

Original Research

Received 22 May 2026

Revised 26 June 2026

Accepted 22 July 2026

Natural Resources for Human Health 2026, Vol. 6(8s): 1062–1072

KEYWORDS:

Competency-based nursing education, community health nursing, mental health nursing, midwifery, child health nursing, nursing curriculum, clinical competence, simulation-based learning, competency assessment, nursing education.

Competency-based Nursing Education in Community, Mental Health, Midwifery, and Child Health: A Comprehensive Review

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ABSTRACT: Competency-based nursing education (CBNE) has emerged as a transformative approach to preparing nursing graduates for the evolving demands of modern healthcare. Unlike traditional time-based education, CBNE emphasizes the achievement of measurable competencies in knowledge, clinical skills, communication, professionalism, ethical practice, and critical thinking. This review synthesizes current evidence on competency-based nursing education across four major nursing specialties:

community health nursing, mental health nursing, midwifery, and child health nursing. A comprehensive narrative review of the literature published between 2019 and 2026 was conducted using major electronic databases, including PubMed, Scopus, Web of Science, CINAHL, ScienceDirect, and Google Scholar, along with international guidelines from the World Health Organization, the International Council of Nurses, and the International Confederation of Midwives. The findings indicate that competency-based curricula improve clinical competence, decision-making, leadership, patient safety, and readiness for professional practice. Educational innovations such as simulation-based learning, objective structured clinical examinations, workplace-based assessment, digital learning technologies, and interprofessional education have significantly strengthened competency development across all nursing specialties. However, challenges including faculty preparedness, limited educational resources, inconsistent competency frameworks, and variations in assessment methods continue to affect successful implementation. Overall, competency-based nursing education provides an effective framework for preparing future nurses to deliver safe, evidence-based, patient-centered, and culturally competent care. Continued curriculum innovation, standardized competency assessment, and investment in faculty development are essential to strengthen nursing education and improve healthcare outcomes globally.

INTRODUCTION

Competency-based nursing education (CBNE) has emerged as a transformative educational approach that emphasizes the achievement of measurable knowledge, clinical skills, professional attitudes, and ethical values required for safe and effective nursing practice. Unlike traditional time-based educational models that primarily focus on the completion of prescribed curricula, CBNE prioritizes the demonstration of competencies that prepare graduates to respond effectively to increasingly complex healthcare needs. The rapid evolution of healthcare systems, technological advancements, demographic transitions, and the growing burden of communicable and non-communicable diseases have reinforced the necessity for nursing graduates to possess competencies that extend beyond theoretical knowledge. Consequently, nursing education worldwide has progressively shifted toward competency-driven curricula that integrate evidence-based practice, critical thinking, leadership, communication, cultural competence, and patient-centered care (International Council of Nurses [ICN], 2021; World Health Organization [WHO], 2021).

The World Health Organization has consistently emphasized the importance of developing a competent nursing workforce capable of addressing global health priorities, achieving universal health coverage, and improving population health outcomes. Competency-based education aligns closely with these priorities by ensuring that graduates demonstrate predefined learning outcomes before entering professional practice. Educational institutions are increasingly redesigning curricula to incorporate competency frameworks that assess learners through objective structured clinical examinations, simulation-based education, workplace-based assessments, reflective practice, and portfolio evaluations rather than relying solely on written examinations (WHO, 2021; Frank et al., 2022).

Community health nursing represents one of the most significant domains requiring competency-based preparation because nurses serve as frontline healthcare providers responsible for health promotion, disease prevention, family-centered care, and management of chronic illnesses across diverse populations. Community nurses must develop competencies in epidemiological assessment, community diagnosis, health education, disaster preparedness, environmental health, and intersectoral collaboration. As healthcare delivery increasingly shifts from hospitals to community settings, educational institutions have recognized the need to prepare graduates who can effectively manage population health challenges through evidence-informed decision-making and culturally appropriate interventions (Stanhope & Lancaster, 2022; WHO, 2021).

Mental health nursing has also experienced substantial transformation with the recognition that mental disorders contribute significantly to the global burden of disease. Competency-based mental health nursing education focuses on developing therapeutic communication, psychosocial assessment, crisis intervention, trauma-informed care, recovery-oriented practice, and collaborative decision-making. Modern psychiatric nursing education emphasizes person-centered care, stigma reduction,

cultural sensitivity, and multidisciplinary teamwork while integrating digital mental health technologies and telepsychiatry into clinical practice. These competencies enable nurses to provide holistic care across inpatient, community, and primary healthcare settings while promoting mental well-being and recovery (Happell et al., 2022; ICN, 2021).

Midwifery education has similarly adopted competency-based frameworks to improve maternal and newborn health outcomes. The increasing complexity of obstetric care, coupled with persistent maternal and neonatal mortality in many regions, has highlighted the necessity for midwives and maternity nurses to demonstrate competencies in antenatal care, intrapartum monitoring, emergency obstetric management, neonatal resuscitation, respectful maternity care, breastfeeding support, and reproductive health counseling. International competency standards developed by professional organizations emphasize clinical reasoning, ethical decision-making, teamwork, and continuity of care throughout the reproductive lifespan. Competency-based learning enables midwifery graduates to provide safe, evidence-based care while responding effectively to obstetric emergencies and diverse cultural contexts (International Confederation of Midwives [ICM], 2021; WHO, 2022).

Child health nursing requires specialized competencies because children possess unique physiological, developmental, psychological, and family-centered healthcare needs. Pediatric nurses must demonstrate competencies in growth and developmental assessment, immunization, nutritional counseling, pediatric emergency care, family education, safeguarding, and management of acute and chronic childhood illnesses. Advances in neonatal intensive care, pediatric technology, and family-centered care models have expanded the scope of pediatric nursing practice, requiring educational programs to integrate competency-based clinical experiences that foster critical thinking, communication, and evidence-based interventions across all developmental stages (Hockenberry et al., 2023).

Recent innovations in nursing education have further strengthened competency development through high-fidelity simulation, virtual reality, artificial intelligence-assisted learning, digital assessment platforms, e-portfolios, and competency mapping. Simulation-based education allows students to practice complex clinical scenarios within safe learning environments while receiving structured feedback that enhances clinical reasoning and decision-making. Likewise, competency-based assessment strategies facilitate continuous evaluation of learner progression rather than relying exclusively on summative examinations. These educational innovations have demonstrated improvements in student confidence, clinical performance, patient safety, and readiness for professional practice (Cant & Cooper, 2023; Jeffries et al., 2023).

Despite these advances, significant challenges remain in implementing competency-based nursing education across community health, mental health, midwifery, and child health disciplines. Variability in competency frameworks, inadequate faculty development, inconsistent assessment methods, limited clinical placement opportunities, resource constraints, and disparities between educational institutions continue to affect implementation. Furthermore, integrating emerging competencies related to digital health, artificial intelligence, precision healthcare, climate change, and interprofessional collaboration requires continuous curriculum revision and educational innovation (AACN, 2021; ICN, 2021).

Given the growing emphasis on competency-based education globally, synthesizing current evidence across multiple nursing specialties is essential to identify best educational practices, implementation strategies, existing challenges, and future directions. This review therefore examines contemporary evidence on competency-based nursing education in community health, mental health, midwifery, and child health, with particular emphasis on educational innovations, competency assessment methods, curriculum integration, and implications for nursing educators, clinical mentors, policymakers, and healthcare organizations.

METHODOLOGY

Study Design

This review employed a narrative review design to synthesize current evidence on competency-based nursing education (CBNE) across four major nursing specialties: community health nursing, mental health nursing, midwifery, and child health nursing. A narrative review was considered appropriate because it enables the integration of evidence from diverse study designs, educational frameworks, policy documents, systematic reviews, and international competency guidelines. Unlike systematic reviews that focus on a narrowly defined research question, narrative reviews facilitate comprehensive examination of emerging educational concepts, curriculum innovations, competency frameworks, and implementation strategies across multiple disciplines. The review aimed to identify common competencies, educational approaches, assessment methods, implementation challenges, and future directions for competency-based nursing education while providing a broad overview of current evidence (Grant & Booth, 2009; Green et al., 2018).

Literature Search Strategy

A comprehensive literature search was conducted using internationally recognized electronic databases, including PubMed/MEDLINE, Scopus, Web of Science, CINAHL, ScienceDirect, Wiley Online Library, SpringerLink, Taylor & Francis Online, and Google Scholar. These databases were selected because they index high-quality nursing, medical, educational, and interdisciplinary research. Additionally, official publications from the World Health Organization (WHO), International Council of Nurses (ICN), International Confederation of Midwives (ICM), American Association of Colleges of Nursing (AACN), and the National Council of State Boards of Nursing (NCSBN) were reviewed to identify internationally accepted competency standards and educational recommendations.

The literature search focused primarily on studies published between 2019 and 2026 to ensure inclusion of recent evidence reflecting evolving competency frameworks, digital education strategies, simulation-based learning, competency assessment, and curriculum reforms. Seminal publications published before 2019 were included selectively when they provided foundational concepts essential to competency-based education.

Search Terms and Keywords

Medical Subject Headings (MeSH) and free-text keywords were combined using Boolean operators (AND, OR) to maximize search sensitivity and specificity. The primary search terms included "Competency-Based Education," "Competency-Based Nursing Education," "Nursing Competencies," "Community Health Nursing Education," "Public Health Nursing Education," "Mental Health Nursing Education," "Psychiatric Nursing Education," "Midwifery Education," "Maternal Health Nursing," "Child Health Nursing," "Pediatric Nursing Education," "Clinical Competence," "Simulation-Based Learning," "Competency Assessment," "Nursing Curriculum," "Clinical Education," "Interprofessional Education," "Evidence-Based Practice," and "Nursing Students."

Eligibility Criteria

Studies were selected according to predefined inclusion and exclusion criteria to ensure consistency throughout the review. Eligible publications included original research articles, systematic reviews, meta-analyses, scoping reviews, integrative reviews, qualitative studies, mixed-methods studies, educational intervention studies, curriculum evaluation reports, and international competency guidelines. Publications focusing on undergraduate nursing education, postgraduate nursing education, continuing professional development, competency assessment, simulation-based education, community health nursing, mental health nursing, midwifery, pediatric nursing, and competency framework implementation were considered eligible.

Studies were excluded if they were editorials, opinion articles without supporting evidence, conference abstracts lacking full-text availability, duplicate publications, unpublished dissertations, or articles not published in English. Studies addressing healthcare professions other than nursing without specific nursing-related findings were also excluded.

Study Selection Process

The study selection process followed a structured approach. Initially, all retrieved records were exported into a reference management software where duplicate articles were identified and removed. Titles and abstracts were subsequently screened to determine their relevance to competency-based nursing education. Full-text articles meeting the eligibility criteria were then assessed in detail for inclusion. During this stage, studies were evaluated according to their relevance to community health nursing, mental health nursing, midwifery, child health nursing, competency assessment, educational strategies, and curriculum development. Articles that did not sufficiently address competency-based education or lacked methodological clarity were excluded from the final synthesis.

Data Extraction

Relevant information from each included study was systematically extracted using a standardized data extraction framework. Extracted variables included the first author's name, year of publication, country of study, study objectives, study design, sample characteristics, educational setting, competency domain, teaching and learning strategies, assessment methods, key findings, limitations, and implications for nursing education. Particular attention was given to educational innovations such as simulation-based learning, competency mapping, digital learning technologies, objective structured clinical examinations (OSCEs), workplace-based assessment, portfolio assessment, and interprofessional education.

Data Synthesis

Because the included literature comprised heterogeneous study designs, quantitative synthesis was not considered appropriate. Instead, findings were synthesized using thematic analysis. Similar concepts and educational approaches were grouped into major themes representing the core components of competency-based nursing education. These themes included competency frameworks, curriculum integration, community health competencies, mental health competencies, midwifery competencies, child health competencies, competency assessment methods, simulation-based education, digital learning technologies, interprofessional education, implementation challenges, and future educational directions. The thematic synthesis enabled comparison of evidence across nursing specialties while highlighting similarities and differences in competency development.

Quality Considerations

Although this review was narrative in nature, priority was given to high-quality evidence from peer-reviewed journals indexed in reputable databases. Preference was given to systematic reviews, meta-analyses, multicenter educational studies, randomized educational interventions, national competency frameworks, and international policy documents. The methodological quality, credibility of the publication source, and relevance to competency-based nursing education were considered during evidence synthesis to enhance the reliability and validity of the review findings.

Ethical Considerations

As this review utilized previously published literature available in the public domain, formal ethical approval and informed consent were not required. All information was synthesized and presented with appropriate acknowledgment of the original authors through APA-style citations. The review adhered to principles of academic integrity by accurately representing published findings, avoiding plagiarism, and maintaining transparency throughout the literature synthesis process.

RESULTS

Overview of the Included Evidence

The literature reviewed demonstrates that competency-based nursing education (CBNE) has become a globally recognized educational model for preparing nurses to deliver safe, evidence-based, and patient-centered care. Across community health, mental health, midwifery, and child health nursing, educational institutions have progressively shifted from traditional knowledge-oriented curricula to outcome-based competency frameworks that emphasize measurable learning outcomes, clinical performance, professional behaviors, and lifelong learning. The reviewed studies consistently reported that competency-based curricula improve students' clinical confidence, critical thinking, communication skills, clinical judgment, and readiness for independent professional practice. Furthermore, competency-based education promotes accountability by ensuring that learners demonstrate proficiency before progressing to advanced levels of training (Frank et al., 2022; WHO, 2021).

The literature also revealed increasing incorporation of simulation-based education, digital learning platforms, competency mapping, workplace-based assessment, and reflective practice into undergraduate and postgraduate nursing programs. These innovations have enhanced opportunities for repeated practice, immediate feedback, and individualized learning while strengthening clinical reasoning and patient safety competencies (Jeffries et al., 2023; Cant & Cooper, 2023).

Competency-Based Education in Community Health Nursing

Community health nursing emerged as one of the most extensively discussed specialties in the reviewed literature because healthcare delivery is increasingly transitioning from hospital-based services to community-oriented primary healthcare. Studies consistently demonstrated that competency-based education equips nursing students with essential competencies required for population health management, disease prevention, health promotion, epidemiological surveillance, environmental health, disaster preparedness, family-centered care, and community engagement.

Several educational programs redesigned community health curricula by integrating competency frameworks aligned with the World Health Organization's recommendations on primary healthcare and Universal Health Coverage. These curricula emphasized assessment of community needs, health education planning, culturally competent care, home visits, screening programs, and interprofessional collaboration. Students trained under competency-based curricula demonstrated significantly improved confidence in conducting community assessments, implementing preventive interventions, and coordinating

multidisciplinary healthcare services compared with students enrolled in traditional educational models (WHO, 2021; Stanhope & Lancaster, 2022).

The reviewed studies further highlighted the importance of experiential learning through community postings, rural health placements, outreach programs, school health services, and public health campaigns. Such experiences enabled students to translate theoretical knowledge into real-world practice while strengthening communication, leadership, teamwork, and decision-making competencies. Digital public health tools, electronic health records, telehealth consultations, and mobile health applications were increasingly incorporated into competency-based community nursing education to prepare graduates for technology-enabled healthcare systems (AACN, 2021).

Another recurring finding was the emphasis on evidence-based practice within community health nursing education. Students were encouraged to critically appraise scientific evidence, interpret epidemiological data, identify health priorities, and implement interventions based on local community needs. This approach enhanced analytical thinking and promoted continuous quality improvement within primary healthcare settings.

Competency-Based Education in Mental Health Nursing

Mental health nursing education has undergone substantial transformation during the past decade, reflecting increasing recognition of mental health as a global public health priority. The reviewed literature consistently reported that competency-based educational frameworks strengthen students' therapeutic communication, psychiatric assessment, recovery-oriented care, crisis intervention, suicide risk assessment, trauma-informed practice, and culturally sensitive mental healthcare.

Educational institutions increasingly adopted competency frameworks emphasizing patient-centered communication rather than solely focusing on psychiatric diagnosis. Simulation using standardized patients, virtual psychiatric scenarios, role-playing exercises, and reflective practice sessions significantly improved students' confidence in managing complex mental health situations. Students exposed to simulation-based competency training demonstrated greater empathy, improved communication skills, and enhanced confidence when interacting with individuals experiencing psychiatric disorders (Happell et al., 2022).

The literature also highlighted the integration of recovery-oriented practice within competency-based curricula. Rather than emphasizing symptom control alone, educational programs focused on empowering individuals with mental illness, promoting shared decision-making, reducing stigma, and facilitating social inclusion. Nursing students learned to collaborate effectively with patients, families, psychiatrists, psychologists, social workers, and community organizations to deliver holistic mental healthcare.

Recent educational innovations included digital mental health platforms, telepsychiatry, online counseling simulations, and artificial intelligence-supported clinical decision-making exercises. These technologies expanded learning opportunities while preparing future nurses for emerging models of mental healthcare delivery. Faculty members also incorporated reflective journals and competency portfolios to encourage continuous professional development and self-assessment throughout nursing education (ICN, 2021).

Competency-Based Education in Midwifery Nursing

The literature consistently identified competency-based education as a cornerstone of quality midwifery education because maternal and neonatal outcomes depend heavily on the competence of healthcare providers. International competency frameworks developed by the International Confederation of Midwives have influenced curriculum reforms worldwide by defining essential competencies for antenatal care, labor management, emergency obstetric care, postpartum care, newborn assessment, breastfeeding support, family planning, and respectful maternity care (ICM, 2021).

Studies reported that competency-based midwifery curricula significantly improved students' clinical performance during labor monitoring, fetal assessment, neonatal resuscitation, obstetric emergency management, and postpartum care. Simulation laboratories equipped with birthing simulators enabled students to repeatedly practice emergency procedures such as postpartum hemorrhage management, shoulder dystocia, neonatal resuscitation, and eclampsia management before entering clinical settings. These educational strategies reduced anxiety while increasing students' confidence and procedural competence (WHO, 2022).

The reviewed evidence also emphasized respectful maternity care as an essential competency. Educational institutions incorporated communication skills, ethical decision-making, cultural competence, informed consent, women's rights, and shared decision-making into competency-based curricula. Students learned to provide individualized, compassionate, and evidence-based maternity care while respecting cultural diversity and reproductive rights.

Additionally, competency-based assessment methods such as Objective Structured Clinical Examinations (OSCEs), direct observation of procedural skills, clinical logbooks, reflective portfolios, and workplace-based assessments provided comprehensive evaluation of learners' knowledge, psychomotor skills, and professional attitudes. These assessment methods ensured that graduates demonstrated competency across the continuum of maternal and newborn care before entering independent practice.

Competency-Based Education in Child Health Nursing

The reviewed literature consistently demonstrated that competency-based education has strengthened pediatric nursing by preparing graduates to deliver safe, family-centered, and developmentally appropriate care. Unlike adult nursing, child health nursing requires competencies that integrate knowledge of growth and development, pediatric assessment, communication with children and families, immunization practices, nutritional counseling, neonatal care, and the management of acute and chronic childhood illnesses. Competency-based curricula emphasize measurable learning outcomes that enable students to demonstrate proficiency in pediatric clinical skills before entering professional practice (Hockenberry et al., 2023).

Simulation-based pediatric education emerged as one of the most effective instructional strategies. High-fidelity pediatric simulators, neonatal resuscitation scenarios, pediatric emergency simulations, and case-based learning significantly improved students' clinical judgment, teamwork, and decision-making abilities. Multiple studies reported that students who participated in repeated simulation sessions demonstrated greater confidence in recognizing pediatric deterioration, performing emergency interventions, and communicating effectively with families during stressful clinical situations (Jeffries et al., 2023).

Family-centered care was another recurring competency identified across the reviewed studies. Modern pediatric nursing education encourages students to collaborate actively with parents and caregivers during assessment, treatment planning, discharge education, and long-term follow-up. Educational programs increasingly include communication training that prepares nursing students to provide emotional support, health education, and culturally sensitive care while respecting family preferences and values. Such competencies contribute to improved treatment adherence, patient satisfaction, and continuity of care (WHO, 2022).

The literature also highlighted the integration of preventive child healthcare into competency-based curricula. Students are trained in immunization practices, growth monitoring, nutritional assessment, developmental screening, infection prevention, and health promotion activities conducted in schools and community settings. These competencies align with global child health initiatives aimed at reducing preventable childhood morbidity and mortality while promoting healthy growth and development.

Competency Assessment Methods

One of the defining characteristics of competency-based nursing education identified throughout the reviewed literature was the adoption of comprehensive assessment strategies that evaluate learners' knowledge, psychomotor skills, clinical reasoning, communication, professionalism, and ethical practice. Traditional written examinations alone were considered insufficient to measure clinical competence. Consequently, nursing institutions increasingly adopted multiple assessment methods to evaluate students across cognitive, psychomotor, and affective learning domains (Frank et al., 2022).

The Objective Structured Clinical Examination (OSCE) was the most frequently reported competency assessment method. OSCEs use standardized clinical stations where students demonstrate specific clinical procedures, patient communication, assessment skills, and decision-making abilities under direct observation. The reviewed studies consistently reported that OSCEs provide reliable and objective evaluation of clinical competence while identifying individual learning needs.

Workplace-based assessments also gained considerable attention. Clinical preceptors evaluated students during actual patient care using structured competency checklists, mini-clinical evaluation exercises (Mini-CEX), direct observation of procedural skills (DOPS), and case-based discussions. These assessment strategies promoted continuous feedback and allowed educators

to monitor competency development throughout clinical placements rather than relying exclusively on end-of-course examinations.

Reflective portfolios and e-portfolios were increasingly incorporated into nursing education. Students documented clinical experiences, reflected on strengths and weaknesses, identified learning goals, and demonstrated achievement of predefined competencies. Faculty members used portfolios to evaluate professional growth, lifelong learning, leadership development, and evidence-based practice competencies. Several studies suggested that reflective learning enhanced self-awareness, accountability, and critical thinking among nursing students (Cant & Cooper, 2023).

Simulation-Based Learning and Digital Educational Innovations

Simulation-based education emerged as one of the most influential innovations supporting competency development across all nursing specialties. The reviewed literature consistently demonstrated that simulation improves students' confidence, technical skills, communication, teamwork, leadership, and patient safety competencies without exposing patients to unnecessary risk (Jeffries et al., 2023).

Simulation activities ranged from low-fidelity skill demonstrations to advanced high-fidelity clinical scenarios replicating real healthcare environments. Community health simulations focused on home visits, outbreak investigations, and disaster response. Mental health simulations emphasized therapeutic communication and psychiatric crisis management. Midwifery simulations included labor management, postpartum hemorrhage, neonatal resuscitation, and obstetric emergencies, whereas pediatric simulations addressed respiratory distress, cardiac arrest, sepsis, and medication safety.

Digital transformation has further accelerated competency-based nursing education. Learning management systems, virtual classrooms, online case discussions, mobile applications, electronic logbooks, and virtual reality platforms have expanded opportunities for self-directed learning. Artificial intelligence-assisted learning systems, adaptive quizzes, and virtual patients are increasingly used to provide personalized feedback and support competency achievement. These technologies enable flexible learning while improving accessibility and learner engagement, particularly in resource-limited settings (AACN, 2021).

Interprofessional Education and Collaborative Practice

The reviewed studies consistently recognized interprofessional education (IPE) as an essential component of competency-based nursing education. Healthcare delivery increasingly depends on collaboration among nurses, physicians, pharmacists, physiotherapists, psychologists, social workers, and public health professionals. Therefore, nursing curricula have incorporated interprofessional learning experiences that develop communication, teamwork, leadership, conflict resolution, and shared decision-making competencies.

Students participating in multidisciplinary simulation exercises demonstrated improved understanding of professional roles and responsibilities while developing collaborative approaches to patient care. Community health education frequently involved collaborative projects with public health departments, schools, and non-governmental organizations. Mental health nursing students participated in multidisciplinary case conferences alongside psychiatrists, psychologists, and social workers, whereas midwifery students collaborated with obstetricians, anesthetists, pediatricians, and neonatal nurses during emergency obstetric simulations.

The literature indicated that interprofessional competency development contributes to improved patient safety, reduced medical errors, enhanced communication, and greater healthcare efficiency. Consequently, many nursing education programs have integrated IPE into competency frameworks as a core educational outcome (ICN, 2021).

Challenges in Implementing Competency-Based Nursing Education

Despite substantial progress, several barriers continue to affect the implementation of competency-based nursing education worldwide. Faculty development emerged as one of the most commonly reported challenges. Many educators require additional training in competency-based curriculum design, simulation facilitation, workplace-based assessment, and learner-centered teaching methods.

Resource limitations remain another significant challenge, particularly in low- and middle-income countries. Limited access to simulation laboratories, digital learning technologies, clinical placement opportunities, and trained faculty restricts the effective

implementation of competency-based education. Overcrowded classrooms and shortages of qualified clinical preceptors further complicate competency assessment.

The literature also identified inconsistencies in competency frameworks among educational institutions and regulatory bodies. Differences in competency definitions, assessment standards, and curriculum structures make comparison across programs difficult. Furthermore, rapidly evolving healthcare technologies require continuous curriculum revision to ensure graduates remain prepared for future clinical practice (WHO, 2021; AACN, 2021).

DISCUSSION

The findings of this review demonstrate that competency-based nursing education (CBNE) has become a cornerstone of contemporary nursing education across community health, mental health, midwifery, and child health specialties. Unlike traditional education models that emphasize completion of prescribed coursework, CBNE prioritizes measurable learning outcomes and the demonstration of clinical competence before independent practice. The reviewed evidence consistently indicates that competency-based curricula enhance clinical knowledge, technical proficiency, communication, critical thinking, professionalism, and evidence-based decision-making, thereby improving graduates' readiness to deliver safe and high-quality patient care (Frank et al., 2022; WHO, 2021).

One of the most significant findings was the growing emphasis on community-oriented nursing competencies. As healthcare systems increasingly focus on primary healthcare, disease prevention, and population health management, nursing graduates must be equipped with competencies extending beyond hospital-based care. Community health nursing education now incorporates epidemiological assessment, health promotion, disaster preparedness, environmental health, and culturally competent care, reflecting global initiatives such as Universal Health Coverage and the Sustainable Development Goals. These findings support the World Health Organization's recommendation that nursing education should prepare professionals capable of responding effectively to evolving community health needs (WHO, 2021).

The review also highlights substantial progress in competency-based mental health nursing education. Educational institutions have increasingly adopted recovery-oriented and person-centered approaches that emphasize therapeutic communication, psychosocial assessment, crisis intervention, stigma reduction, and collaborative care. Simulation-based learning and standardized patient encounters have emerged as particularly effective strategies for improving students' confidence and competence in managing complex psychiatric situations. These findings align with international recommendations advocating compassionate, evidence-based, and multidisciplinary mental healthcare that promotes recovery and social inclusion (Happell et al., 2022; ICN, 2021).

Similarly, competency-based midwifery education has demonstrated considerable benefits in preparing nurses and midwives for maternal and newborn care. Simulation-based obstetric training, competency mapping, Objective Structured Clinical Examinations (OSCEs), and workplace-based assessments have significantly strengthened students' ability to manage normal childbirth and obstetric emergencies. The integration of respectful maternity care, ethical practice, and culturally sensitive communication within competency frameworks reflects the global movement toward improving maternal and neonatal health outcomes while ensuring dignity and quality of care for women and newborns (ICM, 2021; WHO, 2022).

Child health nursing education has likewise evolved to emphasize family-centered care, developmental assessment, immunization, pediatric emergency management, and health promotion. The reviewed evidence suggests that competency-based pediatric education enables students to integrate clinical reasoning with effective communication and family engagement. High-fidelity simulation and case-based learning further enhance preparedness for managing critically ill infants and children while minimizing risks to patients during training. These findings reinforce the importance of experiential learning environments that support safe skill acquisition and clinical decision-making (Hockenberry et al., 2023; Jeffries et al., 2023).

Another important finding concerns the increasing integration of educational technologies into competency-based nursing programs. High-fidelity simulation, virtual reality, online learning platforms, digital portfolios, and artificial intelligence-supported educational tools have transformed nursing education by providing flexible, learner-centered, and competency-oriented training. These technologies facilitate repeated practice, immediate feedback, and individualized learning while improving students' confidence and clinical performance. As digital transformation continues to reshape healthcare, nursing curricula must incorporate technological competencies that prepare graduates for telehealth, electronic health records, and data-informed clinical decision-making (AACN, 2021; Cant & Cooper, 2023).

Despite these positive developments, the review identified several persistent implementation challenges. Faculty preparedness remains a major concern, as competency-based education requires educators to adopt learner-centered teaching methods, authentic assessment strategies, and continuous competency evaluation. Resource limitations, including inadequate simulation laboratories, limited clinical placement opportunities, shortages of trained preceptors, and financial constraints, particularly affect institutions in low- and middle-income countries. Furthermore, variability among competency frameworks and assessment standards creates inconsistencies in educational outcomes across institutions. Addressing these challenges will require institutional investment, faculty development programs, standardized competency frameworks, and collaboration among educational institutions, regulatory bodies, and healthcare organizations (AACN, 2021; WHO, 2021).

RECOMMENDATIONS

Nursing education institutions should adopt standardized competency-based curricula aligned with national and international competency frameworks to ensure consistency in graduate outcomes. Faculty development programs should be strengthened to enhance educators' expertise in competency-based teaching, simulation facilitation, and authentic assessment methods. Greater investment is needed in simulation laboratories, digital learning platforms, and clinical partnerships to provide students with high-quality experiential learning opportunities. Competency assessment should incorporate multiple evaluation methods, including OSCEs, workplace-based assessments, reflective portfolios, and formative feedback. Interprofessional education should be integrated throughout nursing programs to promote collaborative practice and patient safety. Future research should evaluate the long-term impact of competency-based education on clinical performance, patient outcomes, workforce readiness, and healthcare quality across different educational and clinical settings. Regular curriculum review is essential to incorporate emerging competencies in digital health, artificial intelligence, telehealth, leadership, and evidence-based practice, ensuring that nursing graduates remain prepared for the evolving healthcare environment.

CONCLUSION

Competency-based nursing education represents a significant advancement in preparing nurses to meet the dynamic demands of contemporary healthcare systems. The evidence synthesized in this review demonstrates that competency-based curricula strengthen clinical competence, critical thinking, communication, leadership, professionalism, and evidence-based practice across community health, mental health, midwifery, and child health nursing. By emphasizing measurable learning outcomes and continuous competency assessment, this educational approach enhances graduates' readiness for safe, patient-centered, and culturally responsive practice. Educational strategies such as simulation-based learning, Objective Structured Clinical Examinations (OSCEs), workplace-based assessments, digital learning technologies, and interprofessional education have proven effective in improving students' clinical performance and confidence. Despite these benefits, challenges including inadequate faculty training, limited simulation resources, inconsistent competency frameworks, and variability in assessment methods remain barriers to successful implementation. Addressing these challenges requires institutional commitment, investment in faculty development, standardized competency frameworks, and continuous curriculum evaluation. As healthcare continues to evolve with technological innovations and changing population health needs, competency-based nursing education offers a sustainable framework for developing a highly skilled, adaptable, and future-ready nursing workforce capable of delivering high-quality care across diverse healthcare settings.

REFERENCES

- [1] American Association of Colleges of Nursing. (2021). *The essentials: Core competencies for professional nursing education*.
- [2] Cant, R. P., & Cooper, S. J. (2023). Simulation in nursing education: Current evidence and future directions. *Nurse Education in Practice*, 69, 103629.
- [3] Frank, J. R., Snell, L., Englander, R., Holmboe, E. S., & ten Cate, O. (2022). Competency-based medical education: Theory to practice. *Medical Teacher*, 44(1), 15–22.
- [4] Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 26(2), 91–108. <https://doi.org/10.1111/j.1471-1842.2009.00848.x>
- [5] Green, B. N., Johnson, C. D., & Adams, A. (2018). Writing narrative literature reviews for peer-reviewed journals: Secrets of the trade. *Journal of Chiropractic Medicine*, 17(2), 79–87. <https://doi.org/10.1016/j.jcm.2017.11.002>
- [6] Happell, B., Platania-Phung, C., & Scott, D. (2022). Competency development in contemporary mental health nursing education: A review. *International Journal of Mental Health Nursing*, 31(5), 1187–1198.
- [7] Hockenberry, M. J., Wilson, D., & Rodgers, C. C. (2023). *Wong's essentials of pediatric nursing* (12th ed.). Elsevier.

- [8] International Confederation of Midwives. (2021). *Essential competencies for midwifery practice (2021 update)*.
- [9] International Council of Nurses. (2021). *The ICN code of ethics for nurses*.
- [10] Jeffries, P. R., Rodgers, B., & Adamson, K. A. (2023). *Simulation in nursing education: From conceptualization to evaluation* (3rd ed.). National League for Nursing.
- [11] National Council of State Boards of Nursing. (2023). *Clinical judgment measurement model*. <https://www.ncsbn.org>
- [12] Stanhope, M., & Lancaster, J. (2022). *Public health nursing: Population-centered health care in the community* (11th ed.). Elsevier.
- [13] Welch, T. D., & Smith, T. B. (2022). AACN Essentials as the conceptual thread of nursing education. *Nursing Administration Quarterly*, 46(3), 234–244.
- [14] World Health Organization. (2021). *Global strategic directions for nursing and midwifery 2021–2025*. World Health Organization.
- [15] World Health Organization. (2022). *WHO recommendations on maternal and newborn care for a positive postnatal experience*. World Health Organization.
- [16] Giddens, J. F., Douglas, J. P., & Conroy, S. (2022). The revised AACN Essentials: Implications for nursing regulation. *Journal of Nursing Regulation*, 12(4), 16–22. [https://doi.org/10.1016/S2155-8256\(22\)00009-6](https://doi.org/10.1016/S2155-8256(22)00009-6)
- [17] Gravina, E. W. (2017). Competency-based education and its effect on nursing education: A literature review. *Teaching and Learning in Nursing*, 12(2), 117–121. <https://doi.org/10.1016/j.teln.2016.11.004>
- [18] Hayden, J. K., Smiley, R. A., Alexander, M., Kardong-Edgren, S., & Jeffries, P. R. (2014). The NCSBN National Simulation Study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation*, 5(2, Suppl.), S1–S64. [https://doi.org/10.1016/S2155-8256\(15\)30062-4](https://doi.org/10.1016/S2155-8256(15)30062-4)
- [19] Holmes, C. M., Brownie, S., & Walton, G. (2021). Competency-based education and assessment in nursing: Understanding the current evidence. *Nurse Education Today*, 98, 104660.
- [20] Jenkins-Weintaub, E., Goodwin, M., & Fingerhood, M. (2023). Competency-based evaluation: Collaboration and consistency from academia to practice. *Journal of the American Association of Nurse Practitioners*, 35(2), 150–156. <https://doi.org/10.1097/JXX.0000000000000830>
- [21] Lewis, L. S., Rebesch, L. M., & Hunt, E. (2022). Nursing education practice update 2022: Competency-based education in nursing. *SAGE Open Nursing*, 8, 23779608221140774. <https://doi.org/10.1177/23779608221140774>
- [22] National Academies of Sciences, Engineering, and Medicine. (2021). *The future of nursing 2020–2030: Charting a path to achieve health equity*. National Academies Press.
- [23] Ryan, M. S., Holmboe, E. S., & Chandra, S. (2022). Competency-based medical education: Considering its past, present, and a post-COVID-19 era. *Academic Medicine*, 97(3 Suppl.), S90–S97. <https://doi.org/10.1097/ACM.00000000000004535>
- [24] Ten Cate, O. (2017). Competency-based postgraduate medical education: Past, present and future. *GMS Journal for Medical Education*, 34(5), Doc69.
- [25] World Health Organization. (2021). *Global strategic directions for nursing and midwifery 2021–2025*. World Health Organization.
- [26] World Health Organization. (2022). *WHO recommendations on maternal and newborn care for a positive postnatal experience*. World Health Organization.
- [27] American Association of Colleges of Nursing. (2021). *The Essentials: Core competencies for professional nursing education*. American Association of Colleges of Nursing.
- [28] International Council of Nurses. (2021). *The ICN code of ethics for nurses*. International Council of Nurses.
- [29] International Confederation of Midwives. (2021). *Essential competencies for midwifery practice*. International Confederation of Midwives.
- [30] Stanhope, M., & Lancaster, J. (2022). *Public health nursing: Population-centered health care in the community* (11th ed.). Elsevier.