

ORIGINAL ARTICLE

PERSPECTIVES OF CLINICAL INSTRUCTORS OF NURSING STUDENT COMPETENCES IN ACUTE AND CRITICAL CARE

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ABSTRACT

Nursing students must be competent in providing acute and critical care. This study investigated the perspectives of clinical instructors on these competencies in challenging nursing environments. Ten clinical instructors from the Regional Hospital of Semarang City, Central Java, Indonesia, participated in this study to observe students during their clinical practice in acute and critical care. Qualitative data was collected between May and December 2020. Face-to-face and virtual indepth interviews lasted 30 to 40 minutes per informant. Data validity was ensured by member verification, which involved participants reviewing the recorded interviews. The nursing competency perspectives were divided into nine themes: (1) addressing biological, psychological, social, and spiritual needs; (2) involving families in patient care; (3) integrating attitudes, morals, and ethics; (4) developing communication skills; (5) working in multidisciplinary teams and complementary therapies; (6) effectively managing emergencies effectively; (7) recognizing and addressing spiritual aspects; (8) developing critical thinking and technology mastery; and (9) improving quality. This study's findings serve as a valuable reference and guide for refining nursing student competencies in acute and critical care and creating assessment instruments.

Keywords: Acute and critical care; clinical instructor; nursing competencies; nursing students; perspective



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INTRODUCTION

Quality health care and health equality can be achieved through competent registered nurses. This competence is built through nursing education (Aldrich & Grajo, 2017; Garneau et al., 2017). Since college, nursing students must meet established competency standards. Such competency standards require registered nurses to integrate and apply their knowledge, skills, assessments, and personal attributes for safe and ethical practice (Pennbrant, 2016). This competence encompasses and integrates biological, psychological, social, cultural, and spiritual modalities into the nurses' daily lives and when caring for patients with their illnesses (Salminen et al., 2021).

Moreover, nurses must apply the concept of holistic nursing care, which includes knowledge, skills, performance, attitudes, and values. The holistic nursing approach is a comprehensive model that involves all aspects of caring, including attending to the patient's mental, spiritual, and social needs. Studies show that most nurses are unfamiliar with the holistic nursing concept but only fulfill the important aspects of the patient's biological needs. Therefore, the holistic nursing concept must be developed and integrated into more appropriate competency standards and assessment instruments (Kang et al., 2021).

As nursing care continues to develop, the main keys to quality and affordable services are health science technological advances and nurses' proficiencies. Moreover, competency measurement as an indicator of student proficiency assessment is a pivotal practice that should be conducted. This systematic evaluation can determine students' characteristics based on their cognitive and psychomotor abilities.

Critical care nursing is a specialized skill developed for nurses serving patients with acute and life-threatening health conditions that require intensive care. The competencies of nursing students for acute and critical care are very significant, but until recently, there have been no instruments

available to measure these competencies (Aldrich & Grajo, 2017; Bernhard et al., 2015; Ebenezer Akore Yeboah et al., 2024). Thus, it has become one of the duties of clinical nursing instructors and college educators to develop competency measurement instruments for nursing students (DeGrande et al., 2018).

The first stage in developing a competency instrument is a literature review and theme setting based on research results (Robert F. Devellis, 2017). This study explores the perspective of clinical instructors on nursing student competencies in acute and critical care nursing. It is important to note that competence in critical care nursing is a multifaceted term with technical and non-technical components. Therefore, in addition to mastering general nursing characteristics, critical nursing students must have a solid grasp of practical abilities (Øvrebø et al., 2022).

METHOD

Study Design

This is a phenomenology qualitative study (Giorgi, 2015) that was conducted from May to December 2020.

Participants

Purposive sampling was used to recruit the informants. The inclusion criteria for the informants were that they were clinical instructors who have worked for three years to guide students in acute and critical care nursing at the Regional Hospital of Semarang City, Central Java, Indonesia, were willing to participate in the research and undergo a tape-recorded interview on their perspectives on the competencies of nursing students in the acute and critical care clinical stage. Ten informants agreed to participate in the study.

Data Collection

This qualitative study employed in-depth interviews for data collection, including face-to-face interviews using live virtual discussions. Data collection was performed through approximately 30- to 40-minute in-depth interviews. The observer compiled field notes during the interview. The sample size was calculated using the data saturation principle, meaning that more participants were recruited until additional information was no longer needed (Nursalam, 2020).

The core interview began with the question, 'What are the nursing competencies that nursing students should possess?' followed by 'Is it acquired in the acute and critical care stages?', 'What forms of support can be provided to fulfill nursing competencies in these phases?', 'Are there obstacles, and how are solutions provided?'

Data Analysis

Each interview was recorded, and all statements related to perspectives were extracted. The thematic analysis method was used to analyze each interview and field records (Castleberry & Nolen, 2018).

Rigor

Transferability

The statements reflected the expectations and criteria of nursing students in the acute and critical care learning stages.

Dependability

The reports were comprehensively, clearly, systematically, and reliably recorded to be easily understood by the readers. **Confirmability**

Data validity was conducted by checking and confirming the results by asking the informants to re-read the recorded interview results.

Credibility

Continuous analysis and synthesis produced subthemes. The researchers grouped them into nine themes covering a variety of expectations and competency criteria based on the experiences expressed by the participants.

Ethical Consideration

This study was approved by the Ethics Committee No.118/EC/KEPK/D.Kep. Informed consent was obtained from each participant prior to data collection. The researchers explained the study's objectives and procedures and ensured that participation in this study was voluntary.

RESULT

Ten informants met the criteria for in-depth interviews. Table 1 shows the informants' characteristics. The informants' perspectives of nursing student competencies in the acute and critical care learning stages were categorized into nine competencies related themes: (1) to biological, psychological, social, and spiritual needs; (2) competencies related to patient care with family participation; (3) competencies related to the attitudes, morals, and ethics of nurses; (4) competencies related to communication; (5) competence related to multidisciplinary collaboration in patient care and complementary therapies; (6) competency in assessing and managing emergencies; (7) competence in spiritual aspects and spiritual service; (8) critical thinking skills and mastering technology and information; and (9) quality development.

Table 1. Informants' Characteristics (n = 10)

Number	Percentage
3	30
7	70
3	30
4	40
3	30
-	-
10	100
3	30
7	70
	3 7 3 4 3 - 10

1. Competencies Related to Biological, Psychological, Social, and Spiritual Needs

All participants stated that holistic care was integrated into nursing care that addressed the patients' biological, psychological, social, and spiritual needs.

"Holistic nursing competency is the nurses' ability or skills in providing care to patients, which include biological, psychological, social, cultural, and spiritual aspects" (P1). "Holistic nursing competence is the ability to provide complete nursing care, which includes a connection between body, mind, emotions, social/ cultural, and spiritual aspects" (P3).

"All forms of nursing practice aim to help the patient achieve complete recovery in various aspects of their life, including their families and communities" (P4).

"Complete nursing care covers all patient life span stages" (P5).

"Nursing services comprehensively refer to patientcentered care, so they must cover all aspects." (P6). "Holistic care covers the patient's whole treatment program. Or when they're in the ICU, they cannot be left alone, including their family, because the family also needs support" (P7).

"Holistic care is providing the best possible biological, psychological, social, and environment for the family when needed" (P10).

2. Competence Related to Patient Care with Family Involvement

The participants communicated that holistic nursing competence includes involving patient's families in patient care.

'[We need to] bring the patient's family to support them and meet their psychosocial needs because the average ICU patient feels isolated' (P2).

"When a family is educated [on the patient's condition], the family becomes cooperative" (P3).

"For unconscious patients, we explain what we plan to do with the family for them to understand the truth" (P4).

"Care that encompasses a kind service to the patient" (P6).

"Give family support in the patient's healing process. We also tell them to be active and not to forget to listen to the patient's wishes." (P7).

"The ability to educate the patient and his family well according to the patient's needs" (P8).

"We bring families into the patient's end-of-life phase" (P9).

3. Competencies Related to The Nurses' Attitudes, Morals, And Ethics

Almost all participants commented that nurses need to acquire a higher level of competency regarding their attitude, morals, and ethics.

Attitude

"The students' attitude towards their patients was more essential in the critical care stage than in other stages" (P1).

"Holistic nursing competence includes qualities such as patience, diligence, politeness, friendliness, calmness, conscientiousness, trustworthiness, responsibility, willingness, enterprising nature, persistence, and high interest [in the patient]" (P2).

"The students with these competencies were more caring and empathic". (P3).

"In the nursing service, nurses always involve the patient's, their families' and their communities' biological, social, cultural, and spiritual aspects in every nursing intervention." (P4)

"The students were confident in their practice and did not hurry every action performed." (P5)

Morals and ethics

Almost all informants stated that ethics is a crucial competency for nursing students.

"Competence is mentioned in nursing theory, research, and ethics." (P1)

"The problem with today's children is their lack of respect for older adults. The solution to this problem is character development." (P2) "Legal ethics." (P3)

"Talk about legal ethics." (P4)

"Something that is related to competencies is legal ethics." (P5)

4. Competencies Related to Communication

Almost all informants commented that good relationships between patients, nurses, and teams is a crucial nursing competency.

"Competencies in nursing theory, research, caring for patients, and good therapeutic communication is essential." (P1)

"The ability to understand the patient's desires and inabilities in acute and critical care units." (P2)

"Holistic nursing competencies that should be owned by nursing students are effective communication and an understanding of local culture." (P3)

"A good nursing student should be competent in nursing theory, practice, and communication." (P4)

"Good communication." (P5)

"Highlights communication." (P6) "Communicates well." (P7)

"Technical communication skills are the ability to communicate with both the patient and the patient's family." (P8) "Communicating means that the patient has trusted us." (P9)

"To communicate well with the patient and their family." (P10)

5. Competence Related to Multidisciplinary Collaboration in Patient Care and Complementary Therapies

Patient care requires multidisciplinary collaboration

Almost all informants reported that the care team needs to involve individuals from various professions, such as acupuncturists, physiotherapists, and murotal therapists. Interprofessional collaborations such as acupuncture, physical therapies, aromatherapies, and murotal reflect a holistic approach to patient care.

"We helped patients who have been using a ventilator for a long time to consult with an acupuncturist." (P1)

"Every effort has been made, and the last effort we made was working with the acupuncture department."(P3)

"The patient's treatment involved other professions; such as physiotherapists, acupuncturists, and murotal therapists. There are also more therapies in the hospital." (P5)

"He received more than one treatment, such as acupuncture and physiotherapy." (P6)

"We cooperate with other professionals, such as an acupuncturist and physiotherapist." (P10)

Complementary therapy

Almost all participants said that complementary therapy is important. Most participants also highlighted the importance of analytical skills and the application of complementary therapies in the treatment or research context.

"We provide aromatherapy." (P1)

"We provide aromatherapy treatment because our friend has done research on the subject in the ICU. (P2)

"We teach relaxation techniques, or maybe massage techniques." (P3)

"We teach them to eat. If the patient is in pain, we would teach them a relaxation technique or maybe a massage technique." (P4)

"We also have a central mural." (P5)

"Every effort has been made, and the last effort we made was working with the acupuncture department." (P6) "We

advise conscious patients to always seek God every day for their mental well-being; If their mental condition is good, then they can accept their current condition." (P8) "Analyzing journals can help us apply appropriate complementary therapies." (P8)

6. Competence in Assessing and Managing Emergencies

Almost all informants conveyed the importance of understanding critical patients.

"The first thing he did would be to take care of critical patients." (P1).

"We are being criticized more than we are primarily criticized; the pattern of airway breathing circulation we still put in should be a benchmark." (P2)

"If what we were doing in the ICU was what we had received, the main concern was his first concern." (P3).

"After we have covered lifesaving procedures, we would start attending to other needs." (P4).

"[We need to] focus on lifesaving without excluding other needs too. Patients in the critical acute phase are attended to first, when they're stable, we'll attend to others." (P8).

7. Competence in Spiritual Aspects and Spiritual Services

Almost all informants communicated that competent nurses would acknowledge the spiritual dimension in the care of the patient, and their competence involves an active response to the spiritual needs and beliefs of each patient.

"Normally, spiritual needs are related to what happens with murotal therapy." (P1)

We still have a central mural in the room." (P2)

"We advise conscious patients to always seek God every day for their mental well-being; If their mental condition is good, then they can accept their current condition." (P3) "If there is no spiritual officer, one of us guides the patient to pray. We pray for the patient to be healed." (P4). "The spiritual officer comes every day to pray." (P5) "We would bring a priest for non-muslims."(P6)

"We approach the patient to remind them to pray." (P9) "When the patient is in a critical and acute state, how are the spiritual needs of the patient and his family fulfilled?" (P10)

8. Competence in Critical Thinking Skills and Mastering Technology and Information

Critical Thinking

All participants agreed that nurses must have knowledge of ideas, concepts, and critical understanding.

"Mastering theories and practicing their knowledge according to their competencies" (P1).

"Acute and critical care evaluation is performed quickly to discover life-threatening conditions; after reaching a stable state, a complete review is conducted. Different holistic assessments are performed, since the patient's condition should be explored, not only physically. Furthermore, holistic nursing implementation requires the participation of patients and families to choose what they need. Meanwhile, the acute or crisis stage prioritizes life safety. Thus, nurses play more than one role for patients and their families" (P2).

"Analytical, conceptual, emotional, and spiritual abilities" (P3).

"Critical thinking". (P4)

"Develop critical thinking". (P5)

"I can think critically." (P6)

"We should be able to study in a timely and accurate manner and also evaluate it." (P7)

"Have the ability to analyze cases, make diagnoses, and take actions that can be applied to the patient." (P8)

"He should be able to think quickly." (P9)

"Can make accurate clinical decisions, study situations and take appropriate action." (P10)

Mastering Technology and Information

Almost all informants stated that technology and information knowledge and skills are essential for nursing students.

"Technology and information skills are necessary, since the treatment of patients in critical condition (different from those in ordinary room) require more complex equipment" (P1).

"Holistic nursing student competencies in the acute and critical care stages include sensitivity to the patients' and their families' emotional states." (P2)

9. Quality Development

Almost all informants stated that professional development was also necessary to support the nursing students' competencies.

"Students should be exposed to more learning platforms, in classes, seminars, or training workshops to improve their skills" (P1).

"Competence in theory, research, and ethics of nursing, involve caring for patients and good therapeutic communication" (P2).

"Motivating students and providing more opportunities for learning in class, seminars, and lab practices" (P3).

DISCUSSION

This research discusses the expectations for nursing student competencies. Although only ten participants were eligible to be interviewed, they provided adequate information.

The human body comprises integrated body organs that each perform a specific role in a system and are interdependent on one another. They undergo growing and evolving processes, and must meet basic needs to maintain human life (Kimmel et al., 2024). Research conducted by Rajabpour, Rayyani, and Shahrbabaki (2019) revealed that overall patient satisfaction with nursing care depends on holistic nursing care. Therefore, nurses should pay attention to the patient's physical, mental, and emotional aspects and improve the quality of care given (Rajabpour, Rayyani, and Shahrbabaki 2019).

A human is a living creature with a soul. According to Sigmund Freud, humans' personalities consist of three aspects: the id, the most fundamental personality, followed by the principle of pleasure, which comprises a fundamental desire that requires immediate recharge and without a delay in pleasure. The ego is the evolution of the id. The ego is more organized, and its task is to avoid discontent by regulating instinctual impulses to fit the outer world (Cataldas et al., 2024). The ego works according to the principles of reality and defense mechanisms, while the id is selfish and only aims to satisfy pleasure. The third is the superego, which is the development of the id at a higher level than the ego. The superego is based on ethical and non-ethical aspects, whether things are inappropriate, wrong, or right. The superego principle is used to meet needs and is aligned with values, rules, or norms that apply in society. In humans, the id, ego, and superego are intrinsic (Boyle, 2019).

The human being as a social entity grows and develops in need of others. The nature of a human as a social being allows it to learn from its surrounding environment (Dong & Huang, 2023). A person's interactions with others and their responses can affect how they behave based on the support and attention given to them.

As spiritual beings, humans have a relationship with a power beyond themselves based on their beliefs, a relationship with God, and a belief in life (Eise & Rawat, 2023). Research by Page et al. (2018) indicates that religious engagement supports health and longevity (Robin L. Page et al., 2018). Spirituality is related to the awakening or enlightenment an individual feels in achieving the meaning of life and reaching the purpose of life towards well-being. Spirituality is personal and provides emotional power that drives, directs, and chooses various behaviors (Libster, 2017). These competencies teach students to respect and value each other's integrity. The definition of holistic nursing is respecting the dignity and diversity of students and responding to the patient's social, mental, and spiritual needs. The focus is to provide patient-centered care that embodies Nightingale's life legacy.

In addition to topics related to biological, psychological, social, and spiritual competencies, the other aspects nursing students cover include information on illness, aseptic techniques, respecting individual cultural practices (Safipour et al., 2016), religious beliefs, and spiritual needs (Duff, 2019). Holistic care is a comprehensive model that includes the patient's mental, spiritual, and social needs (Fallis, 2019). According to a study by Benjamin (2020), holistic nursing is a non-invasive intervention that allows patients to relax, improving compliance with the therapeutic regimen. Additionally, a holistic mind-body spiritual nursing care (MBS) model has a robust relationship with spirituality (Kurniawati et al., 2019).

The competence theme relates to patient care with family involvement. A family-based care team's competence also includes allowing families to participate in decision-making related to patient care (Makkonen et al., 2023). This collaboration creates an atmosphere of mutual understanding between the care team and the family, providing the best decisions for the patient. By emphasizing family involvement, the care team demonstrated awareness of the family's important role in supporting the patient. This step not only enriches aspects of medical care but also creates an environment where family information and views are regarded as valuable and important in care planning (van Oort et al., 2024).

Next, for the attitude theme, the areas of study were the nurses' abilities to identify causes, find solutions to obstacles, detect problems by conveying the truth, observe things objectively, reflect, evaluate their thinking processes, realize their strengths, promote others' welfare, and motivate and encourage other nurses in a difficult situation (Ebenezer Akore Yeboah et al., 2024).

Self-efficacy partially mediates the relationship between the clinical learning environment and the nursing students' clinical abilities, confirming the importance of close academic and clinical cooperation. Such close collaboration does more than improve the clinical learning environment. Self-efficacy, clinical ability, and all influential factors must be considered when developing an undergraduate nursing curriculum to optimize nursing students' learning and improve patient care quality (Yu et al., 2021).

Nurses integrate art and science and translate the philosophy, theory, and ethics of humans into valuable tools. It is general knowledge that individuals' activities affect their health and those in the community (Rosa et al., 2019). Therefore, nurses need to provide patient-centered nursing care and adhere to fundamental ethical standards while providing nursing care, anticipating risk factors, preventing medical errors, and ensuring task completion before delegating responsibility to other nurses. Nurses must also uphold good morals and ethics by responsibly submitting and reporting medical errors that may endanger patients without hiding any information (Arab et al., 2022).

Holistic nurses also ensure open communication between nurses, patients, and families. They recognize that a healthy environment comprises living systems that participate and interact, including the physical body, its habitat, and psychological, social, and cultural needs. Transpersonal knowledge helps to respect individuals' culture, values, customs, and decisions related to health (Ho et al., 2022; Rosa et al., 2019). The nurses' abilities were examined in the following areas: developing therapeutic relationships with patients, providing the necessary sensitization for patients and families, communicating with clients according to their age, cultural background, and value system, sharing patients' needs with other healthcare professionals, providing nursing care such as primary tasks and functions, adapting plans and prioritizing their services based on clients' needs, and gathering information (Brooks et al., 2023). Moreover, caregivers must have the proper knowledge, skills, and attitudes and be supported in using these tools to work well in a team (Barton et al., 2018).

Regarding the topic of competency in evaluating and handling emergencies, the holistic approach implies that patient care involves collaboration between several professions rather than the involvement of a single profession or one area of care (Habre et al., 2023; Shimizu & Shimizu, 2023) Opportunities for advancement in patient care or health research can arise from the value of complementary therapy and analytical abilities (Gunnarsdottir et al., 2022). The concept of a holistic approach to health recognizes the correlation between the individual's physical, mental, and spiritual aspects. It reflects the view that health is not just about the absence of disease but also includes balance and well-being in the overall dimension of life. Complementary therapy contributes as a supporter of a holistic approach (Simsek & Alpar, 2022). Therapies such as acupuncture, aromatherapy, or relaxation techniques are often designed to affect physical aspects and mental and spiritual well-being (Chu et al., 2022).

To provide high-quality and timely medical care, it is crucial to have a thorough awareness of urgent patient conditions and the ability to identify and manage emergencies. Thus, health professionals should undergo continuous training and focus on understanding patient problems (Saleh, 2023).

On the theme of spiritual aspects, the nursing team's positive impact from being involved in the patient's spiritual growth includes stress reduction, increased body endurance, improved patient motivation, and others. Thus, involving the spiritual dimension in care is a holistic and profound step to support the patient's overall well-being (Rieger et al., 2023). Florence Nightingale's philosophy and teaching emphasize that nurses must think critically and use their minds, hearts,

and abilities to create a healing environment while caring for the patient's body, mind, and soul. Since then, nursing has built a holistic paradigm in all fields of thought with a humanistic approach and an inseparable relationship with the environment. Florence's contribution to holistic critical thinking in nursing has been proven to make a difference for nurses in implementing clinical practice (Riegel et al., 2021). Competencies related to knowledge of technology and information included the need for learning objectives, understanding nursing care, technology skills and their implications, the ability to identify obstacles and find solutions to them, detecting problems around them by conveying the truth, the need for learning more, making independent study plans for professional improvement, and seeking answers to questions that arise from nursing practice (Gardulf et al., 2019). Educators emphasized learning and self-leadership skills, but according to them, not all students have the same learning abilities. Learning skills can also strengthen academic performance, impacting and increasing motivation. This competency guides nurses in learning and researching, as well as in how to gain a deeper understanding of social and environmental determinants of health (Almarwani & Alzahrani, 2023). They also challenge students to collect stories on how individuals and communities achieved their health standards and conduct research that was considered to provide qualitative and quantitative evidence. Therefore, this research explored findings on a broader level related to achieving healthy conditions. On the theme of quality development, the areas of study were the nurses' abilities to retain knowledge and skills, identify the need for more knowledge, make self-learning plans for professional improvement, and seek answers to questions that arise from nursing practice (Oguro et al., 2023).

According to the evaluation of nursing students, the nursing educators' abilities are excellent. Educator's abilities were found to be related to student academic performance and satisfaction with a nursing degree (Labrague et al., 2023). It is crucial to note that although nursing educators have good technical skills and appropriate academic training, further research should focus on the possible relationships between instructor and student abilities (Liu et al., 2023). Further international cooperation is also required to align the competency requirements of nursing educators (Salminen et al., 2021)

The professional development of undergraduate nursing students demonstrates the commitment to ongoing selfimprovement in nursing. Academic and clinical workers must support professional development. Undergraduate nursing students can develop professionally by reflecting on past nursing practices, responding favorably to criticism, and implementing evidence-based practices (Nilsson et al., 2020; Wu et al., 2016).

Due to the restrictive informant criteria and the willingness of the clinical instructors to participate, the study's main limitation is the small number of participants included. However, bias is expected to be less likely because the chosen participants come from various hospitals.

Nurses can improve their skills by creating a self-learning plan for professional improvement and seeking answers to questions arising from nursing practice. Nkoane (2022) provides information on the learning needs of new nurses. Moreover, understanding specific learning needs, supported by empirical evidence, can enhance insight into how nursing students transition to professional nurses. This understanding, combined with the development of practical skills, psychological adaptation, and social support, can help new nurses provide adequate patient care and achieve succeed in their roles.

CONCLUSION AND RECOMMENDATION

This study emphasizes the importance of the proficiency of nursing students in acute and critical care. The study investigated nine themes: (1) competencies related to biological, psychological, social, and spiritual needs; (2) competencies related to patient care with family involvement; (3) competencies related to attitudes, morals, and ethics of nurses; (4) competencies related to communication; (5) competencies related to collaboration with multidisciplinary in patient care and complementary therapies; (6) competence in assessing and managing emergencies; (7) competence in spiritual aspects and spiritual service; (8) critical thinking skills and mastering technology and information; and (9) quality development. These results suggest creating important evaluation tools and student competencies at the acute care stage.

The study's findings provided suggestions for improvements to the current nursing curriculum to include topics from research, particularly those related to competency in acute and critical care. Clinical educators may also undergo more training workshops to better understand student competency and effectively mentor them throughout the crucial care phases. Moreover, appropriate evaluation tools may also be developed to gauge student proficiency in acute and critical care.

The research emphasizes the importance of mastering nursing students in acute and critical care by identifying nine themes of competence required. In order to enhance the nursing curriculum, it is recommended that these themes be integrated, as well as developing continuing education programs and workshops for clinical educators. In addition, effective evaluation tools need to be developed to measure the progressive development of student competence. Additional training and workshops are also important to ensure clinical instructors have the latest skills. Advanced research in the form of longitudinal studies is required to evaluate the effectiveness of curriculum changes and training. Multidisciplinary collaboration and collaboration with health institutions are also recommended to provide a hands-on learning experience for students. Implementation of these changes involves stages of preparation, development, testing, and evaluation to ensure improved quality of nursing education and health services.

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