

Research Article

Enhancing Clinical Learning Opportunities for Student Nurses in A Public Academic Hospital in Gauteng Through Collaborative Learning Activities: A Qualitative Research Study

Dr. Mpho N. Motsaanaka* ✉, Prof Agnes Makhene (Supervisor) ✉, Prof Gugu Ndawo (Co-supervisor) ✉

University of Johannesburg (UJ) Doornfontein. Department of Nursing. Faculty of Health Sciences

*Corresponding author: Dr. Mpho N. Motsaanaka, Postal address: 45 Coetsee Street, Roodepoort West, Roodepoort, 1724.

Institutional Mailing Address: University of Johannesburg (UJ): Doornfontein Campus, 25 Louisa Street Doornfontein, Johannesburg, 2028, South Africa.

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Abstract

Background: Clinical learning opportunities are vital components of nursing education as they contribute to the successful clinical competency development of student nurses. They expose student nurses to varied clinical experiences and opportunities to practice actively, developing and acquiring higher-order thinking skills (HOTS) such as critical, reflective, and innovative thinking, clinical reasoning, and judgment skills. However, overcrowding in the academic hospital under study led to inadequate clinical learning opportunities for student nurses, resulting in a lack of integration of theory and practice and the development of HOTS. Collaborative learning continues to be extensively researched and supported globally as an innovative approach that nurtures and encourages students' engagement and active participation in clinical learning activities.

Purpose: To develop collaborative clinical learning strategies to enhance students' clinical learning opportunities and experiences.

Methods: A qualitative, exploratory, descriptive, contextual, and strategy development framework design was used to develop collaborative clinical learning strategies.

Setting: The study was conducted in a public academic hospital in Gauteng. The academic hospital caters to work-integrated learning (WIL) for various students from different healthcare disciplines, with a lack of evidence on coordinated and collaborative clinical placements of students.

Participants: Nurse educators, Clinical Education and Training Unit (CETU) personnel, and operational managers responsible for the clinical facilitation of student nurses.

Discussion: A strategy development framework was based on the formulation of strategic objectives, development of strategic activities, action plans, outcome indicators, and responsible persons.

Conclusion: Strategies to enhance clinical learning opportunities through collaborative learning were developed to assist nurse educators, CETU personnel, and operational managers to enhance clinical learning opportunities for student nurses. They would also be guided to provide student nurses with authentic clinical learning experiences to develop and gain the required skills and competencies for collaborative practices.

Keywords: Clinical learning opportunities; Collaborative learning activities; Enhancing; Strategies; Strategy development; Student nurses.

1. Introduction

Clinical learning opportunities (CLO) are educational and practical encounters in a dynamic multidimensional, and real-life healthcare setting to enhance the integration of theory into practice, with the development of HOTS and clinical competencies [1]. CLO also signifies a period during

which student nurses are allowed to demonstrate applied competencies in integrating foundational, practical, and reflexive competencies in real-life healthcare settings. This highlights the critical importance of students' CLO and experiences as the core component of nursing, which is indispensable for the growth and development of autonomous, confident, and competent professional nurses.

Collaborative learning is described as an innovative learning approach that supports students' interaction and teamwork behaviors during education in actual clinical settings [2,3]. It fosters self-directed learning, sharing of knowledge through engaging with varying ideas and perspectives, teamwork, and work-based problem solving [2]. The amalgamation and integration of collaborative learning and clinical activities to enhance CLO for students would thus be essential in the development of integrated clinical learning skills, competencies, and team-based approaches to deliver safe and quality patient care.

1.1 Problem statement

Various impacting factors in the clinical learning environment significantly hinder students' CLO and achievement of clinical learning outcomes. A study conducted by [4] identified negative experiences of overcrowding by student nurses from various healthcare educational institutions and different health disciplines. The public academic hospital under study caters to and provides students with WIL from various healthcare institutions and health disciplines. A large number of students led to competitiveness in clinical procedures, with the resultant inadequate CLO, and negative emotional experiences of anger, frustration, and demotivation [2,4]. Increased absenteeism, inability to achieve clinical learning outcomes, and clinical skills incompetencies were further identified as the results of inadequate CLO and experiences [5].

An extensive literature search was conducted with analysis and identification of knowledge gaps on collaborative learning strategies to enhance CLO for student nurses in a public academic hospital. However, the majority of literature highlighted on engagement and active participation of students in collaborative learning activities positively influencing their learning and acquisition of necessary skills and competencies. Collaborative practices; coordinated and team approach to problem-solving were additionally highlighted as competencies and benefits of collaborative learning and practices for safe and quality patient care [6]. Shakhman, Omari, Arulappan and Wynaden (2020) [7] attest to the growing need for collaborative education and learning to be integrated into the healthcare curriculums to foster competencies required for intra and interprofessional collaborative practices. Stenberg et al. (2022) [2], added that collaborative learning activities embedded in nursing education curricula and programmes are vital in developing and preparing undergraduate nursing students for the crucial collaborative requirements they will need in the healthcare profession.

The great concern of overcrowding and competing for CLO by various students from different health disciplines drove the researcher to develop collaborative clinical learning strategies. The lack of evidence on collaborative learning strategies to enhance CLO in a public academic hospital, and the need and support to embed collaborative learning in the nursing curriculum further obligated the need to develop collaborative learning strategies. To achieve this, the researcher was able to formulate data collection questions

guided by the defining attributes of CLO identified during the concept analysis process [1]. Data collection questions assisted to explore and describe the perceptions of participants on how collaborative clinical learning activities could enhance CLO for students.

1.2 Purpose of the article

The purpose of this paper was to develop strategies for collaborative learning to enhance CLO for student nurses in a public academic hospital in Gauteng, with the resultant acquisition of necessary skills, competencies, and collaborative practices.

1.3 Research design and method

To achieve the purpose of the paper, a qualitative, explorative, descriptive, and contextual research design was used to explore and describe the perceptions of participants on how CLO could be enhanced through collaborative learning activities [8, 9]. The paper's contextual orientation relates to a particular public academic hospital in Gauteng, where student nurses are placed for their CLO and experiences, focusing on the specific events in a naturalistic setting [10]. Relevant literature was further explored and described for integration during the conceptualization of the findings as guided by the practice framework of Dickoff, James and Wiedenbach (1968) [11]. This was followed by the development of strategies to enhance CLO for student nurses through collaborative learning activities. The strategy development framework of Muller, Bezuidenhout and Jooste (2019) [12] was used. Thereafter, Chinn, Kramer and Sitzman (2022) [13] principles of evaluation were followed and applied to evaluate the clarity, simplicity, generality, accessibility, and importance of the strategies.

1.4 Population and sampling method

The population consisted of nurse educators, CETU personnel, and operational managers, identified as agents to enhance CLO for student nurses [1]. The inclusion criteria were both male and female nurse educators, CETU personnel, and operational managers who:

- Are permanently employed either at a nursing education institution or the affiliated public academic hospital under study.
- Have a minimum experience of two years in their professional posts.
- Hold a nursing education qualification and are registered as such, with the South African Nursing Council [SANC] (Regulation 118 of 1987) [14].
- Are involved in clinical accompaniment of undergraduate student nurses registered for Regulation (R171) as stipulated by SANC [15].
- Were also willing to participate in the study.

1.5 Method of data collection

Agenda focus groups and semi-structured individual interviews were conducted to explore and describe the participants' perceptions of how CLO could be enhanced through collaborative learning activities [16,17]. Agenda focus groups allowed active interactions with one another,

debate, and actively listening to the opinions of others before forming own personal viewpoints, thus generating rich data that assisted in the development of strategies. Semi-structured individual interviews were conducted to collect data from the willing participants who were not available to participate in the agenda focus groups. This allowed flexibility in the availability and convenience of the participants. The participants also had the freedom to express their perceptions in focused areas and settings that were non-threatening.

All interviews were conducted in the English language as a medium of instruction in both the nursing college and the

public academic hospital under study. Communication clarification techniques, such as active listening, probing, paraphrasing, reflection, summarising, and feedback, were used throughout the interviews [18]. Such techniques assisted the researcher in obtaining meaning as understood and expressed by the participants, thus eliminating misunderstanding of information. Field notes were also taken, to allow the researcher to describe the behaviors and nonverbal communications of the participants to enrich the collected data. Data saturation was reached after interviewing forty-five participants. Tables 1 and 2 below, outline the demographics of the participants in the agenda focus groups and semi-structured individual interviews.

Table 1: Demographics of the participants (Agenda Focus Group Interviews)

Interviews	Participants	Number in a Group	Gender	Age Group	Years of experience	Setting
Focus Group FG:1	Nurse Educators	08 (N = 08)	Females = 07 Males = 01	25-60 years	3-5 years = 02 5-10 years = 04 More than 10 years = 02	Nursing education institution
Focus Group FG:2	Nurse Educators	08 (N = 08)	Females = 08 Males = 00	25-55 years	3-5 years = 02 5-10 years = 05 More than 10 years = 01	Nursing education institution
Focus Group FG:3	Nurse Educators	06 (N = 06)	Females = 06 Males = 00	25-55 years	3-5 years = 02 5-10 years = 04 More than 10 years = 00	Nursing education institution
Focus Group FG:4	CETU personnel	06 (N = 06)	Females = 06 Males = 00	35-60 years	3-5 years = 02 5-10 years = 04 More than 10 years = 00	Public academic hospital

Table 2: Demographics of the participants (Semi-structured Individual Interviews)

Participants	Total no:	Gender	Age Group	Years of Experience	Setting
Nurse Educators	09	Females = 08 Males = 01	25-55 years	3-5 years = 04 5-10 years = 05 More than 10 years = 00	Nursing education institution
CETU personnel	03	Females = 03 Males = 00	35-50 years	3-5 years = 01 5-10 years = 02 More than 10 years = 00	Public academic hospital
Operational managers	05	Females = 04 Males = 01	35-60 years	3-5 years = 00 5-10 years = 02 More than 10 years = 03	Public academic hospital

1.6 Data analysis

As guided by Polit and Beck (2020) [19], the researcher analyzed the data concurrently with data collection. The matrix-building method of data analysis was used following Miles, Huberman, and Saldaña (2019) [20] framework, which included data consolidation, displaying consolidated data in matrices, drawing, and verifying conclusions.

1.7 Trustworthiness

Trustworthiness is the degree of being professional, accurate, truthful, consistent, and confident about the data collected and analyzed, using the following strategies in qualitative research namely: credibility, transferability, dependability, confirmability, and authenticity [21,22].

1.8 Ethical consideration

The study was conducted following the ethical norms, standards, and guidelines stipulated by the Department of Health [23]. The ethical issues relating to the professional, legal, and socially responsible conduct of nursing research included applying and balancing the following four principles related to the study participants, namely autonomy, non-maleficence, beneficence, and justice [23]. All willing participants signed written informed consent to participate in this study.

Ethical approval was obtained from the Research Ethics Committee (REC) and Higher Degrees Committee (HDC) of the University of Johannesburg, and the research study was also granted from DoH and the Research Approval Committee (RAC) of the public academic hospital under study.

2. Results

Participants' perceptions on how collaborative learning activities could enhance CLO for student nurses were explored and categorized into the main theme and related

subthemes as outlined in Table 3 below. The findings were supported by verbatim statements from the participants, which were further conceptualized within the relevant literature.

Table 3: Main theme and related subthemes

MAIN THEME	RELATED SUBTHEMES
Promoting intra and interprofessional collaborative clinical learning	<ul style="list-style-type: none"> • Develop intra and interprofessional relations for collaborative planning and facilitation of clinical learning and activities. • Develop intra and interprofessional collaborative policies and guidelines. • Establish common learning goals and clarification of roles and responsibilities. • Establishment of dedicated intra and interprofessional clinical learning units for WIL.

2.1 Main theme

2.1.1 Promoting intra and interprofessional collaborative clinical learning

Promoting intra and interprofessional collaborative clinical learning was identified as the main theme to enhance CLO for student nurses. The main theme consisted of four related sub-themes which are: developing intra and interprofessional relations for collaborative planning and facilitation of clinical learning, intra and interprofessional collaborative policies and guidelines, establishing common learning goals and clarification of roles and responsibilities, intra and interprofessional clinical learning units.

2.2 Related Subthemes

2.2.1 Develop intra and interprofessional relations for collaborative planning and facilitation of clinical learning.

The majority of participants supported and emphasized the establishment of intra and interprofessional relations as crucial to enhance CLO for student nurses through collaborative learning activities. Their support and emphasis were based on the dynamic and multidimensional clinical context within which students from various health professions are exposed and were noticeable in the following verbatim statements.

"We need to develop professional relationships with different health disciplines, encourage and promote small and mixed groups of students for interprofessional learning in the clinical area to facilitate clinical learning and collaborative learning experiences for all our students. When these collaborative activities are aligned with the student's clinical outcomes, there would be more productivity, and collaborative and quality patient care would be greater." (CETU personnel 6, in Focus Group 4)

"I believe that the development of both intra and interprofessional relationships can help us focus on critical elements of clinical practice, which can bring our students together for collaborative involvement, especially learning activities that can improve their competencies to work as a team in consideration of patients' interest." (Operational Manager 3)

"We need to come together and develop a supportive intra and interprofessional learning and a good working relationship. Let us sit together and plan this properly how best we can place all our students in one area, mixing them to promote interprofessional learning and taking into consideration their learning outcomes." (Nurse Educator 8, in Focus Group 1)

2.2.2 Develop intra and interprofessional collaborative policies and guidelines.

The development of collaborative policies and guidelines was deemed necessary by most of the participants, in line with promoting intra and interprofessional collaborative clinical learning. They reported on the benefits of policies and guidelines in clarifying quality standards, performance, and sustainability in collaborative clinical learning activities. Participants said:

"For this to work, proper planning is needed, and I think if all stakeholders are involved, and in agreement, it can work. Collaborative views can be used to address relevant health problems of the population, which can even drive them to develop policies and guidelines for collaborative learning approach and practices." (Operational Manager 2)

*"If we must draft a policy regarding this, so be it (**Sound adamant**). At least policies can provide proper and safe guidelines on how to successfully implement collaborative learning, ensuring successful clinical learning opportunities for all students. After all, we are all there to provide quality care to the same patient." (Nurse Educator 4, in Focus Group 3)*

2.2.3 Establish common learning goals and clarification of roles and responsibilities.

The need to develop and articulate common learning goals was reported as vital to enhance and motivate students' commitment, engagement, and active participation in collaborative clinical learning processes and activities. Clarification of roles and responsibilities was also reported as vital to improving the students' clinical learning experiences, with the ultimate goal of promoting respect

among the students, less duplication of skills, and greater clinical collaborative efficiency and productivity.

"Because of our different scope of practices, we also need to embrace each other's profession and contributions to interprofessional collaboration. Learn to overcome our differences and respect each other's contributions and inputs. We need to act like role models for our students to do the same." (Operational Manager 1)

"Interprofessional learning activities can be grouped as well. And I think this needs to start with the students where different professional roles and responsibilities are taught and understood by all students, and integration of competencies during their collaborative learning and services are clarified." (Nurse Educator 7, in Focus Group 2)

2.2.4 Establishment of dedicated interprofessional clinical learning units

According to participants, the establishment of interprofessional clinical learning units is a creative approach to facilitate collaborative and practical learning of students in a conducive clinical environment which in turn enhances the understanding of collaborative interprofessional health and patient care. Students will be allowed to actively participate in activities related to interprofessional collaborative healthcare delivery under the supervision of clinical facilitators. Participants said:

"Stakeholders must come together and establish interprofessional units with real patients in the hospital for successful clinical learning and collaboratively create learning opportunities." (CETU personnel 3)

"I read somewhere overseas, they have developed interprofessional units within the hospital where different healthcare students are placed to work and be able to develop their collaborative clinical competencies. Why can't we adopt that and evaluate it to see if it would be feasible? Clinical facilitators can guide the students and ensure that learning activities are in line with the student's learning outcomes." (Nurse Educator 7)

3. Discussion of the findings

Engagement and active participation in collaborative learning activities will enhance CLO for student nurses to achieve their required clinical learning outcomes and competencies. Below, are descriptions of the importance of identified theme and related subthemes as vital processes for the successful occurrence of CLO in a public academic hospital through collaborative learning activities. As the delivery of healthcare evolves to become more interconnected and coordinated, it is thus imperative for student nurses to engage and actively participate in collaborative clinical learning activities. This will enhance effective and good working relationships in the practice of approaching quality patient care from a team-based perspective.

3.1 Promoting intra and interprofessional collaborative clinical learning

Student nurses require specialized knowledge and skills to effectively contribute to intra and interprofessional teams and promote collaborative learning, which is vital to prepare them for intra and interprofessional education and collaborative practice [IPECP], [24,25]. Engaging and encouraging active participation of healthcare students in collaborative activities promotes joint sharing of knowledge and working towards a common goal where each student learns from, with, and about each other's professional roles and responsibilities [26].

The importance of promoting and engaging in such activities will further allow healthcare students from different professional backgrounds, together with the patients, to collaboratively provide inputs, create professional role clarity, and be part of the decision-making in constructing collective actions to address the complex health needs of the global population [24, 26]. Lack of engagement and active participation of healthcare students in collaborative activities will limit their interactive learning and shared problem-solving abilities, resulting in professional incompetency, lack of confidence, poor teamwork, and leadership skills [27,28].

3.1.1 Develop intra and interprofessional relations for collaborative planning and facilitation of clinical learning.

Collaborative and interprofessional education involve various health professions, their foundation disciplines, and students who mutually create and adopt a collaborative learning environment [7]. Intraprofessional refers to a collaboration between two or more disciplines within the same profession. Such relations aspire to expose students to varying health disciplines to understand the importance of collaborative practices within the health and clinical environment. The development of intra and interprofessional relations across healthcare disciplines can facilitate collaborative learning and practice to promote teamwork in holistic and quality patient care across health professionals [29,30]. Developing intra and interprofessional relationships further creates more opportunities for collaborative learning and experiences, which could assist with the long-term goal of promoting collaborative patient-centered care [31].

The success of intra and interprofessional relations will also be beneficial in the development of a relevant framework for an integrated clinical placement model [32]. Such frameworks within healthcare settings can provide ideal clinical learning opportunities, encouraging intra and interprofessional education and collaborative practices, values, and competencies of healthcare students [32,33]. Moreover, this will enhance collaboration, thus bridging the gap to efficiently provide authentic learning experiences and the need to capitalize on all clinical opportunities to enhance and promote clinical learning.

3.1.2 Develop interprofessional collaborative policies and guidelines.

Girard (2021) [34], reported on the realities and importance of an interprofessional care and health workforce as a complex and multi-layered process that requires a systematic approach to the interconnection of different health facilities, stakeholders, governance levels, and physical institutions. The International Federation of Medical Students Associations (IFMSA) supports the development of concrete policies for interprofessional education and collaborative practice with all relevant stakeholders, achieving context specific, Integrated Interprofessional Education and Collaboration Practice (IPECP) and programmes within the healthcare system. They further believe IPECP is a critical measure to improve students' learning and patient safety, promoting people-centered care in universal health coverage with improved health outcomes. Furthermore, an interprofessional collaborative team-based approach will assist to combat the complexities in the healthcare system.

The development of interprofessional collaborative policies and guidelines can assist and guide the curriculum development framework to identify core competencies required for interprofessional collaborative learning [7]. Interprofessional collaborative policies and guidelines can further promote a culture of equality and interprofessional collaboration among various health professions, behavioral control, norms and standards, and the role of collaborative decisions and policymakers [35,36]. Healthcare students will thus be provided with clarity on expected standards, ensuring consistency and efficiency in operational procedures, and adequate exposure to collaborative clinical learning opportunities and experiences.

3.1.3 Establish common clinical learning goals and clarification of roles and responsibilities.

The establishment of common clinical learning goals and clarification of roles and responsibilities provide learning opportunities that highlight the core competencies of building strong healthcare teams with good interprofessional communication skills. They also accentuate the values and ethics required to provide collaborative and quality patient-centered care [37]. As cited by Henry, Garner, Guernon and Male (2018) [38], Barr's (1998) [39] model for competency-based interprofessional education described the following critical abilities relevant to various stages on the clinical learning continuum: 1. recognizing and respecting the roles of other professionals, 2. joint planning and review of care interventions, 3. evaluation of the outcomes of another practitioner's work, and 4. facilitation of interprofessional learning and teamwork [39].

Understanding the roles and responsibilities of other healthcare professionals in providing safe, efficient, and effective patient-centered healthcare that optimizes outcomes is vital. This intensifies the students' positive attitudes towards intra and interprofessional collaboration and recognition of one's limitations in skills, knowledge, and abilities, thus enhancing their role awareness and need for lifelong learning [40]. Ulrich (2021) [41] added that clarification of roles and responsibilities in collaborative learning enhances the students' learning opportunities in using one's knowledge and those of others to efficiently address the health needs of patients and promote health for the global population.

3.1.4 Establishment of dedicated interprofessional clinical learning units

Hamoen, van Blankenstein, de Jong, Ray and Reinders (2021) [42], support the establishment of dedicated clinical units, as they are perceived to create a better workplace learning environment that is beneficial for the students. Such an environment provides and enhances clinical learning activities and opportunities with the goal of professional collaborative learning and delivery of coordinated quality patient care. Palese, Gonella, Brugnolli, Mansutti, Saiani et al. (2019) [43] purport that interprofessional learning units are innovative approaches that increase interprofessional education opportunities, with various ranges of technical and non-technical skills, and with increased students' confidence in searching for multidisciplinary collaboration. Interprofessional learning units provide students with authentic, facilitated clinical and collaborative experiences focused on competencies for interprofessional collaborative practice and coordinated patient care delivery [44]. Moreover, they increase awareness of interprofessional teamwork, promote interprofessional communication, and foster integrated care planning and confidence in interprofessional collaboration and decision-making approaches [42].

4. Development of strategies to enhance clinical learning opportunities through collaborative learning activities

The development of strategies to enhance CLO through collaborative learning activities followed the framework of Muller et al. (2019) [12]. The framework included formulation of the strategic objective, development of strategic priorities and subsequent action plans, outcome indicators, and responsible persons. Based on the participants' perceptions and the identified main theme with the related sub-themes, the strategies were developed and outlined in Table 4 below.

Table 4: Strategies to enhance clinical learning opportunities through collaborative learning activities.

Strategic Objective: To enhance and facilitate clinical learning opportunities (CLO) through collaborative learning activities		
Strategic Actions	Strategic Output/Outcome Indicators	Responsible Person/s
Strategic Priority 1: Develop intra and interprofessional relations for collaborative planning and facilitation of learning		
<ul style="list-style-type: none"> Consult and engage with relevant stakeholders in the discussion and development of collaborative working relationships. Establish interprofessional partnerships with relevant healthcare professionals for collaborative clinical learning of healthcare students. 	<ul style="list-style-type: none"> Intentional intra and interprofessional networks and teams. A non-hierarchical interprofessional relationship and shared leadership (Equality culture in power and autonomy). Enhanced interactive intra and interprofessional team-based learning approach (sharing of skills and knowledge). Interdependence and coordinated clinical learning and healthcare delivery system. 	<ul style="list-style-type: none"> Nurse educators CETU personnel Operational managers Healthcare students Other relevant stakeholders
<ul style="list-style-type: none"> Design intra and interprofessional clinical learning programme. Provide training for intra and interprofessional collaborative facilitators. 	<ul style="list-style-type: none"> Developed intra and interprofessional clinical learning programme. Embedded interprofessional learning in the curriculum and in line with the community needs. Trained competent intra and interprofessional collaborative facilitators. Facilitated interprofessional collaborative learning activities and practice. Successful application of active learning principles in collaborative clinical learning. Diminished fragmentation within the healthcare system. 	
<ul style="list-style-type: none"> Involve relevant stakeholders in the development and implementation of integrated collaborative clinical placement of students. 	<ul style="list-style-type: none"> Developed framework and model for intra and interprofessional clinical placement. Joint, coordinated, and integrated intra and interprofessional clinical placement of students. Reduced overcrowding of students in clinical placement areas. Enhanced clinical learning opportunities. 	
<ul style="list-style-type: none"> Develop and appoint an intra and interprofessional collaboration committee to provide directions and monitoring of collaborative clinical learning and activities. 	<ul style="list-style-type: none"> A developed framework for collaborative learning. Developed collaborative clinical learning outcomes that are both attached to the vision and goal of intra and interprofessional clinical learning. Availability of collaborative learning resources and design of clinical learning activities. 	

Strategic Objective: To enhance and facilitate clinical learning opportunities (CLO) through collaborative learning activities		
Strategic Actions	Strategic Output/Outcome Indicators	Responsible Person/s
	<ul style="list-style-type: none"> Implemented clinical learning activities and evaluation strategies of collaborative core competencies. 	
• Strategic Priority 2: Develop intra and interprofessional collaborative policies and guidelines		
<ul style="list-style-type: none"> Involve relevant structures to obtain support for intra and interprofessional collaborative learning initiatives from all governance levels. 	<ul style="list-style-type: none"> Available legislative directives for intra and interprofessional collaborative learning and activities. Positive support for collaborative learning from the macro, meso, and micro legislative levels. Availability of resources for collaborative clinical learning. 	<ul style="list-style-type: none"> Nurse educators CETU personnel Operational managers Healthcare students Relevant stakeholders
<ul style="list-style-type: none"> Develop, implement, and review policies and guidelines for successful collaborative clinical learning initiatives in improving collaborative learning activities. 	<ul style="list-style-type: none"> Developed and endorsed policies, guidelines, and standard operating procedures related to coordinated intra and interprofessional collaborative clinical learning and practices. 	
<ul style="list-style-type: none"> Identify and formulate collaborative interprofessional core competencies. 	<ul style="list-style-type: none"> Developed interprofessional core competencies. Developed assessment and evaluation tools for interprofessional core competencies. Interprofessional engagement in policies and guidelines applicable to collaborative clinical learning activities. Shared intra and interprofessional knowledge, ideas, experiences, and resources. Development of students' higher-order skills. 	
• Strategic Priority 3: Establish common clinical learning goals and clarification of roles and responsibilities		
<ul style="list-style-type: none"> Identify and develop common clinical learning outcomes guided by diverse and complementing interprofessional competencies. 	<ul style="list-style-type: none"> Collective establishment of clinical learning and collaborative educational vision and commitment to mutual/common learning outcomes and goals. Enhanced intra and interprofessional clinical learning opportunities. Enhanced intra and interprofessional learning and teamwork. Enhanced reflective practices and engagement in collaborative healthcare practices. Highlighted intra and interprofessional values and work ethic. 	<ul style="list-style-type: none"> Nurse educators CETU personnel Operational managers Healthcare students Other relevant stakeholders
<ul style="list-style-type: none"> Identify, describe, and clarify the roles and responsibilities of the involved healthcare disciplines. 	<ul style="list-style-type: none"> Respect for different and various health professional's knowledge and skills, with enhanced collaborative team-based practices. Enhanced facilitation of intra and interprofessional learning and interactions. A collaborative health workforce for the global population. 	

Strategic Objective: To enhance and facilitate clinical learning opportunities (CLO) through collaborative learning activities		
Strategic Actions	Strategic Output/Outcome Indicators	Responsible Person/s
	<ul style="list-style-type: none"> Coordinated and integrated healthcare delivery. 	
<ul style="list-style-type: none"> Implement in-service training on the roles and responsibilities of other healthcare disciplines. 	<ul style="list-style-type: none"> Increased understanding of the roles and responsibilities of other healthcare professionals. Positive attitude towards collaborative learning and increased role awareness. 	
<ul style="list-style-type: none"> Develop and implement conflict resolution and quality improvement strategies and measures. 	<ul style="list-style-type: none"> Collaborative conflict resolution strategies and quality improvement strategies in place. Decreased fragmentation in healthcare delivery. 	
<ul style="list-style-type: none"> Strategic Priority 4: Establish dedicated interprofessional clinical learning units 		
<ul style="list-style-type: none"> Identify clinical units that are dynamic and multidimensional to foster active participation and collaborative engagement of healthcare students. Jointly establish interprofessional collaborative clinical learning units (CLU) that promote collaborative work-integrated learning and activities. 	<ul style="list-style-type: none"> A platform for collaborative clinical learning and opportunities with open lines of communication that incorporate intra and interprofessional collaboration and teamwork. Developed interprofessional units and collaborative clinical learning culture in various clinical settings (Contextual collaborative support and resources). Joint and coordinated intra and interprofessional clinical placement of students. Classification of collaborative clinical learning opportunities and activities for different health professions. Developed student-centered, student-led (leadership) groups centered around collaborative learning and the delivery of quality patient care with intra and interprofessional supervision. Integrated, collaborative, and shared clinical learning opportunities, practice, and diversity experience. Commitment and engagement in collaborative learning activities for intra and interprofessional clinical competencies. Collective decision-making approaches to quality patient care. 	<ul style="list-style-type: none"> Nurse educators CETU personnel Operational managers Healthcare students Relevant stakeholders

5. Evaluation of the strategies

The strategies developed were presented to a group of experts in qualitative research and strategy development processes, who reflected and resonated on the adequacy and purposes following the criteria of Chinn et al. (2022) [13], namely clarity, generality, accessibility, and importance of the strategies. The paper was also under the supervision and co-supervision of professors who both hold doctoral degrees and have extensive knowledge in qualitative research and theory generation.

The student nurses' engagement and active participation in collaborative clinical learning activities can develop their confidence and competencies with the acquired skills in critical thinking, clinical reasoning and judgment, critical decision-making, and problem-solving skills. They will be able to address complex health problems and provide coordinated quality care to the global population within dynamic and multidimensional real-life healthcare settings.

6. Contribution and conclusion of the paper

The study outlines an overview of the importance of adequate exposure to CLO for student nurses and the need for collaborative learning and practices in a public academic hospital that caters to and supports work-integrated learning (WIL) for students from various healthcare disciplines. The developed strategies can assist decision-makers and policy developers in nursing education institutions and affiliated clinical areas to support and enhance the development of professional interdependence, teamwork, and collaboration for safe and quality patient care through collaborative learning. They will further assist nurse educators, CETU personnel, and operational managers to facilitate and enhance CLO for student nurses through effective collaborative clinical learning activities. Moreover, the strategies can be applied, aligned, and coordinated with the theories, models, and frameworks for interprofessional collaborative learning, students-integrated clinical placement, and practice in the clinical environment. Collaborative learning and activities will encourage students' deeper and self-directed learning with the development of HOTS, communication, teamwork, and collaborative decision-making skills. Students will also have a smooth transition into the nursing profession, with increased confidence, and competence in addressing complex health problems for the global population. With the increasing health complexities and challenging healthcare system, training of students and quality patient care necessitates transformation and practical collaborative approaches that would enhance knowledge and skills development in the provision of quality care and positive health outcomes globally.

Declaration of interest

- Declarations of interest: None
- Submission declaration and verification: The work described in this manuscript has not been published previously.

Author contributions/statement

Mpho N. Motsaanaka: The conception, design of the study, acquisition of data, analysis, and interpretation of data, drafting and revising the manuscript.

Prof A. Makhene: Supervised the entire research study, and approval of the version submitted.

Prof G. Ndawo: Co-supervision of the research study.

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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- The conception and design of the research study, acquisition of data, or analysis and interpretation of data
- Final approval of the version for submission.
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