



## Postgraduate midwifery education programs to enhance clinical competency

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### ABSTRACT

Strengthening clinical skills among midwives is essential for improving the quality of maternal and newborn care. This review aims to map and describe various postgraduate clinical education models designed to enhance midwifery competencies. The research was motivated by the increasing global demand for skilled midwives capable of addressing complex maternal and neonatal health issues. A systematic search was conducted in ScienceDirect, SpringerLink, PubMed, and Google Scholar for articles published between 2021 and 2025, focusing on studies that involved midwives and postgraduate clinical training. The review followed the PRISMA-ScR framework to ensure a rigorous selection and analysis process. The findings were grouped into three main themes: first, programs such as fellowships and advanced clinical placements contributed to improved clinical reasoning, leadership, and engagement with health systems; second, residency and internship models supported a smoother transition to clinical practice and encouraged interprofessional collaboration; third, preceptorship and mentorship approaches increased learners' confidence, satisfaction, and skill integration through guided supervision and peer learning. These results underscore the crucial role of structured postgraduate clinical education in equipping midwives for the evolving demands of healthcare.

### ARTICLE INFO

#### Article History:

Received: 3 Apr 2025  
Revised: 14 Jun 2025  
Accepted: 17 Jun 2025  
Available online: 27 Jun 2025  
Publish: 27 Jun 2025

#### Keywords:

clinical competency;  
midwifery; postgraduate  
education

#### Open access

Curricula: Journal of Curriculum Development is a peer-reviewed open-access journal.

### ABSTRAK

Peningkatan keterampilan klinis bidan sangat penting untuk memperbaiki kualitas pelayanan kesehatan ibu dan bayi baru lahir. Penelitian ini bertujuan untuk memetakan dan mendeskripsikan berbagai model pendidikan klinis pascasarjana yang dirancang guna meningkatkan kompetensi bidan. Kebutuhan global akan bidan yang terampil dalam menghadapi tantangan kesehatan ibu dan neonatal yang semakin kompleks menjadi alasan utama dilakukannya kajian ini. Peneliti melakukan penelusuran sistematis pada database ScienceDirect, SpringerLink, PubMed, dan Google Scholar untuk artikel yang diterbitkan antara tahun 2021 hingga 2025, dengan fokus pada studi yang melibatkan bidan dan pelatihan klinis pascasarjana. Proses telaah mengikuti pedoman PRISMA-ScR untuk memastikan seleksi dan analisis data yang ketat. Hasil kajian dikelompokkan dalam tiga tema utama: pertama, program seperti fellowship dan advanced clinical placement meningkatkan penalaran klinis, kepemimpinan, serta keterlibatan dalam sistem kesehatan; kedua, model residensi dan magang membantu transisi ke praktik klinis dan mendorong kolaborasi antar profesi; ketiga, pendekatan preceptorship dan mentorship meningkatkan kepercayaan diri, kepuasan, serta integrasi keterampilan peserta melalui supervisi dan pembelajaran sebaya. Temuan ini menegaskan pentingnya pendidikan klinis pascasarjana yang terstruktur dalam mempersiapkan bidan menghadapi tuntutan layanan kesehatan modern.

**Kata Kunci:** kebidanan; kompetensi klinis; pendidikan pascasarjana

### How to cite (APA 7)

Shafiah, S., & Susanti, A. I. (2025). Postgraduate midwifery education programs to enhance clinical competency. *Curricula: Journal of Curriculum Development*, 4(1), 749-764.

### Peer review

This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review.

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## **INTRODUCTION**

Postgraduate clinical education programs in midwifery are pivotal in advancing professional skills and equipping practitioners to address the evolving complexities of maternal healthcare. These initiatives, including fellowships and advanced clinical placements, are specifically designed to address the growing demand for expertise in the field. As the prevalence of advanced maternal age and high-risk pregnancies rises, there is a growing necessity for midwives to possess specialized knowledge and competencies to manage these challenges effectively (Johnston et al., 2022; Kranz et al., 2024). Globally, the landscape of midwifery education has shifted toward university-based training, with a dual emphasis on clinical proficiency and academic rigor. Advanced clinical placements and residency programs immerse students in real-world settings, fostering critical thinking and problem-solving abilities under the mentorship of seasoned professionals (Susanti et al., 2024). These models, including structured internship programs, are essential in bridging the divide between theoretical instruction and practical application, ensuring that graduates are well-prepared for the realities of clinical practice (González-Mesa et al., 2020; Kranz et al., 2024).

Previous studies have shown that structured clinical placements, mentorship, and preceptorship programs can significantly enhance students' clinical competence and confidence. However, much of the existing research has concentrated on undergraduate education or single-country settings, often neglecting the comparative impact of different postgraduate models in midwifery (Beddoe et al., 2022; González-Mesa et al., 2020). Moreover, only a limited number of studies have systematically explored the range of postgraduate clinical education models, such as fellowships, residencies, and international placements, and their influence on advanced skill development and clinical decision-making in midwifery (Kranz et al., 2024; Tusiimire et al., 2024). This review offers a novel perspective by systematically comparing various postgraduate clinical education models in midwifery, with a focus on their effectiveness in fostering advanced clinical competencies and addressing the evolving challenges of maternal healthcare. By offering a comprehensive synthesis, this review aims to inform future curriculum development and policy in midwifery education.

Preceptorship and mentorship frameworks are fundamental to midwifery education, offering students invaluable opportunities to learn alongside experienced practitioners. Mentorship cultivates a nurturing environment that fosters student confidence and professional competence, whereas preceptorship programs typically deliver structured clinical training focused on skill development (González-Mesa et al., 2020; Farahi et al., 2020). Despite their recognized benefits, the design and effectiveness of these programs can vary considerably, influencing the outcomes for students. Residency and fellowship programs are generally tailored toward advanced specialization and clinical decision-making, whereas internships and preceptorships often provide a broader foundation in essential midwifery practice (Johnston et al., 2022; Kidd et al., 2024; Kranz et al., 2024; Nacht & Martin, 2020). This review seeks to examine the spectrum of postgraduate clinical education models and their impact on midwifery practice, thereby contributing to the ongoing conversation about optimizing clinical education systems for future midwives.

## LITERATURE REVIEW

### Comparison Between Programs

Postgraduate clinical education programs, including fellowships and advanced clinical placements, are essential for enabling midwifery students to apply their theoretical knowledge in practical, real-world clinical settings. These programs are significant for developing advanced skills, particularly in complex and specialized areas such as maternity care for high-risk patients (Olsen & Farley, 2024; Tusiimire et al., 2024). Fellowships provide midwives with the opportunity to deepen their knowledge in specific areas, such as neonatal care and high-risk obstetrics, thereby enabling them to handle complex clinical situations with greater expertise (Beddoe et al., 2022; Olsen & Farley, 2024).

Clinical placements are a crucial component of postgraduate training, offering students the opportunity to refine their clinical skills in real-world healthcare settings, thereby enhancing their ability to manage patient care effectively (Griffiths et al., 2020; Lloyd et al., 2023). Incorporating Evidence-Based Practice (EBP) into these placements allows students to incorporate the latest research findings into their clinical decision-making, resulting in improved care quality (Cardoso et al., 2021). Furthermore, interprofessional education (IPE), where midwifery students collaborate with professionals from other healthcare fields, has been shown to foster improved communication and teamwork skills, both of which are critical for effective patient care (Avery et al., 2022; Klein & Lugo, 2018; van Rooyen et al., 2018).

### Residency and Internship Models

Residency and internship programs are integral to providing hands-on clinical experience and developing specialization. Programs in fields such as emergency medicine and neonatal care provide students with the opportunity to deepen their knowledge and enhance their clinical expertise. A comparison of emergency medicine residency programs revealed that, while Iran's residency program offers comprehensive training, its duration is shorter than those in Canada and the United States, which offer more extensive residency periods and rotations (Talebi et al., 2023). Internship programs, by contrast, aim to provide new graduates with foundational clinical experience. Interns engage in supervised learning, allowing them to gain practical experience in patient care and further develop their professional skills (Babamohamadi et al., 2023; Foodani et al., 2025). Moreover, clinical supervision is vital during these programs, as it ensures that students receive consistent feedback and guidance, which significantly enhances their clinical progress (Thomas et al., 2023). Peer learning is also beneficial, as it allows students to collaborate and support one another, especially when direct access to preceptors is limited (Spets et al., 2024).

### Preceptorship and Mentorship Approaches

Preceptorship is a cornerstone of midwifery education, where experienced midwives serve as preceptors to guide students through their clinical placements. Research indicates that preceptors with extensive experience, particularly those with over ten years of practice, provide more valuable mentorship and support, enabling students to navigate complex clinical situations with greater confidence (Spets et al., 2024). To ensure preceptors are

effective in their roles, proper training is essential to equip them with the skills needed to provide high-quality supervision and mentorship (Lafrance & Brunet-Pagé, 2025). Peer learning, where students learn from one another by sharing knowledge and collaborating, is also an effective learning method, especially in settings where experienced preceptors may not always be available (Spets et al., 2024). Additionally, mentorship plays a significant role in students' personal and professional growth, guiding them through challenges and helping them develop leadership capabilities. Continuous training for both preceptors and mentors is necessary to ensure they can adapt to the latest teaching practices and provide relevant, effective supervision (Lafrance & Brunet-Pagé, 2025; Rogers et al., 2023).

## **Challenges and Future Directions**

Despite the clear benefits of postgraduate education programs, several ongoing challenges continue to hinder their effectiveness. One major issue is the lack of resources, such as qualified preceptors and appropriate clinical placements, particularly in countries experiencing shortages of healthcare workers. These gaps significantly impact the quality of clinical training available to students (Acheampong et al., 2021; Rogers et al., 2023). Furthermore, gender dynamics have a significant influence on students' decisions regarding their specialty choices. Research indicates that factors such as career goals, work-life balance, and the work environment all play a role in the decisions made by medical students and interns when selecting a residency program (Avery et al., 2022; Babamohamadi et al., 2023). Gender dynamics also influence students' choices in selecting specialties, with men often prioritizing career progression, while women tend to focus on work-life balance and the work environment (Al Ajmi et al., 2025). It is essential to address these gender disparities in healthcare education and leadership positions to ensure fair opportunities for all students.

An additional critical factor affecting clinical education is the cultural, personal, and professional development of nursing students. International clinical placements provide students with the opportunity to develop essential skills in cultural awareness and adaptability, which are crucial in today's global healthcare settings (Jansen et al., 2021). These placements provide students not only with clinical skills but also enhance their personal and professional growth, enabling them to work effectively in diverse environments. Moreover, academic fellowships in global health (Pine et al., 2025). Offer students opportunities to engage in projects focused on developing the global health system. These fellowships enable students to gain a deeper understanding of global healthcare challenges and prepare them for leadership roles in healthcare systems. Finally, simulation training has become a prominent tool for enhancing clinical skills and improving student satisfaction.

Studies comparing medium- and high-fidelity simulation training have found that students are more satisfied and feel more confident after engaging in high-fidelity simulations, which closely replicate real-life clinical scenarios (Alconero-Camarero et al., 2021). These simulations provide a realistic environment for students to practice and refine their skills before applying them in clinical placements (Susanti et al., 2025). The midwifery education system in Iran has also been evaluated, and it has been found that while midwifery graduates generally express satisfaction with the integration of theoretical and clinical education, challenges remain in the areas of clinical evaluations and the quality of the educational environment (Toosi et al., 2021). This highlights the need for ongoing revisions to improve

the overall quality of midwifery education in Iran (Alconero-Camarero et al., 2021; Toosi et al., 2021).

## METHODS

This article presents a scoping review to explore existing evidence on “*Postgraduate Midwifery Education Programs to Enhance Clinical Competency*.” The study aims to gather and evaluate relevant literature from electronic databases systematically. Selected studies were carefully examined, with a focus on sampling methods, influencing factors, and key findings. A scoping review aims to systematically map literature from various sources that are relevant to the research question. Creswell argues that this process involves several key steps, including formulating research questions, searching for relevant sources, selecting studies that align with the topic, organizing the findings, and synthesizing the results into a comprehensive summary. Literature was retrieved from PubMed, ScienceDirect, SpringerLink, and Google Scholar using keywords from the PEO Framework. Articles were included based on clear criteria: original research published between 2021 and 2025, written in English, and available in full text. These criteria ensured the literature’s relevance, accessibility, and reliability for this review.

The focus of this study encompasses midwives, midwifery students, midwifery education programs, and medical students. The interventions examined as exposures include the Residency Program, International Midwifery Fellowship, Global Health Residency for Midwives, Midwifery Clinical Training Exchange, and Cross-cultural Midwifery Placement. The outcomes assessed across these programs center on midwifery skills, clinical competence, and health-related competencies. The systematic search process was documented using the PRISMA guidelines, which provide a clear flowchart detailing each stage of the literature review: identification, screening, eligibility, and inclusion. During the identification phase, all records retrieved from databases and other sources, after duplicates were removed, were recorded. The screening phase involved evaluating studies based on research questions, keywords, and specific inclusion and exclusion criteria. Eligibility was assessed based on whether articles met specific standards for inclusion. Finally, the included section comprised all articles that passed both screening and eligibility stages for further analysis.

A comprehensive literature search was conducted using Google Scholar, ScienceDirect, and SpringerLink. This process yielded 482 articles from PubMed, 45 from Google Scholar, 393 from ScienceDirect, and 1,085 from SpringerLink. The inclusion criteria required publications from the last five years (2020-2024), empirical research, and full-text availability. During the eligibility phase, articles that passed the initial screening underwent further evaluation to ensure alignment with the study objectives. Any articles that did not address midwifery training or educational skill development programs were excluded at this stage. Ultimately, 19 articles were selected for in-depth analysis: six (6) from PubMed, five (5) from Google Scholar, five (5) from ScienceDirect, and three (3) from SpringerLink. The selection process adhered to a transparent and systematic approach from identification and screening to eligibility assessment and final inclusion in this scoping review.



## RESULTS AND DISCUSSION

The selected articles are summarized and presented in **Table 1**, based on the review of the four articles that explored postgraduate education programs in Midwifery that advance skills and enhance clinical competency. The studies were conducted in Multinational (United States, Iran, Denmark), United Kingdom, Ireland, Australia, Uganda, Turkey, Iran, Australia, United States (2), Sweden, Portugal, Canada, Spain, Ghana, Iran (2), Oman, reflecting a range of collectivist educational settings. The research included in this literature review consists of mixed-methods studies (1), qualitative studies (7), and quantitative studies (11), including Cross-Sectional, Survey, Randomized Controlled Trial (RCT), comparative study, and pre- and post-intervention studies.

**Table 1.** Result of Data Analysis

Author	Journal	Country	Purpose	Methods	Result
(Olsen & Farley, 2024)	Journal of Midwifery & Women's Health	United States	To describe the characteristics of postgraduate midwifery fellowship programs in the U.S. and examine the outcomes for fellows and program directors, including perceived benefits and challenges.	Mixed-methods study: Quantitative: Online survey distributed to fellowship directors (n = 22) and alumni (n = 50) from 30 programs. Qualitative: Open-ended survey questions were analyzed thematically.	Fellowship programs varied in structure but were mostly full-time, 12-month programs in academic health centers. Fellows reported increased confidence, skill development, and smoother transition into practice. Directors noted that fellowships supported workforce development and retention, but faced challenges such as funding and role clarity. Alumni expressed strong appreciation for the programs and felt better prepared for independent practice compared to peers without fellowship experience.
(Foodani et al., 2025)	Nursing Practice Today	Iran	To analyze the contributions of a nursing residency program in supporting newly graduated nurses during their transition into clinical practice.	The study uses a literature review and analysis of existing data from various Nursing Residency Programs implemented globally. It identifies key factors that contribute to the success of NRPs, including structured mentorship, clinical rotations, and support mechanisms.	The results indicate that Nursing Residency Programs have a significant impact on improving the confidence and clinical competence of new nurses. These programs also lead to higher nurse retention rates, reduce role ambiguity, and contribute to better patient care outcomes. Challenges such as financial constraints and resistance from healthcare institutions are identified, but solutions like proper infrastructure, stakeholder engagement, and targeted resource allocation are suggested to overcome these barriers.

Author	Journal	Country	Purpose	Methods	Result
(Jansen et al., 2021)	Nurse Education in Practice	Denmark, United Kingdom, Ireland	To explore the cultural, personal, and professional development experiences of nursing students from three European countries during international clinical placements (ICPs).	A qualitative phenomenological study based on 23 written student reflections post-placement. Data were analyzed using systematic text condensation.	ICPs significantly impacted students' development by pushing them out of their comfort zones and enhancing cultural awareness. Students in low-income countries faced more cultural and communication challenges, while those in high-income countries reported structured learning supported by preceptors. Four key themes emerged: communication barriers, cultural confrontation, personal and professional growth, and the importance of preceptorship. Participants progressed along the continuum of cultural competence, though complete cultural competence was not achieved within the placement period.
(Rogers et al., 2023)	Collegian	Australia	To investigate the development of self-perceived work readiness among graduate nurses and midwives across a 12-month Transition to Practice Program (TPP).	A repeated-measure, cross-sectional survey study using the validated Work Readiness Scale for Graduate Nurses (WRS-GN). =	The study found significant improvement in work competence (WC), personal work characteristics (PWC), and social intelligence (SI) between start and mid-program. From start to end, WC and PWC showed further significant increases, while organisational acumen (OA) remained high and stable. The TPP effectively supported graduate development in multiple readiness domains, particularly clinical competence and resilience.
(Tusiimire et al., 2024)	International Medical Education	Uganda	The study explores the impact of Global Health Scholarships on the postgraduate students at Mbarara University of Science and Technology (MUST).	The research employed an online cross-sectional survey conducted from November 29 to December 19, 2022, targeting scholars and alumni who received Global Health Collaborative (GHC) scholarships.	The study found that a majority of the alumni (88%) were employed, with most working in the public health sector. Scholars reported high levels of career satisfaction, and many made significant contributions to healthcare provision, academic research, and community development. A significant number of alumni also pursued additional fellowships and advanced studies after completing their scholarship. The impact of the scholarships

Author	Journal	Country	Purpose	Methods	Result
					on nursing leadership and healthcare delivery, particularly in critical care nursing and community health, was evident, with several alumni leading innovations and improving healthcare systems in their communities.
(Lloyd et al., 2023)	Midwifery	Turkey	To explore the experiences of midwifery students during their clinical internship placements and identify factors that influenced their learning process.	A descriptive qualitative study using in-depth interviews with 14 final-year midwifery students. Data were analyzed using thematic analysis.	The study revealed that students faced several challenges during clinical internships, including the gap between theory and practice, lack of support from clinical preceptors, and unsupportive learning environments. Emotional experiences such as stress, anxiety, and fear of making mistakes were everyday.
(Babamohamadi et al., 2023)	Nurse Education Today	Iran	To explore the strategies employed by Iranian nursing students to adjust to clinical internship environments.	A conventional qualitative content analysis was conducted. Twenty final-year nursing students from three universities in Iran participated in this study through a purposive sampling approach.	Three main categories of adjustment strategies emerged: (1) actively developing professional competencies (including self-learning, repetitive practice, and seeking guidance), (2) establishing effective communication (such as building trust and avoiding conflict with staff), and (3) enhancing personal resilience (including emotional regulation, positive thinking, and spiritual coping).
(Thomas et al., 2023)	Nurse Education Today	Australia	To explore undergraduate midwifery students' experiences with novice and expert preceptors, and to identify benefits and challenges from students' perspectives.	Qualitative descriptive study using thematic analysis from six focus groups involving 19 third- and fourth-year midwifery students.	Three themes emerged: building relationships, teaching and learning, and improving professional placements. Novice preceptors were more relatable and approachable, while expert preceptors gave more structured feedback and teaching. Both types were beneficial; aligning student needs with preceptor styles can improve learning outcomes.
(Pine et al., 2025)	BMC Medical Education	United States	To evaluate the feasibility and effectiveness of an undergraduate fellowship program aimed at building global health systems through community-based	Thematic analysis of open-ended survey responses from participants at the beginning and end of their fellowship.	Since 2019, 22 fellows have completed the program, gaining research, teaching, and grant-writing skills. The 2022-2023 cohorts met their individual goals, with over half wanting to continue working with the organization. Fellows



Author	Journal	Country	Purpose	Methods	Result
			emergency medical services.		contributed to 17 academic outputs, raised \$31,000 in funding, and many advanced to graduate studies. The program showed strong potential as a replicable model for immersive global health training.
(Spets et al., 2024)	Nurse Education Today	Sweden	To quantitatively describe midwives' experiences and conditions in their role as preceptors in a birth unit and explore their attitudes toward peer learning.	Cross-sectional	Midwives with $\leq 10$ years of experience felt less confident and supported in the preceptor role. Time constraints were a barrier to effective supervision. 42.8% had experience with peer learning and saw student-to-student learning as its primary benefit. Experienced midwives perceived the preceptor role more positively and had better conditions for student supervision.
(Cardoso et al., 2021)	International Journal of Environmental Research and Public Health	Portugal	To evaluate the effectiveness of an educational intervention program focused on Evidence-Based Practice (EBP) in improving undergraduate nursing students' knowledge and skills related to EBP.	A two-group parallel cluster randomized controlled trial	The results showed a statistically significant interaction effect between the intervention and time on EBP knowledge and skills ( $p = 0.002$ ). While both groups demonstrated improvement, the intervention group showed a greater increase in EBP knowledge and skills compared to the control group. Qualitative analysis also indicated more advanced application of EBP principles in students' academic work in the intervention group.
(Lafrance & Brunet-Pagé, 2025)	Midwifery	Canada (Québec)	To describe the initial and continuing education needs of midwifery preceptors and preceptors-to-be, including preferred delivery modes and timing of professional development activities.	Descriptive exploratory study using two focus group discussions with practicing and prospective midwifery preceptors.	Preceptors expressed similar needs for both initial and continuing education, especially in areas such as practicum pedagogy, student-preceptor relationships, and understanding preceptorship roles. In-person formats were preferred for initial training, while online methods were favored for continuing education. Annual sessions and trainings before beginning a practicum were identified as the best times for professional development.

Author	Journal	Country	Purpose	Methods	Result
(Alconero-Camarero et al., 2021)	International Journal of Environmental Research and Public Health	Spain	To compare nursing students' satisfaction between medium-fidelity simulation (MFS) and high-fidelity simulation (HFS) in clinical training.	Quantitative study using the Satisfaction Scale Questionnaire with High-Fidelity Clinical Simulation. The sample included 393 nursing students from two Spanish universities.	Students showed significantly greater satisfaction with medium-fidelity simulations compared to high-fidelity simulations. While both forms support learning, MFS is especially effective for basic skills training and is more cost-efficient. The choice of simulation type should consider the student's level of knowledge and clinical experience.
(Acheampong et al., 2021)	BMC Health Services Research	Ghana	To explore the involvement of nurses and midwives in health policy development, review, and reforms in Ghana.	A qualitative, descriptive, exploratory design was employed, involving one-on-one interviews with 30 purposively selected participants. Data were transcribed and analyzed using inductive content analysis.	Two main themes emerged: participation in policy development and perspectives on policy reviews and reforms. Nurses and midwives were overlooked mainly during health policy processes. Participants emphasized the need for reforms in pre-service preparation, staff development, and admission systems for nursing education. The study concluded that active participation of nurses and midwives in policymaking could significantly improve healthcare delivery.
(Talebi et al., 2023)	Archives of Academic Emergency Medicine	Iran (with global comparison)	To compare the structure, duration, admission process, and educational content of emergency medicine residency programs in Iran with those in 13 other countries around the world.	A descriptive comparative study using a checklist	The study found that although there are some similarities, significant differences exist between countries in terms of residency duration (ranging from 3 to 6 years), entry requirements, and curricular design. Iran's program has a unique structure, characterized by centralized admission and a specific national curriculum. The findings underscore the importance of context-specific needs and highlight areas for possible improvement or adaptation in Iran's emergency medicine residency education.
(Avery et al., 2022)	Journal of Midwifery & Women's Health	United States	To evaluate the effectiveness of interprofessional education (IPE) sessions between midwifery students and obstetrics and	Quantitative study using a pre- and post-intervention design. Participants engaged in	The study showed a significant improvement in self-assessed interprofessional collaboration scores among participants after the intervention. The findings

Author	Journal	Country	Purpose	Methods	Result
			gynecology (OB/GYN) residents in improving perceived collaboration.	structured IPE activities aimed at enhancing teamwork and communication across disciplines.	underscore the importance of IPE in promoting effective teamwork and communication in maternal healthcare settings.
(Toosi et al., 2021)	BMC Medical Education	Iran	To evaluate the opinions of midwifery graduates in Iran regarding the quality, strengths, and weaknesses of their midwifery education, and to identify areas for improvement.	A cross-sectional descriptive study using a structured questionnaire.	The findings revealed that while graduates were moderately satisfied with their education, they identified deficiencies in practical clinical training, particularly in advanced midwifery skills. Participants emphasized the need for enhanced integration between theoretical instruction and clinical practice, and suggested improvements in faculty supervision, clinical facilities, and curriculum relevance to real-world applications.
(Al Ajmi et al., 2025) / Factors Influencing the Choice of Residency Program Among Medical Intern Doctors and Medical Students	BMC Medical Education	Oman	The study investigates the factors influencing the residency program choices of Omani medical students and intern doctors, with a particular focus on internal medicine.	The study uses a cross-sectional survey design.	The findings reveal that internal medicine was a popular specialty among participants, particularly due to its perceived intellectual stimulation, job security, and work-life balance. Gender differences were observed, with men emphasizing career progression and surgical procedures, while women prioritized work environment and family considerations. Mentorship and role models were also key influences in specialty choice, highlighting the importance of guidance in career decision-making.

Source: Research 2025

Based on **Table 1**, five articles (1, 2, 4, 16, 18) were included in the category of postgraduate fellowship and residency programs in midwifery and nursing because they specifically analyzed program structures, outcomes, and challenges. These studies examined how fellowships and residencies support clinical skill development, ease the transition into advanced practice, and address barriers such as limited resources and mentorship gaps. Three (3, 5, 10) focused on international clinical placements and global health scholarships, highlighting students' experiences in adapting to new healthcare systems and cultures, as well as the personal and professional growth gained through these programs. Articles 7 and 8 discussed clinical internships and adaptation strategies, exploring how students adjust to clinical environments and the support systems that help them succeed. Three articles (9, 11,

13) examined mentorship, preceptorship, and peer learning, emphasizing the importance of guidance from experienced practitioners and collaborative learning in building clinical competence. Two articles (12, 17) addressed the integration of evidence-based practice and interprofessional education, showing how these approaches improve clinical decision-making and teamwork. Article 6 examined the application of digital technology and e-learning in midwifery education, while Article 14 compared student satisfaction with various simulation-based training methods. Article 15 examined the roles of nurses and midwives in health policy, and Article 19 analyzed factors influencing residency program choices among medical students and interns.

## **Discussion**

Postgraduate clinical education in midwifery demonstrates considerable value in bridging the gap between theory and practice, particularly as the demands of maternal health care become more complex. Advanced programs such as fellowships, residencies, and structured clinical placements consistently foster critical thinking, decision-making, and specialized skills among midwifery students, enabling them to manage high-risk and diverse patient populations more effectively (Beddoe et al., 2022; Olsen & Farley, 2024; Tusiimire et al., 2024). The integration of Evidence-Based Practice (EBP) and interprofessional education (IPE) within these programs not only enhances clinical competence but also cultivates collaborative skills essential for modern healthcare teams (Avery et al., 2022; Cardoso et al., 2021). These elements align with global trends emphasizing the need for curricula that are both academically rigorous and practically relevant, ensuring that graduates are well-prepared for the realities of clinical environments (Lloyd et al., 2023).

Mentorship and preceptorship remain central to the professional development of midwifery students. Experienced mentors and preceptors provide guidance, support, and role modeling, which are crucial for building confidence and clinical judgment (Lafrance & Brunet-Pagé, 2025; Spets et al., 2024). However, disparities in the quality and availability of mentorship highlight the importance of institutional investment in educator training and resource allocation (Rogers et al., 2023). Peer learning also emerges as a valuable supplement, particularly in contexts where access to experienced preceptors is limited, fostering a collaborative learning environment and mutual support among students (Spets et al., 2024). Despite these strengths, several persistent challenges must be addressed to optimize postgraduate midwifery education. Resource limitations, including shortages of qualified educators and clinical placements, can constrain the quality of training, especially in regions facing broader healthcare workforce deficits EM (Acheampong et al., 2021; Rogers et al., 2023).

Additionally, gender dynamics continue to influence specialty choices and career trajectories, with evidence suggesting that women often prioritize work-life balance and supportive environments, while men tend to focus more on career advancement and procedural experience (Al Ajmi et al., 2025; Babamohamadi et al., 2023). Addressing these disparities is essential for promoting equity and diversity in midwifery leadership and practice. Innovative approaches, such as simulation-based learning and international placements, offer promising avenues for enhancing both clinical skills and cultural competence. High-fidelity simulation has been shown to increase student satisfaction and preparedness for real-

world scenarios, while global health fellowships and international experiences foster adaptability and a broader understanding of healthcare systems (Alconero-Camarero et al., 2021; Jansen et al., 2021; Pine et al., 2025).

However, the variability in program structure and assessment methods underscores the need for standardized frameworks to ensure consistent educational outcomes (Toosi et al., 2021). In summary, while postgraduate clinical education in midwifery offers substantial benefits for student competence, professional identity, and patient care, its full potential will only be realized through ongoing investment in educator development, equitable resource distribution, and the systematic adoption of evidence-based, student-centered curricula. Addressing persistent barriers and embracing innovative educational strategies will be key to preparing the next generation of midwives for the dynamic landscape of maternal and newborn health (Beddoe et al., 2022; Lloyd et al., 2023; Pine et al., 2025).

## CONCLUSION

This study concludes that postgraduate education programs in midwifery significantly contribute to strengthening clinical competence. These programs serve as a bridge between theory and practice, preparing students to handle real-world clinical challenges with greater confidence and skill. Beyond technical training, such programs also foster professional growth, adaptability, and collaboration—key attributes in today's complex healthcare environments. Moving forward, educational institutions are encouraged to invest in the quality and accessibility of clinical training. This includes expanding mentorship opportunities, enhancing practical learning environments, and designing inclusive curricula that respond to diverse student needs. Future research could explore innovative teaching models and evaluate their impact on long-term clinical outcomes, ensuring these programs remain aligned with the evolving demands of global healthcare.

## AUTHOR'S NOTE

The author declares that there is no conflict of interest regarding the publication of this article. Furthermore, the author affirms that the content and data presented are original and free from any form of plagiarism.

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