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Evaluation of midwifery education curricula: A systematic review of models, outcomes, and quality indicators

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Abstract

Background: The transformation of maternal and neonatal care encourages midwifery education to develop a curriculum that focuses not only on content but also on achieving graduate competencies that meet global standards and the needs of midwifery practice. Curriculum evaluation is necessary to assess the alignment between learning design, implementation, and the education quality assurance system.
Purpose: To systematically review the curriculum model, implementation results, and quality indicators in the evaluation of midwifery education.
Method: A systematic literature review was employed, referring to the PRISMA 2020 guidelines. Article searches were conducted through PubMed, Scopus, ScienceDirect, Google Scholar, and Wiley Online Library. Of the 1,390 articles found, 15 studies met the inclusion criteria and were analyzed using narrative synthesis. Methodological quality was independently assessed by two reviewers using study-specific appraisal criteria
Results: Competency-based curricula were widely implemented through the integration of simulation, midwifery continuity of care, student-centered learning, and International Confederation of Midwives (ICM) standards. Implementation of these curricula contributed to improved clinical skills, Objective Structured Clinical Examination (OSCE) scores, critical thinking, self-confidence, and student readiness for practice. Curriculum quality is influenced by alignment with standards, faculty competency, clinical facilities, supervision, and institutional quality assurance.
Conclusion: Competency-based curriculum evaluation plays an important role in improving the quality of midwifery education and graduate readiness.

Keywords: Competency-Based Education; Curriculum Evaluation; Midwifery Education.

INTRODUCTION

The transformation of maternal and neonatal healthcare services requires midwifery education to shift from traditional models to competency-based/skills-based education aligned with international standards and current practice needs (Ige et al., 2024). The curriculum no longer simply emphasizes theory and technical skills, but must systematically develop critical thinking skills, evidence-based clinical decision-making, effective communication, interprofessional collaboration, empathy, and the value of woman-centered care as the core of safe and quality midwifery practice (Carter et al., 2022). In this context, the curriculum becomes a strategic component that guides learning outcomes, pedagogical approaches (such as PBL and simulation), and student competency evaluation systems. Reforming toward a competency-based curriculum requires structured planning and evaluation, stakeholder engagement, faculty empowerment, and resource support to ensure graduates are truly work-ready and able to contribute to reducing maternal and infant morbidity and mortality (Ige et al., 2024).

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The development of global health education has encouraged the adoption of various curriculum models, such as competency-based education (CBE), outcome-based education (OBE), and integrated curricula, to prepare healthcare professionals capable of facing the complexities of modern clinical practice (Mani, 2025). CBE and OBE emphasize clear competency outcomes and outcomes, while integrated curricula link basic science, clinical practice, and the service context, and have been shown to improve maternal–child health knowledge and skills compared to traditional curricula (Marcotte & Gruppen, 2022). In this context, curriculum evaluation is crucial to assess the alignment between curriculum structure, learning methods, and assessment systems, including the use of diverse and authentic competency assessments (O'Sullivan et al., 2025). A comprehensive, program-based evaluation approach, not just outcome-based, is necessary to ensure the curriculum remains adaptive to advances in science, technology, and the needs of maternal health services, as well as the ever-changing health system (Mani, 2025).

The results of curriculum implementation are also a key indicator of the quality of midwifery education because they are reflected in the improvement in knowledge, clinical skills, self-confidence, communication skills, professionalism, and work readiness of graduates (Yunas, 2025). Various studies have shown that a systematically designed and competency-based or skills-based curriculum, accompanied by strengthening faculty capacity and learning facilities (e.g., simulations, mentoring, and skills laboratories), can improve student performance in clinical practice and support maternal and neonatal safety through mastery of obstetric and neonatal emergency management (Allen et al., 2022; Shikuku et al., 2024). However, the success of this implementation is uneven across institutions and countries, influenced by variations in curriculum quality, institutional support, availability of practice facilities, and suboptimal supervision and evaluation systems. Therefore, a systematic review and comprehensive program evaluation are needed to identify determinants of success and ensure the sustainability of the competency-based approach in midwifery education (Mani, 2025).

Midwifery education curriculum quality indicators encompass not only the formulation of learning outcomes, but also the learning process, assessment system, resource availability, and compliance with national and global accreditation standards such as those of the ICM and WHO (Bogren et al., 2024a). Quality assessments should examine the readiness and competence of faculty, the adequacy of facilities and practice areas, the quality of curriculum implementation in clinics, and the involvement of various stakeholders (educators, students, regulators, service users) in internal and external quality assurance. Identifying and using clear, measurable quality indicators aligned with national and international standards is a key step in ensuring the midwifery curriculum remains adaptive to developments in science, technology, and the demands for quality maternal and neonatal health services (Luyben et al., 2017).

Changes in higher health education policies and the increasingly complex demands of midwifery practice are encouraging institutions to conduct regular curriculum evaluations and more systematically integrate interprofessional education, simulation-based learning, and student-centered approaches (Burns et al., 2021). Various collaborative and interprofessional simulation programs in midwifery and obstetrics have been shown to improve confidence, collaboration skills, team communication, preparedness for emergency situations and the transition to real-world practice (Avery et al., 2020). Student-centered and blended learning approaches have also been reported to enhance active engagement, reflective learning, and the development of clinical and generic competencies in students. Systematic evaluation of these approaches is needed to determine their effectiveness in improving the quality of learning and student competencies (Chen et al., 2025).

Various studies have shown that evaluation of midwifery education still focuses on isolated aspects, such as the quality of clinical learning, accreditation, or the completeness of curriculum content against ICM standards, rather than on the integration of curriculum design, implementation processes, and the overall quality assurance system (Bogren et al., 2024a; Moller et al., 2022; Ryder et al., 2025). Comprehensive approaches linking curriculum models, student learning outcomes and experiences, graduate competencies, and institutional quality indicators (accreditation, quality assurance, standardized assessment tools) are still limited,

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although several initiatives have emerged through the development of contextual accreditation tools, quality assurance tools, and national evaluations of nursing–midwifery curricula (Javadnoori et al., 2024). This situation emphasizes the need for systematic and integrative reviews that summarize scientific evidence across contexts to provide a more complete picture of how curriculum models, implementation outcomes, and quality indicators interrelate in improving the quality of midwifery education and maternal-neonatal care (Moller et al., 2022).

A systematic review of midwifery and midwifery nursing curricula allows for the identification of common patterns, gaps, and best practices in curriculum design and evaluation, including theory-practice balance, the use of simulation, interprofessional education, and innovative approaches such as Student-Centered, Problem-Based, Integrated, Community-Oriented, Elective, Systematic (SPICES) or blended learning (Moloney et al., 2022). By compiling various curriculum evaluation studies, a comparative overview can be obtained of curriculum models that are more effective in improving clinical competence, clinical reasoning, interprofessional collaboration, and practice readiness, such as competency-based curricula, comprehensive simulation scenarios, or interprofessional simulation for obstetric emergencies (Gorantla et al., 2019).

This study aims to conduct a systematic review of midwifery education curriculum evaluation, focusing on curriculum models, implementation outcomes, and quality indicators. The study's findings are expected to contribute to the development of a comprehensive, evidence-based curriculum evaluation framework. Furthermore, the findings can serve as a basis for midwifery education institutions to improve the quality of learning, strengthen graduate competencies, and support the sustainable improvement of maternal health services.

RESEARCH METHOD

A systematic literature review was employed to identify, assess, and synthesize scientific evidence related to midwifery education curriculum evaluation, focusing on curriculum models, implementation outcomes, and quality indicators. The research process was carried out in accordance with the PRISMA 2020 guidelines to ensure transparency and methodological rigor. A review protocol was developed to guide the search, screening, eligibility assessment, data extraction, and narrative synthesis. However, the protocol was not prospectively registered in PROSPERO and was not published as a separate protocol before the review was conducted. Therefore, no registration number is available.

A systematic literature search was conducted in April 2026 through five electronic databases: PubMed, Scopus, ScienceDirect, Google Scholar, and Wiley Online Library. The search strategy used a combination of keywords with Boolean operators (AND and OR) tailored to each database.

Table 1. Search Keywords Based on Databases

Databases	Keywords (Search Terms)
PubMed	*("midwifery education" OR "midwifery curriculum" OR "midwifery training") AND ("curriculum evaluation" OR "program evaluation" OR "educational evaluation") AND ("competency-based education" OR "outcome-based education" OR "competency-based curriculum") AND ("learning outcomes" OR "quality indicators" OR "clinical competence")*
Scopus	*TITLE-ABS-KEY ("midwifery education" OR "midwifery curriculum") AND TITLE-ABS-KEY ("curriculum evaluation" OR "education quality" OR "program assessment") AND TITLE-ABS-KEY ("competency-based" OR "outcome-based" OR "integrated curriculum")*
ScienceDirect	*("midwifery curriculum" OR "midwifery education program") AND ("evaluation" OR "assessment") AND ("competence" OR "learning outcomes" OR "quality assurance")*
Google Scholar	*"evaluasi kurikulum kebidanan" OR "midwifery curriculum evaluation" AND "competency-based education" AND "learning outcomes" AND "quality indicators"*
Wiley Online Library	*("midwifery education" AND "curriculum evaluation") AND ("competency-based curriculum" OR "education quality" OR "clinical competence")*

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Table 2. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Original research articles with empirical data	Opinion articles, editorials, commentaries without empirical data, proceedings without clear research results
Focus on evaluating the midwifery education curriculum	Studies that only discuss clinical interventions without any link to the curriculum
Discuss curriculum models (e.g. competency-based, outcome-based, integrated, student-centered, simulation-based)	Does not explain the curriculum model or design specifically
Reporting curriculum implementation results (learning outcomes, competencies, practice readiness, OSCE, etc.)	Does not report learning outcomes or implementation impacts
Presenting education quality indicators (e.g., compliance with ICM standards, quality assurance, accreditation, quality indicators)	Does not address quality indicators or educational standards
Research population: midwifery students, midwifery educators, midwifery education institutions	Population not within the context of midwifery education (e.g., only general nurses, other healthcare workers without a midwifery focus)
Full text available	Article not available in full text
Publication in English or Indonesian	Publication in a language other than English or Indonesian
Publication year range according to the search period (e.g., 2015–2026)	Publication outside the specified year range

The methodological quality of the included studies was assessed independently by two reviewers using design-appropriate critical appraisal criteria. JBI Critical Appraisal Checklists were used for randomized controlled trials, quasi-experimental studies, cross-sectional studies, qualitative studies, and analytical/descriptive studies; the Mixed Methods Appraisal Tool (MMAT) was used for mixed-methods studies; and structured criteria adapted to the methodological purpose were used for Delphi, curriculum-development, quality-improvement, and expert-consensus studies. Disagreements were resolved through discussion. The appraisal considered the clarity of the research question, appropriateness of design, sampling, measurement, analysis, completeness of reporting, and potential sources of bias. Studies were not excluded solely because of quality scores; instead, appraisal findings were considered when interpreting the strength and limitations of the evidence.

The initial search results identified 1,390 articles, which were then further processed through a selection process. Prior to the screening phase, 212 duplicate articles were removed, and another 100 articles were eliminated for not meeting the initial criteria or being flagged as ineligible by the automated tool, leaving 1,078 articles for screening based on title and abstract. At this stage, 917 articles were excluded for being irrelevant to midwifery curriculum evaluation, not addressing models, outcomes, or quality indicators, or focusing solely on clinical interventions without curriculum context. Furthermore, 161 articles were assessed through full-text review, and 146 articles were excluded for not specifically evaluating the curriculum, not reporting outcomes or quality indicators, having an inappropriate study design, having an irrelevant population, or not having full text available. Fifteen articles ultimately met all criteria and were included in the final analysis.

Data extraction was conducted using a standardized format that included information on authors, year of publication, research location, research design, sample characteristics, curriculum model, evaluation focus, quality indicators, and impact on learning outcomes. Data analysis was conducted using a narrative synthesis approach by grouping findings into three main domains: curriculum model, curriculum implementation outcomes, and education quality indicators.

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RESEARCH RESULTS

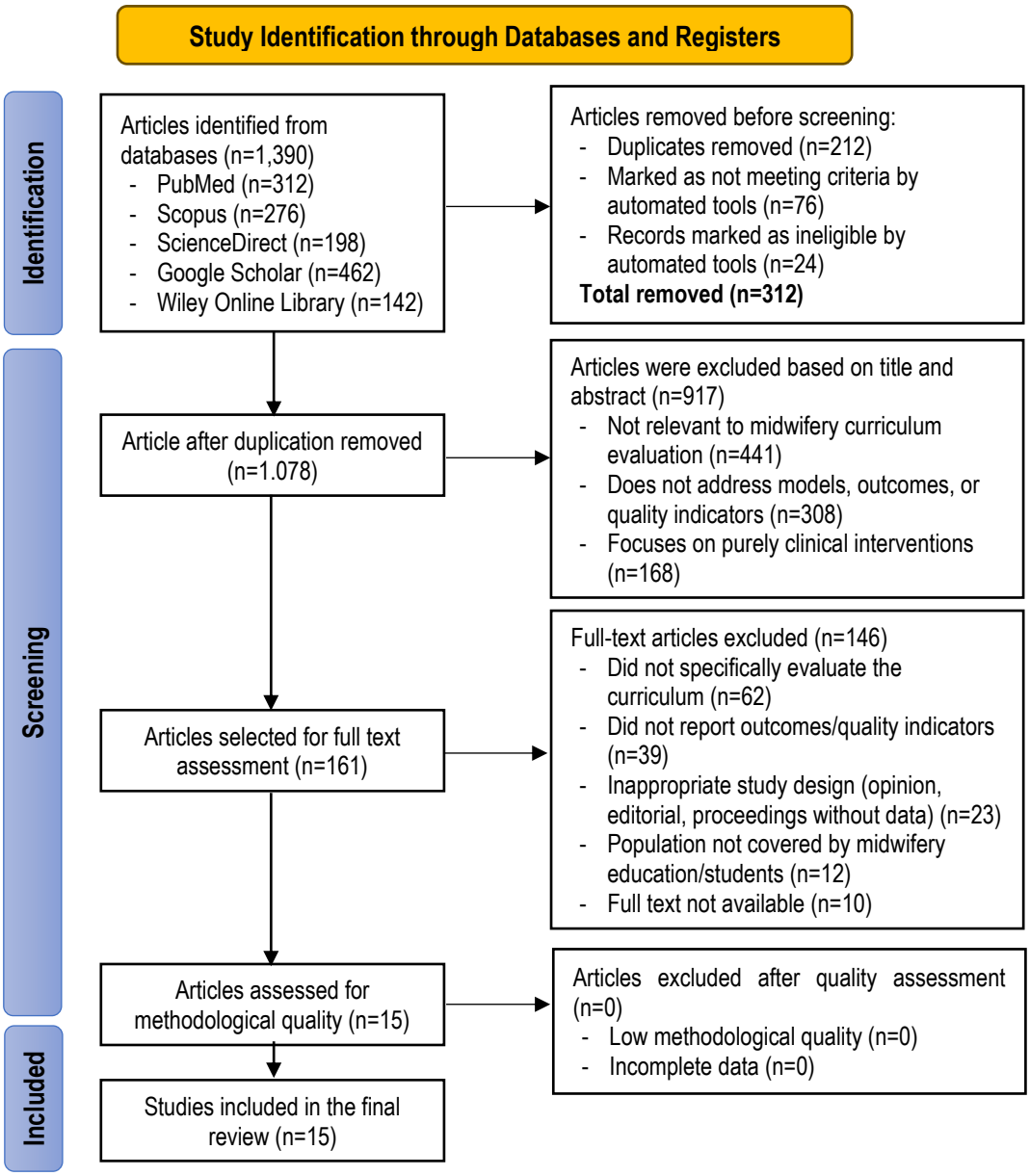


Figure 1. PRISMA Flowchart

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Table 3. Methodological Quality and Risk-of-Bias Appraisal of Included Studies

Study	Design	Appraisal tool/criteria	Overall appraisal	Main considerations
Shikuku et al. (2024)	Cluster RCT	JBI RCT checklist	Low	Randomized comparative design; some reporting limitations may remain.
Hassan et al. (2025)	Cross-sectional	JBI Analytical Cross-Sectional	Moderate	Potential self-assessment and cross-sectional measurement bias.
Abdolalipour et al. (2023)	Document analysis + Delphi	JBI + Delphi criteria	Moderate	Potential expert-selection and consensus bias.
Bogren et al. (2024b)	Process analysis/commentary	JBI text/opinion criteria	Moderate	Limited empirical outcome measurement.
Ball et al. (2023)	Descriptive/ conference abstract	JBI descriptive criteria	High/unclear concern	Limited methodological detail and abstract-level reporting.
Renfrew (2019)	Project/curriculum evaluation	Structured criteria	Moderate	Limited standardized outcome measurement.
Ellis (2024)	Mixed methods	MMAT	Moderate	Possible selection and self-report bias.
Ige & Ngcobo (2024)	Qualitative grounded theory	JBI Qualitative	Low–Moderate	Appropriate qualitative approach; interpretation and sampling may influence findings.
Fakouri & Poorhakak (2023)	One-group quasi-experimental	JBI Quasi-Experimental	Moderate	No concurrent control group.
Rojas-Cáceres et al. (2024)	Longitudinal descriptive evaluative	JBI cohort/ descriptive criteria	Moderate	Potential confounding from contextual changes between periods.
Bogren et al. (2024a)	Delphi study	Structured Delphi criteria	Low–Moderate	Systematic consensus process; dependent on panel composition.
Womack & Stec (2026)	Quality-improvement pre–post	JBI Quasi-Experimental	Moderate	No control group; several outcomes self-reported.
Parsons & Killingley (2024)	Reflective descriptive innovation	JBI descriptive criteria	Moderate–High concern	Limited sampling and outcome-measurement detail.
Tierney et al. (2024)	Modified Delphi	Structured Delphi criteria	Low–Moderate	Iterative expert consensus; potential panel-selection bias.
Plappert et al. (2024)	Expert-consensus position paper	JBI text/opinion criteria	Moderate	Primarily normative evidence rather than empirical evaluation.

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Table 4. Characteristics of the Included Studies

Author (Year), Country	Purpose	Methods (Design, Sample, Sampling Technique)	Curriculum Model Used	Curriculum Evaluation Focus	Quality Indicators	Impact on Learning Outcomes	Results (Main Findings)
Shikuku et al. (2024), Kenya	To assess the effectiveness of an EmONC enhanced midwifery curriculum delivered by trained and mentored midwifery educators on the quality of education and student performance in Kenya.	Cluster Randomized Controlled Trial; Sample: midwifery educators and final year students; Technique: consecutive sampling for educators and systematic random sampling for students	Updated pre-service midwifery curriculum integrates EmONC with training and mentoring	Evaluation of the effectiveness of implementing a competency-based curriculum with EmONC integration on the quality of teaching and student competencies	Educator knowledge, teaching skills, student OSCE scores, student knowledge, self-confidence, clinical readiness	Significant improvement in students' clinical knowledge and skills as well as the quality of educators' teaching	Training and mentoring increased educators' knowledge from 61.3% to 73.3% and improved teaching skills; students in the intervention group had higher OSCE knowledge and skills scores than the control group.
Hassan et al. (2025), West Bank, Occupied Palestinian Territory (oPt)	To assess four-year direct-entry bachelor's midwifery programs against the International Confederation of Midwives (ICM) essential competencies for midwifery practice.	Cross-sectional rapid assessment; Sample: 5 direct-entry undergraduate midwifery programs; Technique: total sampling of all programs; data collection using competency-based self-assessment	Bachelor's degree direct-entry midwifery curriculum based on ICM standard competencies	Evaluation of the suitability of the midwifery curriculum with the ICM essential competencies	ICM competency coverage, curriculum content distribution, competency gaps, percentage of standard fulfillment	Identifying areas of strength and weakness of the curriculum that impact on graduate competency readiness	Total competency scores across programs ranged from 54.3% to 68.5%; gaps were found in several clinical and management competencies; the curriculum did not fully meet ICM standards.
Abdolalipour et al. (2023), Iran	To evaluate the content, strengths, and weaknesses of the midwifery curriculum in Iran based on the most recent ICM midwifery education standards in all competence areas, as well as to obtain expert	Descriptive evaluative study with a comparative approach; Sample: national midwifery curriculum document and expert panel; Technique: document analysis and Delphi method to obtain expert consensus	Competency-based midwifery curriculum based on ICM standards	Mapping the midwifery curriculum against ICM essential competencies	Competency alignment, curriculum content coverage, competency gaps, expert feedback	Identifying curriculum gaps that affect graduate competency readiness	Iran's midwifery curriculum does not fully meet all ICM competencies; some competency areas require strengthening; the analysis results provide a basis for policy interventions to improve

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Author (Year), Country	Purpose	Methods (Design, Sample, Sampling Technique)	Curriculum Model Used	Curriculum Evaluation Focus	Quality Indicators	Impact on Learning Outcomes	Results (Main Findings)
	feedback on the necessary courses or lessons for the curriculum using the Delphi method.						the quality of midwifery education.
Bogren et al. (2024b), Rwanda	To describe Rwanda's nationally driven process of updating, standardizing, and culturally adapting midwifery curricula at diploma, bachelor, and master's levels to be competency-based and aligned with the International Confederation of Midwives (ICM) Essential Competencies framework, and to highlight Rwanda's experience as a potential model for south–south cooperation.	Design: Policy evaluation-based commentary and process analysis; Sample: national stakeholders (Ministry of Health, educational institutions, midwifery associations); Techniques: curriculum gap analysis, workshops, peer review, and national validation	Competency-based standardized national midwifery curriculum is aligned with ICM	Evaluation of the national curriculum standardization process and its conformity with ICM competencies	ICM competency suitability, stakeholder involvement, curriculum structure quality, cultural relevance, quality assurance process	Improving the consistency of graduate competencies and readiness for midwifery practice	Standardization of the national curriculum through gap analysis, workshops, and validation improves the alignment of the curriculum with ICM competencies and ensures cultural relevance and national needs.
Ball et al. (2023), Australia	To collate and report the evidence on the role of the woman in the clinical assessment of midwifery students.	Design: descriptive evaluative; Sample: midwifery students and clinical assessment process; Technique: analysis of clinical	Woman-centred care integrated curriculum	Evaluation of the integration of woman-centered care in clinical assessment of midwifery students	Focus on women's experiences, communication assessment, patient involvement, holistic approach	Improving students' understanding of woman-centered midwifery practice	It was found that clinical assessments still place more emphasis on technical skills than on women's experiences; stronger integration of the concept of woman-centred

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Author (Year), Country	Purpose	Methods (Design, Sample, Sampling Technique)	Curriculum Model Used	Curriculum Evaluation Focus	Quality Indicators	Impact on Learning Outcomes	Results (Main Findings)
		assessment approaches (conference abstract)					care in the curriculum and evaluation is needed.
Renfrew (2019), England	To transform midwifery education to ensure midwives are equipped with the knowledge, skills, and competencies to provide safe, evidence-based, and high-quality care for women, babies, and families.	Design: project evaluation/curriculum development; Sample: midwifery education institutions and stakeholders; Technique: stakeholder consultation and analysis of curriculum implementation	Future Midwife Curriculum (new professional standards-based competencies)	Final stage evaluation of the implementation of the new midwifery education curriculum	Competency alignment, clinical practice readiness, theory-practice integration, graduate readiness	Improving student readiness to enter professional midwifery practice	The new curriculum emphasizes holistic competencies, continuity of care, and integration of practical learning to enhance graduate readiness.
Ellis (2013), Canada	To examine the curriculum annually from the perspective of new graduates (n=34) and their mentors (n=21) to inform curriculum renewal and development.	Design: mixed-methods; Sample: midwifery students and educators; Technique: purposive sampling; Data collection: survey and interviews	Competency-Based Midwifery Curriculum	Evaluation of the implementation of competency-based curriculum	Clinical competence, practice readiness, learning quality, student satisfaction	Improving students' clinical practice readiness	Competency-based curriculum improves clinical skills, confidence, and practice readiness of midwifery students.
Ige & Ngcobo (2024), Nigeria	To analyze the process used to strengthen the quality of midwifery education with the aim of generating a middle-range model to prepare competent and confident midwifery graduates	Design: qualitative; Strauss & Corbin grounded theory approach; social constructivism paradigm; Sample: midwifery educators, students, and stakeholders; Sampling technique: purposive & theoretical sampling; Data	Competency-Based Midwifery Curriculum model "Strengthening Quality of Midwifery	Evaluation of the process of strengthening the quality of midwifery education and implementation of competency-based curriculum	Learning environment, educator competency, curriculum implementation, collaboration, institutional	Improve students' competence, confidence, and practical readiness	The SQME model consists of educational context, competency-based curriculum, supportive environment, collaboration, and continuous lecturer development; implementation of

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Author (Year), Country	Purpose	Methods (Design, Sample, Sampling Technique)	Curriculum Model Used	Curriculum Evaluation Focus	Quality Indicators	Impact on Learning Outcomes	Results (Main Findings)
		collection: in-depth interviews	Education (SQME)"		support, leadership		competency-based curriculum produces competent and confident graduates.
Fakouri & Poorhakak (2023), Iran	To improve the quality of midwifery education by designing, implementing, and evaluating the midwifery internship course using the group rethinking method based on Boud et al.'s model.	Design: quasi-experimental one group; Sample: midwifery students who participated in clinical practice; Sampling technique: total sampling; Instruments: standard questionnaire & reflection checklist; Analysis: descriptive statistical test and t-test	Group reflection model based on Boud et al.'s Reflection Model	Evaluation of the implementation of group reflection in the midwifery clinical practice curriculum	Reflection scores, clinical discussion quality, learning feedback, student engagement	Improved clinical understanding, case analysis skills, and practice readiness	Student scores significantly increased after the intervention (before: 122.95 ± 10.48; after: 131.60 ± 19.78; p=0.012). Reflection topics included labor management, postpartum care, and newborn care. Reflection helped correct misunderstandings and improve the quality of learning.
Rojas-Cáceres et al. (2024), Chile	To describe the reflection after the transformation and curricular evaluation of the new curriculum based on competencies.	Design: descriptive evaluative; longitudinal reflective approach; Sample: midwifery students in two periods of curriculum implementation; Sampling technique: total cohort (comparison of old vs new curriculum); Evaluation: OSCE and implementation analysis.	Competency-based curriculum	Evaluation of curriculum transformation from content-based to competency-based	Clinical competency, theory-practice integration, OSCE results, competency achievement	Improving students' clinical skills and practice readiness	The competency-based curriculum transformation improves the integration of theory and practice and shows better student performance on OSCE evaluations compared to the old curriculum.

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Bogren et al. (2024a), Bangladesh	To validate and culturally adapt a Quality Assurance Assessment tool aligned with global midwifery education standards for application in Bangladesh.	Design: Delphi study; Sample: midwifery education experts, regulators, and educators; Sampling technique: purposive sampling with multiple Delphi rounds; Analysis: expert consensus	Competency-Based Midwifery Curriculum	Development of quality indicators for midwifery education for curriculum implementation	Educator standards, learning environment, clinical facilities, lecturer-student ratio, practice supervision, clinical competency	Helping to improve student competency through educational quality standards	Expert consensus resulted in a set of quality indicators for midwifery education that can be used to monitor the implementation of competency-based curricula and improve the quality of graduates.
Womack & Stec (2026), United States	To highlight the role of competent midwifery care in addressing key contributing factors, such as limited health care access, insufficient prenatal care, and adverse social determinants of health. (Emory University School of Nursing, Atlanta, Georgia)	Design: Quality Improvement Project; Sample: third-semester midwifery students; Sampling technique: total sampling of laboratory participants; Instrument: pre-post survey using a modified Student Satisfaction and Self-Confidence in Learning tool; Analysis: descriptive & comparative	Competency-Based Intrapartum Skills Laboratory based on simulation	Evaluation of the effectiveness of a competency-based intrapartum skills laboratory	Student self-confidence, learning satisfaction, clinical skills readiness, simulation effectiveness	Increased confidence, practice readiness, and understanding of intrapartum skills	There was a significant increase in pre- and post-laboratory assessments, especially in students' confidence in clinical skills, the suitability of simulation methods to learning styles, and confidence in the lecturer's ability to teach midwifery practice.
Parsons & Killingley (2024), England	To outline the process and outcomes of redesigning a midwifery curriculum into a flexible, student-centred programme that meets	Design: reflective descriptive (practice-based educational innovation); Sample: midwifery students; Sampling technique: not	Student-Centered Curriculum (learner-centered	Evaluation of curriculum transformation towards student-centered learning	Student engagement, reflective learning, critical thinking, clinical	Improve critical thinking skills, learning independence, and clinical practice readiness	The student-based curriculum enhances active participation, reflective learning, and supports the development

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	NMC standards and addresses challenges in undergraduate education	specifically stated (curriculum implementation on a cohort of students); Method: evaluation of learning implementation	midwifery education)		experience, collaboration		of the professional identity of midwifery students.
Tierney et al. (2024), Australia	To develop and identify standardised learning outcomes for the CoCE	Design: Modified Delphi Study; Sample: panel of midwifery education experts; Sampling technique: purposive sampling with multiple Delphi rounds; Item development based on previous studies; Bloom's Taxonomy used in outcome formulation	Continuity of Care Experience (CoCE) Curriculum Model based on competency learning outcomes	Development and standardization of learning outcomes in students' continuity of care experiences	Competency-based learning outcomes, Bloom's level of thinking, clinical practice evaluation, assessment consistency	Improve the clarity of learning objectives and students' clinical practice readiness	The study resulted in standardized learning outcomes for CoCE that were previously not explicit, thereby improving the consistency of assessment and optimizing learning in midwifery practice.
Plappert et al. (2024), Germany	To lay the groundwork for a unified, competence-based, and academically rigorous midwifery education system in Germany that ensures consistency, quality, and professional development across institutions.	Design: expert consensus-based position paper; Sample: Midwifery Science Committee members; Sampling technique: expert consensus & literature review; Analysis: education policy recommendations	Academic Bachelor Midwifery Competency-based Curriculum	National standards for academic midwifery education	Curriculum structure, clinical competencies, theory-practice integration, lecturer qualifications, clinical facilities, service partnerships	Improving graduate competency and readiness for professional practice	Academic midwifery education requires integration of academic and clinical learning, strengthening of practice-based competencies, and national standards to ensure the quality of graduates.

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Table 5. Distribution of Studies Based on Primary Research Objectives in Midwifery Education Curriculum Evaluation

Main Objectives of the Study	Study (n/%)	Study References
Evaluating the effectiveness of competency-based curriculum implementation on learning outcomes and practice readiness	6/40	Shikuku et al. (2024); Ellis (2013); Rojas-Cáceres et al. (2024); Womack & Stec (2026); Fakouri & Poorhakak (2023); Renfrew (2019)
Evaluating the curriculum's alignment with international standards/competencies (e.g., ICM)	3/20	Hassan et al. (2025); Abdolalipour et al. (2023); Bogren et al. (2024b – Rwanda)
Developing and establishing midwifery education quality indicators	1/6.7	Bogren et al. (2024a – Bangladesh)
Evaluating the quality improvement process and systematic curriculum implementation (quality improvement/education strengthening model)	2/13.3	Ige & Ngcobo (2024); Plappert et al. (2024)
Evaluating pedagogical innovations in the curriculum (student-centered, continuity of care, woman-centered care)	3/20	Parsons & Killingley (2024); Tierney et al. (2024); Ball et al. (2023)

As shown in Table 5, 40% of studies focused on learning outcomes and practice readiness, 20% on alignment with international standards, 20% on pedagogical innovations, 13.3% on systemic quality strengthening, and 6.7% on developing quality indicators. This distribution underscores that curriculum evaluation research addresses both student outcomes and broader governance and standardization in midwifery education."

DISCUSSION

The integration of a competency-based curriculum evaluation approach in midwifery education identified in fifteen reviewed studies indicates a paradigm shift from a content-based curriculum to an outcomes-based curriculum. Prior studies confirmed that implementing a competency-based curriculum significantly improved students' clinical skills, OSCE scores, and practice readiness (Shikuku et al., 2024; Ellis, 2013; Rojas-Cáceres et al., 2024). These findings are consistent with the OBE framework, which places learning outcomes at the heart of curriculum design, enabling decisions about content, teaching methods, and assessment strategies to be driven by clear and measurable learning outcomes (Syeed et al., 2022). Conceptually, this approach aligns with Biggs' principle of constructive alignment, where learning objectives, learning activities, and assessments are designed in an integrated manner to enable students to actively construct their knowledge and achieve professional competencies that can be demonstrated through measurable performance (Biggs & Tang, 2020).

The effectiveness of curriculum implementation is also significantly influenced by strengthening lecturer capacity and institutional support. Educator training and mentoring in EmONC integration improved teaching quality and directly impacted student competency (Shikuku et al., 2024). These findings are reinforced by a study of SQME model, which emphasized the importance of a supportive learning environment, leadership, and multi-stakeholder collaboration (Ige & Ngcobo, 2024). Numerous studies in medical and nursing education confirm that competency-based curriculum reform will be ineffective without changes in pedagogical practices

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at the faculty level, supported by structured faculty development programs to shift from a teacher-centered to a learner-centered approach, strengthen formative assessment, and facilitate new roles for lecturers in active learning and competency-based assessment (Ramanathan et al., 2021; Sukkurwalla et al., 2024).

Several studies highlight the importance of curriculum alignment with international standards, particularly ICM essential competencies. Gaps between national curricula and ICM standards were found, particularly in clinical and management competencies (Hassan et al., 2025; Abdolalipour et al., 2023). Meanwhile, the process of standardizing national curricula through gap analysis and stakeholder validation can improve alignment with global standards while maintaining relevance to local contexts (Bogren et al., 2024b). This approach supports the principle of global–local integration in health education, where global frameworks and standards are used as a common reference but systematically contextualized through a glocalization process to align with local health needs, culture, and priorities, as emphasized in various WHO–WFME initiatives, WHO curriculum guidelines, and the literature on glocalization and standardization–contextualization in medical education (Aldardeir et al., 2025).

Developing quality indicators for midwifery education is another important aspect of curriculum evaluation. The Delphi study produced a set of quality indicators that included the faculty-student ratio, clinical facilities, practical supervision, and educator competency (Bogren et al., 2024b). The need for national standards was emphasized for academic midwifery education that ensure the integration of theory and practice (Plappert et al., 2024). These findings indicate that curriculum quality is determined not only by written documents but also by the availability of resources, quality assurance systems, and clinical service partnerships. The concept of quality assurance in higher education emphasizes that quality evaluation must be implemented systematically, structured, and continuously as an improvement process inherent in institutional activities, thus going beyond simply fulfilling one-time administrative accreditation requirements (Berkat, 2025).

Pedagogical innovation in the midwifery curriculum has also received significant attention. A student-centered approach enhances students' active engagement and professional identity development (Parsons & Killingley, 2024). More explicit and standardized learning outcomes were developed for ongoing practice experiences through the CoCE model (Tierney et al., 2024). Meanwhile, the need to integrate woman-centered care into clinical assessments was highlighted, as assessments that focus too much on technical skills risk neglecting women's empathy and experiences (Ball et al., 2023). This approach aligns with humanistic education theory, which emphasizes the development of human values, empathy, and caring as core health professions, by integrating scientific and humanistic knowledge into care practices (Zhang & Tian, 2024). In the midwifery context, this humanistic orientation is evident in the emphasis on the therapeutic relationship between midwives and women as the core of caring, which must be maintained at the center of the midwifery curriculum and practice, as well as on structured reflective learning to foster self-awareness, personal growth, and transformative learning throughout the educational program (Bass et al., 2017).

Reflective and experiential learning approaches have also been shown to strengthen student competencies. Group reflection based on the Boud model significantly improved clinical understanding and practice readiness (Fakouri & Poorhakak, 2023). This supports Schön's theory of reflective practice, which states that reflection on clinical experiences allows students to develop deeper clinical reasoning. Similarly, a simulation-based skills laboratory increased student confidence and readiness for intrapartum practice (Womack & Stec, 2026). Simulation as a pedagogical strategy is widely recommended in health education because it provides a safe and controlled learning environment for practicing psychomotor skills while developing clinical reasoning and decision-making, without putting patients at risk (Herrera-Aliaga & Estrada, 2022).

The transformation of the curriculum from content-based to competency-based by integrating theory and practice is a key element in enhancing graduate readiness (Rojas-Cáceres et al., 2024; Renfrew, 2019).

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The future midwife curriculum emphasized continuity of care and holistic competency as the foundation of professional practice (Renfrew, 2019). This approach is consistent with a practice-based education framework that places clinical experience at the center of learning. This approach aligns with research findings in medical and nursing education, which demonstrate that longitudinal integration of clinical learning through longitudinal clerkships and continuous clinical placements contributes to strengthening clinical competency and readiness for transition to professional practice. In medical education, longitudinally integrated clerkships and third-year longitudinal clerkship models have been shown to maintain or improve clinical performance and patient care readiness, with continuity experiences being considered highly supportive of students' learning success and professional role (Hudson et al., 2017). In nursing education, immersive and repeated longitudinal clinical placement programs within a single organization have been reported to bridge the "experience–complexity gap," develop critical thinking and clinical competencies, and enhance readiness for practice upon entry into the workforce (Goers et al., 2024).

LIMITATIONS

This review has several limitations. First, the review protocol was not prospectively registered in PROSPERO and no separate protocol was published, which may reduce transparency and increase the possibility of post hoc methodological decisions. Second, the included studies were highly heterogeneous in design, settings, populations, curriculum models, and outcome measures; therefore, meta-analysis was not feasible and the findings were synthesized narratively. Third, several studies relied on descriptive, qualitative, expert-consensus, quality-improvement, or self-reported outcomes, and some reports provided limited methodological detail, resulting in moderate or unclear risk-of-bias concerns. Finally, the search was limited to five databases, full-text articles available in English or Indonesian, and the specified publication period, so relevant studies published elsewhere or in other languages may have been missed. Accordingly, the findings should be interpreted in light of differences in the methodological strength and reporting quality of the included evidence.

CONCLUSION

Evaluation of the midwifery education curriculum shows that the shift toward a competency-based approach, integrated with international standards and pedagogical innovations such as simulation and continuity of care, significantly contributes to improving graduates' clinical competence and practice readiness. However, effective implementation depends heavily on strengthening faculty capacity, institutional support, the availability of practice facilities, and a systemic and sustainable quality assurance system. Comprehensive integration of curriculum design, learning processes, and quality indicators is necessary for midwifery education to not only meet accreditation standards but also sustainably improve the quality of maternal and neonatal healthcare services.

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