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Interprofessional collaborative learning as a strategy to facilitate critical thinking and reduce bias in clinical decision-making among student nurses

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Research Article

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Abstract

Background

Critical thinking and clinical judgement are foundational to safe, high-quality patient care. However, undergraduate nursing students at public nursing colleges in South Africa frequently experience difficulty interrogating assumptions, recognising cognitive biases, and applying theory to complex clinical situations. Effective interprofessional collaboration is critical for patient outcomes, yet discipline-specific, task-oriented teaching at colleges such as Nursing education institution limits exposure to alternative professional perspectives. Interprofessional collaborative learning (IPCL) brings nursing and other health professional students together to analyse shared cases, encouraging diverse reasoning and reflective scepticism. Evidence on IPCL impact on assumption identification and bias reduction within South African public nursing college contexts remains limited.

Purpose

To explore and describe clinical facilitators' and student nurses' perceptions of IPCL as a strategy to facilitate critical thinking and reduce bias in clinical decision-making at a public nursing college in Gauteng, and to develop recommendations for incorporation of IPCL in clinical practice.

Methods

I employed a qualitative, exploratory, descriptive and contextual design at a public nursing college in Gauteng offering the R171 Diploma in General Nursing. Purposive sampling recruited 13 clinical facilitators (11 female, 2 male, experience 3–16 years, SANC registered as nurse educators) and 12 third-year R171 student nurses (8 female, 4 male, aged 21–45). Semi-structured individual interviews were conducted April–July 2025 (45–90 minutes), audio-recorded and transcribed verbatim. Data were analysed using Miles, Huberman and Saldaña's matrix-building approach: data condensation, display in matrices, drawing and verifying conclusions. An independent coder analysed data independently; consensus meeting finalised themes. Trustworthiness was ensured through credibility (prolonged engagement, member checking), dependability (audit trail), confirmability (reflexivity, bracketing, independent coding), transferability (thick description of the NEI context) and authenticity (verbatim quotes). Ethical clearance REC-3037-2024, REC-1656-2023, University of Johannesburg.

Results

Four themes emerged: (1) Promoting teamwork and active participation as a foundation for critical thinking, (2) Facilitating interprofessional collaborative learning and collaboration through co-teaching, structured discussions and feedback protocols, (3) Enhancing real-world problem-solving and ethical

deliberation through IPCL, (4) Fostering reflection and appreciation of diverse perspectives. Staff shortages were reported as a barrier to one-to-one facilitation.

Conclusion

IPCL offers a practical, low-cost and sustainable strategy to strengthen critical thinking and reduce bias by exposing student nurses to diverse professional perspectives. For resource-constrained settings such as Nursing education institution, brief ward-based interprofessional case discussions, co-teaching and structured reflection provide feasible models for integration into the R171 curriculum.

Background

Interprofessional collaborative learning (IPCL) involves small groups from different health professions learning with, from and about each other to improve collaboration and quality of care, as defined by WHO. Collaborative learning maximises shared learning through structured interaction following facilitator guidance[1] [3; 2]. Teaching and learning innovations that push the limits of conventional teaching methods and the attainment of interprofessional graduate abilities are needed globally, and in developing nations especially [4]. Health professionals engage in intricate, dynamic interactions as part of interprofessional collaborative learning. The development of critical interprofessional competences through a range of shared learning opportunities is crucial for clinical IPCL [5]. Interprofessional education, as an established beneficial approach to collaborative learning that addresses the problems of disintegration in health care delivery and separation among health care professionals, is well supported but not always successfully applied [6]. Moving from authoritative task-oriented instruction toward collaborative inquiry-based facilitation supports development of reasoning and clinical judgement. Undergraduates often focus on task completion due to anxiety; facilitators assist linking tasks to broader clinical picture through concept-mapping and shared reflection. For student nurses, IPCL benefits include teamwork, communication, self-efficacy and professional identity. These competencies are essential in multidisciplinary practice. IPCL may also contribute to reduced clinical errors and improved satisfaction [7] [8] [9] Collaborative concept mapping and simulation-based IPCL are used to foster critical thinking and safe decision-making. Simulation provides realistic scenarios without jeopardising patient safety. While benefits are documented, implementation challenges limit impact. Effective and highly integrated teams can facilitate critical thinking skills to increase collaborative patient care and safety through the successful integration of IPCL into curricula and practice contexts, potentially leading to optimal patient-centered results [10] The present study explores clinical facilitators' and student nurses' perceptions of IPCL as a strategy to facilitate critical thinking and reduce bias in clinical decision-making among student nurses in Gauteng, South Africa.

Methods

Design

This study used a qualitative, exploratory, descriptive and contextual design to generate rich data on perceptions of IPCL in facilitating critical thinking. Qualitative exploratory-descriptive design is appropriate for exploring under-researched phenomena from participants' perspectives. [11] [12]

Participants and recruitment

Purposive sampling was used to select information-rich participants. Inclusion criteria: (1) nurse educators at a higher education institution, (2) registered with SANC as nurse educators, (3) willing to participate, (4) supervising student nurses clinically, and (5) third-year diploma student nurses (R171) willing to participate. Invitations to participate were sent through emails and distribution of the information leaflet by the NEI's research committee to clinical facilitators and third year student nurses. Sample comprised 13 clinical facilitators (11 female, 2 males, experience 3–16 years) and 12 third-year student nurses (8 female, 4 male, aged 21–45). Participants who agreed to be interviewed provided written consent.

Setting

The study was conducted at a public nursing college in Gauteng offering R171 diploma leading to registration as General Nurse with SANC. Third-year cohort averages 135 students.

Data collection

Semi-structured individual interviews explored perceptions of IPCL. Interviews were conducted between April-July 2025, weekdays and per participant availability, lasting 45–90 minutes. The central question: *How can critical thinking of student nurses be facilitated through IPCL?* Probes enhanced depth and credibility. Interviews were audio-recorded with field notes and transcribed verbatim. Saturation reached at 25 participants.

Data analysis

The matrix-building method of data analysis as guided by Miles, Huberman, and Saldaña's framework which included data consolidation, displaying consolidated data in matrices, drawing, and verifying conclusions was used [11]. A table was created with columns and rows to arrange the collected data for easy viewing, analysis, and comparison of information. Data collection questions were separated into rows. Information was collected from various participants during interviews, where similar responsive patterns related to the question were clustered and consolidated into a sole source to make rich data of the same information [12]. The researcher met regularly with the study supervisors and coder to study the transcripts and come to a consensus on the emerging themes meeting finalised themes. Consolidated data were then put together to assist with systematic and extensive data analysis. An

independent coder analysed data independently. An expert panel was shown the final themes along with quotation examples for confirmation.

Reflexivity

As the researcher, I am a registered nurse with previous experience as a nurse educator. I am familiar with public nursing education institutions in Gauteng. I entered this study as a partial insider, with preconceived ideas that clinical facilitators at the nursing education institution face challenges due to large student numbers and task-oriented teaching in busy clinical sites where student nurses are placed. I acknowledged potential power imbalances. Although not employed at the NEI under study, differences in age and qualifications may have influenced responses. Reflexivity was maintained through a reflexive journal after each interview, bracketing during data collection and analysis, and through independent coding and consensus meetings.

Ethical considerations

Ethical clearance from University of Johannesburg Faculty of Health Sciences REC (REC-3037-2024, REC-1656-2023). There were no connections between the researcher and the nurse educators during the study period. Participants provided both verbal and written consent prior to the collection of data. All participants were made aware of their right to exit the study at any time without facing any repercussions or needing to explain their decision to withdraw. Participants were assured that their confidentiality would be protected. When transcribing and discussing the data, codes were utilized. An independent coder signed a confidentiality agreement to guarantee the participants' confidentiality would remain intact. The gathered data will be securely stored in a password-protected file for a duration of five years and will be accessible solely to the author.

Trustworthiness

[12] criteria guided trustworthiness: credibility through prolonged engagement and member checking, dependability via audit trail, confirmability through reflexivity and bracketing, transferability via thick description, authenticity via verbatim quotes[13]. Authenticity is the extent to which the researcher fairly and completely shows a range of different realities [12]. Appropriate selection of participants for the study sample, provision of rich, detailed, and accurate data analysis, and report of the findings was provided to address the criterion of authenticity [12]. Researcher journaling managed bias. Researcher journaling managed bias.

Results

Four themes were constructed: (1) Teamwork and active participation, (2) Facilitation of interdisciplinary learning and collaboration, (3) Real-world problem solving and ethical debate, (4) Foster reflection and diverse perceptions.

Theme 1: Promoting teamwork and active participation

To foster teamwork and active participation in interdisciplinary collaborative learning, focus on establishing clear goals, promoting open communication, assigning roles, and encouraging active listening and feedback. Participants emphasised communication, shared responsibility and accountability. One participant said:

"The ability to work as a team improves when students learn together; they listen and respect each other." (P6 F)

Another participant thinks that through interdisciplinary collaborative learning, clearly outlining the learning objectives and expectations for the collaborative activity. The participant stated:

“We just need to set clear boundaries of the interdisciplinary learning and the expected outcomes, because sometimes our students feel or lack confidence in engaging with other students from different disciplines, so they end up not achieving their objectives. Hence, they lack critical thinking skills.” (P2 F).

Another participant added:

“Ma’am. (sigh) I think it can help us as students to come together with interns in the ward, maybe have 15 minutes or 30 minutes sessions to discuss patient conditions and the care plans for intervention. It can teach us a lot because we can learn from each other and plan for the logistical aspects of interdisciplinary programmes, such as resource allocation and communication." (P4 SN)

The participants describe that collaborative skills for clinical facilitators focus on building strong relationships, clear communication, and shared goals with students, supervisors, and other healthcare professionals to integrate theory with practice, requiring active listening, mentorship, problem-solving, and leadership to create supportive, effective learning environments for competent student nurses. This is reflected in the participants’ statements below:

“When we send our students to clinical areas, we should clearly articulate the learning objectives and the benefits of interdisciplinary collaboration for students then ensure that the goals are well-defined and understood by all participants.” (P2 F)

Theme 2: Facilitating interprofessional collaborative learning

The results indicate that instructors are capable of successfully mediating cross-disciplinary education and cooperative efforts, thereby cultivating a vibrant and immersive pedagogical atmosphere that readies pupils for the intricate challenges of professional life. One respondent stated:

“Another thing is that we can collaborate with facilitators from other institutions to co-teach and co-assess students work by engaging students in real-world problems that require them to apply knowledge and

critical thinking skills. ” (P4 F)

Another participant proposed:

“We can also develop plans to avoid conflicts that may arise during our collaborative work. At the end of it all, we must have a session to discuss the outcomes, and what was learned and how we can improve the management of our patients. in that way, we will improve our critical thinking skills." (P8 SN)

IPCL creates safe spaces to share knowledge and challenge assumptions. Core characteristics: communication, respect, trust, coordination, shared decision-making.

A participant suggested that communication and feedback for students in collaborative learning making students develop crucial interpersonal skills like communication, accountability, and teamwork:

“We need to train students to provide and receive feedback in a supportive and helpful manner. We can use a variety of communication tools, such as discussions, presentations, and written reports, to facilitate information exchange. I think this will also help our students learn to use their thinking skills to communicate with other disciplines” (P3 F)

The findings suggest that collaboration is central as it mirrors real-world projects that require communication, coordination, and shared effort to achieve outcomes. Another participant described that students learn to serve as thought partners, which helps them make sense of complex material, clarify misconceptions, and deepen their understanding together:

“We should also facilitate structured discussions around specific topics or problems. Involve students in projects that require use of critical thinking skills in teamwork, research, and presentation of findings. Divide a topic into parts, assign each part to a group member, and then have them teach their part to the rest of the group, in that way, you will be able to identify which student lacks critical thinking skills.” (P7 F)

Theme 3: Enhancing real-world problem solving and ethical deliberation through IPCL

Participants emphasized the importance of interdisciplinary collaborative learning as a strategy to enhance real-world problem solving and ethical reasoning. They highlighted that analysing authentic clinical problems collaboratively encourages integration of evidence and ethical reasoning, while mitigating rapid, intuitive thinking. This is illustrated in the following statements:

“…And set learning activities around real-world issues relevant to the local community or the students' lives. We should facilitate structured discussions using techniques like debates to encourage critical thinking and ethical reasoning” (P5 F)

Another participant stated:

“Design tasks that require students to conduct research, form opinions, and develop solutions to address the identified problem, which is very important if we want our students to be critical thinkers.” (P11 F)

Collaborative projects require students to work together to achieve a common goal, promote teamwork, communication, and critical thinking, as students must analyze information, make decisions, and solve problems as a group. Another participant stated:

“We should encourage problem-based learning, where students work through case scenarios, identify learning objectives, and find solutions. So, what we can do is, implement a guided design, where facilitators break down the problem-solving process into steps with feedback at each stage. ” (P1 F)

Participants further acknowledged that integrating diverse perspectives, knowledge and skills within multidisciplinary teams improve patient outcomes and safety, as illustrated below:

“It is important for us to encourage students to explore different perspectives and consider the ethical implications of different solutions.

“We need to facilitate peer feedback to provide students with different perspectives and opportunities to learn from each other by adopting a culture of open communication where students feel comfortable sharing ideas and challenging each other's thinking and make sure that students understand the shared goals and objectives of their collaborative work.” (P6 F)

Theme 4: Fostering reflection and appreciation of diverse perspectives

Participants stated that facilitators should create structured opportunities for students to share their work, engage in constructive critique, and reflect on their own learning processes to foster reflection and diverse perceptions in collaborative learning. A participant said: Need for structured reflection beyond describing what went wrong toward analysing viewpoints.

“If we are to achieve a real education transformation, facilitators need multiple and diverse frameworks and the ability to create and recreate different types of settings through critical reflective learning in communities.” (P9 F)

"Clinical facilitators do not use specific, structured techniques to move past 'what went wrong' and do not push students to analyze different viewpoints, challenge assumptions, and build deep clinical judgment to improve students' critical thinking skills". (P3 F)

Another participant indicated:

“When we work together as students, we come across variety of ideas and perceptions from colleagues, which broadens our understanding of a topic and encourages us to consider different angles before coming to our own conclusions on the problems at hand. So, I think yes, there is a benefit when we allow perceptions from other colleagues, and it improves our critical thinking skills.” (P11 SN)

Encouraging diverse perspectives within groups and promoting active listening are crucial for maximizing the benefits of collaborative learning

“By working together to solve problems, students can learn from each other's strategies, identify more effective methods, and develop a deeper understanding of the problem-solving process.” (P7 F).

“These skills are crucial for critical thinking, as they enable students to share ideas, clarify misunderstandings, and build upon each other's contributions. Debates can encourage students to research a topic, formulate arguments, and present their viewpoints in a structured and convincing manner.” (P3 F)

The findings reveal that participants perceive it as necessary for clinical facilitators to foster reflection and diverse perceptions for critical thinking by creating safe, unrestricted learning environments and using structured guidance like reflective journals, open-ended questioning, and peer debriefing. The participants said:

“As a clinical facilitator, you need to create a supportive, open space where learners feel comfortable sharing emotive responses, difficulties, and mistakes without fear of judgment. Facilitate focused formal dialogues and group debriefs so learners can compare their actions and decisions with those of peers and experienced colleagues, exposing them to diverse perspectives.” (P6 F)

In addition to accepting the need to foster reflection and diverse perceptions, facilitators also acknowledged that their facilitation lack the aspect of encouraging students to reflect to foster diverse perceptions.

“Clinical facilitators do not use specific, structured techniques to move past "what went wrong" and do not push students to analyze different viewpoints, challenge assumptions, and build deep clinical judgment to improve students’ critical thinking skills”. (P3 F)

Discussion

This study aimed to explore and describe clinical facilitators’ and third-year student nurses' perceptions of facilitating critical thinking through interprofessional collaborative learning (IPCL), and to develop recommendations for incorporating this approach into clinical practice. The findings revealed that both clinical facilitators and student nurses deeply appreciate the need to integrate interprofessional collaborative learning into clinical teaching to foster robust clinical reasoning capabilities. Collaboration in healthcare occurs when diverse healthcare professionals, patients, and communities work together as a team, sharing knowledge and skills to provide integrated, high-quality care, leading to better patient safety, improved outcomes, enhanced efficiency, and a more holistic approach to managing complex conditions [7]. It moves beyond isolated practice to build stronger communication, coordinate treatment plans, and utilize the full strengths of the entire care team. For clinical facilitators and student nurses alike, developing collaborative skills focuses on building strong relationships, clear communication, and shared goals to successfully integrate theory with practice, requiring active listening, mentorship,

problem-solving, and leadership to create supportive, effective learning environments for competent student nurses. Globally, comprehensive clinical skills acquisition requires the collaborative involvement of nurse educators, clinical facilitators, and preceptors to guide and mentor student nurses toward achieving the requisite skills, knowledge, attitudes, and competencies within authentic clinical environments [14]. Key experiential skills involve fostering trust, guiding group processes, ensuring active participation from students, managing conflicts, and adapting to challenges like staff shortages to achieve better clinical outcomes. Clinical facilitators need to collaborate with stakeholders to create a safe space for student learning and interprofessional practice, ultimately enhancing the active facilitation of critical thinking at the point of care. They also have a crucial role in guiding, demonstrating best practices, and supporting student development in authentic clinical settings. It is through these interactive processes that an optimal collaborative partnership between academic institutions and clinical sites is developed and maintained within multidisciplinary teams in the best interest of the students[15].

Collaborative learning combines two key goals: learning to work toward solving clinical problems in the company of others and sharpening one's own understanding by listening considerately to the insights of peer professionals, especially those with diverse backgrounds and life experiences. Existing literature [16] indicates that adjusting collaborative facilitation and learning strategies in response to clinical environment challenges, such as staff shortages, can actively foster student critical thinking. This adjustment paves the way for joint efforts to reach student learning objectives and improves the overall quality of clinical education, producing competent and confident healthcare professionals. Furthermore, participating in collaborative learning inspires student nurses to engage with global workforce strategies and acquire an international perspective on interprofessional disciplines. This enables them to develop a deeper, broader understanding of other cultures and healthcare roles. Through IPCL, students' critical thinking is facilitated alongside the acquisition of transferable skills, preparing them to become global health professionals equipped with collaborative decision-making capabilities [17]. Interprofessional education and training encourage students and professionals to work in groups on real-world scenarios. This shared exposure to different viewpoints and problem-solving methods in a safe environment helps student nurses develop critical thinking and clinical judgment skills before participating in high-stakes practice. The ability to create and cultivate collaborative learning in practice is essential to capitalize on the exchange of varied knowledge, skills, and abilities, providing student nurses with the baseline competencies needed to improve healthcare services and navigate evolving healthcare trends. According to [18], interprofessional collaborative education is highly effective in addressing complex health challenges and improving health outcomes. Additionally, [19] identify communication, respect, trust, coordination, and shared decision-making as core characteristics of collaborative skills in clinical practice.

Collaborative learning plays a vital role in developing essential student nurse characteristics, such as professional respect, accountability, self-awareness, communication, and critical thinking. Conversely, student nurses undergoing traditional discipline-specific education have shown lower levels of critical thinking disposition, as isolated teaching often reinforces professional silos [20]. During semi-structured

interviews, acute staff shortages emerged as a significant barrier to collaborative clinical facilitation and student engagement. Participants noted that personnel in clinical areas were too few given the high number of student nurses on clinical placement requiring supervision and support. For instance, clinical facilitators expressed dissatisfaction regarding their limited numbers compared to the large cohorts of students requiring continuous mentorship. Consequently, clinical supervisors cannot always facilitate student learning on an idealized one-to-one basis. To address this structural barrier, clinical facilitators and students advocate for higher education institutions to embed project-based collaborations directly into the curriculum as a foundational skill and a core component of academic work. Student nurses learn to work effectively in multidisciplinary teams over time, provided they receive continuous guidance from their facilitators. Where possible, clinical facilitators should promote collaboration within groups, between groups, across classrooms, between different universities, and with external multidisciplinary teams to make learning more effective and satisfying. Facilitators and students play a critical role in selecting and navigating an environment that facilitates teamwork, particularly where digital technologies and mobile decision-support applications can easily assist student nurses in demanding clinical spaces. While collaborative learning is increasingly adopted in higher education, students frequently encounter difficulties participating in long-running collaborations that require sustained, effective communication among team members [21]. Student nurses often lack the specific interpersonal skills necessary to manage group dynamics initially, which directly interferes with their engagement in collaborative learning.

In the process of collaborating on project work, student nurses experience the practical reality to which various theoretical concepts and clinical interactions relate. This experiential connection serves to facilitate critical thinking and build shared mental models enriched with practical knowledge. Building these shared mental models within the context of project-based learning occurs when students are provided the opportunity to experiment, reflect, and accumulate knowledge while actively engaged in authentic project activities. PjBL is primarily a learning-by-doing approach and serves as a form of experiential learning that enhances student nurses' cognitive skills and reduces bias in clinical decision-making [22]. Research examined the specific social skills that should be taught to students to support collaborative learning, highlighting consensual decision-making, dialogue and discussion, conflict resolution, and team leadership [23]. Furthermore, learning as part of an interprofessional group has been shown to be an effective way to enhance critical thinking skills [24]; students learn more efficiently from people they know and trust, as they must first consider and accept the expertise of other healthcare professionals on the topic. Scholars argue that learning and understanding are always socially constructed and normally take place in social settings—such as families, communities, and among colleagues [25]. Working cooperatively with familiar peers and facilitators reinforces this effect. True learning occurs when individuals work together to solve problems in groups, meaning that clinical facilitators must better prepare student nurses for collaborative learning environments [26]. The diversity inherent in collaborative learning is crucial for broadening student nurses' clinical perspectives, breaking down professional silos, and fostering adaptable problem-solving skills at the point of care[27]. Thus, collaboration may benefit learning even when students and peers are novices and errors are committed

during their learning activities. Moreover, social interaction can positively affect students' self-efficacy and motivation, which in turn may positively affect subsequent learning and performance [28]. Improved patient safety and outcomes through effective teamwork, improved critical thinking skills, and reduced error rates and complications are some benefits of IPCL [29]. Working in a multi-faceted clinical setting exposes students to different thoughts, which challenges their assumptions and helps mitigate the risks associated with rapid, intuitive thinking in clinical practice.

Recommendations for future research

The insights gained from this study open up several important avenues for future research, particularly regarding how clinical facilitators and third-year student nurses navigate collaborative environments: (1) tracking critical thinking growth over time, (2) embedding project-based learning into curricula, (3) finding solutions for staff shortages and using technology, (4) understanding social dynamics and building trust.

Strengths and limitations

The findings of this study led to the provision of recommendations that collaborative learning efforts facilitates critical thinking in clinical practice by integrating diverse perspectives, knowledge, and skills among multidisciplinary teams, ultimately leading to improved patient outcomes and safety [30]. Shared understanding in collaborative learning is positively correlated with team performance and requires engaging in the team's thinking process to help identify cognitive biases and prevent premature decision closure, a common cause of errors. The limitations to the study were that while this study offers valuable insights into the experiences of both clinical facilitators and third-year student nurses, we acknowledge several limitations when interpreting the findings. This study was conducted within a specific institutional and geographic framework, focusing on clinical placement sites associated with a nursing college campus in a single province. The research design used was contextual in nature thus impacting the generalisation of the findings to other contexts.

Conclusions

This study set out to explore how clinical facilitators and third-year student nurses perceive the facilitation of critical thinking through interprofessional collaborative learning (IPCL), with the ultimate goal of developing practical recommendations for nursing education. The qualitative findings clearly demonstrate that moving away from conventional, isolated, and task-oriented teaching models is not just beneficial, but necessary for modern nursing practice. Both facilitators and student nurses view IPCL as a highly practical strategy that actively breaks down professional silos and enhances clinical reasoning at the point of care. The shared experiences of the participants highlighted four central pillars where collaborative learning directly builds analytical skills. First, establishing clear team boundaries and goals helps students actively participate without stepping on other disciplines' toes. Second, deliberate teaching structures—like structured debriefs and co-teaching—provide the supportive feedback loops that students need to evaluate their clinical performance. Third, analyzing authentic, local community

health problems as a team forces student nurses to slow down, avoiding rapid, intuitive assumptions and premature closure during diagnoses. Finally, tools like reflective journals and group debriefings give students a safe space to process diverse viewpoints and think more deeply about their decisions.

Importantly, this research provides vital contextual evidence from a public nursing college operating under significant systemic strain. In an environment where acute staff shortages and large student cohorts (averaging 135 third-year students) make traditional, one-to-one mentoring almost impossible, IPCL stands out as a highly sustainable alternative. Because it embeds collaborative problem-solving directly into existing clinical placements, it optimizes current clinical areas without requiring additional staffing resources.

Ultimately, if we are to prepare nursing graduates to navigate the complex challenges of the South African public health system safely, teamwork and collaborative reasoning must be treated as essential 21st-century competencies. Rather than treating interprofessional learning as an optional add-on, higher education institutions must purposefully integrate it as a foundational component of the R171 curriculum. By providing clear institutional guidelines for conflict resolution, communication, and task delegation, clinical facilitators can systematically establish and monitor these activities, ensuring future nurses are fully equipped for safe, collaborative, and critical clinical practice.

Abbreviations

IPCL Interprofessional Collaborative Learning

NEI Nursing Education Institution

Declarations

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Author contributions

ELN was responsible for the conceptualisation of the study, structural design, methodology planning, and formal data collection. ELN also drafted the initial manuscript. AM and LM provided expert academic supervision, critically reviewed the manuscript for intellectual content, and assisted with revisions. All authors read, cross-reviewed, and approved the final version of the manuscript for submission.

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Data availability

The datasets generated and/or analysed during the current study are not publicly available due to participant confidentiality and ethical restrictions and because they contain sensitive interview transcripts that could compromise participant anonymity.

Ethics approval and consent to participate

Ethics approval and consent to participate: Ethical clearance from University of Johannesburg REC (REC-3037-2024, REC-1656-2023). The study was entirely voluntary, and participants were made aware that they might leave at any time without facing any repercussions. All participants gave their informed consent in compliance with the ethics committee's guidelines.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

References

1. World Health Organization. Framework for action on interprofessional education and collaborative practice. Geneva: WHO; 2010.
2. World Health Organization. Transforming and scaling up health professionals' education and training: WHO guidelines. Geneva: WHO; 2013.
3. Damani Q, Malik G, Bourke S. Nursing faculty and undergraduate nursing students’ perceptions and experiences of collaborative learning: A scoping review. J Prof Nurs. 2025 Aug 21.
4. Douglass B, Solecki S, Carter N. The innovative development of a virtual global classroom: An interprofessional partnership for advanced-level nursing education. J Interprofessional Educ Pract. 2023;32:100638.
5. Neely L. Clinical Educators' Perceptions and Experiences with Interprofessional Education and Collaborative Practice (2025). Graduate Thesis and Dissertation post-2024. 483. https://stars.library.ucf.edu/etd2024/483
6. Khan AM, Al Baqami SK, Assiry AN, Albissi AA, Alshahrani NA, Al-Muteiri NH, Alghamdi SS, Alshreef SA. Interprofessional Healthcare Collaboration Integrating Medical Physics, Nursing, Pharmaceutical Sciences and Public Health for Improved Patient Outcomes. Cultura: International Journal of Philosophy of Culture and Axiology. 2026;23(3s):446 – 69.

7. Samarasekera DD, Nyoni CN, Amaral E, Grant J. Challenges and opportunities in interprofessional education and practice. Lancet. 2022;400(10362):1495–7.
8. Oudbier J, Verheijck E, van Diermen D, Tams J, Bramer J, Spaai G. Enhancing the effectiveness of interprofessional education in health science education: a state-of-the-art review. BMC Med Educ. 2024;24(1):1492.
9. Zenani NE, Sehularo LA, Gause G, Chukwuere PC. The contribution of interprofessional education in developing competent undergraduate nursing students: integrative literature review. BMC Nurs. 2023;22(1):315.
10. Cadet T, Cusimano J, McKearney S, Honaker J, O'Neal C, Taheri R, Uhley V, Zhang Y, Dreker M, Cohn JS. Describing the evidence linking interprofessional education interventions to improving the delivery of safe and effective patient care: a scoping review. J Interprof Care. 2024;38(3):476–85.
11. Miles MB, Huberman AM, Saldaña J. Qualitative data analysis: A methods sourcebook. 4th ed. Thousand Oaks: Sage; 2020.
12. Lincoln YS, Guba EG. But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. New Dir Program Eval. 1986;1986(30):73–84.
13. Polit DF, Beck CT. Nursing research: Generating and assessing evidence for nursing practice. 10th ed. Philadelphia: Wolters Kluwer; 2017.
14. Motsaanaka MN, Makhene A, Ndawo G. Technology-based approaches to enhance clinical learning opportunities for student nurses in a nursing education institution in Gauteng. Int J Afr Nurs Sci. 2024;21:100790.
15. Oshodi TO, Sookhoo D. Nursing students' perceptions of inadequate nurse staffing in the clinical learning environment–a systematic narrative review. Nurse Educ Pract. 2025;82:104221.
16. Simons M, Goossensen A, Nies H. Interventions fostering interdisciplinary and inter-organizational collaboration in health and social care; an integrative literature review. J Interprof Educ Pract. 2022;28:100515.
17. McNamara S, Cranley L, Kilpatrick K, Parry M. Teaching and Learning Activities That Promote Critical Thinking in Student Nurse Practitioners: A Rapid Review. J Adv Nurs. 2026;82(10):9112–24.
18. Loos NL, Selles RW, Ter Stege MH, Arends GR, Hoogendam L, van Kooij YE, Veltkamp J, Wouters RM. Using outcome information during consultation yields better shared decision making, better patient experiences, and more positive expectations: A comparative effectiveness study. Value health. 2025;28(4):571–81.
19. Tomas N, Markus L. Readiness for interprofessional learning among undergraduate health discipline students: A multisite study. Curationis. 2026;49(1):1–0.
20. Baecher-Lind L, Fleming AC, Bhargava R, et al. Enhancing interprofessional collaboration and interprofessional education in women's health. Med Educ Online. 2022;27(1):2107419.
21. Rashid A, Rasheed R. Trustworthiness as Inferential Accountability in Qualitative Research. Int J Qualitative Methods. 2026;25:16094069261473133.

22. Kakar ZU, Rasheed R, Rashid A, Akhter S. Criteria for assessing and ensuring the trustworthiness in qualitative research.
23. Polit D, Beck C. Resource manual for nursing research: Generating and assessing evidence for nursing practice. Lippincott Williams & Wilkins; 2019. Dec 9.
24. Mhango L, Jere D, Msiska G, Chorwe-Sungani G, Chirwa E. 2021. The roles and experiences of preceptors in clinical teaching of undergraduate nursing and midwifery students in Malawi. Malawi Med J, 33(Postgraduate Supplementary Iss), p.35.
25. Zenani NE, Sehularo LA, Gause G, Chukwuere PC. The contribution of interprofessional education in developing competent undergraduate nursing students: integrative literature review. BMC Nurs. 2023;22(1):315.
26. Oshodi TO, Sookhoo D. Nursing students' perceptions of inadequate nurse staffing in the clinical learning environment–a systematic narrative review. Nurse Educ Pract. 2025;82:104221.
27. McNamara S, Cranley L, Kilpatrick K, Parry M. Teaching and Learning Activities That Promote Critical Thinking in Student Nurse Practitioners: A Rapid Review. J Adv Nurs. 2026;82(10):9112–24.
28. Baecher-Lind L, Fleming AC, Bhargava R, Cox SM, Everett EN, Forstein DA, Madani Sims S, Morgan HK, Morosky CM, Royce CS, Sonn TS. Enhancing interprofessional collaboration and interprofessional education in women's health. Med Educ Online. 2022;27(1):2107419.
29. Simons M, Goossensen A, Nies H. Interventions fostering interdisciplinary and inter-organizational collaboration in health and social care; an integrative literature review. J Interprofessional Educ Pract. 2022;28:100515. (Simons M).
30. Ayed A, Aqtam I, Malak MZ, Toqan D, Hammad BM, Qaddumi J, Shouli M. Insights into the relationship between emotional intelligence and critical thinking among nursing students. BMC Nurs. 2025;24(1):1107.