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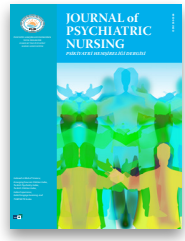

Systematic Review

Enhancing critical thinking skills and patient care outcome through simulated mental health nursing training among baccalaureate nursing students

Jasna T,[1] Usha Marath[2]

[1]Nursing Tutor, Government School of Nursing, Kozhikode, Kerala, India
[2]Principal, Lisie College of Nursing, Ernakulam, Kerala, India

Abstract

Objectives: The link between theoretical knowledge and practical application in nursing education requires innovative methods to teach crucial skills to future nurses. This review outlines a framework emphasizing simulated training in mental health nursing and aims to consolidate findings on the significance of this training for nursing students globally.

Methods: This review utilized five major databases: Scopus, ProQuest Medical Library Database, CINAHL Database via EBSCO Host, PubMed, and Web of Science. Papers related to simulated mental health nursing training for baccalaureate nursing students were searched using specific keywords such as simulated mental health nursing, learning mental illness through simulation, mental health nursing through simulation, and simulation in psychiatric nursing. From the results, papers containing one or more of these keywords within titles, abstracts, or keyword sections were identified.

Results: Research indicates that simulated mental health nursing training decreases students' anxiety and enhances their confidence, ultimately resulting in improved patient care. The study emphasizes how simulated mental health nursing training can improve nursing outcomes and patient care by aligning with learners' cognitive abilities and evaluation methods.

Conclusion: Simulating mental health nursing enhances the knowledge and skills of nursing students, supporting the development of crucial competencies by linking theory to practice. These simulations serve as an effective educational strategy to address challenges in learning mental health nursing. Simulated mental health nursing training strengthens nursing students' confidence, reduces anxiety, improves their knowledge and skills, and contributes to better patient care outcomes.

Keywords: Clinical knowledge; critical thinking; mental health nursing; simulation; undergraduate nursing students

Mental health nursing education has evolved significantly, driven by societal shifts in mental health awareness and the growing recognition of its role in overall healthcare. Nurses in this field face complex ethical and clinical challenges, emphasizing the need for innovative teaching methods that provide students with real-world experiences.[1] As mental health nursing in the baccalaureate curriculum includes understanding the basic psychology of human behavior, types, causes, symptoms, and management of various mental illnesses, using the appropriate therapeutic communication techniques, removing the social stigma related to mental illness, and managing psychiatric emergencies in the community and hospital. As the subject requires more advanced knowledge and skills in managing mentally ill patients,[2] simulated participant programs (SPPs) have emerged as valuable tools for improving nursing education, enhancing theoretical knowledge, developing critical skills, and addressing the need for skilled mental health professionals who can meet the com-

Address for correspondence: Jasna T, Nursing Tutor, Government School of Nursing, Kozhikode, Kerala, India
Phone: +91 949 501 10 96 **E-mail:** jasnaamanulla@gmail.com **ORCID:** 0009-0008-0230-4530
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plex needs of patients.[3] Simulation in nursing education can be categorized as low-fidelity, using simple tools like mannequins or role-playing, and high-fidelity, utilizing advanced technology and lifelike mannequins to create realistic clinical settings.[4] This range of simulation strengthens critical thinking, improves clinical judgment, and fosters empathy in patient care. Initially, simulations involved simple models and role-playing exercises, focusing on basic skills. However, the advent of advanced simulators and virtual reality technology has expanded the scope of simulation to include complex medical scenarios, providing a more immersive and realistic experience.[5] Frameworks like the Association of Standardized Patient Educators (ASPE) and Standards of Best Practice have been established to ensure quality standards and continuous improvement in training effectiveness.[6,7] Simulation-based learning, grounded in constructivist and situational learning theories, is crucial for enhancing nursing education, particularly in mental health.[8] The purpose of this review was to reiterate the significance of simulated learning in mental health nursing, in the clinical competence of baccalaureate nursing students and clinical outcome of patients. We have used extensive search strategies from data sources such as Scopus, ProQuest Medical Library Database, CINAHL Database via EBSCO Host, PubMed, and Web of Science. The studies that met the inclusion criteria were selected, and the comprehensive analysis was done based on the findings of the source list published between 2010 and 2024.

Theoretical Models Supporting Simulation-Based Learning

Human simulation involves human role players interacting with learners in experiential learning and assessment. Initially, role players were referred to as standardized or simulated patients (SPs) portraying patients.[9] In recent years, SPs may take on various roles such as clients, family members, or healthcare professionals. The methodology can be applied to any individual portraying a human in any simulation. Simulation-based learning, supported by different theories, is very important for improving nursing education, especially in mental health areas.[10] Constructivist theories from Piaget and Vygotsky stress the need for hands-on learning, where students are actively involved in learning, leading to better understanding of complicated clinical ideas, which supports the evidence of adding transformative learning experiences that are meaningful for both new and experienced clinicians and nurses, helping to improve their clinical reasoning skills.[11] Additionally, the situational learning theory suggests that knowledge is best gained through experiences in context, further backed by simulated learning,[12] which showed in an assessment of simulated programs that well-structured, realistic simulations greatly enhance learning outcomes. These theories together highlight the importance of interactive settings in developing empathy, critical thinking, and better patient care, ultimately getting nursing students ready for the challenging realities of mental health work. A recent study conducted on the effectiveness of simulated learning outcomes in real-time clinical settings in psychiatry by nursing students showed that after doing the simulation, students' levels of stigma improved significantly in six out of nine areas. The biggest improvements were seen in feelings of anger and willingness to help, with moderate effect sizes (r=0.392 and 0.307). When comparing by gender, the analysis showed that simulation helped women reduce stigma in six areas, while men showed improvements in four areas — with anger and fear having the strongest effects for men (r=0.414 and 0.446). The researchers also looked at whether students who had previous contact with people with mental illness reacted differently. Overall, there was no big difference between the groups. However, within each group, students who had prior contact showed improvement in fear only (p=0.040, r=0.353), while those with no prior contact showed improvements in six areas, similar to the full group's results.[13]

What is presently known on this subject?

- Simulated mental health nursing training is essential for the clinical skill development of baccalaureate nursing students.

What does this article add to the existing knowledge?

- Simulation in mental health nursing increases confidence, self-esteem, empathy, and interpersonal relationships with patients.
- It not only enhances the students' confidence and clinical competency, but also the patients' well-being and clinical outcome.

What are the implications for practice?

- Every nursing school should include simulation training in mental health nursing to improve the teaching-learning process in psychiatric care settings, and thus improve patients' outcomes and satisfaction.

Research Question

Based on the fine review of the related literature, the authors have identified the need for simulated nursing education for baccalaureate nursing students in mental health nursing, especially in the post-pandemic era and during times when many emerging and tropical illnesses play a critical role in the healthcare system.[14] The following research question was formulated by the authors for undertaking this comprehensive review:

"What is the impact of simulation-based mental health nursing training on undergraduate nursing students' critical thinking, clinical decision-making skills, and their ability to provide improved patient care?"

Objectives of the Review

The goal of simulation-based teaching is to boost students' knowledge, abilities, and empathy, which should lead to better critical thinking and patient care.[15] By using methods

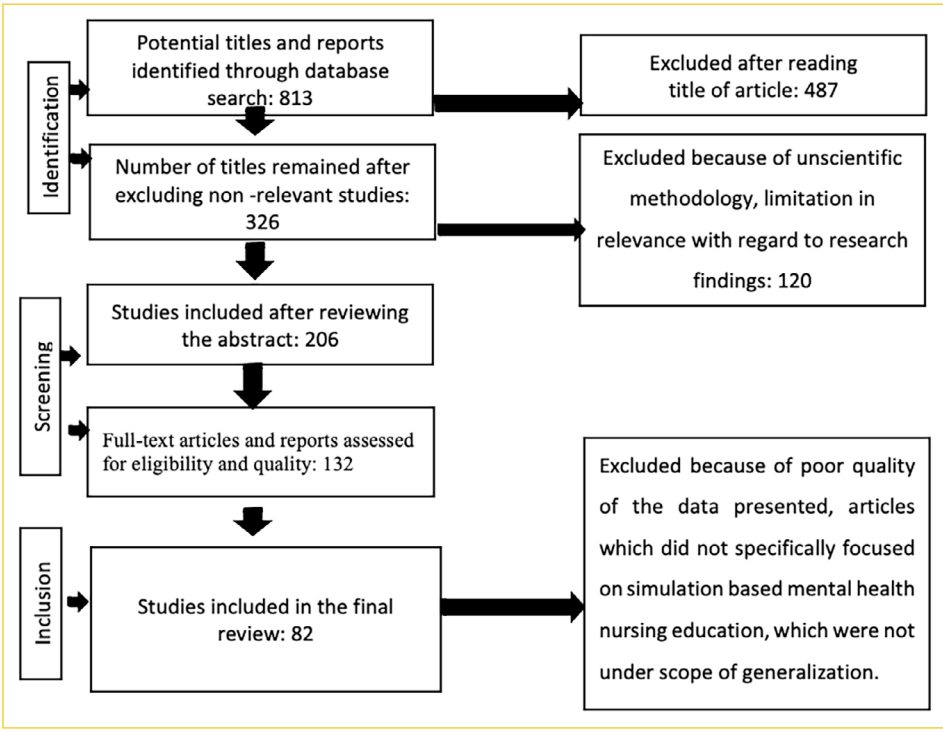

Figure 1. Flow-diagram of literature selection.

that replicate real-life clinical situations, this review aims to connect theory with practice. Current nursing programs often do not include enough hands-on learning, as seen in recent trends and issues with clinical reasoning. Related studies show that understanding changes in clinical education after the pandemic requires a forward-thinking approach to updating curricula.[16] Thus, this review has the following objectives:

- To check how effective simulated training is in the clinical practice of mental health nursing students.
- To guide future nursing education curriculum developments.
- To address the gaps in quality and diversity.[17]

Materials and Method

To identify pertinent studies in the broad area of our review, we utilized five major databases: Scopus, ProQuest Medical Library Database, CINAHL Database via EBSCO Host, PubMed, and Web of Science. Our search was guided by the query: "Simulated mental health nursing training for baccalaureate nursing students," and the search terms were simulation, nursing, mental health, psychiatric nursing, simulated mental health training, undergraduate nursing students, mental health nursing students, nursing education, and nursing curriculum. From the results, we aimed to pinpoint papers containing one or more of the following keywords: Simulated mental health nursing, learning mental illness using simulated learning, mental health nursing through simulated learning, and simulation and psychiatric nursing. These keywords were searched within the titles, abstracts, or keyword sections of the papers. The methodology for searching and selecting articles for this review is illustrated in Figure 1.

Inclusion and Exclusion Criteria

Our search was restricted to articles published in English between 2010 and 2024. Initially, our selection process began with 813 papers, which encompassed original research, review articles, and surveys. For our analysis, we opted to include only those papers that presented original experimental findings and review papers and were either open access or had the full text available (Table 1).

To filter out papers that did not satisfy our inclusion criteria (Table 2), we implemented a four-step process:

Step 1: Elimination of duplicates, review articles, and survey articles.

Step 2: Exclusion of articles lacking full text.

Step 3: Removal of articles without experimental results.

Step 4: Exclusion of articles that did not provide adequate details regarding data sources.

Following the removal of duplications and methodologically inconsistent review papers in the first step, we were left with 326 articles for further screening. We then assessed the open access criterion (full text availability) and identified 132 papers that met this requirement. We examined the titles, abstracts, methodologies, and results of these papers. After our initial screening, we selected 82 full texts of interest that offered orig-

Table 1. Data sources and search strategy

Sl. no.	Database	Keywords	Number of identified articles
1	Scopus	Simulation, nursing, mental health, psychiatric nursing, mental health nursing students, nursing education and nursing curriculum.	176
2	ProQuest	Simulated mental health training, under graduate nursing students	78
3	Medical library database	Simulation, nursing, mental health, psychiatric nursing, mental health nursing students, nursing education and nursing curriculum.	16
4	CINAHL Database	Simulated mental health training, under graduate nursing students,	219
5	PubMed	Simulated mental health training, under graduate nursing students, simulation, nursing, mental health, psychiatric nursing, mental health nursing students, nursing education and nursing curriculum.	118
6	Web of Science	Simulated mental health training, under graduate nursing students, simulation, nursing, mental health, psychiatric nursing, mental health nursing students, nursing education and nursing curriculum.	206

Table 2. Inclusion and exclusion criteria for the review of literature

Inclusion criteria	Exclusion criteria
Manuscripts on simulation in mental health nursing training	Literature not directly focusing on the research question
Literature focusing on simulated learning in nursing	Literature characterized by methodological inconsistencies, which can be identified through the examination of abstracts, often presents challenges in the synthesis of evidence. This includes instances where the methodology is inadequately explained, resulting in insufficient evidence, as well as articles that primarily consist of commentary and opinion rather than empirical research.
Literatures which were peer reviewed	Literatures which were published in other than English
Articles from across the globe, referencing to simulation training in psychiatric nursing education	
Articles published between 2010 and 2024	

inal experimental data and consistency in the review outputs. Subsequently, we established our eligibility criteria based on the type of data utilized and its availability in the public domain.

Results

In the healthcare field, nurses need more than just medical knowledge and technical skills; they also need empathy and emotional understanding for their patients.[18] Building strong relationships with patients through empathy helps to improve trust and communication, leading to better care outcomes.[19] Transformative learning experiences and real-life practice are key in enhancing a nurse's clinical reasoning skills and ability to adapt to patient needs.[20] Simulation-based structured training programs can also play a crucial role in developing these essential competencies.[21]

Role of Experiential Learning in Nursing Education

Hands-on learning in nursing education is crucial to help students develop real skills from theoretical knowledge. It is important for nurse educators to have the necessary skills to create curricula that promote hands-on learning and address community health issues. Research has shown that using various teaching methods, including hands-on learning, enhances knowledge and confidence in new nurses working in emergency departments, ultimately improving patient care outcomes.[22]

Impact of Simulation on Student Engagement and Learning Outcomes

Engagement and participation are essential in nursing education, particularly in mental health training. Simulation-based training is valuable for students as it allows them to practice real clinical situations without risking patient safety, boosting confidence and skills as well as clinical reasoning and critical thinking.[23] Teaching clinical reasoning explicitly through simulations enhances learning outcomes and creates a more skilled nursing workforce as evidenced by Rothgeb.[24]

Enhancing Knowledge and Skills Through Simulation

In nursing education, simulation training is a key tool for improving both knowledge and hands-on skills necessary for good patient care.[25,26] Researchers point out that good clinical reasoning is a complex skill that develops through practice and facing various clinical situations.[27] Moreover, simu-

lation gives students a controlled but active environment to deal with problems they might face in real life, addressing significant gaps in reasoning and diagnostic skills that often come from traditional education methods.[28] This practical approach not only builds clinical and diagnostic abilities but also improves students' empathy and communication skills, resulting in better patient care outcomes.

Development of Clinical Skills Through Simulation Exercises

The role of simulation exercises in nursing education has changed from being an extra tool to becoming essential for building clinical skills. Through interactive scenarios, students take part in real-life patient interactions, which helps them develop both technical skills and critical thinking, along with emotional intelligence needed in mental health nursing.[29] For example, the study of simulated participant programs (SPPs) shows how organized structures improve training quality, making sure nursing students understand the complex needs of clinical reasoning and patient care.[30] Additionally, this method helps with the mental strain often felt during real-life interactions, enabling students to practice and improve their abilities in a safe and supportive setting.[31] As a result, simulation exercises not only boost students' confidence but also get them ready to handle clinical situations with empathy and understanding.

Comparison of Traditional vs. Simulation-Based Training Outcomes

Traditional nursing education methods mostly focus on theory and clinical practice, which can limit students' chances to develop advanced communication and emotional skills. A systematic review shows that although there may not be big differences in levels of empathy, self-confidence, and satisfaction between students trained with high-fidelity manikin simulators and standardized patients, these experiences contribute to an important social shift that emphasizes empathetic communication in nursing.[32] Moreover, efforts to teach emotional intelligence and empathy through new strategies have shown possible benefits in enhancing the students' clinical experience.[33]

Integration of Evidence-Based Practices in Simulation Scenarios

By participating in simulations that are based on up-to-date research, students can understand the complexities of mental health issues better, which helps them improve their diagnostic skills and patient care strategies.[34] The shift from theory to practice is backed by Default and Network Theory (DNT) that good clinical reasoning comes from lots of practice with organized mentoring.[35] Also, addressing student worries and job expectations through specific simulation exercises has been shown to get students ready for real clinical situations, as noted in earlier studies about immersive learning.[36] In the end, this method not only improves theoretical understanding but also gives students the skills needed to enhance patient care results in mental health areas.

Role of Feedback in Skill Enhancement During Simulations

In simulations, students take part in realistic situations that require them to make clinical decisions and use what they have learned. Giving timely and helpful feedback not only helps students see where they can improve but also supports good practices, leading to a better understanding of their future roles in healthcare. A recent study suggests that new graduate nurses need better clinical judgment, highlighting the role of feedback in preparing for the Next Generation NCLEX (NGN) exam.[37] Additionally, as shown in research among medical graduates, organized feedback during the transition in college demonstrated interventions to reduce student anxiety and improve their professionalism and diagnostic skills.[38] The authors support that effective feedback makes simulations into strong educational tools that enhance critical thinking and patient care results among medical students.

Fostering Empathy and Emotional Intelligence

Empathy and emotional intelligence are very important in nursing education, especially in mental health. Developing these traits in baccalaureate nursing students boosts their skills and affects patient care outcomes. Studies show that students with emotional intelligence training show better clinical practices and higher patient satisfaction, making a strong case for adding emotional skills training to nursing programs.[39] Moreover, research on nursing students at various educational levels found that emotional intelligence is often linked to personal maturity, indicating that as students learn more, their empathy may also grow.[40] Therefore, organized programs that include empathy and emotional intelligence in mental health nursing education are crucial to prepare future nurses to handle their patients' complex emotional needs effectively.

Improved Patient Interactions

A key point found in various case studies is that organized simulation exercises boost students' clinical reasoning skills by giving them a real-life setting to practice their empathetic communication and critical thinking. These simulations create a safe space where nursing students can reflect on their practice, which was noted by participants who moved from being inexperienced to more confident professionals.[41] Additionally, using a simulation approach in developing clinical competency among students shows that regular evaluations of these simulation programs can measure improvements in

the quality of clinical interactions, highlighting how beneficial this training can be.[42] Overall, these research findings emphasize the importance of hands-on learning models in improving patient care standards, pushing future nursing programs to focus more on simulation-based teaching.

Long-Term Effects of Empathy Training Through Simulation on Nursing Practice

Empathy training in nursing education has shown good long-term effects on practice, helping both patient care and nurse-patient relationships. By involving nursing students in simulation exercises that imitate real-life challenges faced by people with sensory and cognitive issues, educators create a setting for critical reflection on emotional responses. This training improves technical skills and builds a better understanding of patients' experiences, leading to better health outcomes. Studies highlight that dealing with sensory and cognitive impairments requires healthcare professionals to take a more empathetic approach, which can lower the chances of negative events in clinical settings.[43] Also, using theoretical methods in training can help nursing students improve their communication skills, making it easier for them to handle difficult emotional situations and support patients better.[44] Thus, the ongoing use of empathy learned through simulation can greatly enhance nursing practice over time.

Simulation as a Tool for Developing Critical Thinking Skills

In nursing education, using simulation as a teaching method has become a strong way to improve students' critical thinking. By placing learners in real-life clinical situations, simulation helps them develop important thinking skills needed for making good decisions in patient care. For example, studies show that organized simulated experiences can improve clinical reasoning skills, which are crucial in mental health nursing, where practitioners deal with tricky emotional and psychological issues.[45] Additionally, using Simulation-Based Research (SBR) to assess the quality of simulations ensures that education programs meet high standards meant to enhance critical thinking in nursing.[46] Therefore, simulation not only helps in gaining knowledge and skills but also builds the empathy needed for whole patient-centered care.

Although we have analysed the constructive and learning interventions possible using simulation in mental health nursing, evidence suggests that it has some negative impacts as well, which may hinder the learning enthusiasm of the students.

Limited Human Interaction

As mental health nursing requires vast experience for the learner to interact with real patients and real-time emotions, the artificially created environment and learning environment do not facilitate students' interaction with patients.[47]

Risk of Oversimplification

Scenarios in SPPs are often structured with clear learning objectives for the students. Real-world mental health situations are often ambiguous, overlapping, and evolve in unexpected ways. This may lead students to develop unrealistic expectations of clinical practice and make clinical case management even tougher.[48]

High Cost and Resource Demands

Often, quality simulated learning environments require highly trained simulated patients, experienced staff, and advanced mannequins. In most low-resource setting nursing schools, such facilities may not be available.[49]

Limited Focus on Therapeutic Relationship Building

Building a trusting therapeutic alliance is central to mental health nursing, and simulations may emphasize specific communication techniques or crisis interventions but may not adequately foster the subtle, long-term skills needed to build rapport and therapeutic trust with the patients in real-time clinical scenarios.[50]

Performance Anxiety in Students

Some students might feel significant stress or embarrassment when acting out scenarios in front of peers and instructors. This anxiety can reduce their ability to perform naturally and diminish the effectiveness of the learning experience, eventually acting as a barrier to enhancing clinical skills.[51]

Discussion

The changing field of nursing education needs new ways to help students gain the skills required for mental health work.[52] One way to do this is through simulated training, which places students in safe but realistic clinical situations, helping them improve both their clinical thinking and people skills. This method goes beyond normal classroom learning by allowing students to experience real-life patient situations in a secure setting. Importantly, this hands-on experience helps build empathy, communication, and decision-making skills, which are key in mental health nursing. By acting out real patient interactions, students can see how they respond, think about their practice, and strengthen their emotional toughness—important factors for good patient care. In the end, simulated training not only improves technical skills but also gives nursing students the overall abilities they need for the challenges of mental health nursing, leading to better patient results and a more caring healthcare team.[44]

Table 3. Challenges and limitations of simulated mental health training

Challenge	Importance level	Impact on training	Source
Limited access to technology	High	Hinders practice and skill development	American Nursing Association
Variability in simulation quality	Medium	Different outcomes across training programs	Nursing Education Perspectives
Instructor experience	High	Affects simulation effectiveness and realism	Journal of Nursing Education
Student preparedness	Medium	Differences in prior knowledge affect learning	International Journal of Nursing Studies
Emotional distress in simulations	High	May impact student engagement and learning	Nurse Education Today
Resource intensive	Medium	Increases costs and time for implementation	Nursing Management

The importance of simulated mental health nursing training helps by putting students in real-life situations, these simulations help combine what they learn theoretically with how to use it practically, helping them build critical thinking and decision-making skills during challenging times. Additionally, the emotional side of nursing gets attention, allowing students to practice empathy and communication skills that are key for good patient care. As the need for skilled mental health workers grows, it makes sense to incorporate such modern training methods into nursing courses more thoroughly. This article highlights how important it is to use simulation-based learning techniques to better equip and build the confidence of upcoming nurses when facing complex mental health situations.[53] In conclusion, the review points out the positive effects of simulated mental health nursing training and supports its wider use in educational programs. By embracing this teaching method, nursing schools can increase student readiness and also improve the overall quality of mental health care. In the end, continuously developing these teaching strategies is crucial for meeting the changing demands of healthcare systems and for improving patient outcomes in mental health services. The use of simulated training in nursing education is really important for getting students ready for real-life clinical problems. This method creates a setting where students can deal with complex situations, helping them build critical thinking and decision-making abilities that are vital for mental health nursing. Also, taking part in simulations helps promote empathy, especially for the needs of patients with sensory and cognitive challenges.[54] As nursing students work through these designed scenarios, they not only practice technical skills but also learn to recognize the emotional aspects of patient care, thus connecting theory to practice. Moreover, including emotional intelligence in training, as mentioned in the literature, adds to student growth by focusing on caring delivery, making graduates better at handling complicated patient interactions.[44] Therefore, simulated training is key in improving the overall skills of nursing students, getting them ready for the challenges of mental health care. Simulated training in mental health nursing does have significant educational advantages, but it also comes with some challenges and limits. A major issue is that participants might feel emotionally disconnected, as students could struggle to engage fully with simulations that do not reflect the emotional depth of real-life situations. This disconnection can result in a lack of empathetic understanding, which is essential in mental health care. Additionally, focusing too much on simulation might overlook the significance of direct interactions with patients, highlighting the restrictions of an artificial learning environment. Being able to handle complex interpersonal situations and improve emotional intelligence is crucial for effective nursing practice. However, some people suggest that standardized tests for emotional intelligence raise ethical concerns, as they often fail to capture the subtle qualities of compassion and care needed for mental health professionals.[55] Therefore, while new simulation methods provide useful training opportunities, they should be carefully combined with real-world experiences to ensure thorough skill development, as they have a few negative implications in the learning process and real-time patient management skills in clinical scenarios. Moreover, simulated learning experiences need advanced clinical labs and experienced instructors.

Implications for Nursing Education and Practice

Simulated mental health nursing training enhances nursing education by helping new nurses build confidence in clinical skills and professionalism. It offers a controlled environment for students to practice in realistic situations, improving clinical reasoning and critical thinking skills. This method reduces reliance on traditional shift-based learning, allowing for more practice and better preparation for real-life healthcare challenges, ultimately leading to improved patient care outcomes. This method should be included inevitably in the nursing curriculum, and the educational institution authorities must be able to provide administrative and other technical support for implementing the simulation-based training in nursing schools. However, the simulation method of mental health nursing clinical training is a challenging task for many instructors, as reported by researchers, and the same has been depicted in Table 3.

Recommendations for Future Research in Simulation Training

To make simulation training in nursing education better, future studies need to focus on creating and testing new simulation methods that include a complete approach to mental health care. It is important to look into different simulation settings, like virtual reality and realistic manikins, to find out which approaches best improve empathy, clinical judgment, and critical thinking in nursing students. Taylor et al.,[56] and Doyon et al.,[57] in their research, noted that adding clinical judgment to training is key for better patient outcomes, which calls for a thorough examination of simulation situations that promote this skill. Also, research should look into how interprofessional education works within simulation environments, as shown by results from research highlighting fairness and teamwork among health professions.[15] These efforts could help understand how simulation training can better prepare nursing students to handle complicated health issues in their careers.

Limitations of the Review

The review shows promising results, but there are limitations that affect its impact and generalizability. Differences in simulation programs across institutions could limit relevance. Simulation in mental health nursing education is crucial for enhancing skills like empathy, communication, and critical thinking. Realistic scenarios help students understand psychological issues and prepare for real-world experiences. Educators should consider stress factors like remote consulting and emerging tropical illnesses, which may cause a threat to the population in quarantine. Using recognized methods to assess simulation quality improves learning outcomes. Investing in comprehensive simulation training results in better patient care and skilled mental health professionals.

Conclusion

In summary, this review shows that simulated mental health nursing training significantly improves bachelor nursing students' knowledge, skills, and empathy. These simulations create a realistic clinical environment that allows students to learn actively and think critically, which prepares them for real patient care challenges. Previous studies indicate that effective simulation programs can greatly enhance educational quality and student outcomes, Sanchis-Giménez et al.[44] The knowledge gained from this training may also guide changes in the curriculum, making future nursing education more relevant to today's complex healthcare needs, Kiernan & Olsen.[41] In the end, incorporating simulated training into nursing programs is not just about improving academic standards; it is an essential development that leads to better patient care and helps prepare nurses with the necessary skills for their careers.

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