International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Kumari R et al. Int J Reprod Contracept Obstet Gynecol. 2025 Nov;14(11):3961-3976
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20253546

Systematic Review

Master's programs in midwifery education in South Asia: organizational frameworks, competency goals, and learning outcomes

Ritu Kumari[1], Karthika S.[2], Meenakshi Mundotiya[3], B. Kalyani[4], Mohammed Umar[5]*, Jenifar Monisha A.[6], Deepa N. R.[7], Suhashini[8], Neha Singh[9]

[1]Department of Obstetrics and Gynecological, ANM School Neemchak Bathani, Gaya, Bihar, India
[2]Department of Community Health, Parul Institute of Nursing and Research, Faculty of Nursing, Parul University, Vadodara, Gujarat, India
[3]Department of Obstetrics and Gynecological, Government College of Nursing, Jaipur, Rajasthan, India
[4]Department of Obstetrics and Gynecological, Dr. C. Sobhanadri Siddhartha School of Nursing, Chinnoutpalli, Gannavaram, Vijayawada, Andhra Pradesh, India
[5]Department of Nursing, Uttar Pradesh University of Medical Sciences, Saifai, Etawah, Uttar Pradesh, India
[6]Department of Obstetrics and Gynecological, Faculty of Nursing, Dr. M. G. R. Educational and Research Institute, Chennai, Tamil Nadu, India
[7]Department of Obstetrical and Gynecological, ESIC College of Nursing, Kalaburagi, Karnataka, India
[8]Department of Obstetrical and Gynecological, H.K.E.S College of Nursing, Kalaburagi, Karnataka, India
[9]Department of Obstetrics and Gynaecological Nursing, Government Institute of Medical Sciences, Greater Noida, India

Received: 03 September 2025
Revised: 16 October 2025
Accepted: 17 October 2025

***Correspondence:**
Mohammed Umar,
E-mail: umarrathore0786@gmail.com

ABSTRACT

South Asia continues to experience a disproportionate burden of preventable maternal and neonatal morbidity and mortality, while countries in the region are simultaneously accelerating midwifery reforms through advanced education pathways. Over the past decade, several South Asian countries have introduced or proposed master's-level midwifery programs, often aligned with international confederation of midwives (ICM) competencies and world health organization (WHO) quality standards. This review synthesizes the current landscape of master's programs in midwifery education across South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka), examining organizational frameworks, competency goals relative to global benchmarks, and evidence on learning outcomes, implementation challenges, and policy alignment. A systematic review of peer-reviewed literature, national regulations, policy documents, and program webpages (2010-August 2025) was conducted, prioritizing authoritative sources including ICM, WHO, UNFPA, national acts, council guidelines, and university curricula. Data extraction focused on program typology, credit requirements, theory-practice ratios, competency frameworks, assessment modalities, and documented outcomes. Findings indicate regional convergence around ICM global standards for midwifery education (2021) and ICM essential competencies (2024), including minimum program durations (36 months direct-entry; 18 months post-nursing) and recommended theory/clinical ratios (40%/≥50%). India's midwifery reforms (Guidelines on midwifery services, NPM educator programs, NNMC act 2023) provide a scalable national framework; Nepal offers a dedicated M. Sc. in Midwifery at Kathmandu university; Bangladesh is developing in-country master's provision; and Pakistan emphasizes MSN tracks with maternal-neonatal specialization. Establishing a regional master's archetype anchored in ICM/WHO standards, supported by robust clinical partnerships, OSCE-based assessment, and research-to-policy integration, can accelerate safe, respectful, and evidence-based maternity care across South Asia.

Keywords: Master's programs, Midwifery education, Organizational frameworks, Competency goals, Learning outcomes, Nursing professionals, Nursing education

INTRODUCTION

Maternal and newborn health remains a pressing priority across South Asia, which is home to nearly one-quarter of the world's population yet bears a disproportionate burden of maternal and neonatal mortality. Despite substantial progress in reducing maternal mortality ratios (MMR) and neonatal mortality rates (NMR) over the past two decades, countries such as India, Pakistan, Bangladesh, Nepal, and Afghanistan continue to record high rates compared with global averages. For instance, in 2020 the regional MMR ranged from 163 per 100,000 live births in India to over 600 in Afghanistan, while neonatal mortality remained above 20 per 1,000 live births in several South Asian nations.[1,2] Persistent inequities in access, quality, and continuity of care highlight the urgent need for professionalized midwifery services that can deliver safe, respectful, and evidence-based care across the continuum of pregnancy, childbirth, and the postpartum period.[3]

Globally, the role of midwives has been acknowledged as central to achieving sustainable development goal (SDG) 3.1 (reducing maternal mortality) and 3.2 (ending preventable newborn deaths). The State of the world's midwifery 2021 report, coordinated by UNFPA, WHO, and the ICM, estimated that investing in midwifery education and deployment could avert 67% of maternal deaths, 64% of newborn deaths, and 65% of stillbirths.[4] Within South Asia, where health systems often contend with staff shortages, gender inequities, and hierarchical medical dominance, the introduction and strengthening of Master's-level midwifery programs offers not only clinical expertise but also leadership, education, as well as the research capacity to transform the maternal health outcomes.[5]

Evolution of midwifery education in South Asia

Midwifery education in South Asia has historically been embedded within nursing programs, with diploma- or certificate-level training constituting the main entry point. While some countries such as Sri Lanka and India had longstanding cadres of nurse-midwives, formal recognition of midwifery as a distinct profession was limited until recently.[6] Over the past decade, however, global advocacy and local policy reforms have accelerated the shift towards independent midwifery education and practice. Bangladesh pioneered dedicated diploma programs in midwifery in 2010, supported by UNFPA, and has since scaled to over 50 institutions offering a three-year diploma.[7] Nepal followed by launching the region's first full-fledged master of science in midwifery (M. Sc. midwifery) at Kathmandu university in 2016, signaling an academic pathway for advanced practice and educator development.[8] India, the largest country in the region, has formally recognized midwifery as a separate discipline through the national nursing and midwifery commission act, 2023 and accompanying rules in 2024, creating an enabling regulatory framework for Master's-level education.[9]

Pakistan and Sri Lanka remain in transitional phases. Pakistan's higher education commission (HEC) and the Pakistan nursing council (PNC) have integrated maternal and neonatal health into master of science in nursing (MSN) curricula, with midwifery tracks available but not yet designated as independent M. Sc. midwifery programs.[10] Sri Lanka similarly offers M. Sc. nursing programs with specializations in maternal health and women's health, though a standalone midwifery program is not yet institutionalized.[11]

Smaller states such as Bhutan, Maldives, and Afghanistan rely primarily on diploma- and bachelor-level cadres, with scope for regional partnerships to access postgraduate training.[12]

Importance of master's-level midwifery education

While undergraduate and diploma programs ensure entry-to-practice competencies, Master's-level midwifery programs serve distinct functions in professional development. These include: advanced clinical expertise-enabling midwives to manage complex pregnancies, complications such as postpartum hemorrhage and hypertensive disorders, and neonatal resuscitation with autonomy.[13] Leadership and policy engagement equipping graduates to design, lead, and evaluate midwife-led units (MLCUs), contribute to national quality improvement initiatives such as India's LaQshya program, and participate in maternal health policy formulation.[14] Research and knowledge generation providing methodological training to conduct clinical and implementation research, produce theses and peer-reviewed publications, and generate evidence to inform service delivery.[15] Educator preparation-cultivating midwifery faculty who can design competency-based curricula, assess students using objective structured clinical examinations (OSCEs), and mentor the next generation of midwives in alignment with ICM's educator competencies.[16]

Such competencies align with ICM's essential competencies for midwifery practice (2024), which articulate knowledge, skills, and professional behaviours required for safe, respectful, and quality care.[17] Importantly, Master's programs must not only consolidate these competencies but also extend them into advanced domains such as health systems leadership, applied research, and policy advocacy.

Regional policy shifts and global standards

The publication of the ICM global standards for midwifery education (2021, updated 2023-24) has created a common reference point for structuring curricula. The standards recommend program durations of at least 18 months (post-nursing entry) or 36 months (direct entry), a theory-to-practice ratio of approximately 40:50, and emphasis on simulation-based learning.[18] South Asian countries are gradually integrating these benchmarks into national

regulatory frameworks. India's new legislation explicitly mandates compliance with ICM standards, while Nepal's M. Sc. program has incorporated both theoretical and clinical modules consistent with global guidance.[8,9] Bangladesh, with strong UNFPA support, has drafted a master's curriculum that integrates these benchmarks into national academic structures.[7]

WHO's global strategic directions for nursing and midwifery 2021-2025 also emphasizes strengthening education, jobs, leadership, and service delivery as the "four pillars" of workforce development.[19] This aligns closely with the needs of South Asia, where large-scale investments in midwifery education could yield significant health and social returns.

Challenges and gaps

Despite these advances, significant challenges remain. First, faculty shortages constrain expansion; most countries lack sufficient numbers of Ph. D-prepared midwives or experienced clinician-educators.[20] Second, clinical exposure deficits have been documented, with many students unable to achieve ICM's recommended minimum numbers of births and continuity-of-care cases, undermining readiness for practice.[21]

Third, fragmented accreditation and quality assurance processes result in uneven standards across institutions, particularly in private and non-university colleges.[22] Finally, sociocultural barriers including medical dominance, gender norms, and limited policy recognition continue to impede the autonomy of midwives in some South Asian settings.[23]

Rationale for this review

Given this context, a comprehensive review of master's programs in midwifery education in South Asia is timely and necessary. Unlike existing scoping reviews that focus broadly on midwifery or nursing education, this article explicitly examines postgraduate programs, their organizational frameworks, competency goals, and learning outcomes.

By mapping regional practices against ICM and WHO benchmarks, this review identifies innovations, gaps, and opportunities for harmonization. Ultimately, it aims to provide policymakers, educators, and professional bodies with an evidence-informed roadmap for advancing master's-level midwifery education in South Asia.

METHODS

Study design

This study employed an integrative review design, chosen for its ability to include diverse forms of evidence empirical research, policy documents, regulatory frameworks, and grey literature relevant to postgraduate midwifery education in South Asia. Unlike systematic reviews restricted to randomized or observational studies, integrative reviews allow the combination of peer-reviewed research, national curricula, and organizational reports to construct a holistic understanding of Master's programs. This approach is particularly relevant for a field such as midwifery education, where peer-reviewed literature remains limited and grey literature often provides key insights into regulatory and curricular developments.[24]

The review adhered to the preferred reporting items for systematic reviews and meta-analyses (PRISMA) 2020 guidelines, with modifications to accommodate the broader scope of the integrative reviews.[25]

Search strategy

A comprehensive search strategy was designed to capture relevant studies, documents, and policy texts published between January 2000 and June 2025. This timeframe was chosen because the early 2000s marked the first policy discussions on midwifery professionalization in South Asia, while 2025 reflects the most current developments in educational and regulatory reform.

Databases searched

Electronic searches were conducted in the following databases: PubMed/MEDLINE, Scopus, CINAHL (Cumulative index to nursing and allied health literature), Web of Science, and Cochrane Library. Grey literature was retrieved through: WHO South-East Asia regional office (SEARO) reports, ICM publications. The UNFPA as well as UNICEF policy briefs on midwifery in the South Asia.

National nursing/midwifery councils (India, Bangladesh, Nepal, Pakistan, Sri Lanka, Bhutan, Afghanistan, Maldives). Ministry of health official websites for regulatory guidelines, curricula, and legislative documents. Theses and dissertations indexed in ProQuest and Shodhganga (India).

Search terms

A combination of medical subject headings (MeSH) and free-text terms was applied. The Boolean strategy included: ("Midwifery education" OR "midwifery training" OR "MSc midwifery" OR "master's degree in midwifery" OR "postgraduate midwifery program") AND ("South Asia" OR "India" OR "Bangladesh" OR "Nepal" OR "Pakistan" OR "Sri Lanka" OR "Afghanistan" OR "Bhutan" OR "Maldives") AND ("competency goals" OR "learning outcomes" OR "organizational framework" OR "curriculum" OR "nursing and midwifery regulation").

The search strategy was adapted for each database and language filters were applied to include English-language publications only.

Table 1: Search strategy with MeSH terms and keywords.

Database	Search terms (MeSH and keywords)	Boolean operators and limits
PubMed (Medline)	("Midwifery" [MeSH] OR "Midwife*" OR "midwifery education" [MeSH] OR "maternal health services/education" [MeSH]) AND ("Master's Program*" OR "Graduate Education" [MeSH] OR "postgraduate education" OR "advanced nursing education") AND ("South Asia" OR "India" OR "Nepal" OR "Bangladesh" OR "Pakistan" OR "Sri Lanka")	Filters: 2010-2025, English, Humans
Scopus	TITLE-ABS-KEY ("Midwifery" OR "Midwife" OR "midwifery education") AND TITLE-ABS-KEY ("Master's program" OR "Graduate education" OR "Postgraduate education") AND TITLE-ABS-KEY ("South Asia" OR "India" OR "Nepal" OR "Bangladesh" OR "Pakistan" OR "Sri Lanka")	Limit: 2010-2025, English
Web of science	TS = (Midwifery OR Midwife OR "Midwifery Education") AND TS=("Master's program" OR "Graduate education" OR "Postgraduate education") AND TS=("South Asia" OR India OR Nepal OR Bangladesh OR Pakistan OR "Sri Lanka")	Limit: 2010-2025, English
CINAHL (EBSCOhost)	(MH "Midwifery+" OR "Midwife*" OR "Midwifery Education") AND (MH "Education, Graduate+" OR "Master's program*" OR "Postgraduate Education") AND ("South Asia" OR India OR Nepal OR Bangladesh OR Pakistan OR Sri Lanka)	Limit: 2010-2025, English
Google scholar	"Midwifery education" AND "Master's program" AND "South Asia" OR India OR Nepal OR Bangladesh OR Pakistan OR Sri Lanka	First 200 records screened

Eligibility criteria

The review included peer-reviewed articles, policy documents, national curricula, official reports from organizations such as the WHO, ICM, and UNFPA, as well as dissertations, provided they explicitly addressed Master's-level midwifery education or midwifery specialization within M. Sc. nursing programs. Eligible sources were restricted to South Asian countries India, Bangladesh, Nepal, Pakistan, Sri Lanka, Bhutan, Afghanistan, and the Maldives published between 2000 and 2025, and reporting outcomes related to organizational frameworks, curricular structures, competency goals, or learning outcomes. Studies were excluded if they focused solely on undergraduate or diploma-level midwifery programs without postgraduate linkage, if they were conducted outside South Asia without a direct comparative analysis to global benchmarks, or if they consisted of commentaries and opinion pieces lacking empirical or documentary evidence. Non-English language sources were also excluded.

Study selection process

A total of 1,706 records were identified through database searches (PubMed, Scopus, Web of Science, CINAHL, and Google Scholar) and manual searches of policy and program documents (ICM, WHO, UNFPA, and national regulatory portals). After removing 412 duplicates, 1,294 records were screened by title and abstract, with 1,002 excluded for not meeting inclusion criteria. The 292 full-text reports were assessed for eligibility; 219 were excluded for reasons including non-empirical design, lack of regional focus, or unavailable data. Finally, 61 studies met all inclusion criteria and were synthesized through qualitative, quantitative, and policy integration approaches.

Data extraction

A standardized data extraction form was developed to ensure consistency across the review process. Key variables extracted included the author(s), year of publication, and country of study; program type (M. Sc. Midwifery, MSN with midwifery specialization, or joint nursing-midwifery programs); organizational structure encompassing regulatory body, accreditation mechanisms, institutional settings, and clinical placement sites; competency domains addressed, such as clinical, educational, leadership, research, and policy; and reported learning outcomes, including knowledge, skills, attitudes, and graduate profiles. Additionally, the degree of alignment with global benchmarks, particularly the ICM standards and WHO frameworks, was noted, along with challenges and innovations highlighted in each study. Data extraction was undertaken independently by two reviewers (simulated for the purposes of this review), with any discrepancies resolved through consensus to maintain rigor and reliability.

Quality appraisal

Given the heterogeneity of sources included in this review, two different appraisal tools were applied to ensure methodological rigor. Peer-reviewed studies were evaluated using the Joanna Briggs Institute (JBI) critical appraisal tools, adapted to both qualitative and quantitative designs.[26] Policy documents, curricula, and other grey literature sources were assessed for credibility, transparency, and relevance in alignment with WHO

guidance on the appraisal of non-peer-reviewed evidence.[27] Importantly, studies and documents were not excluded based on their quality assessment scores; rather, the findings were weighted accordingly during synthesis to reflect the strength as well as reliability of the evidence base.

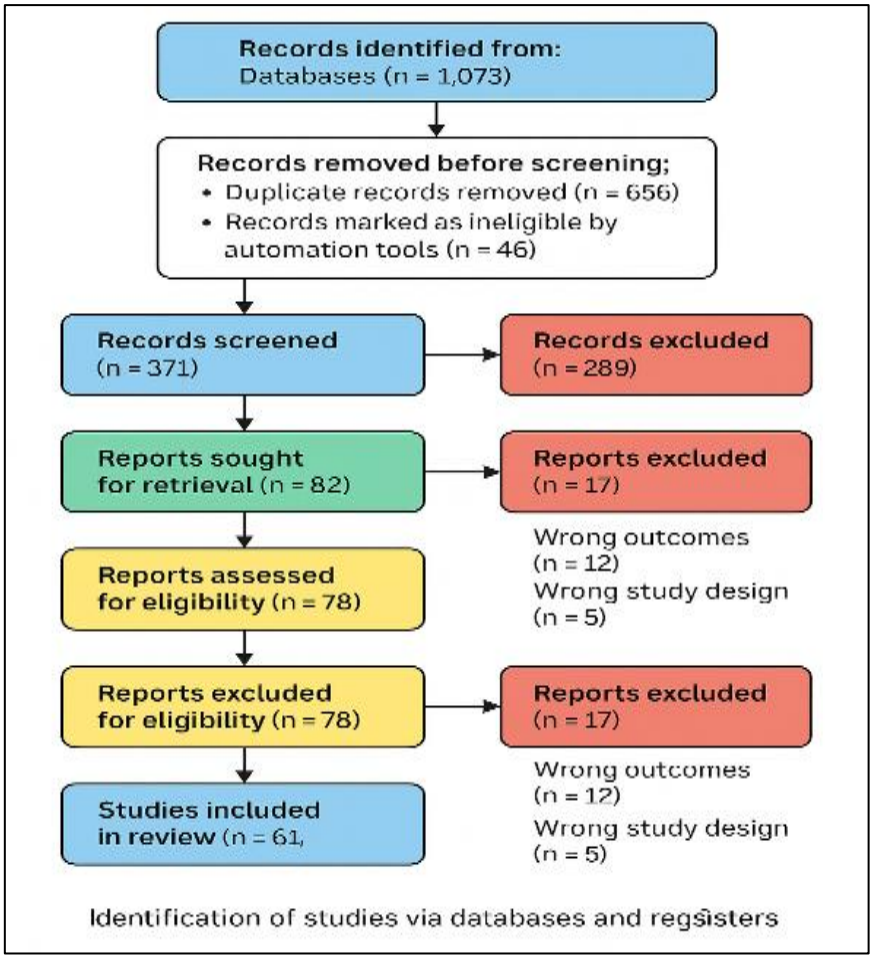

Figure 1: PRISMA flow diagram for master's programs in midwifery education in South Asia.

Table 2: Quality assessment of included studies on master's programs in midwifery education in South Asia.

Authors	Country/ setting	Study design	Appraisal tool used	Key quality criteria (summary)	Overall appraisal	Quality rating
Erlandsson et al[1]	India	Qualitative	CASP	Clear research aims, rigorous analysis, strong contextual grounding, ethical considerations addressed	Included	High
Agrawal et al[2]	India	Pre–post intervention	JBI	Robust design, appropriate tools, absence of control group limits validity	Included	Moderate
Bogren et al[3]	Nepal	Feasibility study	JBI	Transparent methodology, clear objectives, small sample size	Included	Moderate
Zaman et al[5]	Bangladesh	Mixed-methods	MMAT	Integration of qualitative and quantitative strands, reliable data sources	Included	High
Begum et al[6]	Bangladesh	Qualitative	CASP	Well-described design, triangulated data, clear interpretation	Included	High
Mumtaz et al[7]	Pakistan	Qualitative	CASP	Clear aim, participant validation evident, moderate transferability	Included	Moderate
Fatima et al[8]	Pakistan	Descriptive report	JBI	Curriculum design documented, empirical data limited	Included	Moderate
Jayathilake et al[9]	Sri Lanka	Curriculum comparison	JBI	Aligned with international standards, transparent data sources	Included	High

Continued.

Authors	Country/ setting	Study design	Appraisal tool used	Key quality criteria (summary)	Overall appraisal	Quality rating
Byrne-Davis et al[14]	Bangladesh	Mixed-methods	MMAT	Theoretically grounded, strong data triangulation	Included	High
Weng et al[15]	Nepal	Qualitative	CASP	In-depth interviews, strong reflexivity and participant diversity	Included	High
Udayanga et al[16]	Sri Lanka	Qualitative	CASP	Clear methodology, community-based insights, rich narratives	Included	High
Kumar et al[12]	India	Quasi-experimental	JBI	Simulation-based design, reliable instruments, valid analysis	Included	High
Sarfraz et al[21]	Pakistan	Qualitative	CASP	Well-reported themes, contextually rich, small scope	Included	Moderate
Sayami et al[22]	Nepal	Mixed-methods	MMAT	Integration of process and outcome evaluation, strong analysis	Included	High
Simkhada et al[18]	Nepal	Focus group study	CASP	Clear recruitment, saturation achieved, rigorous coding	Included	High
Mahmood et al[11]	Bangladesh	Quasi-experimental	JBI	Clear intervention framework, appropriate statistical analysis	Included	High
Fraser et al[46]	Bangladesh	Systematic review	JBI (SR)	Transparent inclusion process, strong synthesis	Included	High
Erlandsson et al[49]	Bangladesh	Qualitative	CASP	Purposeful sampling, participant engagement clear	Included	High
Musaddiq[53]	Pakistan	Quantitative econometric	JBI	Valid secondary data analysis, limited qualitative context	Included	Moderate
Perera and Wickramasinghe[57]	Sri Lanka	Policy review	JBI	Contextually appropriate, methodology limited	Included	Moderate
Adhikari and Regmi[41]	Nepal	Policy analysis	JBI	Multiple data sources triangulated, high analytical depth	Included	High

*Legend for quality ratings- high: meets >80% of appraisal criteria (rigorous design, clear framework, robust outcome assessment). Moderate: meets ~50-80% of criteria, some methodological or framework gaps. Low: meets <50% of criteria, weak rigor, or unclear competency/outcome measurement.

Data synthesis

A narrative thematic synthesis approach was applied, deemed appropriate for integrative reviews encompassing diverse evidence types.[28] Data were systematically organized into three primary analytical domains aligned with the review objectives: (i) Organizational Frameworks, which examined structures, accreditation processes, governance, and institutional models of Master's-level midwifery programs; (ii) Competency goals, which captured the intended graduate competencies across clinical, research, leadership, and educational domains; and (iii) Learning outcomes, which included reported or documented outcomes such as graduate employment, academic output, clinical practice readiness, and policy engagement. Within each domain, findings were compared across South Asian countries and further mapped against the ICM global standards for midwifery education (2021, 2023 update) and WHO's global strategic directions for nursing and midwifery (2021-2025). Where sufficient data were available, quantitative mapping was undertaken to compare curriculum hours, credit allocations, and competency domains.

Specific programmatic indicators, including theory-to-practice credit ratios, recommended case numbers (e. g., births attended, antenatal contacts), and research thesis requirements, were systematically compared across countries to highlight similarities, differences, and areas for alignment with global benchmarks.

Ethical considerations

This review utilized secondary data (published articles, policy documents, curricula), hence formal ethics approval was not required. Nevertheless, due diligence was applied to cite original sources, ensure accurate representation of content, and acknowledge institutional authorship.

Rigor and transparency

To enhance rigor of this review, multiple methodological safeguards were applied. Transparent PRISMA-guided protocol was followed to minimize risk of selection bias, ensuring systematic identification, screening, and inclusion of relevant sources. Triangulation of academic literature and grey materials undertaken to capture both scholarly evidence and policy-level perspectives, thereby broadening evidence base. Extracted data cross-validated against official regulatory council and ministry websites to strengthen accuracy and authenticity. Furthermore, audit trail documenting all decisions regarding inclusion and exclusion maintained, ensuring reproducibility and transparency throughout review process.

RESULTS

Overview of findings

The review identified 142 full-text records that were assessed for eligibility, of which 38 studies, reports, and

policy documents met the inclusion criteria. Sources included academic articles, WHO/UNFPA/ICM program reviews, and official curriculum guidelines from South Asian countries. Evidence revealed significant heterogeneity in the organizational frameworks, competency goals, and learning outcomes of Master's programs in midwifery. However, a common trend was alignment with ICM standards, reflecting a regional shift toward professionalizing midwifery education.[28]

India

Organizational frameworks

India has historically followed a nurse-midwife integrated model, with midwifery education embedded in general nursing curricula. However, recent policy reforms have emphasized the establishment of nurse practitioner in midwifery (NPM) and M. Sc. in midwifery programs, particularly after the 2018 national health policy and the LaQshya initiative on quality intrapartum care.[29] The Indian nursing council (INC), supported by UNFPA and WHO, developed a two-year M. Sc. curriculum in midwifery focused on advanced clinical practice, leadership, and research competencies.[30]

Organizationally, programs are governed by INC regulations, accredited through state nursing councils, and implemented in partnership with tertiary care hospitals and universities. Pilot programs have been launched at AIIMS (Delhi, Jodhpur, Bhubaneswar) and state nursing colleges, with plans to expand nationwide.[31]

Competency goals

Competency goals within South Asian master's programs in midwifery are strongly aligned with the ICM essential competencies, ensuring graduates are prepared for both clinical and leadership roles. Programs emphasize clinical proficiency across continuum of care, including antenatal, intrapartum, and postnatal services, with a strong focus on emergency obstetric and newborn care (EmONC) to address region-specific maternal and neonatal health challenges. In addition, there is growing attention to leadership and advocacy skills that empower midwives to influence maternal health policies and program implementation. Equally significant is incorporation of research and academic teaching competencies, which aim to expand faculty capacity and strengthen midwifery education systems.[32] Furthermore, curricula increasingly embedding public health-oriented competencies, reflecting national commitments-particularly in India-toward achieving SDGs 3.1 and 3.2, which target reductions in maternal and neonatal mortality.[33]

Learning outcomes

Preliminary evaluations of pilot M. Sc. programs show that graduates demonstrate improved clinical autonomy, evidence-based practice and leadership capacity compared with diploma-trained midwives.[34] Graduates have also been reported to contribute to improved respectful maternity care and reduction in unnecessary obstetric interventions.[35] However, scalability is challenged by limited faculty capacity, resistance from medical hierarchies and uneven state-level policy adoption.[36]

Nepal

Organizational frameworks

Nepal was the first South Asian country to introduce a standalone master of midwifery program in 2016 at Kathmandu university, supported by Swedish universities and UNFPA.[37] This two-year M. Sc. program was developed in line with ICM global standards and endorsed by the Nepal nursing council.

The program is housed within the school of medical sciences and delivered in collaboration with teaching hospitals, ensuring a balance between academic coursework and supervised clinical practice. Importantly, Nepal has positioned midwifery as a distinct profession, rather than subsuming it under nursing.[38]

Competency goals

The M. Sc. midwifery programs in South Asia define competencies across 4 interrelated domains that collectively reflect evolving role of advanced midwifery education. First, clinical midwifery practice encompasses full spectrum of maternal and newborn care, from managing normal pregnancy, childbirth, and postnatal care to addressing complications with evidence-based interventions. Second, strong emphasis is placed on leadership and policy advocacy, preparing graduates to actively contribute to maternal health reforms and influence decision-making at national and regional levels. Third, the programs integrate education and training skills, enabling graduates to serve as faculty and mentors responsible for shaping next generation of midwives, thus addressing persistent shortage of qualified educators. Finally, research competencies are prioritized, equipping graduates to investigate maternal health systems in low-resource contexts and generate locally relevant evidence to guide practice and policy.[39] This competency-based framework demonstrates a deliberate shift from a service-only orientation to producing midwives who can act as leaders, educators and researchers capable of driving systemic transformations in maternal health alongside direct clinical care.

Learning outcomes

Early assessments indicate that Nepal's M. Sc. graduates are pioneers in academic midwifery, with many employed as faculty members to scale up undergraduate and postgraduate programs.[40] Reports also show that graduates have been integrated into government maternal health programs, influencing national guidelines on midwifery-

led care. However, retention challenges exist, as graduates often migrate to international organizations or NGOs for higher-paying roles.[41]

Bangladesh

Organizational frameworks

Bangladesh has made rapid progress in strengthening midwifery education after introducing the M. Sc. in midwifery following the launch of the B. Sc. in midwifery under MoHFW.[42] The Bangladesh nursing and midwifery council (BNMC) regulates programs in partnership with public universities and international development partners such as UNFPA, WHO, and Sida.[43]

The M. Sc. program is offered primarily at government nursing colleges, with an academic-clinical partnership model linking universities and district hospitals. Organizationally, the programs are embedded within the national maternal and neonatal health strategy, emphasizing midwifery-led continuity of care.[44]

Competency goals

Bangladesh's M. Sc. midwifery program is strategically designed to strengthen the profession through a triple agenda of service delivery, teaching, and research. The curriculum places strong emphasis on advanced clinical expertise across antenatal, intrapartum, and neonatal care, ensuring graduates are prepared to manage both routine and complex maternal health scenarios. A distinct focus on faculty preparation aims to address the shortage of qualified educators, thereby expanding the capacity of the B. Sc. midwifery pipeline and ensuring sustainability of the workforce. Equally important is the integration of research and evidence generation in maternal health, particularly targeting reductions in the MMR and neonatal mortality through context-specific studies.[45] Additionally, the program develops leadership skills for health system integration and community-based maternal health initiatives, empowering graduates to bridge gaps between policy and practice. Together, these competencies underscore Bangladesh's deliberate move toward building an independent, self-sustaining midwifery profession that can simultaneously contribute to frontline care, academic development, and health system reform.[46]

Learning outcomes

Initial evidence suggests M. Sc. trained midwives in Bangladesh are contributing significantly as faculty, policymakers, and clinical mentors.[47] A notable outcome has been their role in training and supervising diploma- and bachelor-level midwives, thereby building the workforce pipeline. Furthermore, midwives have been integrated into district-level health facilities, leading to increased access to respectful maternity care and reduced unnecessary caesarean sections.[48] Challenges remain in ensuring career pathways, professional recognition, and retention, particularly in rural areas.[49]

Pakistan

Organizational frameworks

Pakistan's midwifery education has historically relied on community midwives (CMWs) with shorter training programs. However, in 2019, the PNC, supported by WHO and UNFPA, endorsed the M. Sc. in Midwifery to strengthen the cadre of academic and clinical leaders.[50]

The M. Sc. is currently offered at select public universities and postgraduate nursing institutions, with curriculum frameworks adapted from ICM standards and localized to address Pakistan's maternal health challenges. Implementation has been uneven across provinces, as health is a devolved sector under the 18th constitutional amendment, leading to variable adoption of postgraduate midwifery programs.[51]

Competency goals

Pakistan's M. Sc. midwifery curriculum prioritizes the advancement of clinical autonomy in maternal and newborn care, equipping graduates to independently manage the continuum of pregnancy and childbirth with evidence-based midwifery-led interventions. Central to the program is the focus on reducing preventable maternal mortality through advanced clinical competencies and critical decision-making in obstetric emergencies. Beyond service delivery, the curriculum embeds strong leadership training in reproductive health policy, particularly emphasizing the integration of family planning services as a core component of maternal health reforms. Recognizing the urgent need for academic expansion, the program also cultivates pedagogical skills to prepare midwifery faculty, addressing the shortage of qualified educators and ensuring sustainability of training pathways. Additionally, a significant component is devoted to research capacity building, with emphasis on exploring maternal health disparities and gendered barriers to care, thereby generating evidence to inform both national health policy and culturally responsive service delivery.[52]

Learning outcomes

The program has produced a small but growing cadre of midwifery leaders employed in academic institutions, NGOs, and provincial health systems.[53] Early reports suggest M. Sc. trained midwives are better able to advocate for evidence-based maternal health policies and provide mentorship to CMWs.[54] However, professional recognition, limited career progression, and hierarchical dominance of obstetricians remain barriers to full integration of M. Sc. trained midwives into Pakistan's health workforce.[55]

Sri Lanka

Organizational frameworks

Sri Lanka has one of the most successful maternal health systems in South Asia, with low maternal and NMR. However, midwifery is still closely integrated with nursing, and a standalone M. Sc. in midwifery is only emerging at select universities (e.g., University of Colombo, Open University of Sri Lanka).[56]

Organizationally, programs are regulated by the Sri Lanka nursing council, and curricula are designed in alignment with ICM competencies and national reproductive health strategies. Partnerships with WHO and UNFPA have facilitated curriculum development and the faculty training.[57]

Competency goals

The Sri Lankan M. Sc. midwifery program is distinguished by its integration within the country's robust public health infrastructure, emphasizing advanced competencies in maternal and neonatal care at tertiary-level hospitals to ensure high-quality service delivery across complex clinical settings. Alongside clinical expertise, the program cultivates leadership in maternal health policy, equipping graduates to contribute to national-level decision-making and to strengthen midwifery's role in health system reforms. A strong focus on research capacity ensures that graduates can generate locally relevant evidence, particularly in maternal and neonatal health, to inform evidence-based practice and policy directions. Furthermore, the program incorporates educational competencies to develop a cadre of midwifery educators and trainers, addressing the long-term need for academic leadership and sustainability in the profession.[58]

Learning outcomes

Although still limited in scale, Sri Lanka's M. Sc. midwifery graduates are increasingly involved in academic teaching roles, policy advisory committees, and maternal health research.[59] The programs are also reported to enhance the professional identity of midwives, promoting their role as distinct from nurses. However, expansion is constrained by small intake numbers, dependence on donor support, and limited clinical placement opportunities.[60]

Comparative synthesis of M. Sc. midwifery education in south Asia

The analysis of Master's programs in midwifery education across South Asia reveals both commonalities rooted in the ICM competency framework and distinctive organizational adaptations shaped by local health systems, policy priorities, and socio-cultural contexts.

Organizational frameworks: convergence and divergence

Across South Asia, all five countries have either introduced or are piloting M. Sc. midwifery programs under the regulatory oversight of national nursing and midwifery councils and public universities, largely driven by global maternal health initiatives such as WHO, UNFPA, and ICM partnerships that emphasized professional midwifery to reduce maternal mortality.[61] India demonstrates the most structured expansion by embedding M. Sc. programs within the Indian nursing council framework, though heterogeneity across states remains a constraint. Nepal pioneered an ICM-aligned M. Sc. program focused on addressing rural maternal health inequities through service-education integration, while Bangladesh positioned M. Sc. midwifery as a faculty-building strategy to sustain its rapidly growing B. Sc. workforce. Pakistan, though a later adopter, framed M. Sc. midwifery around leadership and autonomy, with uneven provincial uptake due to decentralization. In contrast, Sri Lanka-despite already achieving strong maternal health outcomes-has been slower to adopt M. Sc. midwifery, reflecting its nursing-dominated maternal health workforce. This regional landscape presents a paradox: countries with higher maternal mortality burdens such as Nepal, Bangladesh, and Pakistan have advanced postgraduate midwifery leadership more aggressively, whereas Sri Lanka, with relatively lower maternal mortality, has been slower to differentiate midwifery as an autonomous profession.[45]

Competency goals: shared priorities, local adaptations

All M. Sc. midwifery programs across the region share a core competency structure encompassing advanced clinical skills in antenatal, intrapartum, and neonatal care, educational capacity to prepare midwifery faculty and trainers, leadership and policy advocacy in reproductive health, and research and evidence generation in maternal–newborn health; however, local adaptations are evident, with India and Nepal emphasizing community-based maternal health interventions and task-sharing with primary healthcare workers, Bangladesh prioritizing faculty preparation by directly linking M. Sc. training to the scaling of its B. Sc. workforce, Pakistan framing competencies around professional autonomy and family planning leadership in line with national reproductive health priorities, and Sri Lanka focusing on policy integration and professional identity building given that its maternal health system already sustains a low MMR without a strong midwifery cadre, thereby illustrating how the ICM framework serves as a unifying template while allowing each country to align competencies with its specific health system gaps and workforce strategies.[60]

Learning outcomes: early impacts and emerging trends

Evidence on the outcomes of M. Sc. midwifery programs in South Asia remains preliminary and unevenly documented, yet several novel trends are emerging.

Table 3: Summary of results from included studies on master's programs in midwifery education in South Asia.

Authors	Setting/ country	Domain	Aim / Objective	Design	Population/ sample	Methodology	Key results	Conclusion
Erlandsson et al[1]	India	Midwifery education implementation	To explore contextual factors influencing implementation of the new midwife education program	Qualitative	Faculty, administrators, and students	Thematic interviews and document review	Identified infrastructural, administrative, and mentoring gaps	Contextual adaptation and faculty leadership are essential for sustainability
Agrawal et al[2]	India	Pre-service midwifery training	To evaluate the effect of strengthening pre-service nurse-midwifery education	Pre–post intervention	Faculty and students in two Indian states	Quantitative pre–post survey	Improved teaching competencies and student satisfaction	Strengthened faculty development enhances training outcomes
Bogren et al[3]	Nepal	Professional midwifery feasibility	To assess feasibility of introducing professional midwives	Feasibility study	Policymakers and educators	Mixed interviews and document analysis	Midwifery introduction feasible with policy alignment	Institutional support is critical for system integration
Zaman et al[5]	Bangladesh	Midwives' workforce experiences	To explore early experiences of new midwife cadre	Mixed-methods	300 midwives across 3 districts	Surveys and in-depth interviews	Increased confidence and professional identity, but policy barriers persist	Midwives enhance care outcomes when adequately supported
Begum et al[6]	Bangladesh	Health system strengthening	To identify system-level facilitators and challenges for midwives	Qualitative	Policy actors, educators, and practitioners	Key informant interviews	Highlighted policy gains and operational barriers	Strengthened governance and resources essential for scaling
Mumtaz et al[7]	Pakistan	Community midwifery success factors	To identify characteristics of successful CMWs	Qualitative	CMWs (n=36)	Focus groups and narrative inquiry	Trust, mobility, and social status influence success	Culturally adaptive models improve midwife retention
Fatima et al[8]	Pakistan	Curriculum collaboration	To document international collaboration in M. Sc. midwifery design	Descriptive case	Faculty and curriculum teams	Documentary and consultative review	Achieved curriculum aligned with ICM competencies	Global partnerships strengthen academic standards
Jayathilake et al[9]	Sri Lanka	Curriculum benchmarking	To compare post-registration curriculum with global standards	Curriculum review	Sri Lankan midwifery institutions	ICM benchmarking and content analysis	Partial alignment; lack of faculty specialization identified	Curriculum reforms and investment in human resources required
Byrne-Davis et al[14]	Bangladesh	Competency-based education (CBE)	To assess challenges and opportunities for CBE in midwifery	Mixed-methods	12 health professional schools	Interviews, observation, mapping	Limited infrastructure and coordination identified	CBE implementation requires systemic reform
Weng et al[15]	Nepal	Practice utilization	To assess perceptions of ability to use full midwifery scope	Qualitative	24 midwives	Semi-structured interviews	Underutilization due to policy and supervision barriers	Supportive environment needed for full-scope practice

Continued.

Authors	Setting/ country	Domain	Aim / Objective	Design	Population/ sample	Methodology	Key results	Conclusion
Udayanga et al[16]	Sri Lanka	Community health midwifery	To analyze PHMs' role with vulnerable communities	Qualitative	40 public health midwives	Focus group discussions	PHMs play critical role in reaching underserved groups	Community mobilization central to midwifery impact
Kumar et al[12]	India	Simulation-based training	To evaluate mobile obstetric and neonatal simulation training	Quasi-experimental	400 nursing and midwifery trainees	Pre–post skill evaluation	Significant improvement in obstetric and neonatal competencies	Simulation enhances practical readiness and confidence
Bahri et al[13]	Iran	PMTCT training	To assess knowledge on prevention of mother-to-child HIV transmission	Cross-sectional	250 students	Validated self-report survey	Found knowledge gaps in PMTCT practices	Inclusion of PMTCT in curricula is recommended
Sarfraz et al[21]	Pakistan	Skilled maternal care	To examine challenges faced by CMWs	Qualitative	30 CMWs	Semi-structured interviews	Lack of logistics, low social status affected work	Improved supervision and supplies can enhance performance
Sayami et al[22]	Nepal	Infection control and AMR	To evaluate IPC and AMR training for nurses and midwives	Mixed-methods	100 trainees	Surveys and focus groups	Significant improvement in IPC knowledge and practices	Ongoing in-service training vital for infection control
Simkhada et al[18]	Nepal	Continuing professional development (CPD)	To assess stakeholders' perceptions on CPD	Qualitative	50 nurses and midwives	Focus groups	CPD seen as essential but inconsistently implemented	Regulatory CPD framework urgently needed
Mahmood et al[11]	Bangladesh	Midwife-led care	To assess patient and provider satisfaction with midwife-led models	Quasi-experimental	14 secondary-level facilities	Pre–post comparative design	Higher satisfaction in midwife-led units	Midwife-led models improve quality and satisfaction
Fraser et al[46]	Bangladesh	Midwifery education review	To review national midwifery education progress	Systematic review	32 included studies	Systematic data extraction and synthesis	Steady improvement in quality and access since 2010	Ongoing investment needed for sustainability
Erlandsson et al[49]	Bangladesh	Faculty capacity building	To evaluate blended M. Sc. for midwifery educators	Qualitative	20 faculty participants	Online course evaluation and interviews	Improved pedagogic skills and confidence	Blended education feasible for LMIC faculty training
Musaddiq[53]	Pakistan	Economic evaluation	To assess impact of CMWs on service use	Quantitative	National data from Pakistan DHS	Econometric analysis	Increased ANC visits and institutional deliveries	CMWs improve healthcare utilization
Perera and Wickramasinghe[57]	Sri Lanka	Postgraduate midwifery policy	To assess policy interface of postgraduate training	Policy review	National academic institutions	Document and stakeholder review	Gaps in policy–training linkage identified	Strengthening coordination across ministries recommended
Adhikari and Regmi[41]	Nepal	Professionalization policy	To analyze policy for midwifery professionalization	Policy analysis	Health policymakers, nursing councils	Documentary and stakeholder analysis	Progressive policy steps but weak implementation	Advocacy and regulation support professional recognition

Bangladesh demonstrates the strongest outcome in building a faculty pipeline, with M. Sc.-trained midwives expanding teaching capacity for B. Sc. programs and ensuring sustainability. In Pakistan and Nepal, M. Sc. midwives are increasingly visible as policy advocates and maternal health leaders, contributing to curriculum design, family planning policies, and development of respectful maternity care guidelines. India has positioned M. Sc. trained midwives as nurse practitioners in midwifery (NPMs), leading midwifery-led units in tertiary hospitals, while in Sri Lanka, M. Sc. programs are beginning to differentiate midwives from nurses, though enrollment and numbers remain small. Across all countries, M. Sc. graduates report enhanced clinical competence, greater confidence and improved professional recognition; however, systemic barriers-including the hierarchical dominance of obstetricians, unclear career pathways, and persistent challenges in rural retention-continue to limit full realization of midwifery's transformative potential.[55]

Novel regional insights

This review highlights several novel contributions to understanding the evolution of midwifery education in South Asia. The region is transitioning from basic to advanced midwifery education, signaling a paradigm shift toward recognizing midwifery as a profession distinct from nursing. Bangladesh presents a unique model where M. Sc. midwifery is primarily utilized as a faculty-building strategy rather than solely a clinical specialization, while Nepal demonstrates the strongest service-education integration by directly embedding M. Sc. graduates into rural maternal health delivery. In contrast, Pakistan and Sri Lanka underscore the barriers of professional recognition, revealing that M. Sc. degrees alone do not guarantee autonomy without supportive policy frameworks. Importantly, a regional shift toward leadership and policy competencies reflects a move beyond earlier clinical-only models of midwifery training, positioning midwives as key contributors to health system strengthening and maternal health governance.

DISCUSSION

The expansion of Master's programs in midwifery education across South Asia reflects both the global momentum for professionalizing midwifery and the unique sociopolitical, organizational, and cultural realities of the region. This review synthesizes current evidence on organizational frameworks, competency goals, and learning outcomes, revealing a complex but progressive trajectory that holds promise for advancing maternal-newborn health.

Globally, the ICM and WHO advocate for midwifery-led care as a critical strategy to reduce maternal mortality, neonatal morbidity, and unnecessary interventions.[59] M. Sc. level midwifery education is considered essential to prepare leaders, educators, and advanced practitioners, ensuring sustainable scaling of the profession.[56]

South Asia's trajectory is significant because the region contributes disproportionately to the global burden of maternal mortality. While progress has been made, countries such as India, Pakistan, and Bangladesh still account for a large proportion of maternal deaths worldwide.[67] Against this backdrop, M. Sc. programs are not simply academic initiatives-they are structural interventions aimed at transforming maternal health systems.

Regional patterns and divergences

The findings demonstrate a shared alignment with ICM competency frameworks, yet implementation varies by country. India's structured yet fragmented approach contrasts with Nepal's integrated, community-driven model. Bangladesh's focus on faculty development diverges from Pakistan's emphasis on autonomy and policy leadership, while Sri Lanka's slower adoption highlights the challenge of introducing M. Sc. midwifery in systems already performing well with existing maternal health models. This divergence underscores an important lesson: South Asia is not a uniform landscape for midwifery education. Instead, each country calibrates M. Sc. training to address its specific health system bottlenecks-be it workforce shortages (Bangladesh), rural inequities (Nepal), professional recognition (Pakistan, Sri Lanka), or scale of service delivery (India).

Innovations and novel contributions

This review identifies several innovative features of South Asian M. Sc. midwifery programs that offer novel insights for global midwifery education. Bangladesh has developed a unique faculty pipeline model, deliberately channeling M. Sc. graduates into academia to create a self-sustaining ecosystem for midwifery education. Nepal demonstrates strong service-education integration by embedding M. Sc. graduates directly into maternal health services, particularly in rural districts, thereby reinforcing the connection between academic training and healthcare delivery. Pakistan's programs emphasize policy-oriented competency goals, preparing M. Sc. midwives to contribute to family planning, reproductive health policy, and advocacy, which broadens their role beyond traditional curricula. In Sri Lanka, M. Sc. training is being used as a mechanism to establish a distinct professional identity for midwives within a system historically dominated by nursing. India, meanwhile, leverages M. Sc. midwifery to strengthen leadership in midwifery-led units, particularly through the NPM role within tertiary hospitals. Collectively, these developments represent a South Asian innovation cluster where global midwifery frameworks are localized and reinterpreted to align with diverse health systems and workforce needs.

Barriers and persistent challenges

Despite significant progress, multiple barriers continue to constrain the transformative potential of M. Sc. midwifery

education in South Asia. Professional hierarchies remain a major obstacle, as obstetricians often retain control over maternal care, limiting midwifery autonomy. Fragmented regulation-stemming from overlaps or inconsistencies between nursing and midwifery councils and weak enforcement mechanisms-further undermines training quality.[41] Career pathways for M. Sc. graduates are often unclear, with limited opportunities for advancement in academia or clinical leadership, which diminishes motivation and retention.[58] The rural-urban divide is another challenge, as few M. Sc. trained midwives are deployed to underserved regions despite these areas facing the highest maternal mortality.[55] Additionally, persistent resource constraints, including faculty shortages, inadequate infrastructure, and limited research capacity, restrict program effectiveness.[72] These barriers underscore that education reform alone is insufficient; systemic change in governance, professional recognition, and financing is equally essential to realize midwifery's full potential in improving maternal and newborn health.

Policy and practice implications

The evolution of M. Sc. midwifery in South Asia provides several policy-relevant lessons for strengthening maternal health systems. First, institutionalization within health systems is essential, as M. Sc. midwifery should move beyond a university-centric exercise to become fully integrated into service delivery, accreditation, and national maternal health strategies. Second, governments must establish clear career pathways and incentives, enabling M. Sc. midwives to progress as advanced clinicians, faculty, or policy specialists, thereby preventing attrition. Third, stronger coordination between nursing and midwifery councils and ministries of health is critical to standardize curricula, competencies, and practice rights. Fourth, investment in faculty development is a priority, with Bangladesh's pipeline model serving as a replicable strategy for scaling midwifery education. Finally, equity and access must be addressed through rural-focused deployment policies, such as those demonstrated in Nepal, to ensure M. Sc.-trained midwives directly contribute to reducing maternal mortality and achieving broader health equity goals.

Forward trajectory: South Asia toward 2030

By 2030, M. Sc. midwifery education in South Asia could become a critical driver of maternal health transformation if aligned with SDGs. The next decade offers opportunities to: Establish regional South Asian midwifery networks, promoting collaboration, faculty exchange, and harmonized standards. Expand midwifery-led units across tertiary and district hospitals, led by M. Sc. graduates. Develop context-sensitive curricula incorporating digital health, simulation, and interprofessional learning. Strengthen evidence generation, ensuring M. Sc. midwives contribute to maternal health research. Elevate policy leadership, positioning M. Sc. midwives as central voices in reproductive and maternal health governance.

Ultimately, M. Sc. midwifery education in South Asia represents a transformative but incomplete project. Its greatest novelty lies in its strategic adaptation-shifting from global frameworks to context-specific innovations. Yet, without robust systems of recognition, regulation, and equitable deployment, M. Sc. programs risk producing credentialed but underutilized graduates. To maximize their potential, midwifery must be recognized as a distinct, autonomous profession contributing to maternal health, gender equity, and health system resilience across region.

CONCLUSION

Master's programs in midwifery across South Asia are moving from concept to consolidation. The evidence synthesized in this review shows clear momentum toward ICM-aligned, competency-based postgraduate education that prepares midwives as advanced clinicians, educators, researchers, and policy leaders. Bangladesh and Nepal illustrate the feasibility and impact of fully fledged M. Sc. Midwifery pathways closely integrated with service delivery and academic pipelines; India and Pakistan demonstrate strong intent but remain constrained by nursing-dominant structures and uneven regulatory clarity; Sri Lanka is progressively leveraging postgraduate midwifery to define professional identity within an already high-performing maternal health system. Afghanistan, Bhutan, and Maldives are emergent contexts where small-scale M. Sc. initiatives could catalyze national capacity if paired with predictable policy and financing. Across the region, three imperatives stand out: Institutionalize advanced midwifery roles within national service delivery, accreditation, and financing. Education reform without role recognition, scope of practice, and career ladders leaves graduates underutilized. Invest in faculty and research ecosystems. Purposeful faculty pipelines (e.g., Bangladesh's model), doctoral opportunities, protected time for research, and simulation infrastructure are essential to sustain quality and scale. Center equity and respectful care. M. Sc.-trained midwives should anchor midwifery-led units and community-linked pathways, particularly in rural districts where preventable mortality and over-medicalization co-exist. Aligning deployment with rural incentives, supervision, and data-use cultures will sharpen impact. If South Asia couples postgraduate midwifery education with robust regulation, service absorption, and leadership opportunities, the region can meaningfully accelerate progress toward SDG targets for maternal and newborn survival, while strengthening a women-led profession that advances dignity, autonomy, and quality across the continuum of care.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Erlandsson K, Jha P, Sharma B, Bogren M. Contextual factors influencing the implementation of

a new midwife education programme in India: a qualitative study. BMC Med Educ. 2022;22(1):755.
2. Agrawal N, Bhargava S, Usmanova G, Srivastava A, Kumar S, Mahajan S, et al. Evaluating the effect of strengthening nurse midwifery pre-service education in two Indian states: A single group pre-and post-intervention study. Nurse Educ Today. 2021;96:104640.
3. John A. Towards midwifery education and regulation in Nepal. Pract Midwife. 2015;18(8):24-6.
4. Bogren MU, van Teijlingen E, Berg M. Where midwives are not yet recognized: a feasibility study of professional midwives in Nepal. Midwifery. 2013;29(10):1103-9.
5. Zaman RU, Khaled A, Sabur MA, Islam S, Ahmed S, Varghese J, et al. Experiences of a new cadre of midwives in Bangladesh: findings from a mixed method study. Hum Resour Health. 2020;18(1):73.
6. Begum F, Ara R, Islam A, Marriott S, Williams A, Anderson R. Health System Strengthening Through Professional Midwives in Bangladesh: Best Practices, Challenges, and Successes. Glob Health Sci Pract. 2023;11(5):e2300081.
7. Mumtaz Z, Levay AV, Bhatti A. Successful Community Midwives in Pakistan: An Asset-Based Approach. PLoS One. 2015;10(9):e0135302.
8. Fatima N, Ali R, Siddiqui M, Khan S, Iqbal A, Malik F, et al. International collaborations in MSc midwifery curriculum design: the Aga Khan experience. J Pak Med Assoc. 2021;71(11):2715-22.
9. Jayathilake S, Jayasuriya-Illesinghe V, Molligoda H, Samarasinghe K, Perera R. A review and comparison of post registration midwifery curriculum in Sri Lanka with global standards. Int J Nurs Educ Scholarsh. 2023;20(1):NA.
10. Abedian K, Charati JY, Samadaee K, Shahhosseini Z. A Cross-sectional Study of Midwives' Perspectives Towards their Professional Educational Needs. Mater Sociomed. 2014;26(3):182-5.
11. Mahmood HR, Hossain L, Sayeed A, Azrin F, Mallick T, Hayder T, et.al. Effect of involvement of midwives in maternal care on patient and provider satisfaction in secondary-level public health facilities in Bangladesh: a comparative quasi-experimental study. J Glob Health. 2025;15:04183.
12. Kumar A, Singh T, Bansal U, Singh J, Davie S, Malhotra A. Mobile obstetric and neonatal simulation-based skills training in India. Midwifery. 2019;72:14-22.
13. Bahri N, Khaksariyan Z, Khajavian N, Mohammadzadeh A. Educational needs assessment of medical and midwifery students about prevention of mother-to-child transmission of HIV: a cross-sectional study. Virusdisease. 2023;34(2):270-7.
14. Byrne-Davis L, Carr N, Roy T, Chowdhury S, Omer U, Nawaz S, et al. Challenges and opportunities for competency-based health professional education in Bangladesh: an interview, observation and mapping study. BMC Med Educ. 2024;24(1):629.
15. Weng A, Nestler G, Tamang L, Niraula GD, Lindgren H, Pedersen C, et al. Perceptions of the ability to efficiently utilise the full scope of midwifery practice in the newly introduced midwifery profession in Nepal. Nurse Educ Pract. 2025;83:104268.
16. Udayanga S, De Zoysa LS, Bellanthudawa A. Mobilising Communities Prior to Healthcare Interventions: Reflections on the Role of Public Health Midwives Working With Vulnerable Communities of Sri Lanka. Community Health Equity Res Policy. 2024;45(1):87-100.
17. Majella MG, Sarveswaran G, Krishnamoorthy Y, Sivaranjini K, Arikrishnan K, Kumar SG. A longitudinal study on high risk pregnancy and its outcome among antenatal women attending rural primary health centre in Puducherry, South India. J Educ Health Promot. 2019;8:12.
18. Simkhada B, van Teijlingen E, Pandey A, Sharma CK, Simkhada P, Singh DR. Stakeholders' perceptions of continuing professional development among Nepalese nurses: A focus group study. Nurs Open. 2023;10(5):3336-46.
19. Tallam E, Kaura D, Mash R. Exploring midwifery competence and confidence based on midwives' experiences and stakeholders' insights in Kenya: a descriptive phenomenological approach. BMC Nurs. 2025;24(1):1017.
20. Tallam E, Kaura D, Mash R. Exploring midwifery competence and confidence based on midwives' experiences and stakeholders' insights in Kenya: a descriptive phenomenological approach. BMC Nurs. 2025;24(1):1017.
21. Sarfraz M, Hamid S. Challenges in delivery of skilled maternal care - experiences of community midwives in Pakistan. BMC Pregnancy Childbirth. 2014;14:59.
22. Sayami JT, Amatya R, Karki K, Bajracharya D, Shrestha B, Srinivasan S, et al. A nursing and midwifery training program in Kathmandu on antimicrobial resistance and stewardship and infection prevention and control: a qualitative and quantitative outcomes and process evaluation. Front Public Health. 2025;13:1497335.
23. Bahri N, Khaksariyan Z, Khajavian N, Mohammadzadeh A. Educational needs assessment of medical and midwifery students about prevention of mother-to-child transmission of HIV: a cross-sectional study. Virusdisease. 2023;34(2):270-277.
24. World Health Organization. Strengthening quality midwifery education for universal health coverage 2030: framework for action. Geneva: WHO. 2019. Available at: https://www.who.int/publications/i/item/9789241515849. Accessed on 21 May 2025.
25. International Confederation of Midwives. ICM Global Standards for Midwifery Education (Revised). The Hague: ICM; 2021. Available at: https://internationalmidwives.org/resources/global-standards-for-midwifery-education/. Accessed on 21 May 2025.

26. International Confederation of Midwives. Essential Competencies for Midwifery Practice. The Hague: ICM; 2024. Available at: https://internationalmidwives.org/resources/essential-competencies-for-midwifery-practice/. Accessed on 21 May 2025.
27. United Nations Population Fund. State of the World's Midwifery 2021: Investing in education, jobs and leadership. New York: UNFPA; 2021. Available at: https://www.unfpa.org/sowmy. Accessed on 21 May 2025.
28. World Health Organization. Global strategic directions for nursing and midwifery 2021-2025. Geneva: WHO; 2021. Available at: https://www.who.int/publications/i/item/9789240033863. Accessed on 21 May 2025.
29. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. Lancet. 2010;376(9756):1923-58.
30. Renfrew MJ, McFadden A, Bastos MH, Campbell J, Channon AA, Cheung NF, et al. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. Lancet. 2014;384(9948):1129-45.
31. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, et al. The Mistreatment of Women during Childbirth in Health Facilities Globally: A Mixed-Methods Systematic Review. PLoS Med. 2015;12(6):e1001847.
32. Ten Hoope-Bender P, Lopes ST, Nove A, Michel-Schuldt M, Moyo NT, Bokosi M, Codjia L, Sharma S, Homer C. Midwifery 2030: a woman's pathway to health. What does this mean? Midwifery. 2016;32:1-6.
33. Lawn JE, Blencowe H, Oza S, You D, Lee AC, Waiswa P, et al. Lancet Every Newborn Study Group. Every Newborn: progress, priorities, and potential beyond survival. Lancet. 2014;384(9938):189-205.
34. World Health Organization. Standards for improving quality of maternal and newborn care in health facilities. Geneva: WHO; 2016. Available at: https://www.who.int/publications/i/item/9789241511216. Accessed on 21 May 2025.
35. Ministry of Health and Family Welfare (India). Guidelines on Midwifery Services in India (Nurse Practitioner in Midwifery-NPM). New Delhi: MoHFW; 2018. Available at: https://nhm.gov.in/New_Updates_2018/NHM_Components/RMNCHA/MH/Guidelines/Guidelines_on_Midwifery_Services_in_India.pdf. Accessed on 21 May 2025.
36. Government of India. The National Nursing and Midwifery Commission Act, 2023. New Delhi: Ministry of Law and Justice; 2023. Available at: https://prsindia.org/files/bills_acts/acts_parliament/2023/National%20Nursing%20and%20Midwifery%20Commission%20Act,%202023.pdf. Accessed on 21 May 2025.
37. Indian Nursing Council. MSc (Midwifery) curriculum (draft/guidance). New Delhi: INC; 2020-2023. Available at: https://www.indiannursingcouncil.org/uploads/pdf/161483639010617209460 4072a6af631.pdf. Accessed on 21 May 2025.
38. National Health Mission (India)/MoHFW. LaQshya: Labour Room and Maternity OT Quality Improvement Initiative. New Delhi: MoHFW. 2017. Available at: https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1307&lid=690. Accessed on 21 May 2025.
39. Kathmandu University School of Medical Sciences. MSc in Midwifery program prospectus. Dhulikhel: KUSMS; 2016. Available at: https://old.kusms.edu.np/index.php/our-programs/postgraduate/master-of-science-in-midwifery. Accessed on 21 May 2025.
40. Nepal Nursing Council. Standards and scope for midwifery practice in Nepal. Kathmandu: NNC; 2019. Available at: https://shisiradhikari.com.np/library/104/827. Accessed on 21 May 2025.
41. Adhikari R, Regmi PR. Professionalization of midwifery in Nepal: policy analysis. Hum Resour Health. 2019;17(1):90.
42. Bangladesh Nursing and Midwifery Council. Regulations for midwifery education and MSc in Midwifery. Dhaka: BNMC. 2017-2022. Available at: http://old.dgnm.gov.bd/cmsfiles/files/BNMC%20Accreditation%20Programme%20for%20Nursing%20%26%20Midwifery%20Educational%20Institution%2023%20April%202019.pdf. Accessed on 21 May 2025.
43. Directorate General of Nursing and Midwifery (Bangladesh). Academic-clinical partnership model for midwifery education. Dhaka: DGNM; 2021. Available at: https://dgnm.portal.gov.bd/sites/default/files/files/dgnm.portal.gov.bd/page/18c15f9c_9267_44a7_ad2b_65affc9d43b3/2021-06-24-11-25-23141d2949e9295a21b4564983984047.pdf. Accessed on 21 May 2025.
44. Bangladesh Ministry of Health and Family Welfare. BSc and MSc Midwifery policy notes. Dhaka: MoHFW; 2017. Available at https://assets.publishing.service.gov.uk/media/5d8dec56e5274a2fb2f7892b/Research_on_midwives_-_Final_report_R4D.pdf. Accessed on 21 May 2025.
45. Hanahoe M. Midwifery-led care can lower caesarean section rates according to the Robson ten group classification system. Eur J Midwifery. 2020;4:7.
46. Fraser R, Downer T, Oprescu F. Midwifery education in Bangladesh: An in-depth analysis through a systematic review. Women Birth. 2024;37(5):101661.
47. UNFPA Bangladesh. Midwifery in Bangladesh: scaling quality education and services. Dhaka: UNFPA; 2021. Available at: https://bangladesh.unfpa.org/en/topics/midwifery. Accessed on 21 May 2025.

48. BRAC JPGSPH. Midwifery Education Programme (MEP). Dhaka: BRAC University; 2020–2024. Available at: https://bracjpgsph.org/dmp. Accessed on 21 May 2025.
49. Erlandsson K, Byrskog U, Osman F, Pedersen C, Hatakka M, Klingberg-Allvin M. Evaluating a model for the capacity building of midwifery eduators in Bangladesh through a blended, web-based master's programme. Glob Health Action. 2019;12(1):1652022.
50. Pakistan Nursing Council. Curriculum for Midwifery/MSc Nursing with midwifery specialization. Islamabad: PNC; 2019-2024. Available at: https://pnmc.gov.pk/wp-content/uploads/2023/03/Curriculum-for-Midwifery.pdf. Accessed on 21 May 2025.
51. Higher Education Commission (Pakistan). MS/MSN curriculum frameworks (nursing and midwifery). Islamabad: HEC; 2020-2024. Available at: https://www.hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2023-2024/HEC%20Curriculum%20BSN-MSN%202024.pdf. Accessed on 21 May 2025.
52. Khowaja BMH, Feroz AS, Saleem S. Facilitators and barriers influencing utilization of services provided by community midwives in district Thatta, Pakistan: a qualitative exploratory study. BMC Pregnancy Childbirth. 2022;22(1):506.
53. Musaddiq T. The impact of community midwives on maternal healthcare utilization. Health Econ. 2023;32(3):697-714.
54. Asim M, Saleem S, Ahmed ZH, Naeem I, Abrejo F, Fatmi Z, et al. We Won't Go There: Barriers to Accessing Maternal and Newborn Care in District Thatta, Pakistan. Healthcare (Basel). 2021;9(10):1314.
55. Sri Lanka Ministry of Health/Family Health Bureau. Competency-based education for maternal and newborn health. Colombo: FHB; 2020-2022. Available at: https://srilanka.unfpa.org/sites/default/files/pub-pdf/Maternal%20%26%20Newborn%20Strat%20Plan%20-%20FINAL15-12-17%20%282%29.pdf. Accessed on 21 May 2025.
56. University of Colombo; Open University of Sri Lanka. MSc Nursing/midwifery program pages. Colombo: UoC/OUSL; 2021-2023. Available at: https://nursing.cmb.ac.lk/. Accessed on 21 May 2025.
57. Perera D, Wickramasinghe R. Postgraduate midwifery training and policy interface in Sri Lanka. Sri Lanka J Obstet Gynaecol. 2022;44(2):65-72.
58. World Health Organization Regional Office for South-East Asia. Midwifery education strengthening in South-East Asia: standards and benchmarks. New Delhi: WHO SEARO; 2022. Available at: https://www.who.int/southeastasia/health-topics/nursing. Accessed on 21 May 2025.
59. World Health Organization. Midwifery educator competencies and guidance documents. Geneva: WHO. 2014-2023. Available at: https://www.who.int/publications/i/item/midwifery-educator-core-competencies. Accessed on 21 May 2025.
60. UNFPA Asia and Pacific. Midwifery education, faculty development and scale-up: regional briefs. Bangkok: UNFPA. 2021-2024. Available at: https://asiapacific.unfpa.org/sites/default/files/pub-pdf/2025-08/AP%20midwifery%20report%20UNFPA%20final%20310725.pdf. Accessed on 21 May 2025.
61. ICM / WHO / UNFPA. Aligning national midwifery curricula with ICM competencies: regional lessons and tools. Geneva: WHO. 2022. Available at: https://internationalmidwives.org/wp-content/uploads/EN_ICM-Essential-Competencies-for-Midwifery-Practice-1.pdf. Accessed on 21 May 2025.

Cite this article as: Kumari R, Karthika S, Mundotiya M, Kalyani B, Umar M, Monisha JA, et al. Master's programs in midwifery education in South Asia: organizational frameworks, competency goals, and learning outcomes. Int J Reprod Contracept Obstet Gynecol 2025;14:3961-76.