., 2021). Furthermore, another study also discovered that heavy workloads impede teaching and learning (Ashipala & Nghoole, 2022). Furthermore, another research study reported increase in workload and shortage of nursing educators as some of the problems faced in clinical teaching and learning (Fitzgerald, 2012). Similarly, a study by Dag (2019) which sought to determine difficulties that nurse instructors' experiences in clinical education identified heavy workload, having a large number of students, having a poor physical environment in clinics as some factors affecting student teaching and learning.

In addition, a study on nurses' experiences of the traditional practical area for student nurses noted that the presence of students in the ward itself is also regarded as extra work for clinical nurses. This was because students significantly impacted on qualified nurses' workload and workflow through their slower speed and questions thus their company was not welcomed by ward nurses (Neal, 2016). In a study conducted to understand teacher led clinical practicum from the viewpoint of staff nurses, it was noted that nurses felt that nursing students drain them as they take up a lot of their time therefore, they do not always appreciate the students' presence especially new students to the ward or first year students. According to the study, staff anticipate a need for more work and time to orient new or first year students (Hanson et al., 2018).

Additionally, a study investigated nursing students' experiences of the clinical learning environments and the factors that affect the clinical learning process. The study findings showed an increase in nursing students in the wards. The enormous number of students in the limited practical area has consequently resulted in undesirable effects on learning (Arkan et al., 2018).

Similarly, Fadana and Vember (2021) investigated the experiences of the undergraduate student nurses while they are on clinical practice in the healthcare facilities, in Boland and Overberg in the Western Cape, South Africa was conducted. The study noted that the student nurses' learning opportunities are decreased when there are a lot of student nurses in one clinical setting (Fadana & Vember, 2021).

2.4.3.3 Incompetence of nursing instructors

In a study done in Tehran, (Iran) to find out more about the learning problems of nursing students in a clinical environment, and to determine the learning challenges of nursing students in clinical environment, it was surmised that novice nursing instructors were incompetent; lacking clinical experience, theoretical and practical knowledge and skills thus affecting student teaching and learning (Baraz et al., 2015). Similarly, research evaluated student nurses' encounters with qualified nurses. It was revealed that nurses who have limited understanding of the information, skills and appropriate attitudes necessary to effectively render care hindered learning (Moghaddam et al., 2020).

Furthermore, a study aimed at evaluating the experiences and views of student nurses and clinical teachers as well as explaining challenges of clinical education in nursing found that nurse mentors demonstrated superficial knowledge (Tehran, 2021). In the study, students echoed that ward nurses mostly focused on empirical clinical practice and took no attention of providing scientific information nor integrating it into practical activities. It was further noted that they were incapable of performing comprehensive medical examinations on patients (Tehran, 2021). In addition, a study to examine challenges of nursing students in the clinical environment in Ethiopia was done. Results showed lack of competence of clinical teachers such that they failed to give scientific explanations but they only practiced from their routine experience (Berhe & Gebretensaye, 2021).

2.4.3.4 Students' lack of participation

A study was done in Tehran, (Iran) to find out more about the learning problems of nursing students in a clinical environment, and to determine the learning challenges of nursing students in clinical environment. It was found that learning is altered in clinical area where clinical nurses deprive students of opportunities to undertake technical and operational procedures due to their lack of trust in the students (Baraz et al., 2015).

Similarly, a study conducted to assess nursing students' perception of the clinical environment within Vietnam noted that there was limited opportunities for learning given to students even when it is expected of them due to clinical teachers' distrust in the nursing students' abilities. (Truong, 2015).

Research studies show reduced confidence in students who have not had the opportunity to participate or learn about handover. A descriptive study was conducted with an aim of explaining student nurses' experiences of handover during clinical practice. Findings showed that students felt uncomfortable and less confident with handovers (Yu & Kang, 2015). Similarly, an Italian cross sectional research study which involved 27 universities targeting 95 three-year nursing programs with 9607 undergraduate nursing students was conducted. The study results surmised that limiting students' participation in handover experience inhibit the improvement of communication capabilities as well as familiarisation with the nursing profession roles and responsibilities (Palese et al., 2019). In addition, a descriptive study in United States of America done to prepare students with handoff skills discovered that inadequate involvement in handover during clinical practical result in students becoming unsure of the handover contents which makes them disorganised, leading to nervousness and stress during handovers (Lee et al., 2016). Another global research that aimed at finding out how best to prepare new doctors for handover also found that junior doctors feel unprepared for handover as they described handover experience as very stressful. Furthermore, a study aimed at exploring nursing students' handover involvement during their clinical learning rotations and associated factors found that insufficient practice of clinical handover among students hinder students' acquisition of effective communication abilities (Palese et al., 2021).

2.5 IMPROVEMENT STRATEGIES FOR LEARNING DURING HANDOVER

In a phenomenological study done in United States of America aimed at exploring and interpreting the student nurses' experience with handover, it was revealed that students felt that handover is important, however it needed some improvements (Hanley-Gumbs, 2019).

2.5.1 USE OF STANDARDISED TOOLS FOR CLINICAL HANDOVER

Numerous global research findings recommend the routine use of uniform tools in improving handover process. Fealy et al. (2018) suggested utilisation of structured tools for example the ISBARR (Identify, Situation, Background, Assessment, Recommendation, and Repeat) framework. Similarly, in a study to understand the determinants that contribute to or hinder handover quality from the nurses' perspective also recommended the use of standardized handover protocol (Hashish, 2023). In addition, an observational pre-quality and post quality

improvement design study done in America found that structured handover checklist enhances handover content, which promotes provider satisfaction (Funk, 2016).

African research aimed to examine nurses' clinical handover and its outcomes done specifically in Nigeria recommended the use of the standardised process which assists in reduced amount of omission errors (David et al., 2018). Another study evaluated how the current pre-hospital to emergency department handover is carried out. Findings of the study proposed a “hand-off bundle” to help all health institutions to have one way of conducting the handover process through use of a similar guide, educating the staff, training and carrying out audits (Ehlers et al., 2021). Furthermore, in a study carried out in Ireland, where contemporary surgical handover practices were investigated and barriers and facilitators of effective handover assessed, it was suggested that standardization of the clinical handover process should include and not be limited to; standardization of when handover ought to happen, where it should take place, who should attend, who should be responsible as well as what type of handover should be used at a particular time (Ryan et al., 2024). According to the study there is need for dedicated handover space that is private and free from disturbances as well as increased staffing around handover times (Ryan et al., 2024). Another study investigated nursing and midwifery students' experiences with Malawi's clinical learning environment (Mbakaya et al., 2020). The study recommended that the hospitals and the institutions should ensure the availability of essential equipment necessary for learning (Mbakaya et al., 2020). In support of the findings, Odhiambo (2023) suggested that the teaching hospitals should ensure the availability of protocols and guidelines during handover.

2.5.2 TRAININGS

A study on factors impacting the effective clinical handover of critically ill patients among health care providers in intensive care units in western region of Kenya was conducted. The study suggested that formal education in medical training colleges should be done on handover to improve competency among health care providers (Odhiambo, 2023). Similarly, a descriptive phenomenological study evaluated new nursing graduates in Hong Kong on their experiences with handover. The research findings recommended that handover education must be in cooperated in the nursing curriculum and be taught to nursing students from their undergraduate

courses so that students are equipped to deliver handover reports with buoyancy and that they are able to deliver proper information that is necessary for patient's care (Chung et al., 2020).

In addition, a study to understand the determinants that contribute to or hinder handover quality from the nurses' perspective also suggested training as one way of improving clinical handover process (Hashish, 2023). Similarly, in a study carried out in Ireland, where contemporary surgical handover practices were investigated and barriers and facilitators of effective handover were also assessed, it was recommended that staff should be trained on handover (Ryan et al., 2024). Furthermore, a study was conducted to evaluate the implementation of lessons done to empower students and clinical teachers who take part in peer and near peer teaching in hospitals. The research suggested that trainings and practice in the ISBARR (Identify, Situation, Background, Assessment, Recommendation, and Repeat) should be done to ensure its effective use (Burgess et al., 2020).

In addition, the study results from an investigation on nursing students' experiences of the clinical learning environments and the factors that affect the clinical learning process recommended that new clinical teachers should be trained on how to teach students and they should be paired with those that have worked for some time as their mentors (Arkan et al., 2018). Furthermore, another study which investigated nursing and midwifery students' experiences with Malawi's clinical learning environment recommended training of teachers. The study findings emphasised empowering teachers through trainings so that they are able to balance the pressure of work and effectively teaching nursing students during clinical practice (Mbakaya et al., 2020). Furthermore, a research study focusing on hindrances to clinical teaching and learning as per students' observations was conducted which then suggested that clinical teachers should attend regular trainings to aid in their competences (Amini, 2020). Similarly, another study to evaluate nurse expertise and the influencing factors in Ethiopia was conducted. The study findings suggested that clinical teachers prioritise gaining of mastery in different domains through trainings and use of opportunities (Shibiru et al., 2023). Furthermore, the study encouraged teachers seek support where it is due and should be open to continuous learning (Shibiru et al., 2023). In addition, another study agreed that training sessions for clinical teachers was necessary. Framing learning objectives and outcomes, interactive instructional methods in small groups, feedback, reflection, assessment and evaluation were among the proposed aspects of the education (Nothman et al., 2021).

2.5.3 EFFECTIVE COMMUNICATION

Clinical handover is generally associated with the communication of information to do with the patient's health as well as other important communications in the health setting. Thus rendering communication skills important for its success. Global findings show that the presence of different professionals and their involvement during handovers allows information to be shared more efficiently (Watson et al., 2014). A study analysed poor communication during handover with more than 700 health professionals using a language and social psychology approach. (Watson, 2015). Results recommended more inter-professional contact to help relations between different disciplines during handover (Watson, 2015).

Similarly, another study suggested utilisation of handover time like during the sharing of roles, information and updates to reinforce team spirit (Giske, 2018). Furthermore, communication during handover may be enhanced if members become sensitive to other people's opinions and contributions (Brindley & Reynolds 2011). During handover self-confidence is also important in facilitating communication. (Brindley & Reynolds 2011; Siemsen et al., 2012).

A study was also conducted to depict the barriers that the nursing students of two state universities in Sri Lanka faced while communicating with nurses and patients during the clinical learning. The study results suggest during continuing education programs, clinical nurses should be taught on how to facilitate student learning in clinical settings for example on effective communication skills (Nasmil & Seneviratne, 2020). Similarly, a study to identify the student nurses' encounters in the clinical sites was done (Jamshidi et al., 2016). The study suggested that, in addition to teaching communication skills to students, such students should be taught before they go for clinical practice (Jamshidi et al., 2016).

A study done in Tehran, (Iran) to find out more about the learning problems of nursing students in a clinical environment, and to determine the learning challenges of nursing students in clinical environment suggested that to improve the communication skills of clinical teachers, workshops should be held (Baraz et al., 2015). A study analysing poor communication during handover with more than 700 health professionals using a language and social psychology approach found that communication proficiency training was necessary for clinical handover improvements (Watson, 2015). Furthermore, a study on acceptability and efficacy of a communication skills training for

nursing students recommended that communication skills training on handover should be encouraged (Cannity et al., 2020). The Joint Commission (2017) also suggested incorporating handover education in nursing education. In a descriptive study to explain student nurses' experiences on handover communication at clinical area in South Korea with 137 participants, 97.1 % of the respondents also recommended handover education (Yu & Kang, 2015). Similarly, other study finding pin pointed that courses should be integrated in the nursing curriculum to enhance knowledge, exposure and experience with handovers (Hanley-gumbs, 2019). In addition, a multi-disciplinary evidence-based undergraduate handover training program in United Kingdom with 46 participants, found that the introduction of handover training intervention improves the attitudes, knowledge and skills of students (Gordon et al., 2019).

However, regardless of the emphasis by different studies on the importance of education on clinical handover, there are still a lot of gaps in training. It must be noted that developing an effective handover curriculum may be challenging because of the need for standardised protocols, faculty education, and cultural resistance to change and diverse institutional factors (Sule, 2020).

In a study to determine the challenges experienced by nursing students in the clinical learning environment and their suggestions, it was recommended that clinical teachers and educators should collaborate and support the use of different and new educational techniques in nursing education (Akyuz & Ergo, 2022). In addition, selecting a leader during handover to manage the deliberations was found to improve handover process and communication (Vergales et al., 2014). Dolley, (2019) highlighted that it is important that the leader be flexible and sensitive during clinical handover. Pun, (2023) emphasised the need to have a leader during clinical handovers who will ensure the deliberations during handover are done in timely manner.

In addition, Global research findings also indicate that minimal usage of abbreviations and unfamiliar medical terms can help to promote clarity and understanding during handover. A systematic research study explored the strategies students use to address the difficulties they experienced in advanced practices of nursing education. The research findings showed that facilitating cooperation between educational institutions and hospitals, developing patient-oriented research and increasing the use of simulation may help to combat some of the problems faced by nursing students in clinical sites (Fitzgerald, 2012).

Similarly, a study conducted to determine the difficulties that nurse educators' experiences in clinical education recommended signing of memorandum of understanding between institutions and clinical practice areas. Furthermore, the study suggested that the clinical sites should be equipped with advanced technology simulators like realistic high-fidelity procedural simulators and high-tech interactive human simulators which may help to teach students when laboratories in nursing institutions are not enough (Fitzgerald 2012; Dag 2019). There has been an outcry to improve the clinical handover (Department of Health, 2012; Palese et al., 2019). A study suggested that handover learning should be given the highest priority so as to improve the process as well as its education component (Palese et al., 2019). In addition other study finding emphasized the need for a proper teaching of handover to those nearly or just joining the nursing profession (Department of Health, 2012). Suggestion have also been given in regard to improvement of handover knowledge. A recommendation was made that students should be taught before being placed in clinical sites with simulation and structured handover techniques which enhances student's levels of assurance that they are capable of leading a handover (Malone et al., 2016) Similarly, Starmer et al., (2014) concur that simulation based clinical handover when used is able to eradicate avoidable adverse effects. Furthermore, ISBARR (Identify, Situation Background Assessment, Recommendation and Repeat) was suggested as the preferred tool for use in order to improve the handover process (Kostiuk, 2015)

Participants in this study noted that others struggled to communicate during clinical handover. The study results are consistent with another research finding that reported nursing students finding it very difficult to communicate in their clinical placements (Jamshidi et al., 2016). According to the study communication skills are important for learning, thus student's underdeveloped communication abilities hinders educative moments (Jamshidi et al., 2016).

2.5.4 IMPROVED EMOTIONAL AND PHYSICAL ENVIRONMENT

A study to explore challenges faced by nursing students in clinical learning environment in Ethiopia was done. It was found that overcrowding especially due to large numbers of students lead to ineffective clinical learning (Berhe & Gebretensaye, 2021).

In assessing student nurses and midwives' experience and perception of the clinical learning environment in Malawi, Mbakaya et al. (2020) suggested that in order to deal with consequences of overcrowding of nursing students in the clinical area, the number of students allocated to a

clinical site at a given period of time should be controlled. According to the study this can be achieved through collaboration between the teaching hospitals and nursing colleges (Mbakaya et al., 2020). Similarly, in a study to explore and describe barriers to clinical teaching based on the experiences of registered nurses, it recommended that teaching institutions should make proper arrangement for placement of nursing students in the clinical site and should limit the number of students allocated in clinical practice at one time to prevent overcrowding (Hoebes & Ashipala, 2023).

Furthermore, other studies recommended careful planning of the number of nursing students receiving clinical education to ensure quality teaching and learning (Dag et al., 2019).

In a study to understand the determinants that contribute to or hinder the quality of handovers, it was suggested that nurses should work in a more supportive environment whereby the nurse managers pay attention to the nurses' well-being (Hashish, 2023). Another finding noted that it is important to reduce the workload of the nurse as part of planning and implementing various clinical models (Neal, 2015). Similarly, another study recommended that clinical teachers should be supported by curtailing their workload so that they are able to balance student teaching and learning as well as caring for patients. According to the study, managers ought to reduce clinical teachers work by delegating their duties to others so that they have enough time to spend with students in clinical teaching (Kalischuk, 2013).

2.6 CONCEPTUAL FRAMEWORK

This study selected the revised Blooms Taxonomy as its conceptual framework (Figure 2), which was developed by Anderson and Krathwohl (2001). Benjamin Bloom and colleagues developed Bloom's Taxonomy in 1956. Marzano (2001), as cited in Özcan (2023), described taxonomy as a system that puts together objects, organisms or concepts with distinct features, according to their characteristics. Taxonomy is used in education to hierarchically order learning objectives. (Yurdabakan, 2012; Ozcan, 2023).

There are three psychological domains; the affective, cognitive and psychomotor domain. Thinking processes are related to the cognitive domain, feelings and attitudes belong to the affective domain and motor skills relate to the psychomotor domain (Begam & Tholappan, 2018). Bloom's Taxonomy's main focus is the cognitive domain. The learning objectives are created based on a particular cognitive learning level and the assessments are created to measure

the progression of the student in accordance with the developed learning objectives (Bloom et al., 2020).

Bloom's Taxonomy ensures that objectives are arranged in the ascending order from lower order thinking skills to higher order thinking skills with each level building upon the former one. These levels start with knowledge, then comprehension, application, analysis, synthesis and lastly evaluation (McGrath & Willcutt, 2022). Bloom's Taxonomy was developed in 2001 by Lorin Anderson and David Krathwohl who advanced their work from the Taxonomy developed by Bloom (Hu et al., 2022). Instead of using nouns, verbs were used to rename the categories into remembering, understanding, applying, analysing, evaluation and creation (McGrath & Willcutt, 2022) (see figure 1).

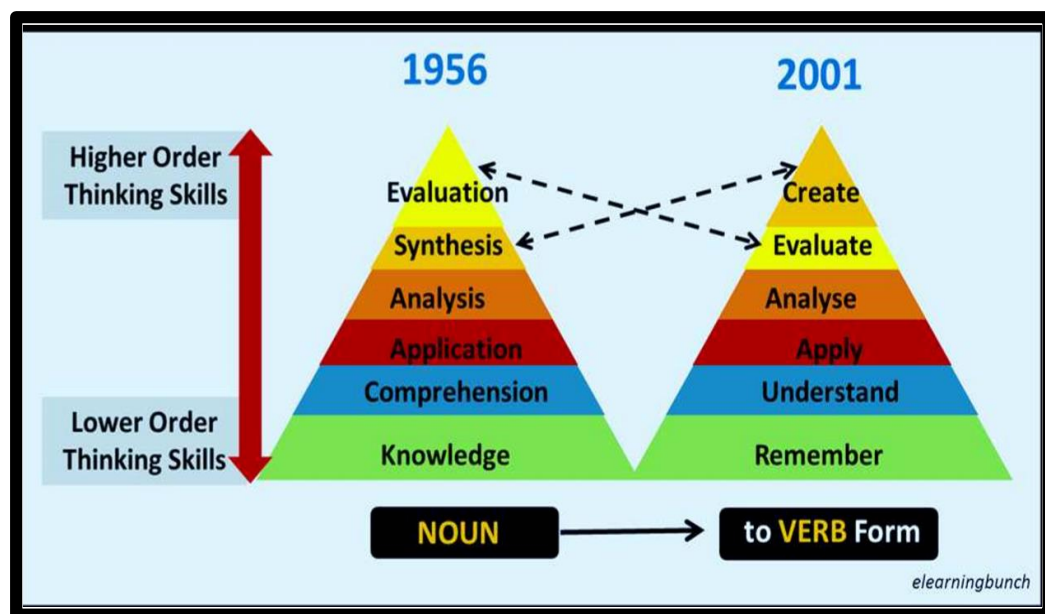


Figure 1: Changes from Blooms Taxonomy to revised Blooms Taxonomy (McGrath & Willcutt, 2022)

2.6.1 REVISED BLOOMS TAXONOMY

The new taxonomy is two dimensional, it consists of knowledge dimension and cognitive process dimension.

2.6.1.1 Knowledge dimension

The knowledge dimension include four types of knowledge, which are factual knowledge, conceptual knowledge, procedural knowledge and metacognitive knowledge (Billings & Halstead, 2009; Bogdanova & Snoeck, 2017).

2.6.1.1.1 Factual knowledge

It is the kind of knowledge that is baseline to any established profession or organization. It involves basic terms and conditions that everyone is expected to know about their profession for example common words that are used in nursing (Bogdanova & Snoeck, 2017). This knowledge in nursing can be attained by means of lecture, peer assisted learning, seminar and small or large group discussions and Team Based Learning (TBL) methods (Billings & Halstead, 2009).

2.6.1.1.2 Conceptual knowledge

It is the knowledge under which the basic information that was learnt is linked and connected to aid in understanding. It includes categories, principles, generalizations, theories, models or structures of a profession/organization (Bogdanova & Snoeck, 2017). The teaching strategies of conceptual knowledge in nursing includes debate, cooperative learning, collaborative learning and group assignments; mind mapping and concept mapping; flipped classroom; role play and simulation (Billings & Halstead, 2009).

2.6.1.1.3 Procedural knowledge

It is the information that necessitate an action from students that is precise for a profession/organization. These are well defined steps on how a task may be carried in line of work or duty (Bogdanova & Snoeck, 2017). Teaching strategies involving procedural knowledge are algorithms, demonstration, games, imagery and mindfulness, posters, self-learning modules, simulation (Billings & Halstead, 2009).

2.6.1.1.4 Metacognitive knowledge

This refers to the student's ability to know who they are in terms of their own knowledge, for example how they can easily retain information (Bogdanova & Snoeck, 2017). This strategy can be used in several formats: case study, inter-professional education (IPE), portfolio and e-

portfolio, problem based learning (PBL), questioning and Socratic questioning, reflection journal writing and simulation (Billings & Halstead, 2009).

2.6.1.2 Cognitive process dimension

The cognitive process dimension is categorized into six processes: remembering, understanding, applying, analyzing, evaluating and creating (Barari et al., 2020; Chandio et al., 2016).

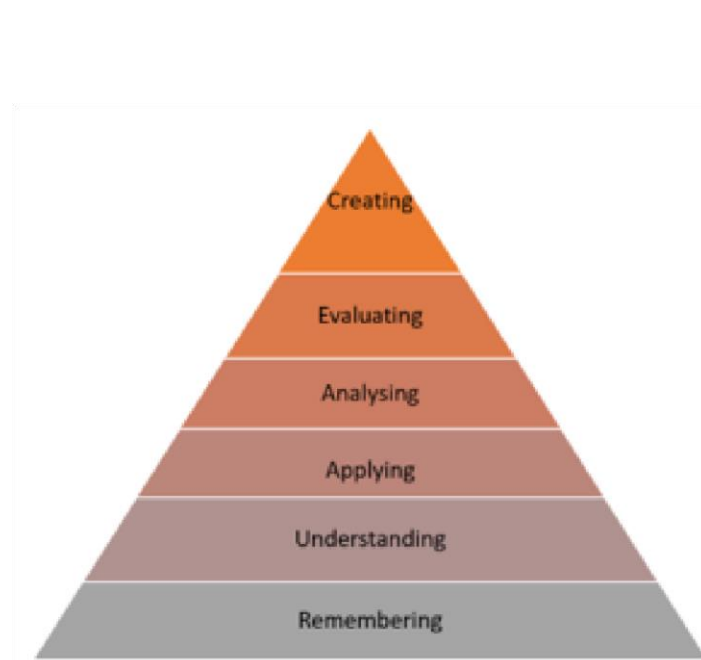


Figure 2: Revised Bloom's Taxonomy (Barari et al., 2020)

1. Remembering: This involves retrieving of known information from memory. An example would be nursing students learning basic terminology used in nursing or basics of psychology, pharmacology and anatomy and physiology (Tuma & Nassar, 2021).
2. Understanding: It means coming up with a meaning by linking data. For example nurses use their knowledge to avoid complications in a patient (Tuma & Nassar, 2021).
3. Applying: This is the ability to perform a task /bring solutions by relating to already known techniques in different ways or circumstance for instance administering an injection (Bogdanova & Snoeck, 2017).

4. Analysing: Involves a deep search of a subject. At this level an individual immerses into thorough understanding by creating information networks such that every detail is of importance (Krathwohl D.R, 2002).

5. Evaluating: This entails making conclusions about a finding after cross checking with the principles that govern it (Bogdanova & Snoeck, 2017).

Some products that can be developed from an evaluation process are critiques, recommendations and reports.

6. Creating: This means indorsing or organizing different parts to produce a logical or practical whole. In health field it can mean authorizing the use of new diagnostic tests (Tuma & Nassar, 2021). Usage examples of cognitive process dimension of learning field in Nursing according to revised Bloom's Taxonomy are shown in Table 1 (Ozcan, 2023).

Table 1: Usage examples of cognitive process dimension of learning field in Nursing according to revised Bloom’s Taxonomy (Ozcan, 2023)

COGNITIVE PROCESS DIMENSION	EXAMPLES IN NURSING
Remembering	Eliciting nursing terminologies, laboratory tests and their results
Understanding	Putting a meaning to the causes, symptoms and treatment methods of different conditions, understanding treatment plans
Applying	Applying nursing skills like venipuncture, providing nursing care and developing nursing care plans.
Analysing	Formulating nursing diagnoses, analyzing laboratory test results
Evaluating	Evaluating patient conditions, assessing the effectiveness of nursing interventions
Creating	Creating modified care plans for patients

2.6.2 APPLICATION OF BLOOM’S TAXONOMY TO THE STUDY

Learning process is multidimensional and comprises the physical, cognitive, social and emotional aspects of individuals, who also have different learning styles and strategies. Learning is essential in fostering and enhancing information sharing as well as allowing assessment of oneself (Ozcan, 2023). Students’ quality of learning can be validated by carrying out the learning process independently and actively, making learning meaningful. Meaningful learning will provide experiences that can be used in everyday life (Ratunguri, 2016; Bressington et al., 2018; Kostianen et al., 2017).

The revised Bloom’s Taxonomy is a treasured resource to guide teaching and learning (Hu, 2023). Applying revised Bloom’s Taxonomy oriented learning activities, students can cultivate

various skills in the learning process including creative thinking (Bloom et al., 2020). Developing student's creative thinking skills is one indication of achieving learning goals (Mahlianurrahman, 2017).

2.6.2.1 Content structuring

Bloom's taxonomy emphasises that learners must accomplish the expectations of the first levels of thinking before shifting to the higher ones (McGrath & Willcutt, 2022). When clinical teachers decide to deliver a lesson during clinical handover, this framework can help them to teach from simple work to more complex then advance material. Basically, the teacher ought to allow students attain mastery of simple facts then slowly upgrade the content to permit achievement complex thinking tasks such as application, analysis, evaluation and synthesis (Mahlianurrahman, 2017).

The revised taxonomy provides a perspective of knowledge dimensions (factual, conceptual, procedural and meta-cognitive). This helps clinical teachers to select the proper content for the audience to facilitate learning during clinical teaching (Ozcan, 2023). For instance during handover teachers may decide which content to include in a particular teaching and learning moment to provide maximum learning. Furthermore, the framework can help the teacher to know which content to cover with the student in a particular session so that the teaching and learning session is done successfully. Subsequently, learning becomes more than just following the stages and levels of objectives of Bloom's Taxonomy rather it encourages deeper engagement with the material (McGrath & Willcutt, 2022).

Blooms taxonomy can be helpful during handovers by providing a clear structure for identifying and formulating educational goals that match different levels of thinking. It can help in planning activities to be done during handover by clarifying objectives such that a clinical teacher knows which objectives are to be achieved first (Ozcan, 2023). Therefore they are able to frame the clinical teaching according to the objective. The teacher looks at what level the students are and the clinical objectives then choice weather to use the lower level order thinking or higher level to attain a goal.

For example students may come to the ward with their objectives, the blooms taxonomy will guide the clinical teacher when an objective should be achieved.

2.6.2.2 Teaching and reinforcing

An understanding of the different levels in Bloom's Taxonomy helps clinical teachers decide whether a previously taught concept needs to be strengthened (Bloom et al., 2020). For example during clinical handover if the audience is failing to recall the basis of a disease that was taught the previous day then the teacher can decide to reinforce or do revision instead of proceeding to the next stage.

The revised taxonomy may also prepare a clinical teacher to acknowledge and focus on more complex aspects of learning and thinking thus promoting teaching and learning that goes beyond factual knowledge and the acquisition of mainly lower order cognitive processes thereby broadening the depth of students learning (Eber & Parker, 2017).

The revised taxonomy can be used by clinical teachers to plan and deliver teaching and learning activity in relation to a specific task that may include different knowledge dimensions and overlapping of lower and higher order cognitive process dimensions which will provide independence and more practice (Ozcan, 2023).

2.6.2.3 Assessing

The revised taxonomy plays an important role in assessing and examining students. During handover the clinical teachers may want to find out if a lesson taught has been assimilated by the students so they may use for example questions. A very good application of revised Bloom's taxonomy in this case will require the clinical teacher to map the questions to the level at which the learning outcomes are set. If the learning outcome is set at a recall level then the clinical teachers must create questions that test learners for recall to ensure that the assessment is valid (McGrath & Willcutt, 2022). Furthermore the revised bloom's taxonomy will help the clinical teachers to create questions or assessments that evaluate not just recall, but higher order thinking like analysis or creation.

The advantage of using Blooms taxonomy during handover lies in how it structures the thinking process and connects it with learning. Clinical teachers who use the taxonomy solicitously can make informed decisions while teaching and ensure that they plan and design learning activities that will help develop different thinking skills of students (Bloom et al., 2020).

2.7 SUMMARY

This chapter reviewed literature on clinical handovers. Literature shows that handovers ensure patient safety and provides an opportunity for learning. The extensive literature has shown that there is paucity of research on student nurse learning rather much emphasis is on patient safety. In addition, most of the studies discussed handover in general terms, mainly focusing on qualified nurses or other health professionals other than nursing students. It is therefore imperative that this study be conducted on nursing students focusing on their learning during handover.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter describes the research methodology. It is composed of research approach, research setting, research population, sampling technique, inclusion and exclusion criteria, sample size, data collection method and instrumentation, data processing and analysis, ethical considerations and limitations.

3.1 RESEARCH APPROACH

The study employed qualitative approach, utilising Husserl's descriptive phenomenology design.

3.1.1 QUALITATIVE APPROACH

Qualitative research is defined as the study and understanding of the meanings that people or groups of people use to describe a social or human problem (Creswell, 2018). The use of the qualitative approach allowed the researcher to ensure that the participants are well understood in their views concerning learning provisions in the course of clinical handover. This was a good approach because the researcher wanted to investigate the learning experiences of the final nursing students, and little research has been done in relation to learning in nursing students and clinical handover, thus it required further study (Mohajan, 2018; Akyildiz & Ahmed, 2021).

3.1.2 PHENOMENOLOGY DESIGN

There are several designs in qualitative research. This study used the phenomenological design of inquiry whereby the researcher described the experiences of nursing students of learning during clinical handover as described by the final year nursing students (Giorgi et al., 2017).

Phenomenology is the study of human experience and it aims to clarify the meanings of phenomena from lived experiences (Alase, 2017). Lived experiences form each person's understanding of a specific phenomenon, revealing what is true or real in their lives (Giorgi et al., 2017). This design helped to yield important insights from individual nursing student experiences of learning during clinical handover.

This study used descriptive phenomenology which is widely used in social science research to explore and describe the lived experiences of individuals (Christensen et al., 2017).

Husserl's phenomenology also dwells on universal essences or eidetic structures in which certain aspects are common to all individuals who have the experience. These common features lead to a generalised description of the lived experiences. It also enables the researchers to make 'wide spread' descriptions of the experiences of participants on the concept under scrutiny due to the component of 'universal essence'. This design helped the researcher to get detailed views from participants by exploring their experiences. The following four components of Husserl's descriptive phenomenology were utilised in this study;

Bracketing- Researcher preconceptions, experience and theoretical learnings were put on check to avoid the researcher's assumptions from directly affecting the research process when listening to and reflecting on the learning experiences of final year nursing students (Hamill & Sinclair, 2010). This is called the 'epoche' which means that any knowledge from the researchers' attitude other than the phenomenological one is laid aside and rendered useless (Giorgi et al., 2017). The process of bracketing was ongoing and was utilised throughout the course of this study.

Intuiting- The researcher was open to meaning of a learning during clinical handover as experienced by the final year nursing students (Polit & Beck, 2017). The researcher embraced learning experiences during clinical handover in a new/fresh way other than what she is used to. However, this was not easily done just as Morley (2019) noted that a complete or perfect 'epoche' is not always possible. Epoche was especially difficult to exercise for the researcher as learning experiences during clinical handover is part of her daily undertakings as a nurse. Apart from personal biases inherent in human experience, the professional knowledge and the presumption had some impact on the researchers' ability to determine pure essence or meaning of the final year nursing students' experience. This is why the first step of identifying and declaring opening before the study was important.

Analysing- The researcher focused on identifying and extracting important statements and reflections, categorising them and evaluating them in connection to the learning experiences of nursing students during clinical handover (Hellman, 2016).

Describing-Defining and describing the conclusions about the phenomenon following data analysis (Hamill & Sinclair 2010; Hellman, 2016). The researcher drew conclusions on what the learning experiences of the nursing students is like during clinical handover.

3.2 STUDY SITE

This project was conducted at Daeyang Nursing College and Nkhoma Nursing Colleges in the Central Region of Malawi. Nkhoma and Daeyang Colleges offer nursing and midwifery courses. Both colleges have approximately over 300 nursing/midwifery students per academic year. The colleges are located in Lilongwe District and they are all under the Christian Health Association of Malawi (CHAM), a network of colleges that train most nursing students in Malawi. The two training institutions were chosen because they are the only nursing colleges in the central region of Malawi that have only one college campus. This helped the researcher to maintain focus and to directly interact with nursing students in their natural environment, which gave the researcher a chance to see how nursing students behave and act within their context (Levitt et al., 2017; Creswell, 2016). Furthermore, the nursing colleges in the study have also recently increased their student intake in response to the global and country need for more nurses making them suitable for the study.

DEAYANG NURSING COLLEGE

Deayang Nursing College is under Deayang University, which is a Christian University founded by the Miracle for Africa Foundation. It is situated behind Malawi Institute of Management (MIM), off the M1 Road between Kamuzu International Airport and Kanengo industrial area. It started with the establishment of Deayang College of Nursing in 2010 and Deayang College of Information and Communication Technology in 2014. It offers several courses including Bachelor of Science (Nursing and Midwifery).

NKHOMA COLLEGE OF NURSING

Nkhoma College of Nursing & Midwifery is a Christian based Nursing & Midwifery education institution affiliated to Nkhoma Church of Central African Presbyterian (CCAP). Nkhoma College is located close to Nkhoma Hospital. Nkhoma college of Nursing and Midwifery was started as a department of Nkhoma Hospital and it is currently a college of Nkhoma University.

It produces technician level nurse-midwives (Diploma) through a nurse-midwife technician program.

3.3 STUDY POPULATION

67 final year nursing students at Daeyang Nursing College, and 51 final year nursing students at Nkhoma College of Nursing and Midwifery were involved. The study had a total sample of 118 nursing students from which study participants were selected.

3.4 SAMPLING TECHNIQUE

Qualitative research sampling implies that circumstances, context and / or participants who provide rich data of the phenomenon under examination are deliberately chosen (Polit & Beck, 2017). Sampling in qualitative research is either random or non-random sampling (Tumen-Akyildiz and Ahmed, 2021). Qualitative researchers are recommended, instead of random sampling to consciously sample (Moser & Korstjens, 2018).

Final year nursing students were purposively chosen according to the researcher's judgment concerning which potential participants would be most informative. This study used purposive sampling in selecting nursing students because the final year students have rich experience concerning learning during clinical handover (Shorey, 2022). The technique helped sample 28 participants consisting of final year nursing students who had a typical collection of experience doing different clinical handovers in Malawi, who also offered valuable data and gave voice on improvement strategies of learning amid clinical handover (Hellman, 2016).

3.5 INCLUSION AND EXCLUSION CRITERIA

3.5.1 INCLUSION CRITERIA

- Final year nursing student
- Experienced in the following clinical handovers; verbal handover in nursing station, written handover in the report book read at the conference room and bedside handover.

3.5.2 EXCLUSION CRITERIA

- Students who have never written or read a clinical handover report.
- Final year students not willing to participate in the study.

3.5.3 RECRUITMENT PROCESS

The researcher applied for and got permission to conduct the research in the nursing colleges by applying at Mzuzu University Research Ethics Committee (see Appendix 1). The participants were then informed of the research study through the research committee coordinators of the colleges.

The prospective participants met the researcher and were asked to take part in the study. The researcher interacted with the participants in private rooms whereby the aim and specific objectives of the study, the kind of data, procedures and the reasons they were being considered as potential participants, were explained. The meeting also allowed for questioning and consent signing. Students agreed to participate. To confirm the eligibility of the students for the study, the researcher asked them to mention the clinical handover they had ever attended or participated in. After each participant met the inclusion criteria, time, date and place for Face-to-Face (F2F) interviews and Focused Group Discussions (FGDs) were arranged. None of the participants declined participation in the study.

3.6 SAMPLE SIZE

The researcher engaged 13 nursing students in face-to-face interviews and 15 final year nursing students in focus group discussions. At Deayang Nursing College the focus group discussions had 7 participants, whilst 8 students participated in Nkhoma College of nursing and midwifery group discussions. Whilst 7 students were interviewed at Deayang College, 6 participated in face-to-face interviews at Nkhoma College of Nursing making a total of 28 students. There is no set standard for sample size in qualitative research and researchers do not usually begin a project with a predetermined sample size. However, in a focused group discussion 6-8 participants are recommended (Creswell & Creswell, 2018).

Similarly, in face-to-face interviews, there are numerical suggestions of sample size depending on the type of research design. In phenomenology, a sample size of 6 to 15 is acceptable as long as the researcher is able to extract rich descriptions of the phenomenon from the participants (Beck & polit, 2018).

3.7 DATA COLLECTION AND INSTRUMENT

Data in this study was collected using two data collection methods. Data in qualitative research is mostly a record of what people have said (Myers, 2013; Akyildiz & Ahmed, 2021).

The first method that was used was the face-to-face interviews (F2F). The second method was the focus group discussion (FGD). Two or more data collection methods are usually used in phenomenology in order to gain more accurate data on the phenomenon (Penner & McClement, 2008). Triangulation offers rich data to a study by ensuring complete and thorough findings (Speziale et al., 2011). Therefore, face-to-face interviews and focus group discussions were combined in this study for the purpose of data completion (Penner & McClement, 2008).

When pursuing data completion, each method discloses different aspects of the phenomenon in question and this contributes to deeper understanding of the phenomenon (Lambert & Loiselle 2008). In this case, F2Fs were used to explore individual experiences, whereas FGDs were suitable for exploring opinions and beliefs about clinical handovers, thereby penetrating deep into the findings.

LN conducted both face to face interviews (F2F) and focus group discussions (FGD). The final year nursing students gave permission to use an audio-recorder during data collection. All interviews, regardless of the medium in which they are carried out, have to be audio recorded with the consent of the participants to enable accurate transcription (Gill & Baillie, 2018) (see Appendix 2). An assistant helped with taking notes during the focus group discussion and recording the deliberations using a recorder.

3.7.1 INTERVIEWS

F2F interview is considered to be the gold standard (Saarija'vi & Bratt, 2021) and it involves spacing out a mutually suitable time and place to meet the participant, gaining a consent and audio-recording the interview (Gill & Baillie, 2018). The interviews permitted the researcher to acquire rich data from the final year nursing students (Myers, 2013; Akyildiz & Ahmed, 2021). During F2F interviews, data was collected until saturation was reached. Each interview lasted 30 to 35 minutes. A semi structured interview guide (see Appendix 4) guided the exercise.

Three initial pilot sessions were conducted with some students in a different college in the Southern Region of Malawi to find out the appropriateness and lucidity of the interview

questions. Determining the relevance and clarity of an interview guide is important as it ensures a possibility of question amendment before the actual study is carried out (Gill & Baillie, 2018).

3.7.2 FOCUS GROUP DISCUSSIONS

Focus group discussions involves deliberations among people who have similar characteristics, discussing the questions asked by the interviewer or moderator in order to explore the attitude, perceptions, feelings, and ideas pertaining a certain topic (Kruger & Casey, 2015; Dilshad & Latif, 2013). Those who participate in focus groups usually have some link to each other. The participants were final year students in this study. This is important because people with a common background or experience are free to express themselves around each other. The focus group discussions continued till there was no new information generated and there was a repetition of the responses, which indicated data saturation. The total time taken for the focus group discussion was approximately 45 minutes. For the discussions, a focus group discussion guide was utilised (see Appendix 3). The participants were probed through open ended questions to clarify their claims and their responses.

The study objectives guided the researcher to develop the two data collection tools (Focus group discussion guide and semi structured interview guide). Therefore, a pretest was done by a team of experienced qualitative researchers, who had done and published several studies on clinical teaching using the qualitative approach, to test and ascertain the suitability and clarity of the interview questions.

3.8 DATA ANALYSIS

The researcher used the established analytical methods that are custom fit for use in descriptive phenomenological research thus Colaizzi's (1978) Seven Step Approach. The researcher therefore analysed data manually using Colaizzi's (1978) Seven Step Approach. The data analysis method by Colaizzi was developed to offer a guide to the researchers on what they can do with the collected data by using conventional seven steps. According to Wirihana (2018), Colaizzi's (1978) method of data analysis was greatly influenced by Husserl's descriptive phenomenology. Ultimately, the method demands that researchers are flexible in these steps but that there is a deep and thorough exploration of meaning on each step (Wirihana, 2018).

The seven steps contained in Colaizzi's method are significant because they present a clear, logical and sequential approach to use as a guide in phenomenology research. It makes the obtained results more dependable. Colaizzi's (1978) method of data analysis is unique as it requires participants to prove findings as accurate and credible, unlike other phenomenological data analysis methods (Wirihana, 2018). During analysis, the researcher again examined herself so that previous knowledge /information about the phenomenon does not influence the analysis /results. Failure to properly 'bracket' may obscure the phenomenon's true qualities and aspects (Hellman, 2016).

The findings are presented as themes and sub themes or cluster themes with supporting verbatim statements that depict well the learning experiences of nursing student through clinical handover. The seven steps of Colaizzi approach include: reading and re-reading of transcripts, extraction of the significant statement as related to the phenomenon, formulating of meanings from the significant statement, formulating of theme clusters and themes, developing a complete description of the phenomenon, describing the structure of the phenomenon in its fundamentals, verifying of the structure in its fundamentals (Morrow et al., 2015). The following elaborates on each of these seven steps by describing how the study carried out each step.

3.8.1. STEP ONE: READING AND RE-READING OF THE TRANSCRIPTS

The first step in Colaizzi's seven steps process involves reading the transcripts. When all the transcripts are read several times, the researcher can make sense of participant responses. The researcher read the F2F and FGD transcripts more than three times and familiarised with the collected data in this study of learning experiences of nursing students during clinical handover.

3.8.2 STEP TWO: EXTRACTING SIGNIFICANT STATEMENTS THAT PERTAIN TO THE PHENOMENON

The researcher analysed the transcripts in this step and made some isolated significant statements from the transcripts (Morrow, 2015). A participant's experience of phenomenon is directly connected to a significant statement made by a participant. Thus, the researcher extracted phrases and statements that clearly described the final year nursing student learning experiences of the clinical handover and gave to peers for verification. Feedback from the extracted phrases was received from the supervisors. Peer involvement also helped confirm the chosen responses.

3.8.3 STEP 3: FORMULATING MEANINGS FROM THE SIGNIFICANT STATEMENTS

Then, meaning from the significant statements were derived and these were then discussed with the peers to avoid any misinterpretation of participant's views.

3.8.4 STEP 4: CREATING OF THEME CLUSTERS AND THEMES

The formulated meanings that the researcher derived from step 3 were then grouped into clusters of themes (subthemes) (Polit & Beck 2017).

3.8.5. STEP 5: DEVELOPING AN EXHAUSTIVE DESCRIPTION OF THE PHENOMENON

Assimilation of all findings gives an exhaustive description of the study findings (Colaizzi, 1978; Poilt & Beck, 2017). This step helped the researcher to use the emergent themes, subthemes and the constructed meanings to explain nursing students learning experiences during clinical handover at length. This thorough exhaustive description was accomplished by constant evaluation of transcripts, subthemes, and themes (Wirihana, 2018).

3.8.6. STEP 6: DESCRIBING THE FUNDAMENTAL STRUCTURE OF THE PHENOMENON

In this step, the description is constricted so that only important aspects of learning experiences during handover are discussed. (Morrow et al., 2015). This step is important because it helps eliminate any repeated or misrepresented descriptions (Colaizzi 1978; Shosha 2012). The researcher followed this step during the discussions of the findings.

3.8.7 STEP 7: SEEKING VERIFICATION OF THE FUNDAMENTAL STRUCTURE

This is the last step in Colaizzis seven step research analysis approach. The researcher returned to final year nursing students with the themes that emerged from the student experiences, for verification and confirmation of the researchers' interpretation to gauge if, indeed, it reflected the interviewee's experiences (Morrow et al., 2015). All participants agreed with the interpretation. In summary, Figure 3 shows the step-by-step process on how data was analysed;

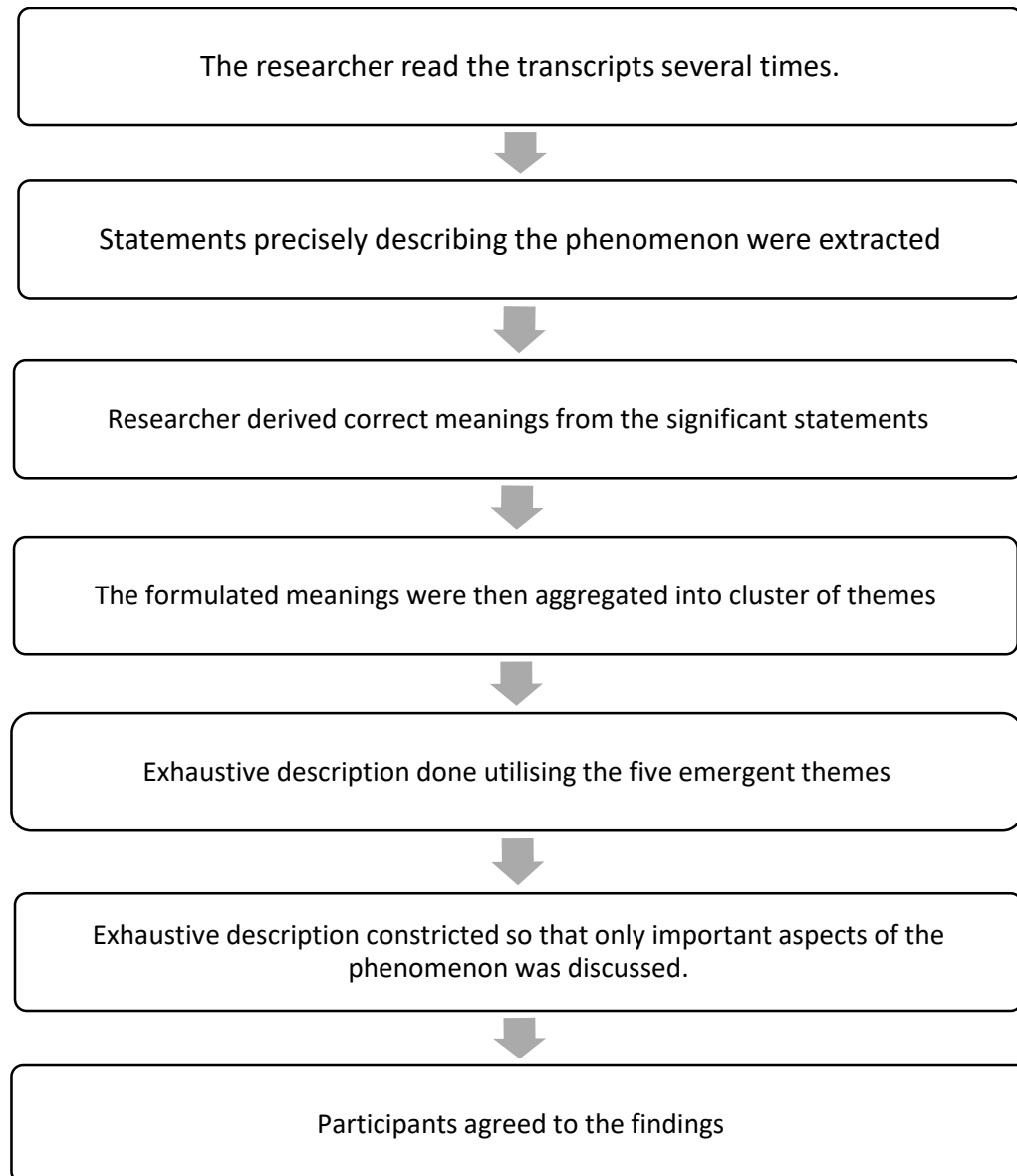


Figure 3: Summary of Colaizzi's step by step approach as used in the study.

3.9 ETHICAL CONSIDERATIONS

Several principles were instituted in the study to ensure that the intended information was generated whilst protecting the rights of the participants.

3.9.1 PERMISSION TO CONDUCT THE STUDY

Before the study began, permission was sought from the Research Ethics Committee of Mzuzu University (see Appendix 1). The researcher also sought permission to conduct the study from Deayang Nursing College and Nkhoma College of Nursing (see Appendix 3 and 4).

3.9.2 INFORMED CONSENT

Appropriate information regarding the study, the purpose of this study, the data collection process and participants' role in the study, inconveniences, and the benefits as related to the study was first provided to participants before the study to enable the participants to make an informed decision. After a well clarified explanation of their role in this study and sufficient appreciation of their participation, the participants were requested to participate in this study voluntarily through a hand written informed consent (See Appendix 2).

3.9.3 RIGHT TO ANONYMITY AND CONFIDENTIALITY

F2F interviews and FGDs were conducted in private rooms where only participants who were willing to be in the study were allowed to be present. Furthermore, the participants had to code themselves as anonymous. Access to the taped and transcribed responses was restricted as they were stored in a locked drawer where only the researcher and supervisors of the research had access. The soft copy findings were kept in a password protected file so as to ensure that there's privacy and protection of findings. The responses were destroyed after the approval of the study report by the research supervisor.

3.9.4 PRINCIPLE OF JUSTICE

Participants had a chance to ask questions to guarantee clarity and accuracy of the responses. The participants were also given contact details so that they could contact the researcher or Mzuzu University Ethics and Research Committee at any given time.

3.9.5 PRINCIPLE OF BENEFICENCE

The researcher made sure that only relevant questions asked and answered during the study and made sure that the information was neither given to anyone else nor used against participants in any way. No direct or monetary benefits were guaranteed to the participants, but they were neither intimidated and informed in advance that their information would help improve nursing education in Malawi.

3.9.6 RESPECT FOR HUMAN DIGNITY

All final year nursing students who participated in the study were treated with respect.

3.9.7 TRUSTWORTHINESS

Trustworthiness of this study was heightened by carefully considering the following; credibility, conformability, transferability and reflexivity.

3.9.7.1 Credibility

Credibility is being sure that the data and the interpretation of the data analysis is an accurate representation of the data supplied by the participants in the situation of the study (Lincoln & Guba 1985 in Hanson et al., 2019; Polit & Beck, 2017). Hanson et al. (2019) stated that the credibility of the findings and judgements and the degree to which they give a full and practical interpretation of the data are set. To ensure that it creates buoyancy in its outcome because the final year nurses students would think the outcome is indeed correct and real. Credibility can be attained through the use of triangulation, peer debriefing, prolonged engagement, persistent observation and member checking (Guba & Lincoln, 1989 as cited in Enworo 2023, Forero et al. 2018, Dodgson 2019). For this criterion, the following approaches were applied in the study to ensure trustworthiness;

Peer Debriefing- Being a new researcher, peer debriefing was of great importance. After collecting data, debriefing sessions were conducted with the peers who could offer insight on the findings. Similarly, during data analysis, work was done together with the peers. Seeking feedback from others helped validate interpretations as well as avoid biases. Further, suggestions were provided to improve the work.

This study also ensured credibility by letting the researcher return to the participants for validation of the findings. The last step in Collaizzi's Seven Step Approach recommends that the researcher returns to participants with the fundamental structure statement to verify with them on their experiences (Morrow et al., 2015). Involving the final year nursing students, the verification process guaranteed that their viewpoints and learning experiences were accurately represented, offering a chance for corrections to be made to the interpretations.

3.9.7.2 Dependability

Dependability is obtaining the same results assuming that if the study were extended, all circumstances would be identical (Morse, 2015). As a result, the methods are expected to be consistent and traceable, clearly described and their procedures and findings fully documented (Hanson et al., 2019).

This study detailed documentation provides future researchers the level of information required by the reader to replicate the study in his or her own context (Morse, 2015). Triangulation as well as the use of audit trail and methodological documentation can achieve dependability (Guba and Lincoln (1989) cited in Ahmed 2024).

The strategies that applied to this study are discussed as follows;

Rich description: This entails providing adequate information of a research background in a qualitative study (Guba and Lincoln 1982, as cited in Enworo, 2023). Rich description is clear about the purpose of the research as well as the types of questions and data to be collected that would serve the research purpose most appropriate (Morse, 2018). The fact that the researcher fulfilled all corruption from the stage of proposal is evidence that he met this criterion. In order to make the project dependable, data collection instruments were appropriate to allow the final year nursing students to provide in depth responses on learning experience during clinical handover (Hanson et al., 2019) and the researcher made appropriate research method related choices, including choice of appropriate and necessary sample.

Documentation of the research process is to a great extent, transparent, and allows for replication of research by other researchers following the same procedure and understanding decision making (Enworo, 2023).

3.9.7.3 Confirmability

Confirmability assisted and showed that the results were not merely the results of the researcher's imagination but they were linked to data (Enworo, 2023). This was done to extend the assurance that the findings from the research study would be confirmed by other researchers (Forero et al., 2018). As a result, data presented were agreed to have meaning, relevant and accurate by two independent auditors. The strategies that were applicable to this study to achieve

conformability were triangulation and reflexivity (Guba & Lincoln, 1982 as cited in Enworo, 2023).

Triangulation- The methodological triangulation was used in the study. It therefore combined two data collection approaches in the same method (Flick, 2018). For this, individual face-to-face interviews were utilised (Flick 2018). Triangulation proved to be useful such that through triangulation, it led to the acquisition of rich data in that it produced complete findings such that the researcher was in a position to acquire a deeper understanding of the phenomenon.

Reflexivity- Guba and Lincoln (1982) as cited in Enworo, (2023) describe the activities in reflexivity as ‘attempting to uncover one’s underlying epistemological assumptions, reasons for formulating the study in a particular way and one’s implicit assumptions, biases or prejudices about the context or problem’. This research achieved reflexivity by utilising ‘bracketing’ in which the researcher’s preconceptions, experience and theoretical learnings were held back to prevent the researchers’ assumptions from directly affecting the research process when listening to and reflecting on the lived experiences of participants. This was achieved through continuous reflection by use of reflective diary as well as self-questioning in order to deal with pre-understanding considering the relationship between the researcher and the participants (nurses and nursing students). For the purposes of this study, the researcher actually kept a reflexive journal and applied reflexivity as a way of clarifying researcher bias in the study. The process of bracketing was ongoing and it was utilised throughout the course of this study. Intuiting, whereby the researcher was open to meaning of learned experiences during clinical handover as experienced by the research participant was also used. Conformability in the study was also established by incorporating the participants’ responses in their own words, expressed as direct quotes in the ‘results’ section as suggested by Hanson et al. (2019).

3.9.7.4 Transferability

Transferability is the ability to generalise or apply the results of a qualitative inquiry to other situations and populations (Forero et al., 2018; Liamputtong, 2019). Transferability is possible through thick descriptions, purposive sampling and reflexivity (Lincoln & Guba 1985 as cited in Enworo, 2023). The obligation then lies with the reader to determine whether the findings and conclusions reflect their own context and experiences (Forero et al., 2018).

The strategies that were utilised in this study to accomplish transferability were the following;

Sampling techniques (purposive sampling) - This sampling technique was applied in this study and it serves to widen the field of generalisation of the study results to other contexts or settings. For example, the study participants were selected through purposive sampling and they were students from the final year of nursing, the population of which were aware and were the key actors to exploring learning experiences in clinical handover, to allow for in depth evaluation of their experiences.

Saturation - The researcher ensured saturations to further warrant the generalisation or transferability of the results of this qualitative study to other contexts or settings.

During data collection, the researcher found that students repeated the said information indicating repetition or saturation from the students. At that point, sample size was being decided if it was enough. After realising that no new information was being extracted, it was evident that the findings had gathered maximum information on the learning experiences of final year nursing students during handover (Malterud et al., 2016; Moser & Korstjens, 2018).

Thick descriptions: The study also provided excellent descriptions of the research context, the students, and the methods such that readers would be able to assess whether students in their context look similar and thus whether findings from the study might be applicable and relevant in their own settings or situation.

Table 2 below is a summary of the trustworthiness criteria usage in the study;

Table 2. The application of the trustworthiness criterion/component summarized

Trustworthiness criteria/component	Original strategies	Strategies applied in this study to achieve trustworthiness
Credibility	Prolonged engagement	Not applicable
	Persistent observation	Not applicable
	Triangulation	‘within methods’ triangulation
	Peer debriefing	Debriefing (with supervisors)
	Member checking (process and terminal)	Member checking (Participants validated results)
Dependability	Triangulation	Triangulation
	Method documentation	Rich method documentation
	Audit trail	Not done
Confirmability	Triangulation	Triangulation
	Audit trail	Not done
	Reflexivity	Reflexivity
Transferability	Purposive sampling	Purposive sampling
	Reflexivity	Reflexivity
	Thick descriptions	Thick descriptions

3.10 STUDY LIMITATIONS

Because the research was performed in one region only, then it cannot be transferred to the rest of the country; this is because the experiences given in this research may not be representative of the experiences of others students in other parts of the country.

The data collection took place in one college during the week before the examinations. This resulted in very busy participants for focused group discussions. Therefore, this may have influenced or even affected rushed responses from the participants. Furthermore, the researcher faced challenges to comprehensively bracket the assumptions and past experiences since clinical handover is part of the researcher's daily activity as a nurse.

3.11 SUMMARY

As presented above, this chapter has described the study methodology. Furthermore, it has given an overview of how data collection, management and analysis procedures were done. In addition, it has discussed ethical considerations that were applied in the study to safeguard the researcher, research participants and the data.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 INTRODUCTION

Learning experiences of final year nursing students during clinical handover in central region nursing colleges are presented in this chapter.

Socio- demographic data is presented in Table 3 as a start point of the result presentation section, followed by an elaboration of the emergent themes. Results are presented in form of four themes and fourteen subthemes which were obtained from the data analysis as summarized in Table 4.

Results of the study are presented with quotes to reflect participants' learning experiences of clinical handover in face to face interviews and focus group discussions.

4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

The findings indicated that the majority (64%) of the participants who were involved in the study were females, with ages ranging from 19-26 years. The males presented 36% of the total participants with age range of 20-24 years. All participants were in their final year at a nursing college.

Table 3: socio- demographic characteristics of the participants.

SEX	AGE RANGE	TOTAL NUMBER
Male	20-24	10
Female	19-26	18

4.2 RESULTS

Two focus group discussions and thirteen face to face interviews were carried out with twenty eight final year student nurses. The ages of the students was between nineteen and twenty six years old.

Four themes and fourteen subthemes was deriving from data analysis (See Table 4). These were; Student learning and teaching strategies, facilitators of learning during clinical handover, Barriers to learning during clinical handover and Strategies for improving maximum learning during clinical handover.

Table 4: Summary of themes and subthemes which emerged from the analysis of data.

THEME	SUBTHEMES
Student teaching and learning strategies	Question and answer method, Discussion method, Lecture method
Facilitators to learning during clinical handover	Student involvement Comprehensive knowledge/skills Presence of different cadres during clinical handover
Barriers to learning during clinical handover	Poor time management Limited resources Clinical teacher's lack of knowledge and skills Poor handover attendance Poor nurse/student interpersonal relationships
Improvement strategies	Clinical teachers' acquisition of updated knowledge/skills and attitudes. Nurse/students' dedication to learning. Creation of conducive leaning environment.

4.2.1 STUDENT TEACHING AND LEARNING STRATEGIES

This theme identified a number of strategies that are used in teaching and learning during clinical handover. Students centered teaching strategies as well as teacher centered teaching strategies

were simultaneously being used. The following subthemes were mentioned; question and answer method, discussions method and lecture method.

4.2.1.1 Question and answer method

The clinical teachers utilized question and answer technique to include and impart knowledge to the students during clinical handover as established in this study. A number of questions were formulated by clinical staff and posed to students. The questions were asked to students to facilitate patient safety through clarity of patient information. For example questions focused on patient assessments or condition. In addition, the strategy enabled the teachers to gather information on the student's level of understanding and knowledge. However students used the method by mainly to asking questions in order to learn new material or to seek understanding on a difficult area of study. The participants stated that the question and answer strategy made them eager to learn and it promoted learning. They searched for more knowledge information to compliment what was learnt during handover. Participants revealed that they studied hard so that they were able to respond to question posed to them during handover. Participants reported feeling embarrassed if unable to answer questions during clinical handover.

The following excerpts provide participants' experiences with questioning and answer teaching strategy:

'Sometimes questions are asked to understand the care that has been given, to evaluate if it is appropriate and then change it if need be. This provides an opportunity for corrections where patient management was not proper.' (IP2)

'As students we are also asked a lot of questions during clinical handover, sometimes we may want to answer the questions but we lack the information, so these questions motivates us to be able to reflect and find out more about the conditions.' (FD3)

'In morning clinical handovers, students meet conditions that they are not familiar with, so when more questions are asked to the one presenting on a condition and explanations are made on the condition, as students we gain more and we later refer back to our notes and this helps us to understand the condition better.' (FD2)

'.. as students we are asked questions during clinical handover, if we fail to answer them, clinical teachers provide explanations.....' (IP3)

‘....so as students we are asked questions which prompt us to find out more, for example on internet or student notes.’ (FD4)

Participants further explained:

‘During clinical handovers, students are often asked a lot of questions, because of that, students are prompted to read more to avoid embarrassment that comes by failing to answer questions in clinical handovers. In this way students greatly improve and they eventually become competent.’ (FD8)

‘When the questions are used, students become attentive because they do not want to be embarrassed when they fail to answer questions.’ (IP3)

Participants felt that, the question and answer method enabled them to always be ready and well prepared to participate during clinical handover.

4.2.1.2 Discussion method

Participants stated that the sharing of clinical knowledge, advanced skills and appropriate attitudes was enhanced with the use of discussions as a teaching method during clinical handover. Students said that participation during clinical handover when discussion method was used entailed asking or responding to questions as well as giving opinion or views during case based presentations. Findings revealed that when discussions method was used to teach nursing students, different clinical illnesses or patient management care was taught. Findings showed that students’ interest was captured through discussions such that students were motivated to practice.

Participants remarked:

‘We gain much knowledge during (morning) clinical handovers; this is so because different medical/surgical conditions are discussed during handovers such that when we go to our respective wards we are interested to take part in the management of patients with different conditions that were discussed during the handovers.’ (FD7)

‘When a report is read... the seniors initiate a discussion, for example they ask on any missing information, the positives or negatives identified from the read report and where necessary, hints are provided to help in recognition of important issues... ’ (IP3).

'sometimes other conditions are not explained properly in class but during clinical handovers we are able to relate and gain more understanding because during discussions there are explanations that help us create a picture of something like 'aaa so this is how it is' this also help us to probe more.' (FD4)

'...the discussions and the questions that follow, help us to learn even more.' (FD3)

'I like discussions with facts; so when colleagues debate on the best management of a client during handovers I become more interested and at the end I learn something from the discussions.' (FD8)

'The discussions were useful because they allowed us to learn a lot. Clinical teachers gave more explanations and the best course of actions on the discussed clinical illnesses.' (IP8)

Participants noted that they had a chance to understand different conditions and their management through detailed deliberations and explanations provided at clinical handover. Participants also noted that they had a chance to apply what they had learnt.

4.2.1.3 Lecture method

Findings revealed that students gained knowledge during handover by means of presentations. According to students, power point presentations allowed information delivered in one presentation to be comprehensive. The presentations were also a source of motivation for students to attend the clinical handovers and it boosted their confidence whenever it was their chance to present. Participants expressed their contentment by saying for example:

'I like the presentations that happen at the morning clinical handovers. I always look forward to handover time because presentations that are done sometimes new topics are taught or they are presentations that I did not understand in class.' (FD1)

'The teaching strategies that they use are very effective because they are well detailed. For example if they want to present on pneumonia it means they will describe the disease, its causes, management and complications and this helps us know how to handle real patients.' (FD3)

‘.....they teach students using power point presentations. During power point presentations students learn a lot for example causes of illnesses or their management.’ (FD10)

‘...they use power point presentations when teaching students to facilitate understanding.’ (FD4)

‘Presentations are more useful in teaching because they make students to prepare well by studying because they know that they are going to present at the clinical handover where they may be asked different questions so they study more.’ (FD12)

Participants’ views indicated that presentations during clinical handovers were effective in their learning and they were satisfied.

4.2.2 FACILITATORS OF LEARNING DURING CLINICAL HANDOVER

This theme describes motivating factors that influence student learning during clinical handover. Student involvement, comprehensive knowledge and skills as well as presence of different cadres during handover were the subtheme for the ‘facilitators to student learning during clinical handover’.

4.2.2.1 Student involvement

The students in the study indicated that they had the opportunity to gain knowledge and skills by being involved during clinical handover. Students learnt through observation and experience. They stated that different facilities have different learning provisions for students during handover. Participants also noted that health institutions had varying policies in terms of what a student nurse ought to do in terms of handover. Participants said that other clinical sites encouraged students’ presence and participation through reading reports during clinical handovers while others were not concerned whether one is present during handover or not. Students noted that the mandatory attendance of handover by nursing students facilitated students’ awareness of their roles and responsibilities. Participants gave the following account:

‘Students that were on day/night shift are often the ones who present the general conditions of patients that were in the wards for that shift.’ (FD4)

'If we were on night duty we were given a task to read the handover reports during clinical handover.' (IP8)

'As students we are expected to give handover reports and answer different questions on how we managed our patients when we are on night duty. Senior nurses actually tell us to read the report during clinical handover' (FD3)

'....I may be told to give a clinical handover report, for example tomorrow. This forces me to prepare by understanding the clinical conditions of the patients in the ward and this fostered learning.' (IP3)

In this study, not only did the participants say they attend and observe clinical handovers or read reports, but they also said that they were given different tasks to perform during or after clinical handover to facilitate learning. For example; they were instructed to take up the role of being teachers to others by preparing and delivering a lesson on different clinical illnesses either by a power point presentation or giving patient progress reports after caring for patients that were the centre of discussions in the clinical handover. Participants revealed that other tasks were given to students when clinical teachers noted that students do not understand a particular sickness during clinical handover deliberations. Clinical teachers gave assignments so that students find out more on patients' clinical conditions for themselves and then share to the group.

Participants narrated:

'We are given a lot of presentations as our assignment especially the conditions that we have shown lack of knowledge so that we find out more about such conditions.' (FD5)

'Students make presentations during clinical handover, clinical teachers then comment on the presentations, making corrections as well as making emphasis on important areas.' (IP4)

'Myself I was told to present on eclampsia, I can confidently say now I know it very well because I read a lot about it' (IP2)

'During clinical handover students are taught about different conditions, then are instructed to provide direct care to patients who have been reported to have the discussed condition.' (FD6)

‘... Students’ may be told; ‘you take care of the patient then you give us feedback on what you have done for the patient.’ (FD2)

Participants were contented with the approach of being given a responsibility to care for a sick person and present on their progress during handover. This is shown in the following sentiments;

‘Teaching students what ought to be done on a patient during handover and ordering them to take care of the patient is helpful because whatever students practically do they don’t really forget. It also help students to gain experience and it provides an opportunity to ask more questions hence increased understand.’ (FD2)

‘During clinical handovers students may also be assigned to take care of patients that are discussed. This provide a chance to students to provide quality care to patients because they know they eventually will have to give a report/feedback on how the patient is progressing. Such assignment enables students to gain more knowledge.’(FD12)

‘We were given opportunities to present during handover, it was exciting and we would go to clinical handover so that maybe we would be chosen to present, this was our chance to boost our confidence.’ (IP8)

The study indicated that students had the feeling of belonging to the clinical team in most hospitals as they were involved during clinical handover. Students said that they were prioritised and they were provided with the chance to take part in deliberations during clinical handovers.

The participants explained:

‘Students are always given the first chance to give clinical handover report and make presentations and not qualified nurses, such that questions and comments will first be directed to students then later to qualified nurses so everyone will be involved in the learning and its really funny.’ (FD1).

‘The principal nursing officer and the in-charges make sure that every student participates in the clinical handovers and they also encourage us to ask questions and give us assignments.....’ (FD1)

Students said this made the learning process exciting.

4.2.2.2 Comprehensive knowledge and skills

Clinical handovers exposed nursing students to new information from clinical practice that helped them to remain well-versed. The research participants verified that clinical handover functions as a tool which enables them to enhance their comprehension of classroom materials (Gap bridging opportunity). Study participants observed that medical and surgical conditions discussed during handover sessions were repeated more often, which helped them with retention of their education material.

Students testified to consistent up to date information that clinical handover provides:

‘In our profession things change each and every day. Most classroom information is outdated so we usually find different management of conditions in the clinical area so during clinical handovers new information is learnt.’ (FD4)

‘ ... We are able to learn new things that were not taught in class. Sometimes it also helps us to understand better the topic/conditions that were difficult to understand during classroom learning.’ (FD6)

‘Handover helps us learn new things that have been introduced or recently changed. For example in class we learnt of different dosing of clients with pre eclampsia and eclampsia but when we are here we have learnt that it was reviewed and the dosing is the same now.’ (FD2)

‘...we are also updated on new developments or protocols that are being used in the clinical area.’ (IP2)

Participants appreciated the new knowledge they got during clinical handovers.

Additionally, this research showed that the clinical handover learning component is wide. It was found that several skills which are critical in learning can be covered through clinical handover, for example communication. The students in this study indicated that others who did not possess proper communication skills improved by continued practise during clinical handover. The following narration illustrates this:

‘...Some students are afraid to speak to a group of people, clinical handover may help such students. I have noted that if one makes a mistake today when giving handover, colleagues correct them and they improve next time.’ (FD1)

The study findings indicated that clinical handover has the possibility of impacting nursing students with good communication abilities.

The participants said that they were able to experience and learn from patients’ conditions that were rarely found in different Malawian hospitals. This was made possible by clinical handover according to the participants. Students elaborated that during clinical placements, it is not always possible to encounter all the illnesses or procedures that were taught in class. Participants further noted that other clinical sites deprive them of learning opportunities, however when students rotate in the clinical sites and they attend handovers they may be able to encounter a patient or clinical case that they have not been able to learn from in the previous learning situations. Such moments allow for redemption of the lost time. Thus maximised learning opportunities.

Participant commented:

‘Clinical handover help us to learn conditions that we had no opportunity to experience/learn about during other allocations because a lot of clinical conditions are discussed during clinical handover.’ (FD2)

Participants noted that clinical handover compliments missed opportunities and experiences.

4.2.2.3 Presence of different cadres during clinical handover

The participants also revealed that the presence of different personnel and cadre during clinical handover helps in their learning as they contribute in sharing of knowledge and sometimes their presence was simply a motivator.

‘Participation of in charges and other qualified nurses in the morning clinical handover is important. This reassures students that if they ask questions, they will be answered properly.’ (FD13)

‘When students attend handover they may be motivated to find qualified nurses and doctors with different knowledge from whom they will gain new knowledge.’ (IP3)

‘The presence of highly ranked health personnel like the Principal Nursing Officer and the District Health Officer during handovers boost morale’ (FD1)

Participants appreciated the presence of different health personnel with different rankings during clinical handover.

4.2.3 BARRIERS TO LEARNING DURING CLINICAL HANDOVER

This theme depicts hindrances to educative clinical handover. The underlying five subthemes that it contains are poor time management, limited resources, lack of knowledge, poor handover attendance and poor nurse/student interpersonal relationships.

4.2.3.1 Poor time management

Students noted that clinical handovers start and end late. They mentioned that lack of time management throughout clinical handovers created negative effects on the succeeding educational activities. Students reported that their learning time for example, power point presentations was replaced by other clinical handovers activities when there was inadequate time. This implied that teaching and learning was considered of little importance as they were not prioritized. This affected their learning. Lateness also affected students’ daily plans. Students felt tempted to miss clinical handovers so that they are able to accomplish their daily objectives. Participants remarked:

‘...lack of time management. I remember one time the morning clinical handover was supposed to start at 7;30am but then most workers came at 7;40am or others at 8am and then maybe there is a presentation, so instead of giving that presentation 20mins,they allocate 10 minutes, this affects the delivery of the presentations as well as follow up questions or comments.’ (FD7)

‘Students have their own daily objectives for example bathing a patient. So a handover that ends late may interrupt student progress on learning for the day therefore they may opt to skip clinical handover in order to fulfill their plans in good time.’ (IP4)

4.2.3.2 Limited resources

Participants revealed that some facilities lacked guidelines or protocols and proper infrastructure for clinical handover. For example, conference/report rooms were small and not enough such that students stood outside the clinical handover rooms. The following excerpt illustrates this:

‘Students stand or sit outside the clinical handover room to create space for the qualified staff, this affects their learning; they lose concentration and focus, they feel they are not part of those who are inside and may choose not to listen or leave the place or just be on their phones.’ (IP13)

‘You go to the facility and you find the rooms where handover is happening is too small, some people are also standing....the room is small so it’s only seniors who find a place to sit inside whilst most students stand outside.’ (IP3)

The following were the participants’ sentiments on other resources:

‘...some facilities do not offer systematic protocol for clinical handovers, they simply make it short and inconsistent, and this makes it hard for student learning.’ (FD4)

Participants failed to learn when clinical handover was unsystematic.

4.2.3.3 Clinical teachers’ lack of knowledge

Findings showed that clinical personnel entrusted with the responsibility to teach nursing students lacked essential knowledge, skills as well as proper attitudes. Participants stated that this affected learning process as they felt unsure of the clinical teacher. It was found that nurses fail to help students when they require their assistance because they themselves lack knowledge. Therefore, they find excuses to try to disguise their lack of knowledge.

Participants’ explained:

‘... they are unable to even properly fill the partograph....this makes the students lose trust, they may not even ask such nurses when they have questions.’ (FD1)

‘... Knowledge of clinical personnel also matters. When students sense that their clinical teachers have less knowledge or skills they are demotivated to attend the clinical handover because they feel they may not gain the necessary information from them.’ (FD4)

'Other nurses lack knowledge, to the point of even failing to manage a patient .When we encounter difficult condition/situation we reach out to qualified nurses however we discover that these nurses are literally stuck they do not even know what to do themselves. They tell us to go and study about the condition at home yet we need the solution immediately.' (IP11)

Participants expressed reluctance to learn from other clinical teachers whom they perceive to lack knowledge.

4.2.3.4 Poor handover attendance

Most nurses exclude themselves from clinical handovers including the highest-ranking nursing professionals in district hospitals such as the district nursing officers. This occurrence results in negative outcomes like poor student attendance and participation. Participants said the following in this regard:

The study also found that most nurses, including the highly ranked nursing professionals like the district nursing officers, do not attend clinical handovers. This consequently affects students' attendance and participation too. Participants said the following in this regard:

'...Most nurses don't go for clinical handovers, this affect the quality of clinical handovers such that the students even fail to ask questions because there is nobody who can respond to the questions especially when it's only the students who are available.' (FD5)

'Most qualified nurses do not attend the morning handovers... maybe this starts with the leaders... Some nurses will even tell you 'aaa you will stop going to handover one day when you become qualified.' (IP3)

'Lack of interest by qualified medical practitioners to attend morning report...this affects student learning as it reduces the motivation of students to attend and participate in the morning clinical handover.' (FD15)

'When the qualified nurses, doctors don't attend the morning handover, students start to view handover as useless.' (IP3)

Participants noted that qualified personnel were not patronising clinical handover and this has implications on their learning during clinical handover.

4.2.3.5 Poor nurse/student interpersonal relationships

Poor student/nurse relationships as a result of bad attitudes of nurses towards students was mentioned by the participants. Participants noted that sometimes other qualified staff in certain districts were not comfortable to give students opportunities or teach them during clinical handover such that they would deliberately conduct clinical handover at unusual time when students are not available to patronize the clinical handover. For example, very early in the morning. The students said:

‘..... Sometimes they would do bedside clinical handovers earlier than the usual time such that students would find that they have finished handover session by the time they arrive.’ (FD11)

‘Other qualified nurses would not show any regard of the presence of students during clinical handovers and were not involving us.’ (FD1)

‘Sometimes they would just discuss amongst themselves (qualified staff) not regarding students...’ (FD5)

‘Other doctors and nurses act as if the students are disturbing them this results in students refraining from associating with them.’ (IP1)

The sentiments demonstrate that the students were not happy when they were not involved during clinical handovers. They felt sidelined.

Students felt other clinical teachers intimidated them when they asked questions. Clinical teachers resorted to giving students punishment instead of teaching them when they ask questions, others opted to responding harshly, while others gave assignments. This is what students said:

‘...other clinical teachers do not respond politely to students whenever they ask questions for example they would say; ‘in which year are you? You are in final year and you don’t know anything about that?’ (FD4)

‘Qualified staff don’t answer students politely, for example when a student ask a question, they may say ‘knowledge is expensive’ and they do not answer the question.’ (FD3)

‘.... If a student fails to answer a question they are punished by either being given a presentation to make or are told to go into the hospitals library to read whilst their friends have gone to the ward. For slow students this exercise may take them the whole day meaning that they have failed to go to the ward on this day ...’ (FD7)

Participants further explained:

‘....whenever students ask questions they don’t respond, they will ask the one asking what they think and then give them as an assignment to present. We are not against assignments however when often times questions turn to assignments students refrain from asking because they are afraid they will be given an assignment instead of an answer.’ (FD3)

‘.....sometimes we were asked beyond what we knew so it felt like torture other than learning. Worse still they keep asking more questions even when you are continually failing to answer instead of asking others to help, they want you to be embarrassed. Then you are told to make a presentation... when it comes to this, myself also I would prefer not to attend handovers.’ (IP1)

‘doctors, nurses tend to favor students from their previous schools ,so they give full focus to these students and neglect the others.....because the student who is presenting is not from their previous school, nurses sometimes ask a lot of questions to find mistakes.’ (IP2)

Participants felt that they were not properly handled during question and answer sessions during handover.

The study also found that clinical teachers belittling and insensible behaviours towards students like shouting, laughing, interrupting them when speaking, sidelining them or making unfair comments to embarrass students when they make mistakes lead to reduced confidence, frustration and demotivation, thus negatively affecting students’ learning. Furthermore, students

complained that increased pressure to engage in intimacy relationships with clinical teachers hindered their learning.

The following excerpts provide participants' explanations:

'..As students we are also affected by the attitudes of nurse in charges. The way qualified nurses approach students when they have made a mistake is not good, they instil fear and this affects them psychologically. This makes students fail to ask them questions.' (FD6)

'...During bedside handover, sometimes the qualified nurses don't speak respectfully to student especially when they have not done something well. It becomes embarrassing to students as this is done in front of patients.' (FD8)

'....the issues of intimate relationships affect student learning. There are some nurse in charges or other colleagues we meet in hospital they like asking students out, so we know how relationships work ...its either you are committed physically or psychologically. It becomes even too difficult when you refuse to be in relationship with them. They sometimes refuse to sign for you for the procedure you have done and when its clinical handover time as a student you may fail to freely participate thus affecting your learning.' (FD6)

Participants felt nurses were rude and hostile to students. Furthermore, participants felt that the nurses pile most of their responsibilities to them such that they miss learning moments. Participants narrated their experiences:

'In other form of clinical handover like bedside....for example if there is a discussion and then members want to know the immediate vital signs, qualified personnel take advantage of students by giving us tasks like to get vital signs kit to check vital signs but the discussions continues so by the time the student arrives, the clinical handover has already been done, other educative discussions about the patient have finished and the student was left out.' (FD5)

Students expressed their worries on the shift of roles and responsibilities from qualified nurses to them as it affected educational gains during handover.

4.2.4 IMPROVEMENT STRATEGIES

The theme outlines specific recommendations which help students learn better during clinical handover situations. Three subthemes that emerged are teachers' acquisition of updated knowledge, skills and attitudes, nurses'/students' dedication to learning as well as creation of a conducive learning environment.

4.2.4.1 Clinical teachers' acquisition of updated knowledge/skills and attitudes

Participants in this study suggested that the teachers who are not competent should work towards attaining expertise in the health field to be able to facilitate learning. Participants further noted humbleness as one attribute necessary for incompetent clinical staff members in pursuit to achieve competence. Other suggested ways to achieve this included consistent seminars and supervision. The participant said the following:

'Nurses and clinicians should have enough and updated knowledge which they will be able to share to students. This may be done by regular trainings. This is essential for students to gain proper knowledge, skills and attitudes.' (FD14)

'Clinical staff that lack knowledge need to be humble enough to ask for assistance from colleagues and hospitals or departments should schedule Continuing Professional Development (CPD) sessions for its staff. Continuous supervision can also help.' (IP12)

4.2.4.2 Nurses'/students' dedication to teaching and learning

Participants stated that nurses who engage in student teaching and learning ought to be ready to help students achieve their education goals. Students mentioned that a clinical teacher's willingness to teach and availability during clinical handover were necessary. Furthermore, participants indicated that students should be self-motivated to learn. The participants also suggested that students should have objectives. Participants said the following:

'Qualified nurses should be dedicated to their work and should be willing to help/teach students.' (FD6)

'Students have to initiate their own learning. They should have objectives and must approach the qualified nurses to help them achieve their objectives/care for patients that were discussed during clinical handover.' (FD5)

'Students should also be willing to learn, sometimes we are very difficult people to handle. For example a qualified nurse may call for help during an emergency, students will not go, they run away, this shows that the students are not committed to learning, however this will backfire when we become qualified nurses, we may fail to teach others because we lack knowledge.' (IP1)

Participants emphasised the need for the students to be active in their own learning.

Students reported that nursing professionals should exhibit motivation toward making handover sessions both educational and unforgettable for students. Furthermore, participants suggested that students should work towards improvement of their self-learning abilities. However, this suggestion received numerous excuses. This is shown in the following responses:

'I disagree on student own initiative. Sometimes it depends on the qualified staff that is available, others have bad attitudes towards students so even if you plan to learn if there is a qualified staff who will not listen to you, you don't attempt to ask rather you wait for another day.' (FD3)

'I also disagree with student own initiative. Sometimes students have well written and planned objectives but qualified staff disrupt this by asking students to do other tasks and students are afraid to refuse because they are afraid to be labelled as rude or others may inform the lecturers.' (FD6)

The suggestion for students to be active in their own learning received a lot of criticism from the participants.

4.2.4.3. Creation of a conducive learning environment

Participants noted that improvement of communication between students and clinical teachers was paramount. In line with the suggestion, students indicated that respectful language should be used in conversations. Participants also pressed a value on putting their learning first by avoiding shifting of roles with nurses. Furthermore, participants said professionalism should be observed by both the teachers and the students when dealing with romantic relationships. Participants remarked;

'During clinical handovers, the qualified nurses should speak to students respectfully taking into consideration that sometimes patients are also there.' (FD7)

‘Qualified staff should stop underrating students. Students can contribute a lot too but they are afraid that if they ask a question or make a comment their question will turn into an assignment or may be insulted by being told they are not smart or are rude.’ (FD3)

‘Students have to be given priority to learn. Hospitals have to remember that students are there to learn and not to cover shortage for instant sending students on unnecessary errands during learning have to be minimized so that students concentrate on their learning.’ (FD5)

‘Students need to be taught emotional intelligence as well so that they know how to react/behave during handovers.’ (IP9)

‘Nurses as well as students need to stick to code of conduct, students become shy to ask somebody who once wanted to be their girlfriend/boyfriend, yet they still have to help patients together so it becomes hard to lender quality services.’ (FD5)

The participants further suggested that the clinical teachers should be able to notice their positive side or good work since this can motivate them to do excellent work. They said;

‘When we are asked questions and we answer correctly we should be encouraged or applauded.’ (IP8)

‘I think they should be able to recognize the effort when we have done an assignment. They should at least say ‘you have done it well’ so that next time we do it even better.’ (IP7).

Participants also emphasised on availability of resources. Students said clinical handover rooms needed to be spacious and well ventilated to support learning. Students further recognized a need for the formulation of a handover schedule and availability of a designated area in the ward for clinical handover for the enhancement of nurse student educational experiences.

This is what was said;

‘The learning environment needs to be conducive for a student to be attentive. It should be well ventilated without bad odor so that students are comfortable enough to concentrate.’ (FD6)

‘ I suggest a special place to be created in the wards for clinical handovers so that student maximize their learning during clinical handovers.’ (FD5)

‘Facilities that do not have enough rooms should at least have a time table of which students are to attend handover. The students should be put in groups so that they are spread through the week days to avoid congestion in morning handovers and to give equal chance for all to learn during handover.’ (IP3)

4.3 SUMMARY

This chapter has surmised that students are taught during clinical handover using both student centered and teacher centred methods. There are numerous opportunities to learn during clinical handover which can be facilitated by student involvement, comprehensive skills/knowledge available at clinical handover as well as availability of different personnel during clinical handover. Participants highlighted challenges encountered with learning and suggestion to combat them are discussed.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter provides an ultimate discussion of the findings of the present study which explored the lived learning experiences of final year nursing students during clinical handover in Malawi. This chapter mainly dwells on the identified themes which are the student teaching and learning strategies utilized during clinical handover, facilitators of nursing student learning during clinical handover, and barriers to nursing student learning during clinical handover with strategies that would improve learning during clinical handover.

5.1. STUDENT TEACHING AND LEARNING STRATEGIES USED DURING CLINICAL HANDOVER

Participants in the study stated that students' centered teaching strategies as well as teacher centered teaching strategies were simultaneously being used. The participants mentioned use of question-and-answer, discussions, as well as lecture method, as teaching strategies by clinical teachers. The use of student-centered approach is of paramount importance in nursing because it helps in raising a generation of nurses that are empowered and are able to make complex decisions (Freire, 2020). In addition, the student centered approach foster innovation as well as the ability to create (Kalsoom et al., 2020). Contrary to this study findings, results in a different study showed that in nursing, a majority of teachers still use traditional teaching methods to teach students (Subhan, 2014). The study further noted that such practices do not promote goodness in nursing education since the students that are subjected to these methods prove to face problems in critical thinking (Subhan, 2014). Similarly, another study done in Iran noted that higher learning institutions still used traditional methods to teach medical students (Aslami et al., 2020).

Participants revealed that there is comprehensive impartation of knowledge and skills during handover including communication skills. Communication skills are fostered during handover through question and answer teaching methodology (Chorzempa & Lapidus; Knezic et al., 2013).

The participants stated that the question and answer instruction was used in handover and it made them eager to learn and it promoted knowledge. A research study supported this study

results as it also found that members attending clinical handover may advance their knowledge if they ask questions (Vretare & Anderzen-Carlsson, 2020). Furthermore, the study noted that health care professionals are able to explain their experiences when asked questions about the presented cases in handover such that others are also able to learn from such experiences (Vretare & Anderzen-Carlsson, 2020). In addition, Ooi et al., (2020) found that when questions were formulated by consultants during handover and then posed to students, they stimulated their learning through exchange of ideas. Furthermore, learning is facilitated where students are allowed to ask question or are able to respond to questions during educative discussions (Giske et al., 2018; Rixon et al., 2017).

Questions in this study were asked to students by clinical teachers to facilitate patient safety through clarity of patient information as well as to gather data on the student's level of understanding and knowledge. However students asked questions so as to learn new material or to seek understanding on a difficult area of study. These research findings are supported by earlier study findings that also gathered that, teachers asked questions to students, and from the responses, they were able to elicit how much of a topic or subject the students knew (Ishtiaq et al., 2024). The study further noted that whenever students asked questions, they were seeking clarity on something they had little knowledge of or they did not know (Ishtiaq et al., 2024). This is similarly applied during educative clinical handover whereby those who lack knowledge are able to seek clearance or learn new information by asking questions (Vacek & Liesveld, 2020).

This study's responses did not fully describe whether the questions asked by the clinical teachers provoked critical thinking in them or not. However, other study results showed that when right questions are used, individuals are prompted to start thinking deeply such that they become critical thinkers (Merisier et al., 2018). Critical thinking may be developed during clinical handover as students are required to analyse patient clinical information, prioritise care based on the data gathered and then plan and implement the best possible interventions (Merisier et al., 2018). It should be noted that in nursing, students and qualified nurses are confronted with situations where they will have to think critically to make a decision, therefore, it is a 'must have' skill for nurses (Ishtiaq et al., 2024). Nursing students who are engaged in metacognitive processes during learning become more critical in practice and opinion, such that they question

their assumptions before making decisions (Yip, 2021). Clinical teachers and educators, therefore, need to enhance students' critical thinking by engaging them in deeper thinking processes. One of the ways to achieve this is through the use of Socratic questioning strategy (Yip, 2021).

Socratic questioning method is one of the reliable strategies that teachers can use if they want students not to just mention information that they memorized, but to utilize such information to solve problems or issues (Yip, 2021). Socratic questioning therefore, has the ability to facilitate the critical thinking skills of students (Yip, 2021). In Socratic questioning strategy, clinical teachers' abilities in questioning defines its success (Bulent et al., 2016). Research investigation was carried out in order to assess clinical teachers' questioning skills. Findings showed that the teachers often asked nursing students to retrieve information from their memory and not necessarily to use the information in providing solutions to clinical situations (Phillips et al., 2017). Other studies also had similar results, for instance Cook et al., (2019) and Ertmer et al., (2011) reported that nurse educators concentrated on teaching and assessing students through use of lower level questions of the blooms taxonomy. Consequently, the nursing students were deprived of the chance to develop skills like critical thinking which can only be attained if proper measures like use of high order level thinking skills on blooms taxonomy are implemented.

It should therefore be noted that lack of knowledge and skills including critical thinking of clinical teachers can cause clinical teachers to fail to ask high order level questions that necessitates students to be able to analyse, evaluate as well as synthesis information (Saad et al., 2012; Nadara & Chew, 2018). The researcher therefore, concludes that clinical teachers should learn the art of framing questions (Saad et al., 2012).

In this study, it was found that discussions that were done in educative clinical handovers allowed nursing students to participate actively and apply knowledge. This was also reported in study results in which discussions as a teaching strategy was found to be superior in providing a good environment for assimilation of knowledge (Angeline et al., 2015). Furthermore, the findings of the study indicated that student involvement is possible with use of discussions (Angeline et al., 2015). Discussions during the delivery of a lesson either in a classroom or the

clinical site enchants participants' attention such that member are able to concentrate, this therefore allows learning to take place (Ibrahim, 2016).

Participants in this study also stated that inclusion of different medical and surgical illnesses and issues during discussions captivated their interest thus improved learning. This is in line with a study that found that discussions are more effective in reinforcing the attention span of students as well as improving understanding (Roshni & Rahim, 2020). Another study noted that group discussions improved learning and retaining of information (Aghapour, 2015). This, therefore, means that discussions should be encouraged during handovers to maintain students' alertness and involvement.

Students in the study said that when clinical teachers used lecture method by utilising power point presentations, they learnt new material and the information delivered in one presentation was comprehensive. This is consistent with studies that found that when lecture method was used the academic success was certain as it encouraged acquisition of knowledge (Vaughn, 2020; Aloush, 2018).

Nevertheless, contrary to the findings above, a study to assess the benefits of problem based learning over the lecture method of teaching revealed that problem based approach is an efficient teaching strategy to teach students in acute nursing care since it enabled students to learn more (Zhang, 2014). Similarly, a study which compared the effect of blended teaching and traditional lecture on the learning and satisfaction about the Tuberculosis disease, showed that the initial assessment on the knowledge of the student in the both groups of students had an average score. (Sedaghat et al., 2014) however after the training there was more increase in knowledge in blended group than in lecture group (Sedaghat et al., 2014). In another study to assess the success levels in using team based learning or lecture based learning in nursing students, team based learning surpassed lecture based method (Zhang, 2023). In addition, research that evaluated student nurses knowledge on myocardial infarction delivered through Problem based learning and traditional lecture method, results demonstrated that the problem based learning method is effective (Amin et al., 2023).

Students in this study also reported satisfaction when clinical teachers used the lecture method. This findings is supported by a study which found that most students liked it when lecture method was employed in educative situations (Solomon, 2020). Another study also found that

students rejoiced when lessons were done by using a lecture method (Liu et al., 2023). Furthermore, according to the study students found consolation in lecture as it depended on the teacher (Liu et al., 2023).

However, several studies showed that lecture method was not preferred as it was noted that it does not foster independence of the students (Shohani et al, 2023; Muenks et al 2017). Another study found that students are more satisfied with participatory methods such as role playing than with lecture and learning through peers (Yadav, 2023).

It can therefore be said that lecture method is reliable in other situations however for it to be effectively used when conducting a lesson, it should be combined with interactive elements like questions and brief discussions (Boso et al., 2019).

5.2 FACILITATORS OF NURSING STUDENT LEARNING DURING CLINICAL HANDOVER

Participants stated that educative exchange of information during clinical handover happened when they were involved. When students use both their physical being as well as their psychological energy during learning, it is called student involvement (Billings & Halstead, 2009). Bahmanbizar et al., (2019), reported that for an effective sharing of knowledge, skills and attitudes to happen, students ought to be involved. Billings and Halstead, (2009) also agreed that letting students take part during a learning activity helps them to gain knowledge. The students not only benefit academically but they may also be able to mature personally (Billings & Halstead, 2009). Research findings also reported that the participation of students may enhance their effectiveness (Hudson, 2015). The study further deduced that students who remain idle are less likely going to benefit in the learning process but students who are active become critical thinkers and can easily solve problems as they become independent (Hudson, 2015). In addition, another study result showed that engaging students in their own learning especially in handover fosters confidence such that they become competent in ensuring safety in handover (Muchlis & Indriasih, 2018). Halamek and Kaegi, (2020) further reported that students in their final year if involved in clinical handover, may be ready to take up their future roles.

Contrary to this study finding however, a study evaluated the effect of student participation in clinical turns, the results showed that some students were not allowed access to participate

during clinical rotations (Palese et al., 2019). These actions denied the students the privilege of being part of the clinical team. Students thus complained that this attitude and behavior impaired their right to associate and identify themselves with colleagues of the same profession (Palese et al., 2019). Another study performed with an aim of ensuring student knowledge gain through a training on handover reported that the effects of not being given the chance to perform a handover during clinical practice was lack of confidence. The nurses were not empowered to step out and give a handover report (Lee et al., 2016). It was noted that this was because missed handover practice opportunity left the students uncertain of what comprises handover and they were usually uncomfortable (Lee et al., 2016).

In this study students got involved through attendance as well as performance of clinical handover reports in conjunction with other tasks that would arise during clinical handover. Nursing students should be encouraged to participate in different clinical handovers tasks which are usually assigned to them to allow learning to happen alongside a task (Dornan, 2014). The advantage of fusing an activity with learning is that it awakens alertness (Dornan, 2014). For example during a handover session in which students are left idle without work to do they are likely to be passive. But when students have something else to do, they remain active. In this study, students actively involved in clinical handover sessions could be probably because they were made comfortable during handover. This was evident as students highlighted that they enjoyed participating in clinical handover and they looked forward to being given tasks like making power point presentations.

This study also found that several skills which are critical in learning can be covered through participation during clinical handover, for example communication. The students in this study indicated that others who did not possess proper communication skills improved by continued practice during clinical handover. The findings are supported by a report that communication skills are gained through learning and can be perfected by consistent practice (Hsu, 2015).

Handover is one of the forums that have been identified as having the ability to foster decision making process in nurses through observation and participation (Billings & Halstead, 2015). The ability of nurses to make decisions is vital in nursing. Students are able to see and learn how qualified personnel behave to reach a consensus on patient care (Bux, 2021). For example,

students learn how nurses properly communicate patient's information by giving systematic reports. Other members of the team are then able to solicit important information that can be used in coming up with a final decision about patient care thereby maintaining patient safety (Bux, 2021). Furthermore, according to the study the process of decision making in handover enables students to contemplate, reflect and seek clarifications (Bux, 2021).

Participants stated that clinical handover learning was also facilitated through constant provision of comprehensive and current information by clinical teachers. This study findings are in line with study results of Skiba et al., (2008), which also found that to impart learning, teachers should be conversant with recent undertakings in health so that they remain relevant in their profession as they are able to provide right information, to right people at the right time. Furthermore, according to Billings and Halsted (2009) to be an effective educator, one should be well informed of the nursing profession scientific knowledge and clinical practices. A research conducted to assess important traits and instructional techniques for clinical teachers necessary for an improved student nurse clinical experience reported that the teachers' expertise was fundamental to effective and memorable experiences (Niederriter et al., 2017). Furthermore, Hayajner (2011) found that students learn more from the clinical instructor who demonstrates clinical skills and are well conversant with training and practice in the hospital.

Study participants observed that medical and surgical conditions discussed during handover sessions were repeated, which helped them with retention of their education material. This is consistent with a study that also noted that if an educative activity is done several times, learnt information is easily assimilated thus reducing the chances of forgetting (Kooloos et al., 2020). The study explained that humans tend to forget information that is not in use for extended periods of time therefore involvement in clinical handover enables constant use of such information. Furthermore, according to another study there is educative material deposition that is slowly done in handover that ensures that an individual is knowledgeable (Kooloos et al., 2020).

The participants also revealed that the presence of different professionals with different rankings during clinical handover enhances learning. This is supported by a study that noted that the presence and participation of senior nurses during handover facilitated a consistent handover process which may foster learning (Hada et al., 2019).

5.3 BARRIERS TO STUDENT LEARNING DURING CLINICAL HANDOVER AND IMPROVEMENT STRATEGIES

Participants highlighted several factors that hinder learning and they also recommended some improvement strategies to the mentioned barriers.

Participants noted that poor time management during handover affected learning. Correspondingly, several studies found that limited time during clinical handover resulted in omission of information and hinder participation in questions, offering opinion and eliciting feedback (Horwitz et al., 2009; Rice et al., 2010). Study findings showed that if time is not enough for handover process other things are skipped. Limited time produces a feeling to rush the handover so that other activities are also accommodated in a defined period (Watson et al., 2014). Similarly another study revealed that inconsistency in handover time resulted in lengthy meetings (Chien et al., 2021). Prolonged handovers do not yield intended purpose and are not recommended especially during teaching and learning sessions. Furthermore the study noted that handover started late which also resulted in untimely finishing as well as increased interruptions (Chien et al., 2021). Ooi, (2020) emphasised that members in a handover session should be mindful of how they allocate the time as good time management may enable achievement of both patient safety and student teaching and learning . In addition, a study suggested that a leader should be selected during handover to manage the deliberations in order to improve handover process and communication (Vergales et al., 2014). Dolley, (2019) highlighted that it is important that the leader be flexible and sensitive during clinical handover. Furthermore, Pun, (2023) emphasised that a leader chosen during clinical handovers should ensure that the deliberations are not delayed.

Participants stated that facilities lacked resources and materials like handover guidelines or protocols. This is in line with a study that found lack of standardised tools for clinical handover (Fealy, et al., 2018). Findings showed that the unavailability of the integrated protocols impede standardization of the shift handover (Odhiambo, 2023). Furthermore, the study noted that due to unsuitable international handover formats, standard handover performance in all health settings proves to be futile (Odhiambo, 2023). Additionally, according to Lim and Pajarillo (2016), the proper handover communication for the student nurses and novice nurses is also difficult because there is no standard handover process or definition of guidelines of the handover.

Participants recommended availability of resources. Correspondingly, several studies suggested that the hospitals and the institutions should ensure the availability of essential equipment and resources necessary for learning like protocols and guidelines during handover (Mbakaya et al., 2020; Odhiambo, 2023).

Fealy et al., (2018), WHO, (2017) and Breuer, 2015) suggested utilisation of structured tools; for example, the ISBARR (Identify, Situation, Background, Assessment, Recommendation, and Repeat) framework. Similarly, in a study to understand the determinants that contribute to or hinder handover quality from the nurses' perspective also recommended the use of standardised handover protocol (Hashish, 2023). In addition, an observational pre-quality and post quality improvement design study done in America found that a structured handover checklist enhances handover content, which promotes provider satisfaction (Funk, 2016). Furthermore, an African research finding recommended the use of the standardised process which assists in reduced amount of omission errors (David et al., 2018). Similarly, Another study finding proposed a “hand-off bundle” to help all health institutions to have one way of conducting the handover process through use of a similar guide, educating the staff, training and carrying out audits (Ehlers et al., 2021). Furthermore, in a study carried out in Ireland, where contemporary surgical handover practices were investigated and barriers and facilitators of effective handover assessed, it was suggested that standardization of the clinical handover process should include and not be limited to; standardization of when handover ought to happen, where it should take place, who should attend, who should be responsible as well as what type of handover should be used at a particular time (Ryan et al., 2024). Furthermore, communication protocol/structures meant for clinical handover process are essential as they help nurses to deliver systematic reports. Such reports give important aspects of patient such that colleagues are able to follow. Handover protocols also allows the report to be clear and easy to understanding. Reports generated using handover protocols can therefore reduce adverse incidences. (Alberta et al., 2018; Gore et al., 2015; Funk et al., 2016; Pun, 2021). Another study also demonstrated communication protocols for clinical handover are advantageous. Study findings showed that handover tools ensure validation of patient data as well as strengthening of relationships among nurses and other health professionals (Pun, 2021).

The use of a standardised tool during handover also face challenges. A study found that same tools can produce different results when used by different people (Eggins et al., 2016). These inconsistencies were found not only with those that had just joined the nursing profession but that have worked for a long time. Furthermore, according to the study, the use of the tools did not shield adverse events from happening were found to have (Eggins et al., 2016). In this study, little information was gathered about the effectiveness of the clinical handover tools since the protocols were rarely available or used in Malawi.

This study also revealed that most facilities lack proper infrastructure for clinical handover, which may hinder learning. According to this study most rooms that were available for handover in Malawi's health institutions, were not conducive; small, located on a busy area and not well ventilated. This finding supports earlier findings of Fearly et al., (2016) which showed that the setting in which handovers happens for instance the ward station, posed a threat on communication through the presence of interruptions (Fealy et al., 2018). Liu et al (2012) also concur as it was found that the use of any available room in the hospitals due to shortages in infrastructure/no designated rooms for handover increased the chances of communication breakdown. Truong, (2015) also reported limited seats and space for students within the clinic sites.

Participants in this study suggested that a specific place should be identified within the hospital premises where handover should be done. However, to this finding, a study noted that even though it is necessary to designate a room for the purpose of clinical handover, it is very difficult to initiate changes especially where policies are concerned as it may require a thorough scrutiny to the decision (Slade et al., 2018). For example a shift from bedside reporting of patients according to a specific hospital to a verbal report in the conference room. Change may also seem impossible where there are lack of resources (Slade et al., 2018).

Participants further suggested that in order to enable 'ideal' learning of students during handover, there must a handover schedule, where students take turns in attending handovers to avoid overcrowding and inefficiency during handover. This is in line with a study that recommended the need for careful planning of the number of nursing students per clinical practice to ensure quality clinical education (Dag et al., 2019). In addition, several studies have suggested that in order to deal with consequences of overcrowding of nursing students in the clinical area, the

number of students allocated to a clinical site at a given period of time should be controlled (Mbakaya et al., 2020; Hoebes & Ashipala, 2023).

Poor student/nurse relationships as a result of bad attitudes of nurses towards students was mentioned by the participants as a clinical handover learning barrier. This finding is consistent with findings of Mbakaya et al., (2020) and Papathanasiou et al., (2014) in which the clinical environment was unreceptive due to poor relationships of nurses and students. Similarly, another study noted that bad attitudes in the clinical sites manifested in unfriendliness and hostility ruined relationships of student nurses and nurses, in turn deterring learning moments (Mntambo, 2020). Kaphagawani and Useh's (2013) discovered that poor relationships sometimes could result to frustrations and lack of motivation among students thereby resulting in poor learning. Similarly, Ebrahimi, (2016) showed that clinical teachers that are verbally offensive to students in clinical settings hinder students' learning because of a discouraging environment that results in poor participation by students.

Studies in nursing found that inappropriate attitude has the ability to disrupt a lot of things during students' clinical practice including communication and interaction between nurses and students (Mamaghani et al., 2018; Hsu, 2015). Additionally, the behaviour of some clinical staff towards students such as communicating with students in a belittling and insensitive manner by shouting at them in front of other staff or patients and talking about them, lead to reduced confidence (Truong, 2015).

Participants recommended that they should be treated with respect. Several studies have made suggestions on how to best treat students during clinical practice to promote learning. Kaphagawani & Useh (2013), suggested that students should be welcomed as team members in clinical areas. This will promote belonging and therefore support can easily be given to students wherever necessary. Mbakaya et al., (2020) and Bux, (2021) recommended that clinical teachers should have right approach to students when they make mistakes. The study mentioned love and kindness as examples of friendly style of confronting someone who has not done well.

Participants stated that they were not properly treated during question and answer sessions during handover. The findings are in line with results of a study that students were shamed because they failed to answer questions (Bux et al., 2021). Similarly, the results supports earlier findings of Arkan et al., (2018), which demonstrated that clinical teachers ask too many

questions at bedside such that students are negatively affected when they fail to answer questions, in front of the patients. Furthermore, another research study found that nursing instructors confronted nursing students in front of patients and their care givers (Jamshidi et al., 2016). It was also noted that nurses were disrespectful to students at bedside and had too much expectations from them (Baraz et al., 2015). According to Arkan et al., (2018), high expectations from instructors results in fatigue and loss of motivation.

Students in this study suggested that clinical teachers should improve the communication process. Several studies have suggested that effective communication may be achieved when members present in handover session believe in their capabilities and opinions and contributions towards patient care are respected (Carroll et al., 2012; Brindley & Reynolds, 2011). Another study finding also suggested that during continuing education programmes, clinical nurses should be taught how to facilitate student learning in clinical settings; for example, effective communication skills (Nasmil & Seneviratne, 2020). Similarly, other research finding suggested that students should be taught effective communication skills especially before they start their practical education (Jamshidi et al., 2016).

In this study clinical teachers overawed students when they asked questions, which affected communication between them and eventually impeding learning as well. Several factors may affect the degree to which staff and students ask and answer questions during handover, which are; existing hierarchies, staff relationships and limited opportunity or time. (Carroll et al., 2012). However, students ought to be encouraged to actively participate even though the reactions of the clinical teachers may not always be predicted. If possible, students should be helped to understand and intervene in the patient's illness to promote wellness whenever they show lack of knowledge and later study can be fostered. Clinical teachers should understand that not all students who have been told to go and study, will do so immediately.

This study participants indicated that sexual relationship advancements from clinical teachers affected learning. The participants stated that clinical teachers should distant themselves from intimate relationships with students to maintain a professional relationship.

Participants in this study revealed that most nurses excluded themselves from clinical handovers which resulted in negative outcomes like poor student attendance and participation in clinical

handover. The availability of highly ranked officials in handover provides opportunities for students to be taught by experts in the health field (Ooi, 2021). All concerned members are supposed to attend handovers as this enhance learning, even though it is not always the case for example in times of an emergency (Watson et al., 2014).

Findings of this study showed that clinical personnel entrusted with the responsibility to teach nursing students lacked essential knowledge, skills as well as proper attitudes. Participants stated that this affected learning process as they felt unsure of the clinical teachers. This finding is supported by study results that indicated that some clinical teachers had little knowledge such that they were unable to contribute to an effective education experience of students (Jahanpour et al., 2016). Bvumbwe et al., (2020) also emphasize that nurses at different levels lack knowledge. The fact that one is highly ranked does not mean they are competent (Bvumbwe et al., 2020). Another study also surmised that novice nursing instructors were incompetent; they lacked clinical experience, theoretical and practical knowledge and skills thus affecting student teaching and learning (Baraz et al., 2015). In addition, several studies surmised that inadequate clinical experience, theoretical gap and little practical knowledge and skills of teachers hinder learning (Baraz et al., 2015; Moghaddam et al., 2020).

Participants in this study suggested consistent trainings and supervision for clinical teachers' in order to equip them with knowledge and skills which they can use to facilitate student learning. This study finding is supported by earlier research findings which recommended that clinical teachers should attend regular trainings to aid in their competence (Amini, 2020). Another study also suggested that clinical teachers should priotise gaining of mastery in different domains through trainings and use of opportunities (Shibiru et al., 2023). Furthermore another study recommended that new clinical teachers should be trained on how to teach students and they should be paired with those that have worked for sometime as their mentors (Arkan et al., 2018).

5.4 CONCLUSION

Clinical handovers' educative value cannot be overemphasised. Effective learning during clinical handover evolves around active involvement of student and teacher, comprehensive pedagogical and content knowledge of the clinical teacher and the conducive learning environment. (Physical, psychological, social). To maximise learning during clinical handover, several strategies are

proposed; clinical teachers' acquisition of updated knowledge, skills and attitudes, nurse/students' dedication to learning and creation of a conducive learning environment.

5.5 RECOMMENDATIONS

Based on the results of this study, the researcher recommends that:-

5.5.1 EDUCATION

Clinical teachers should be trained on how to fluently use student centred approaches and engage an adult learner (students) during handover.

Policy makers should incorporate/enhance clinical handover education so that nurses are prepared before employment.

Education institutions should reinforce mandatory skill competence log books that can help students gain skills during handover.

5.5.2 PRACTICE

Hospitals should intensify continued professional development and/or workshops to improve clinical teachers' knowledge/skills.

Hospitals should continue lobbying for more infrastructure with the Ministry of Health and other partners in order to relieve problems of limited space.

Clinical sites where students are allocated for clinical practice should develop clinical handover attendance policy to guide the students/clinical teachers on issues of time management, attendance and absenteeism. The policies/guidelines/tools should be documented and shared to students during orientation. Continuous supervision on proper use of the guiding tools should be done.

Hospitals should adopt handover process tool, plan and conduct trainings on the adopted handover process tool then provide supportive supervision.

Students should be actively engaged in managing their own clinical learning. Self-initiated learning, self-assertiveness and self-esteem should be encouraged so that students are able to negotiate on their learning with nurses in order to achieve their objectives.

Clinical teachers and students should work together to promote a safe and supportive work environment for all. Conflict management, proper communication and healthy relationships should be enhanced.

5.6 AREAS FOR FURTHER STUDY

The research study can be replicated on a larger scale to nursing students in other regions of the country to make transferability of the findings possible. The findings may help in planning and implementation of the improvement strategies to maximise learning during clinical handover across the country.

Further study can also be done to find out the experiences of the clinical teachers in student teaching and learning during handover. A qualitative study is recommended to obtain a more in-depth understanding of clinical teachers' experiences of teaching and learning. The findings may help to effectively implement the suggested improvement strategies.

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APPENDICES

APPENDIX 1: MZUZU UNIVERSITY RESEARCH ETHICS COMMITTEE (MZUNIREC) APPROVAL LETTER



MZUZU UNIVERSITY

DIRECTORATE OF RESEARCH

Mzuzu University
Private Bag 201
L u w i n g a
M z u z u 2
M A L A W I
TEL: 01 320 722

MZUZU UNIVERSITY RESEARCH ETHICS COMMITTEE (MZUNIREC)

Ref No: MZUNIREC/DOR/23/71 19/06/2023.

Lydia Nkhoma,
Mzuzu University,
P/Bag 201, Luwinga,
Mzuzu 2.

lydiankhoma8@gmail.com

Dear Lydia,

**RESEARCH ETHICS AND REGULATORY APPROVAL AND PERMIT
FOR PROTOCOL REF NO: MZUNIREC/DOR/23/71: EXPERIENCES OF FINAL
YEAR NURSING STUDENTS ON LEARNING DURING HANDOVER IN CENTRAL
REGION NURSING COLLEGES.**

Having satisfied all the relevant ethical and regulatory requirements, I am pleased to inform you that the above referred research protocol has officially been approved. You are now permitted to

proceed with its implementation. Should there be any amendments to the approved protocol in the course of implementing it, you shall be required to seek approval of such amendments before implementation of the same.

This approval is valid for one year from the date of issuance of this approval. If the study goes beyond one year, an annual approval for continuation shall be required to be sought from the Mzuzu University Research Ethics Committee (MZUNIREC) in a format that is available at the Secretariat. Once the study is finalised, you are required to furnish the Committee with a final report of the study. The Committee reserves the right to carry out compliance inspection of this approved protocol at any time as may be deemed by it. As such, you are expected to properly maintain all study documents including consent forms.

Committee Address:

***Secretariat, Mzuzu University Research Ethics Committee, P/Bag 201, Luwingu, Mzuzu 2;
Email address: mzunirec@mzuni.ac.mw***

Wishing you a successful implementation of your study.

Yours Sincerely,



Gift Mbwele

SENIOR RESEARCH ETHICS ADMINISTRATOR

For: CHAIRMAN OF MZUNIREC

APPENDIX 2: INFORMED CONSENT FORM

Introduction

I am **Lydia Nkhoma** from **Mzuzu university**. I am doing research on experiences of final year nursing students on learning during handover in central region nursing college. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask them to me.

Purpose of the research

This research aims to explore the lived experiences of nursing students on learning during handover in central region nursing colleges.

Type of Research Intervention

This research will involve your participation in a focused group discussion.

Participant Selection

You are being invited to take part in this research because you are a final year nursing student, who has ever gone for clinical placement experience and have had enough and wide experience overtime.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate nothing will change. You may skip any question and move on to the next question.

Duration

The research takes place for a period of **approximately 45-60 minutes**.

Risks

You do not have to answer any question or take part in the discussion if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Reimbursements

You will not be provided any incentive to take part in the research.

Sharing the Results

The knowledge that we get from this research will be shared with you and your college before it is made widely available to the public. Following, we will publish the results so other interested people may learn from the research.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact: Dr Chirambo, main supervisor, Mzuzu University, P/Bag 201, Luwinga, Mzuzu 2, Phone:0999236092 or Mrs. F. Lungu.co-supervisor, Mzuzu University, P/Bag 201, Luwinga, Mzuzu 2, Phone:0995380506.

This proposal has been reviewed and approved by Mzuzu University Research Ethics Committee (MZUNIREC) which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the Committee, contact Mr. Gift Mbwele, Mzuzu University Research Ethics (MZUNIREC) Administrator, Mzuzu University, P/Bag 201, Luwinga, Mzuzu 2, Phone: 0999404008/0888641486

Do you have any questions?

Part II: Certificate of Consent

I have been invited to participate in research about experiences of final year nursing students on learning during handover in central region nursing college.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant _____

Signature of Participant _____

Date _____

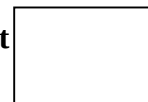
Day/month/year

If illiterate ¹

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____

Thumb print of participant



Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands the research project. I confirm the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

¹ A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

APPENDIX 3: A GUIDE FOR FOCUSED GROUP DISCUSSIONS

Note: Questions grouped according to study objectives

TEACHING STRATEGIES

Describe your clinical handover learning experience in the clinical area that you have been

Probes:

Describe how clinical teachers help students integrate theory to practice(learn) during handover
(teaching strategies used during handover)

How effective are the teaching strategies for student learning?

How do you perceive the educative value of handover?

FACILITATORS

Could you describe your involvement with learning during clinical handover?

Would you describe any facilitators to learning during clinical handover?

BARRIERS

What hinders your learning during clinical handover?

What can be done to maximize teaching and learning during clinical handover?

APPENDIX 4: A SEMI STRUCTURED INTERVIEW GUIDE
SECTION 1: DEMOGRAPHIC INFORMATION

Age:

Sex:

Year of study:

SECTION TWO: GENERAL EXPERIENCE

1. How often do you attend clinical handover?
2. How are clinical handovers conducted in the clinical practice? Can you describe a typical clinical handover process?
.....
3. What information is shared during clinical handover?
.....
4. How are you involved during clinical handover as nursing students?
.....
5. Can you describe your general experience of the clinical handover process?
.....

SECTION THREE: LEARNING DURING CLINICAL HANDOVER

6. How does learning take place during clinical handover? Can you explain your own experience?
.....
7. Can you mention and explain any specific skill or knowledge you have gained from learning during clinical handover? How will the skill/knowledge help you/patients?
8. What teaching methods/strategies are used by the clinical teachers during clinical handover to facilitate learning? Which ones did you find very useful?
.....
9. In general what facilitated learning during clinical handover?
.....

SECTION FOUR: BARRIERS TO LEARNING DURING CLINICAL HANDOVER

10. What challenges do you encounter during clinical handover which potentially affect learning? Can you explain how these hinder learning?

.....

SECTION FIVE: IMPROVEMENT STRATEGIES

11. How should clinical handover be improved to enhance student nurses learning outcomes?

.....

12. What further resources/actions would help in achieving best learning outcome during clinical handover?

.....

.....

Closing question: Is there anything else on clinical handover and learning you would like to share?

APPENDIX 5: LETTER OF REQUEST TO CONDUCT A STUDY AT DEAYANG COLLEGE OF NURSING

Mzuzu University

Private Bag 201

Luwinga

Mzuzu

13 JULY, 2023

The Registrar

Deayang University

P.O Box 30330

Lilongwe

Dear Sir/Madam

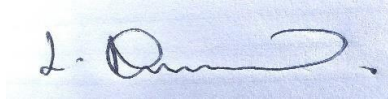
PERMISSION TO CONDUCT A STUDY AT DAEYANG UNIVERSITY

I write to request for permission to conduct a study at your institution. I am a student at Mzuzu University, pursuing masters in nursing education (clinical teaching) so as a requirement for the acquisition of the Master's Degree I am supposed to conduct a research study. The title of the study is '**Learning experiences of final year nursing students during clinical handover in central region nursing colleges**'.

I selected Deayang university because it allocates its students to hospitals in the central region of Malawi. The study will be carried out by Lydia Nkhoma (Student) under the supervision and guidance of Dr. Baxter Chirambo (Phone:0999236092) and Mrs Florence Lungu (Phone:0995380506) of Mzuzu University- Nursing and Midwifery Department.

I will uphold all scientific and ethical requirements in the study. Data collection is expected to start as soon as you give your permission. Your support in this process will be greatly appreciated.

Yours Faithfully,

A handwritten signature in dark ink on a light blue background. The signature is stylized, starting with a large 'L' and ending with a flourish.

Lydia Nkhoma (MScNECT2120)

Phone: 0995639556

Email: lydiankhoma8@gmail.com

APPENDIX 6: LETTER OF REQUEST TO CONDUCT A STUDY AT NKHOMA COLLEGE OF NURSING

Mzuzu University

Private Bag 201

Luwinga

Mzuzu

27 June, 2023

The Principal

Nkhoma College of Nursing and Midwifery

P.O Box 48

Nkhoma

Dear Madam

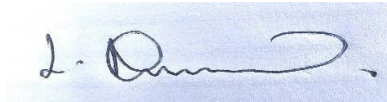
PERMISSION TO CONDUCT A STUDY AT NKHOMA COLLEGE OF NURSING AND MIDWIFERY

I write to request for permission to conduct a study at your institution. I am a student at Mzuzu University, pursuing masters in nursing education (clinical teaching), so as a requirement for the acquisition of the Master's Degree I am supposed to conduct a research study. The title of the study is '**learning experiences of final year nursing students during clinical handover in central region nursing colleges**'.

I selected Nkhoma College of Nursing and Midwifery because it allocates its students to hospitals in the central region of Malawi. The study will be carried out by Lydia Nkhoma (Student) under the supervision and guidance of Dr. Baxter Chirambo (Phone:0999236092) and Mrs Florence Lungu (Phone:0995380506) of Mzuzu University- Nursing and Midwifery Department.

I will uphold all scientific and ethical requirements in the study. Data collection is expected to start as soon as you give your permission. Your support in this process will be greatly appreciated.

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'L. Nkhoma', on a light blue background.

Lydia Nkhoma (MScNECT2120)

Phone: 0995639556

Email: lydiankhoma8@gmail.com

APPENDIX 7: APPROVAL LETTER TO CONDUCT A STUDY AT DEAYANG NURSING COLLEGE



QUALITY ASSURANCE COORDINATOR, PO BOX 30330, KANENGO, LILONGWE.

Email: maluwav@dyuni.ac.mw

14th July, 2023

Lydia Nkhoma,
Mzuzu University
Nursing & Midwifery Dept.
P/Bag 201
Luwinga
Mzuzu 2

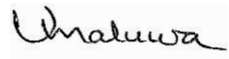
Dear Lydia,

PERMISSION TO CONDUCT A RESEARCH PROJECT AT DAEYANG UNIVERSITY, COLLEGE OF NURSING AND MIDWIFERY

This is to inform you that your request to conduct a research project titled **Learning experiences of Final Year Nursing Students during Clinical Handover in Central Region**

Nursing Colleges at Daeyang University is granted with pleasure. You are advised to stick to your protocol and ensure that your data collection exercise does not disturb the students' classes. We would like to ask you to provide us with your research findings after the completion of your study.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'V. Maluwa', is displayed on a light gray rectangular background.

Veronica Maluwa PhD

Quality Assurance Coordinator

APPENDIX 8: APPROVAL LETTER TO CONDUCT A STUDY AT NKHOMA NURSING COLLEGE



NKHOMA COLLEGE OF NURSING & MIDWIFERY

P.O BOX 48, NKHOMA, LILONGWE

All Communication to The Principal:

Email: nkhomacollege@gmail.com



20th July 2023

Lydia Nkhoma,
Mzuzu University
Nursing & Midwifery Dept.
P/Bag 201
Luwinga
Mzuzu 2

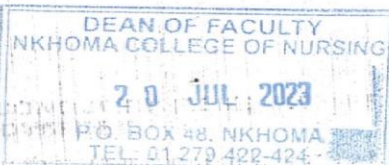
Dear Lydia,

PERMISSION TO CONDUCT A RESEARCH PROJECT AT NKHOMA COLLEGE OF NURSING AND MIDWIFERY

This is to inform you that your request to conduct a research project titled **Experiences of Final Year Nursing Students on Learning during Handover in Central Region Nursing Colleges** at Nkhoma College is granted with pleasure. You are advised to stick to your protocol and ensure that your data collection exercise does not disturb the students' classes/clinical areas. We would like to ask you to provide us with your research findings after the completion of your study.

Yours Sincerely,

[Signature]



Dr. A Kadango

Dean of Nursing