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Facilitators of and barriers to providing high-quality midwifery education in South-East Asia—An integrative review

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ABSTRACT

Background: With a diversity in midwifery education across the South-East Asia region, and with the knowledge about the lifesaving competency of the midwife profession, this study's aim is to describe facilitators of and barriers to providing high-quality midwifery education in South-East Asia.
Methods: Inspired by Whittemore and Knafl, we conducted a systematic integrative literature review including the five key stages of problem identification, literature search, data evaluation, data analysis, and presentation of results. The literature searches were conducted in October 2020 in the databases CINAHL, PubMed, and Scopus. A deductive data analysis based on global standards was performed.
Results: The search identified 1257 articles, 34 of which were included. Countries in South-East Asia did not fully comply with the ICM global standards. Midwifery education was not separated from that of nursing, and educators lacked formal qualifications in midwifery. Curriculum implementation in the clinical area was a key barrier to achieving learning outcomes. Higher academic education for midwifery educators and mentorship programs facilitated the pedagogic and assessment process, focusing on the abilities of critical thinking, reflection, and decision-making.
Conclusions: Countries in South-East Asia still have a long way to go before they can provide high-quality midwifery education. The identified facilitators can lead to a difference in students' academic achievement and confidence in their clinical work. Coordinated actions will enable the progress in achieving competent midwives matching national health priorities. The findings highlight a need for more research on midwifery education in both theory and practice across the region.

Statement of significance

Problem or issue

Little is known about how midwifery education in South-East Asia stands against global standards.

What is already known

Accelerating quality midwifery education is a critical component in achieving good health and wellbeing for women and girls.

What this paper adds

Feasible suggestions for South-East Asia improving its midwifery education and thus producing midwives with evidence-based competency. This through the use of effective curriculum models tailored to country needs, teaching and assessment methods for competency-based education, and effective clinical learning settings.

1. Introduction

Improving maternal and newborn health is key to meeting universal health coverage and the Sustainable Development Goals (SDG) [1]. Midwives educated in a standard setting of high-quality education and regulation have been identified as forming a key

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profession for reducing maternal and newborn mortality and stillbirths, and saving 4.3 million lives annually by 2035. This applies if midwives are given the opportunity to work with an evidence-based approach on interdisciplinary teams and in a favorable environment [2]. High-quality midwifery education programs are therefore vital for educating competent midwives who can provide a high standard of safe, evidence-based care for women and newborns [3,4].

The South-East Asia region has made significant progress towards ending preventable maternal and newborn deaths. Between 2000 and 2019, the region reduced its maternal mortality rate by more than 57% and neonatal mortality by 60%. To meet the SDG targets, especially involving the health of mothers and newborns, sustained and accelerated progress is required [5]. South-East Asia, as stated in the 2014 State of the World's Midwifery report, stands for 29% of the region's midwifery workforce. According to the World Health Organizations (WHO's) recent Regional Strategic Directions for strengthening Midwifery in the South-East Asia Region 2020–2024 [5], it is clear that there is diversity in terms of recognizing midwives as a separate profession and the existence of educational standards based on the International Confederation of Midwives' (ICM) standards [3]. This variation is true not only for South-East Asia but also globally.

Globally there is great variation in who is called a midwife, how they are educated, and the resulting competencies [6]. The ICM has developed educational standards consisting of six domains. These standards are based on the best evidence available, and can be defined as a norm for a uniform reference point that describes the minimum level of achievement for the performance of midwifery education. They provide a framework for the design, implementation, and evaluation of the ongoing quality of programs, as well as information on how the education is aligned with regulatory bodies' scope of practice. These standards can hold midwifery programs accountable to the public and meet national and local workforce needs. It can be concluded that the standards address minimum length, entry-level and core competencies, minimum midwifery educator competency, and qualifications for becoming a fully qualified midwife and maintaining competency over time [3].

With a diversity in midwifery education across the South-East Asia region, and with the knowledge about the lifesaving competency of the midwife profession [2,7,8], this study's aim is to describe facilitators of and barriers to providing high-quality midwifery education in South-East Asia. The specific question we asked was how the midwifery education stands against the ICM's Global Midwifery Education Standards (Organization and Administration; Midwifery Faculty; Student Body; Curriculum; Resources, Facilities, and Services; and Assessment Strategies) [3] and includes the ICM Essential Competencies for Basic Midwifery Practice (ICM 2019) [9] in the standard related to the midwifery curriculum. The ICM Global Standards for Midwifery Education [3] were used to guide the review. This framework was chosen as its six areas relate to the minimum requirement to deliver high-quality midwifery education for producing competent graduates.

2. Method

2.1. Design

A systematic integrative literature review inspired by Whittemore and Knafl was undertaken to enhance methodological rigor. This systematic approach included the five key stages of problem identification, literature search, data evaluation, data analysis, and presentation of results. The use of an integrative review allows for the inclusion of both qualitative and quantitative studies, which is useful in an unexplored research area [10].

2.2. Literature search

The first step in the literature search was to identify inclusion and exclusion criteria using the PIOS approach (Population, Interventions, Outcomes, Study design). For details, see Table 1.

The search strategy for this review was performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines [11]. The search strategy was developed by the librarian authors (LH and HS) in collaboration with authors MB and KE. The search was deliberately broad in an effort to include all relevant articles. We used one multidisciplinary database (Scopus), one database focused on nursing (Cinahl), and one medical database (PubMed). The components for the search strategy were (a) midwives, (b) education, and (c) South-East Asia. For the full search strategy with all search terms used for each component, see Appendix A. No restrictions were applied to years searched or publication language.

The search resulted in 2058 results, with 1257 references remaining after de-duplication. The references were downloaded into the Rayyan web application for systematic reviews [12] to facilitate the review process, and authors MB and KE screened all titles and abstracts independently, resulting in 59 articles included for eligibility assessment. After a full text reading, 34 articles were included. The remaining 25 articles were excluded as they did not

Table 1
Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Participants	
Midwifery educators/tutors/teachers	Midwife practitioners
Midwife-nurse educators/tutors/teachers	Medical practitioners
Midwifery students	Nurse practitioners
Midwife-nurse students	
Clinical preceptors	
Clinical supervisors	
Clinical mentors	
South-East Asia as defined by WHO	
Interventions	
Midwifery education	Postgraduate training
Midwifery clinical education	
Outcome	
Facilitators of and barriers to providing midwifery education, academically and clinically	
Study design	
Original research	Secondary research such as commentaries and editorials
Studies published in English or with an English abstract	
Any year of publication	

meet the inclusion criteria. Disagreements regarding assessment were identified and discussed to reach agreement. Excluded articles and the reasons for their exclusion are presented in Table 2. Fig. 1 shows the PRISMA flowchart of the study selection and inclusion process.

2.3. Data evaluation

The quality of the 34 identified articles was assessed by two independent reviewers (AA, MT) using Pluye's Mixed Methods Appraisal Tool (MMAT). The MMAT is a critical appraisal tool that includes 25 criteria in five study categories that include qualitative, quantitative, and mixed-methods studies [13]. A "quality score" was calculated from the ratings of each criterion according to study type, and was multiplied by 100 to calculate a percentage score. All studies passed the threshold of 50%. Table 3 presents the characteristics and quality appraisals of all included articles.

2.4. Data analyses

The ICM Global Standards for Midwifery Education [3] were used to guide the deductive review. The analysis began with the articles being read and re-read to make sense of the whole. The text corresponding to the standards was extracted from the primary data sources. For this purpose, a matrix based on the standards was created and data were included for the respective standards: Organization and Administration; Midwifery Faculty; Student Body; Curriculum; "Resources, Facilities, and Services; and Assessment Strategies [3]. Selected sentences and small paragraphs from the primary data sources were extracted and systematically compared, which led to the identification of barriers to and facilitators of providing high-quality midwifery education in South-East Asia (Table 4). Thereafter, the content of the text was formulated under each of the six standards and presented as results.

Table 2
Excluded articles with reasons.

Article	Reason for exclusion
Paudel S, Poudel A, Arjyal A, G. C KB, Sarala KC. Analysis of health promoting lifestyle behaviors among nursing students from a college of a health sciences academy in kathmandu, nepal. Middle East Journal of Nursing. 2019;13(3):3–10.	Not according to aim
Chakravarty N, Nallala S, Mahapatra S, Chaudhury P, Sultana F, Bhattacharjee S. Blended training for frontline health functionaries: Is this the way ahead? Int J Prev Med. 2016;2016.	Not according to aim
Zamani S, Amini M, Masoumi SZ, Delavari S, Namaki MJ, Kojuri J. The comparison of the key feature of clinical reasoning and multiple choice examinations in clinical decision makings ability. Biomed Res. 2017;28(3):1115–9.	Not according to aim
Daly WM, Swindlehurst L, Johal P. Exploration into the recruitment of South Asian nurses. Br J Nurs. 2003;12 (11):687–96.	Not according to aim
Husaini, Panghiyangani R, Saputra M. The effects of health education toward HIV/AIDS knowledge and attitude on banjarbaru midwife academy students 2016. Indian J Public Health Res Dev. 2017;8(2):332–6.	Not according to aim
Kaur J, Kaur K, Gupta S, Kaur R. To Assess the Level of Knowledge Regarding Partogram among the Nursing Students in Selected Nursing College of Punjab. International Journal of Nursing Education. 2019;11(2):87–91.	Not according to aim
Simanullang E, Dioso RI. The implementation of midwifery competency standards in applying behaviour of normal childbirth care (APN) on bidan praktik mandiri pera. Enferm Clin. 2020;30:96–8.	Not according to aim
Chib A, Lwin MO, Ang J, Lin H, Santoso F. Midwives and mobiles: Using ICTs to improve healthcare in Aceh Besar, Indonesia. Asian J Commun. 2008;18(4):348–64.	Not according to aim
Mumin KHA. The development of midwifery education in Brunei Darussalam. British Journal of Midwifery. 2015;23 (8):580–7.	Not according to aim
Luyben A, Barger M, Avery M, Bharj KK, O'Connell R, Fleming V, et al. Exploring global recognition of quality midwifery education: Vision or fiction? Women Birth. 2017;30(3):184–92.	Not original research
Midwives to receive safe motherhood training. Safe Mother. 1995(17):1–2.	Not original research
Perry SE, Mander R. A global frame of reference: Learning from everyone, everywhere. Nurs Educ Persp. 2005;26 (3):148–51.	Not original research
Park IS. History of the national licensing examination for the health professions under the Japanese Government-General of Korea (1910–1945). J Educ Eval Health Prof. 2015;12:21.	Not original research
Goyet S, Tamang L, Alvarez VB, Shrestha ID, Bajracharya K. Progress and challenges to introduce midwifery education in Nepal. Lancet. 2017;389(10,070):698–9.	Not original research
Jegasothy R, Subramaniam T, Tukiman R, Jeganathan R, Jegasothy R, Subramaniam T, et al. The A to J of Curricular Change in Midwifery Training in Malaysia. Medical Education. 2014;48:15.	Not original research
Donnay F. [Vietnam: excessive practice of abortion]. Entre Nous Cph Den. 1994(25):16.	Not original research
Lee KH. Nurse-midwifery education through graduate programs to provide a sufficient number of high quality nurse-midwives. J Educ Eval Health Prof. 2006;3:5.	Not original research
Lee KH. Improving the standards of midwifery education and practice and extending the role of a midwife in Korean women and children's health care. Taehan Kanho Hakhoe Chi. 2003;33(8):1111–8.	Not original research
Thomas M. The midwifery nursing course: a study of problems faced by students. Nurs J India. 1996;87(2):36–8.	Not original research
Vichittragoonthavon S, Klunklin A, Wichaikhum OA, Viseskul N, Turale S. Essential clinical skill components of new graduate nurses: A qualitative study. Nurse Educ Pract. 2020;44:102778.	Not about education (but about postgraduates' skills)
Dornhofer K, Farhat A, Guan K, Parker E, Kong C, Kim D, et al. Evaluation of a point-of-care ultrasound curriculum taught by medical students for physicians, nurses, and midwives in rural Indonesia. J Clin Ultrasound. 2020;48 (3):145–51.	Not about education (but about postgraduates' skills)
Chandhiok N, Shrotri A, Joglekar NS, Chaudhury N, Choudhury P, Singh S. Feasibility of using partograph by practitioners of Indian system of medicine (AYUSH): An exploratory observation. Midwifery. 2015;31(7):702–7.	Not about education (but about postgraduates' skills)
Wright NH, Sujpluem C, Rosenfield AG, Varakamin S. Nurse-midwife insertion of the copper T in Thailand: performance, acceptance, and programmatic effects. Stud Fam Plann. 1977;8(9):237–43.	Not about education (but about postgraduates' education)
Moktan M, Mehta VK. Perception of nursing students' on clinical experience in the National Referral Hospital of Bhutan. J Educ Health Promot. 2020;9:94.	Not about education relating to clinical midwifery care (but about nursing)
McDermott J, Beck D, Buffington ST, Annas J, Supratikto G, Prenggono D, et al. Two models of in-service training to improve midwifery skills: how well do they work? J Midwifery Womens Health. 2001;46(4):217–25.	Not about education (but about in-service training)

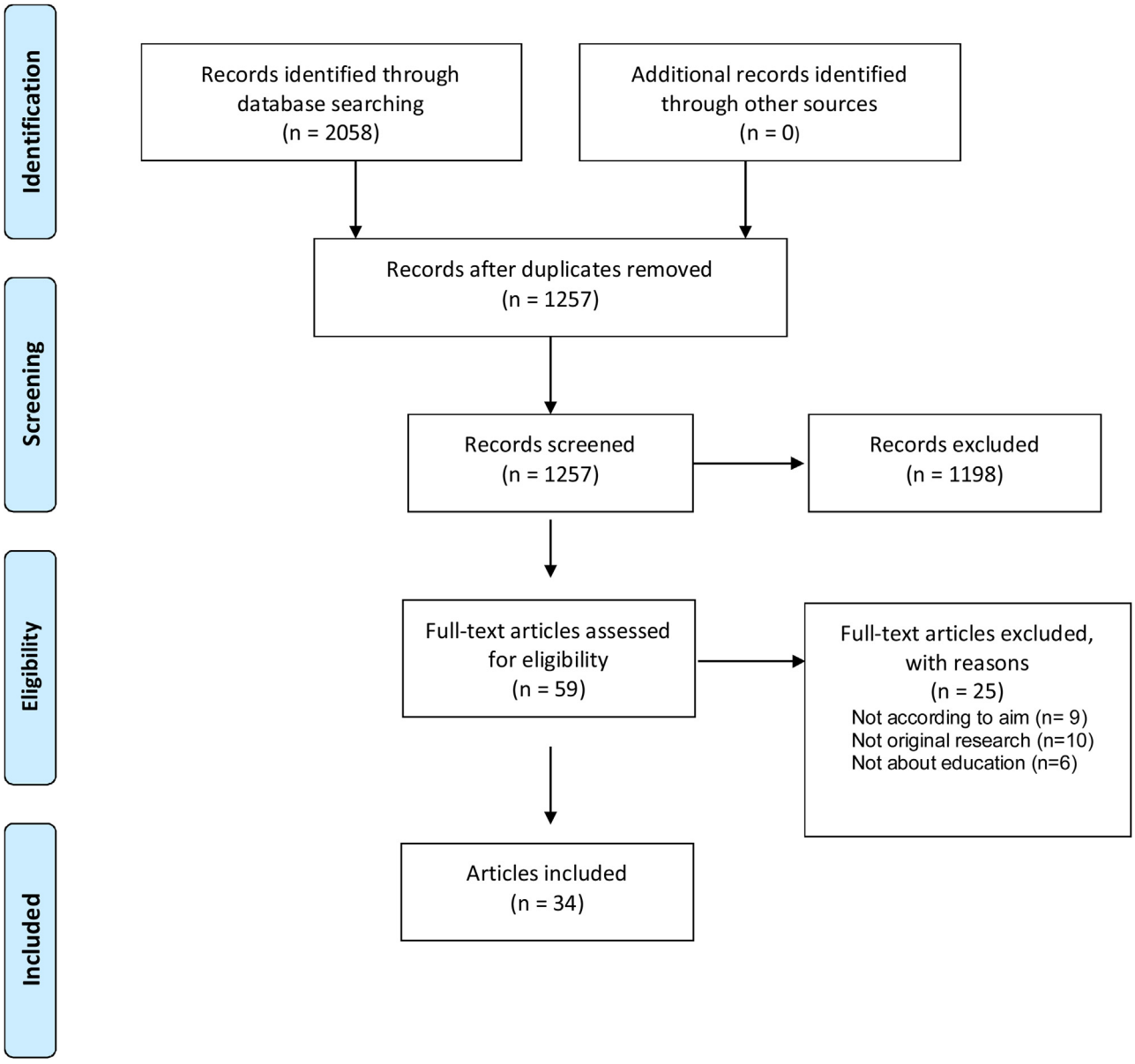

Fig. 1. PRISMA flow diagram.
From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:https://doi.org/10.1371/journal.pmed1000097.

3. Results

3.1. Characteristics of included studies

Thirty-four articles were included. The countries represented in this review were Bangladesh [14–21], Bhutan [17], India [17,18,22–34], Indonesia [18,34–43], Korea DPR [18], Myanmar [18,44], Nepal [15,17,18,45,46], and Thailand [47]. Although the ambition was to include all 11 countries in the WHO South-East Asia region, scientific articles from only eight countries were found. Ten articles reported qualitative methodology [15–17,25,33,34,36,37,45,47], 16 reported quantitative designs [14,22–24,27–32,35,40–44], and eight reported mixed-methods approaches [18,15–21,26,38,39,46]. Participants were students, authorities, and society and midwifery educators. The facilitators of and barriers to providing a high-quality midwifery education in South-East Asia are presented in the results with the six headings from the Global Standards for Midwifery Education: *Organization and Administration*; *Midwifery Faculty*, with the subcategories *Academic Educators* and *Clinical Educators*; *Student Body*; *Curriculum*, with the subcategories *Midwifery Educators at Teaching Institutions* and *Clinical Educators*; *Resources, Facilities, and Service*; and *Assessment Strategies.*

3.2. Organization and administration

A barrier to providing high-quality midwifery education across the South-East Asia region, except in Bangladesh [20] and Indonesia [36], entailed midwifery education being combined with nursing education [45]. In Bangladesh and Indonesia the national health sector plan supported midwifery education, while this was not reported for any of the other countries. Several of the studies [15,20,45,46] reported that the organization and administration at the educational institutions were politicized. This was characterized as a lack of collaboration between the government, non-governmental organizations, and academia, preventing

Table 3
Characteristics of included studies and their quality appraisal.

Author year title	Country method	Objectives	Quality* = low***** = High
Agrawal et al. 2016 Effectiveness of virtual classroom training in improving the knowledge and key maternal neonatal health skills of general nurse midwifery students in Bihar, India: A pre- and post-intervention study.	India Quantitative design. Pre- and post-intervention study.	To evaluate the effectiveness of virtual classroom training in improving the MNH-related skills of the nursing-midwifery students in Bihar, India.	100%*****
Balasubramaniam et al. 2018 Blending virtual with conventional learning to improve student midwifery skills in India	India Quantitative design. Intervention pre- and post- study without a control group.	To compare skills of two auxiliary nurse midwife student cohorts.	100%*****
Bogren et al. 2020 Findings from a context specific accreditation assessment at 38 public midwifery education institutions in Bangladesh	Bangladesh Quantitative design. Cross-sectional study.	To identify a number of structural shortcomings that are indicative of the issues that many midwifery education institutions in many low- and middle-income countries face	100%*****
Bogren and Erlandsson 2018 Opportunities, challenges and strategies when building a midwifery profession. Findings from a qualitative study in Bangladesh and Nepal.	Bangladesh and Nepal Qualitative design. Semi-structured interviews.	To identify opportunities and challenges when building a midwifery profession in Bangladesh and Nepal.	100%*****
Bogren et al. 2019 Build professional competence and Equip with strategies to empower midwifery students – An interview study evaluating a simulation-based learning course for midwifery educators in Bangladesh	Bangladesh Qualitative design. Semi-structured individual interviews.	To investigate the usefulness of a simulation-based learning course for midwifery educators in Bangladesh.	100%*****
Bogren et al. 2016 Shaping the midwifery profession in Nepal — Uncovering actors' connections using a Complex Adaptive Systems framework	Nepal Qualitative explorative study	To explore how actors connect in a system aimed at promoting the establishment of a midwifery profession in Nepal	100%*****
Bogren et al. 2013 Where midwives are not yet recognised: a feasibility study of professional midwives in Nepal	Nepal Mixed-methods design	To explore the feasibility of establishing a professional midwifery cadre in Nepal that meets the global standards for competencies, and to define a strategy for achieving this	100%*****
Bogren et al. 2012 Midwifery education, regulation and association in six South Asian countries – a descriptive report	Afghanistan, Bangladesh, Bhutan, India, and Nepal Qualitative design. Questionnaires.	To describe the situation of midwifery education, regulation, and association in six South Asian countries: Afghanistan, Bangladesh, Bhutan, India, Nepal, and Pakistan.	100%*****
Castro Lopes et al. 2016 A descriptive analysis of midwifery education, regulation and association in 73 countries: the baseline for a post-2015 pathway	Bangladesh, India, Indonesia, Korea DPR, Myanmar, Nepal Mixed-methods design	To explore specific aspects of ERA and highlight regional differences.	100%*****
Chandekar 2012 Preparedness of prospective nurses to work as midwives in hospital and community	India Quantitative design. A descriptive survey.	To assess curriculum adequacy, preparedness, and job preferences of prospective nurses.	80%****
Erlandsson et al. 2019 Evaluating a model for the capacity building of midwifery educators in Bangladesh through a blended, web-based master's programme	Bangladesh Mixed-methods design	To describe the expectations of midwifery educators in Bangladesh who took part in a blended web-based master's program in SRHR, and the extent to which these were realized after 12 months of part-time study	100%*****
Erlandsson et al. 2018 Capacity building of midwifery faculty to implement a 3-years midwifery diploma curriculum in Bangladesh: A process evaluation of a mentorship programme	Bangladesh Mixed-methods design. Process evaluation	To examine feasibility and adherence to a mentorship program among 19 midwifery faculty staff members lecturing in the three-year midwifery diploma-level program at ten institutes/colleges in Bangladesh	100%*****
Fullerton et al. 2016 A Rapid Assessment Tool for affirming good practice in midwifery education programming.	Myanmar Quantitative design	To design a criterion-referenced assessment tool that could be used globally for the rapid assessment of good practices and bottlenecks in midwifery education programs	100%*****
Gorantla et al. 2019 Introduction of an undergraduate interprofessional simulation based skills training program in obstetrics and gynecology in India	India Qualitative design	To evaluate the feasibility and benefit of the interprofessional skills training workshop in obstetrics and gynecology, which was introduced for medical and midwifery students at a secondary-level hospital in India	100%*****
Hariyanto et al. 2019 Developing inquiry-based learning materials to promote students' academic achievement	Indonesia Quantitative design. Questionnaire.	To develop English learning materials based on an inquiry approach to promote students' academic achievement	80%****
Hermasari et al. 2019 How does portfolio assess interprofessional learning among medical and midwifery students?	Indonesia Qualitative design	To evaluate interprofessional core competencies illustrated by IPE portfolios	100%*****
Indrayani et al. 2017 Expectations and prospects regarding the midwife services in Indonesia	Indonesia Qualitative design	To estimate the worth of midwifery education in Indonesia from the perception of stakeholders, providers, and consumers of midwife facilities	100%*****
Kumar et al. 2019 Mobile obstetric and neonatal simulation based skills training in India	India Mixed-methods design. Pre-post workshop survey design.	To identify the challenges faced by birthing staff in their clinical practice and the key messages learnt from the simulation programs that are applicable to their clinical practices	100%*****
Kusumaningtyas and Sulistyowati 2020 Development of logic based learning evaluation instruments	Indonesia Mixed-method design. Action research design with focus groups.	To compile the development of a logic-based clinical learning practice instrument	80%****

Table 3 (*Continued*)

Author year title	Country method	Objectives	Quality* = low***** = High
Mani 1980 A review of midwife training programs in Tamil Nadu	India Quantitative design	To examine the past experience in training and utilizing traditional midwives in Tamil Nadu's maternal and child health and family planning (MCH/FP) programs, during the period 1954–76.	80%****
Murry et al. 2019 Engaging Nursing Students with Small Group Learning in Midwifery Education	India Quantitative design	To assess the feasibility and experience of SGL in undergraduate nursing students.	100%*****
Nugraheny et al. 2016 Feedback in the nonshifting context of midwifery clinical education in Indonesia: A mixed methods study	Indonesia Mixed-methods design	To investigate what is the clinical supervisors' and students' perception regarding feedback delivery in the nonshifting midwifery clinical education and how is the current quality of feedback in the nonshifting context in Indonesia?	100%*****
Pamungkasari et al. 2020 The implementation of inter-professional education community curricula in Indonesian Universities	Indonesia Quantitative design. Observation cross-sectional study.	To analyze the effect of values as well as roles and responsibilities to health professional students' communication on inter-professional education.	80%****
Pratinidhi et al. 2014 Testing of simulation training device for assessment of cervical dilatation among nursing student of Karad, India	India Quantitative design. Study and control group.	To test a simulation training device as a teaching tool at a nursing college in Karad, India	100%*****
Randita et al. 2019 IPE-COM: a pilot study on interprofessional learning design for medical and midwifery students	Indonesia Quantitative design. Pre-experimental study with one group pre- and post-test design.	To investigate the effect of a community-based interprofessional educational learning on collaborative competencies (communication, collaboration, roles and responsibilities, collaborative patient-centered approach, team functioning, and conflict management)	80%****
Sharma et al. 2019 The association of teaching-learning methods and self-confidence of nurse-midwives. A survey from one province in India.	India Quantitative design. Cross-sectional survey.	To investigate the association between the self-confidence of final-year students in selected midwifery skills and teaching-learning methods used in the two formally recognized education programs for nurse-midwives in India	80%****
Sharma et al. 2018 Self-assessed confidence of students on selected midwifery skills: Comparing diploma and bachelors programs in one province of India	India Quantitative design. Cross-sectional survey.	To assess and compare the confidence of final-year students from these two programs for selected midwifery skills from the list of midwifery competencies issued by the International Confederation of Midwives (ICM)	100%*****
Sharma et al. 2015 Do the pre-service education programs for midwives in India prepare confident 'registered midwives'? A survey from India.	India Quantitative design. Cross-sectional survey.	To assess the confidence of final-year students from pre-service education programs (diploma and bachelor's) in selected midwifery skills from the list of midwifery competencies issued by the International Confederation of Midwives (ICM)	100%*****
Sharma et al. 2013 Midwifery scope of practice among staff nurses: a grounded theory study in Gujarat, India	India Qualitative design	To explore and describe the midwifery scope of practice among staff nurses	100%*****
Triana and Rajiani 2019 Interprofessional education module in achieving ethics/values, roles, responsibilities, professional communication competencies, and team collaboration among the college of health students	Indonesia Qualitative design. Observation and interviews.	To analyze the effectiveness of an interprofessional education module in the achievement of ethical/value competencies, roles, responsibilities, professional communication, and team collaboration	80%****
Ulfa et al. 2020 Effects of team-based learning about postpartum hemorrhage on learning outcomes and experience of midwifery students in Indonesia: A pilot study	Indonesia Quantitative design	To evaluate the effects of team-based learning about postpartum hemorrhage on the learning outcomes and experience of midwifery students in Indonesia	100%*****
Yanti et al. 2015 Students' understanding of "Women-Centred Care Philosophy" in midwifery care through Continuity of Care (CoC) learning model: a quasi-experimental study	Indonesia Quantitative design	To determine any differences in students' understanding of midwifery care philosophy between students who underwent the CoC learning model and those who underwent the fragmented care learning model	100%*****
Youngwanichsetha et al. 2020 Flipped Classroom Learning Experiences of Graduate Nursing Students in Advanced Pathophysiology and Pharmacology in Midwifery Course	Thailand Qualitative design	To describe students' learning experiences of the flipped classroom activities, supporting learning environments, and barriers to learning outcomes	60%***
Zaman et al. 2020 Experiences of a new cadre of midwives in Bangladesh: findings from a mixed method study	Bangladesh Mixed-methods design	To better understand the experience of the midwives of their education program and first posting as a qualified midwife, and to assess their midwifery knowledge and skills	100%*****

legislation of the profession. Governments in the region were reported to have a regulatory role, but this was in need of improvement for recognizing midwives as an autonomous regulated profession [18]. Academic levels in the midwifery education were under debate. In Bangladesh, India, Indonesia, Korea DPR, Myanmar, and Nepal there was diversity in the length of the education program, from three years direct entry to 6–18 months postgraduate [18]. Rather than providing opportunities for higher academic degrees, the focus was on keeping the education at the undergraduate level as a means to keep the midwifery workforce in the country [17,45]. The ICM *Global Standards for Midwifery Education* was regarded as a facilitating factor when contextualized into national educational polices and plans [15].

3.3. Midwifery faculty

The qualifications to become a midwifery educator varied across the region, from no formal qualifications to a master's degree-level requirement [14,17,19,20,46].

3.3.1. Midwifery educators at teaching institutions

In studies from Bangladesh, educators' lack of formal qualifications was reported as a main challenge in providing a high-quality

Table 4
An overview of facilitators of and barriers to providing high-quality midwifery education in South-East Asia.

Facilitators	Barriers
Organization and administration	
	Lack of:
• Including midwifery education in national health sector plans	• Midwifery education programs separated from nursing
• Governments having a regulatory role	• Collaboration between government, non-government organizations, and academia
• Recognizing midwives as an autonomous regulated profession	• Legislation of the profession
• Contextualization of ICM's global standards into national educational policies and plans	• Adequate length of midwifery education
	Higher academic degrees, keeping the education at undergraduate level
Midwifery faculty	
	Lack of:
• Different teaching and learning strategies such as using the Internet in teaching/learning and in communication	• Formal qualified midwifery educators
• Increased capacity in supporting students' learning through pedagogic approaches in exercises/assignments such as critical thinking, reflection, decision-making, teaching central aspects of midwifery	• Confidence in lecturing the central aspects of midwifery or understanding the midwifery practice fully, or not understanding the potential midwifery educators have to empower the students in the clinical practice
• Mentorship had effect on midwifery educators ability to fully understand the midwifery practice	• Designated supervisor/preceptor at clinical sites not formalized and students' learning outcomes are not achieved
• Students' enhanced learning experience through the midwifery faculty's promotion of creative and active learning strategies	• Communication between educational institution and clinical practice site regarding students' learning outcomes and what the curriculum and syllabus require students to achieve
• Formal education for midwifery educators aiming to build competence	
Student body	
	Lack of:
• Clear selection criteria based on interviews as well as written, personality, and medical tests declaring social, physical, and psychological fitness	• Uniformed entry requirements
• Clear student requirements focusing on the midwifery students' ability and awareness regarding respectful care and women's rights: to think critically, reflect, and make decisions	• Status: Midwifery students were at the bottom of the medical hierarchical structure
• Non-discrimination policy applied for students in hard-to-reach areas	• Time allocation to midwifery students for both theory and clinical practice
	• Learning outcomes achieved by the time of graduation
Curriculum	
	Lack of:
• Enabling environment and variety in pedagogic methods to enhance reflective learning processes to achieve the learning outcomes	• Uniformed requirements for the minimum length of education
• Course syllabus weaving together practical and theoretical learning	• Pedagogical methods and assessment strategies
• Simulation-based training for clinical procedures and non-clinical skills such as effective communication	• Following women through pregnancy, childbirth, and postpartum period
Resources, facilities, and service	
• Simulation-based training across disciplines make students more confident in collaboration and help break down professional boundaries	Lack of:
	• Computers, internet and course literature
	• Clinical practice sites during midwifery education
	• Meeting the requirements for supporting birth
	• Fulfilling the requirements for becoming a registered midwife
Assessment strategies	
Good assessment strategies tested in the region	Lack of:
• Periodic review of midwifery program in both theory and practice	• Implemented assessment strategies for clinical sites
• Context-specific accreditation tool affirming high-quality midwifery education	• Quality assurance of midwifery program in both theory and practice
• Logic-based learning evaluation instrument assessing the process of implementing clinical learning	
• Students' portfolios used to document and assess clinical experiences and evaluate students' learning process	
• Integrated feedback between supervisors and midwifery students	
• Inquiry-based learning with midwifery students involved analyzing, designing, developing, implementing, and evaluating learning	

midwifery education program. Bangladesh recently moved from having nurses with or without a midwifery qualification to supporting and introducing a three-year diploma in midwifery in an effort to provide a well-trained and high-quality midwifery workforce [14,15,17]. India [17,30], Bhutan [17], and Nepal [15,17,45] were similar, with midwifery educators being nurse-midwives and not trained as midwives according to ICM's global standards.

A facilitating factor found in articles from Bangladesh was the availability of a blended web- based master's degree program [19] and mentorship program [20] with sessions online and on-site. Midwifery educators learned different teaching strategies, including how to use the Internet in their teaching, communicating in less conventional ways, exercises in critical thinking, reflection, and decision-making. Educators became more confident in teaching the central aspects of midwifery, were enabled to support students' learning, and increased their capacity to use different learning strategies and pedagogical approaches. The mentorship was proven to have a good effect on midwifery educators' ability to fully understand the midwifery practice. Pedagogical tools were provided to help the faculty deliver the best pedagogical methods in order to educate their students according to global standards. The new pedagogical approaches enhanced students' learning experience by promoting creative and active learning strategies. The mentorship enabled the midwifery educators to recognize the potential they had to empower their students in their clinical practice [19,20].

3.3.2. Clinical educators

One of the major barriers reported in studies from Bangladesh and India was that the role of clinical educator/supervisor/preceptor was not formalized. Students could be supervised by whoever was on

duty, rather than a designated supervisor/preceptor [14,30]. Another barrier was the communication gap between the academic and clinical educators. Twenty nine percent of the supervisors/preceptors of the midwifery students at the clinical placement sites were not aware of the learning outcomes, i.e. what was required according to the midwifery curriculum [14]. The required number of 40 births before graduation was not met in Bangladesh (33%) or India (38–50%) [14,32]. A facilitating factor was a formal education for midwifery educators, aiming to build competent midwifery educators [16,19] communicating and collaborating between the education institute and the clinical practice site [14,30].

3.4. Student body

In Bangladesh, India, Indonesia, Korea DPR, Myanmar, and Nepal there was diversity in entry requirements [18]. Taking Indonesia as an example, potential students for admission were selected based on interviews as well as written, personality, and medical tests declaring social, physical, and psychological fitness [37]. Meanwhile, in Bangladesh, one reported barrier involved midwifery students being at the bottom of the medical hierarchy with discrimination from nursing faculty and students. In studies from Bangladesh and Nepal, it was reported that the time allocated to midwifery students for both theory and clinical practice was limited [21,46]. A facilitating factor was the clear student requirement focusing on their abilities of critical thinking, reflection, and decision-making. This made them aware of respectful care and women's rights [19]. Yet, studies confirmed that the learning outcomes were not achieved by the time of graduation [14,32]. In India, a non-discrimination policy was applied for students in hard-to-reach areas, with improved knowledge and skills among nursing-midwifery students [22,23].

3.5. Curriculum

According to data from a study published in 2012, only a few countries in the South-East Asia region met the ICM requirement for the minimum length of education [17]. Curricula from a few weeks to about six months were applied for nurses to achieve recognition as a midwife, without being recognized by international standards [22–24,29,30,33,46]. Shortcomings in the inclusion of pedagogical methods and assessment strategies in the curriculum were identified in several studies [14,19,21,23,24]. However, it was described that an enabling learning environment and different pedagogical methods are included in the curricula in studies from India [22,28], Indonesia [35,42,43], and Thailand [47]. Various pedagogic approaches were included in the curricula and syllabuses in India and Indonesia to achieve the learning outcomes [29,39]. Two other studies from the same countries stressed group work as a means to facilitate a reflective learning process [28,42]. A course syllabus weaving together practical and theoretical learning was shown to contribute to students' self-confidence and to the woman's and newborn's safety [16,23,25,29–31]. Hence, an activity to include in the syllabus would be for the student to follow one to three women throughout their pregnancy, childbirth, and postpartum period. This, according to a study from Indonesia, would support self-confidence and practical learning for the student and safer care for the woman [43]. Another facilitator was the inclusion of simulation-based training in the curriculum and syllabus, identified as an effective method for teaching clinical procedures, and nonclinical skills such as effective communication [16,26].

3.6. Resources, facilities, and service

A renewal of resources, facilities, and services, such as the availability of computers and Internet, was reported as critical in assisting students' learning in both theory and practice [14,37]. There was a lack of computers, Internet, and course literature in several of the educational institutions in the region [14,19,21,22,28,44,46]. These barriers were described already in the 80 s in India, when educational institutions were assigned to train midwives in maternal and child health and family planning services [27]. A main barrier in Bangladesh was that 25% of its midwifery educational institutions stated that they could not offer midwifery students enough clinical practice sites related to sexual and reproductive maternal and newborn care services [14]. This barrier was similar in India, where nearly 30% of the students reported not having enough clinical practice during their education. This resulted in an insecurity among the students to work independently with midwifery care [24].

A main barrier identified in clinical education was that the midwifery students had to compete with medical students, intern doctors, doctors, and nursing students for hands-on practice [21]. Midwifery students reported not being confident in hands-on experiences [32], and 33% of students expressed that they did not fulfill the registration requirements set by the India Nursing Council [24]. This situation was the same in Bangladesh, where midwifery students at 33% of all public nursing institutes did not meet the clinical requirements for a registered midwife supporting births [14]. This lack of priority exposes nursing and midwifery students to restricted clinical education [33]. In places where interprofessional collaboration has been implemented in hands-on practice using workshops and simulation-based training between medical and nurse-midwife students, the gap between theoretical and practical competencies in antepartum, intrapartum, postpartum and newborn care has decreased [25,30]. Such education can make students more confident working in collaboration across the disciplines [25,26,28,31,42] and help break down professional boundaries [25,34,40–42].

3.7. Assessment strategies

A main barrier was the lack of availability of assessment strategies to assess clinical sites, where 50% of the midwifery education took place [14]. In Bangladesh, a key barrier found was that the midwifery institutions did not assess the quality of the clinical sites where they posted students for their clinical education. This in turn led to midwifery students graduating without achieving the defined learning outcomes for supporting a woman during birth [14]. Facilitating factors were a periodic review of the midwifery program in both theory and clinical education, tested in Myanmar [44]. Meanwhile, in Bangladesh a context-specific accreditation tool for affirming high-quality midwifery education has been developed [15] and implemented [48]. A logic-based learning evaluation instrument for students was developed in Indonesia to assess the process of implementing clinical learning [38], while in another study from Indonesia, students' portfolios were used to document and assess clinical practice experiences and evaluate their learning process in order to reach learning outcomes [36]. The use of integrated feedback between supervisors and students was another assessment strategy for encouraging students to be confident in their clinical work [39].

In Indonesia, another assessment strategy involved inquiry-based learning, an approach by which midwifery students were involved in analyzing, designing, developing, implanting, and evaluating learning. Such a learning approach made a significant difference in students' academic achievement [35].

4. Discussion

The results revealed that the studied countries in South-East Asia did not fully comply with the ICM global standards. The key barriers identified were midwifery education not being separated from nursing education; midwifery educators lacking formal

qualifications to become a midwifery educator and lacking pedagogical strategies to enable students' learning; an inadequate admission selection system; lack of clinical hand-on experience; shortage of resources, facilities, and services; and assessment strategies not meeting the learning outcomes. A facilitator was the midwifery education being in line with global standards and integrated in national health sector plans and strategies. Interprofessional education helped students to work more confidently in collaboration across disciplines. Higher academic education for midwifery educators and mentorship programs facilitated the pedagogic and assessment process, focusing on their abilities of critical thinking, reflection, and decision-making.

The *Organization and Administration* standard stands for national support of the midwifery education's philosophy, aims, and objectives [3]. This review identified that institutions did not separate midwifery from nursing education, meaning that the philosophy, aims, and objectives of midwifery education were not being taught and practiced. Although reported by WHO's Regional Strategic Directions for strengthening Midwifery in the South-East Asia Region 2020–2024 [5] that several of the countries have a clear definition of the midwife profession, this is not fully reflected in their licensing for autonomous midwifery practice. This is a challenge not only in the South-East Asia region examined in this study but also in Sub-Saharan Africa, the Eastern Mediterranean, the Western Pacific, and the Americas [18]. Hence, when the *Organization and Administration* standard of the midwife education does not lead to a license, there is no logical relationship in education, regulation, and practice, which according to the WHO midwifery education action framework is crucial for securing high-quality midwifery services [4].

The *Midwifery Faculty* standard states that midwifery educators should have a formal midwifery education and training in pedagogy, with at least two years of work experience as a midwife [3]. Articles included in this review proved that several countries in South-East Asia did not have the formal qualifications to be midwifery educators in theory and clinical supervision. The mission to appoint well-qualified educators and clinical preceptors was a challenge, as very few were qualified midwives. In a study from Ethiopia, Ghana, and Malawi, the challenges were similar. One of the challenges was to identify midwifery educators who were up-to-date in their knowledge and proficient in their clinical skills, in combination with having the appropriate skills to teach, mentor, and evaluate students in classroom and clinical settings [49]. Well-qualified educators are an essential component of quality midwifery education and practice. Building midwifery educators' capacity through the provision of higher education, accreditation guidelines, and mentorship might have the potential to enhance retention, foster greater commitment for the institutions, increase research, and contribute to the attainment of national goals [50].

Student Body includes the notion that the midwifery education programs have clearly defined admission policies, including entry requirements as well as transparent recruitment policies, selection process, and criteria for acceptance [3]. This study revealed only a few findings related to the *Student Body* standard. Academic pathways typically require the completion of secondary school, with 12 years of study. This has been defined by the ICM as the entry requirement required for midwifery education and practice [3]. Our findings showed a variation in student entry requirements and transparent recruitment policies, selection process, and criteria for acceptance; this indicates the importance of a review of national admission policies, including these aspects, as this may affect students' rights.

According to the ICM global standards, a *Curriculum* consists of two paths to becoming a qualified midwife: either a three-year midwifery education program, or a 1.5-year post-nursing program. Both programs should contain a minimum of 50% practice and 40% theory, with a total of at least 40 births and 30 normal vaginal births [3]. This review showed variation from a three-year direct-entry program to a few weeks' to six months' add-on for nurses to achieve the recognition of midwife, without meeting international standards. In contrast, multicounty collaboratives in support of midwifery education have been developed in the Africa region [49]. Similar initiatives were established in 2005 in the South-East Asia region through the WHO/SEARO Nursing and Midwifery collaborative centers [51]. These models could serve as support in achieving the common learning objective to develop a regional curriculum and thus harmonize a midwifery education informed by global standards. With support from global research, the midwifery curriculum would benefit from being updated. Of the world's 73 low- and middle-income countries, around half have updated their curricula in the past three years [18]. Thus, effective curriculum models including effective teaching methods for competency-based education [52], tailored to country needs, are suggested.

Resources, facilities, and service include sufficient teaching and learning resources to ensure adequate classroom/theoretical and practical learning [3]. This study revealed that countries in the South-East Asia region faced inadequate infrastructure, outdated material, a lack of qualified educators who were midwives themselves, and a lack of access to computers and Internet. The overarching barrier to fulfilling the learning outcomes were insufficient access to meet the ICM guidance of a minimum of 50 new prenatal visits, 100 repeat prenatal visits, 50 labors and births, 50 newborn examinations, and 100 primary care/family planning visits for each student admitted across the combination of practical sites used during the program [53]. Studies from Australia and the Netherlands have described models for best practice for the clinical supervision of midwifery students [54,55]. Developing a best practice model for effective clinical supervision and learning for midwifery students in South-East Asia is critical in order to develop midwifery graduates who meet the global definition of a midwife [56] who is "fit for practice".

Assessment Strategies include the midwifery faculty using valid and reliable evaluation/assessment methods to measure student performance and progression in both theory and practice learning [3]. This study showed a lack of students' clinical practice to achieve learning outcomes integrating theory into practice. This leads to students graduating without sufficient competencies. To come to terms with this situation, assessment strategies need to be developed as part of the course syllabus as per constructive alignment [52]. The developed assessment strategies need to be presented to clinical preceptors and implemented for midwifery students at clinical practice sites, particularly in relation to competency in practical hands-on skills. To support effective assessment strategies, midwifery education programs in the South-East Asia region would benefit from implementing effective communication and collaboration between students, academic institutions, and clinical placement sites as suggested in a recent literature review [54]. This to ensure that students fulfill the learning outcomes. As shown in our review, Indonesia seems to be at the forefront, with four studies involving assessment strategies. Accreditation has been identified as one means to ensure high-quality midwifery education [57]. Bangladesh was the only country in the region with an inbuilt intention to continuously improve and develop the education through a context-specific accreditation tool. Such a tool could be used to inspire other countries in the region, to guide them in developing assessment strategies for improving the quality of their midwifery education.

4.1. Strengths and limitation

Integrative literature review enables a broader search area, which is useful when there is limited research within the selected

area. The combination of including articles using qualitative, quantitative, and mixed methods strengthens this literature review by not excluding articles depending on their method but rather including them depending on their content [10]. The integrative method offers the possibility to adopt a more holistic and comprehensive understanding of the results, and thereby strengthens the credibility of the main findings in this review [58]. In this case, the integrative method has been time-consuming due to a larger range of articles to be assessed, analyzed, and synthesized. Combining different data sources is complex and challenging, and the user must have knowledge of both qualitative, quantitative, and mixed-methods research in order to be able to assess the process that led to the results of the articles, in order to ultimately prevent bias [10]. Generalizability and transferability may have been affected by the discrepancy between reported and anecdotal data. The scientific data are fragmented: from three of the 11 countries addressed here no scientific data are available. This is a finding in itself, conveying the message that the countries with no published studies addressing midwifery education are those in the most need of producing evidence on this topic.

5. Conclusion

The findings from this integrative systematic review on facilitators of and barriers to providing high-quality midwifery education in South-East Asia conclude that there is a long way to go to achieve a high-quality midwifery education in the region. The identified facilitators can if applied, lead to a significant difference in students' academic achievement and confidence in their clinical work. The solutions for producing midwives with sufficient competency in the region and settings with similar conditions could be through coordinated actions in the following:

- Including midwifery education in national health sector plans
- Contextualizing global standards into national educational policies and plans
- Building midwifery educators competence through formal education and the provision of mentorship
- Making students more confident through simulation-based training across disciplines
- Affirming high-quality midwifery education with the use of a context-specific accreditation tool
- Evaluating students' clinical learning process with the use of portfolios including feedback between supervisors and midwifery students

It is anticipated that these actions will enable the progress in achieving competent midwives matching health system demand and national health priorities. The findings highlight a need for more research on midwifery education in both theory and practice across the region.

Conflicts of interest

None declared.

Ethical statement

None declared.

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Author contributions

MB and KE designed the review, and the search strategy was developed by LH and HS in collaboration with MB and KE. LH and HS conducted the literature search. MB, KE, AA, and MT performed the selection of studies for inclusion, the extraction of data, and the presentation of results. MB and KE wrote the first draft of the paper, to which all authors contributed. All authors have approved the final manuscript.

Appendix A.

PubMed 2020-10-09

#10	#3 AND #6 AND #8	842
#9	#7 OR #8	2674186
#8	educat*[tiab] OR training[tiab] OR school*[tiab] OR college*[tiab] OR institut*[tiab] OR student*[tiab] OR curriculum[tiab] OR curricula[tiab] OR syllabus[tiab] OR syllabi[tiab] OR faculty[tiab] OR faculties[tiab] OR teach*[tiab] OR university[tiab] OR universities[tiab] OR mentor*[tiab] OR supervisor*[tiab] OR preceptor*[tiab] OR "Clinical practice site*"[tiab] OR learn*[tiab] OR "clinical clerkship"[tiab]	2345451
#7	"Education"[Mesh]	
#6	#4 OR #5	319230
#5	bangladesh[tiab] OR bhutan[tiab] OR korea[tiab] OR india[tiab] OR indonesia[tiab] OR indonesian[tiab] OR timor[tiab] OR java[tiab] OR bali[tiab] OR sumatra[tiab] OR celebes[tiab] OR sulawesi[tiab] OR "Irian Jaya"[tiab] OR maldives[tiab] OR myanmar[tiab] OR myanma[tiab] OR burma[tiab] OR nepal[tiab] OR "Sri Lanka"[tiab] OR ceylon[tiab] OR thailand[tiab] OR "Timor-Leste"[tiab] OR "East timor"[tiab] OR "South East Asia"[tiab] OR "South Asia"[tiab] OR "Southern Asia"[tiab] OR "Southeastern Asia"[tiab] OR "Southeast Asia"[tiab]	236418
#4	"Bangladesh"[Mesh] OR "Bhutan"[Mesh] OR "Korea"[Mesh] OR "India"[Mesh] OR "Indonesia"[Mesh] OR "Sri Lanka"[Mesh] OR "Thailand"[Mesh] OR "Timor-Leste"[Mesh]	203335
#3	#1 OR #2	36133
#2	midwife*[tiab] OR midwifery[tiab] OR nurse-midwi*[tiab] OR midwive*[tiab]	25191
#1	"Midwifery"[Mesh] OR "Nurse Midwives"[Mesh]	24944

Scopus 2020-10-09

#4	#1 AND #2 AND #3	1086
#3	TITLE-ABS-KEY (educat* OR training OR school* OR college* OR institut* OR student* OR curriculum OR curricula OR syllabus OR syllabi OR faculty OR faculties OR teach* OR university OR universities OR mentor* OR supervisor* OR preceptor* OR "Clinical practice site*" OR learn* OR "clinical clerkship")	9717174
#2	TITLE-ABS-KEY (bangladesh OR bhutan OR korea OR india OR indonesia OR indonesian OR timor OR java OR bali OR sumatra OR celebes OR sulawesi OR "Irian Jaya" OR maldives OR myanmar OR myanma OR burma OR nepal OR "Sri Lanka" OR ceylon OR thailand OR "Timor-Leste" OR "East timor" OR "South East Asia" OR "South Asia" OR "Southern Asia" OR "Southeastern Asia" OR "Southeast Asia")	1073550
#1	TITLE-ABS-KEY (midwife* OR midwifery OR nurse-midwi* OR midwive*)	46155

Cinahl 2020-10-09

#12	Limit: peer review	130
#11	#7 AND #10	174
#10	#8 OR #9	408
		234
#9	(TI educat*) OR (AB educat*) OR (TI college*) OR (AB college*) OR (TI universit*) OR (AB universit*) OR (TI student*) OR (AB student*) OR (TI training) OR (AB training) OR (TI mentor*) OR (AB mentor*) OR (TI curricul*) OR (AB curricul*) OR (TI teach*) OR (AB teach*) OR (TI syllab*) OR (AB syllab*) OR (TI facult*) OR (AB facult*) OR OR (TI supervis*) OR (AB supervis*) OR (TI learning) OR (AB learning) OR (TI preceptor*) OR (AB preceptor*) OR (TI "Clinical practice site*") OR (AB "Clinical practice site*") OR (TI	271 974

	"clinical clerkship") OR (AB "clinical clerkship") OR (TI school*) OR (AB school*) OR (TI institut*) OR (AB institut*)	
#8	(MH "Education+") OR (MH students+) OR (MH mentorship) OR (MH "Colleges and Universities+") OR (MH "Schools, Health Occupations+") OR (MH curriculum) OR (MH teaching+) OR (MH faculty+) OR (MH Supervisors and Supervision+) OR (MH learning+) OR (MH preceptorship+)	254 834
#7	#3 AND #6	353
#6	#4 OR #5	17 975
#5	(TI midwife*) OR (AB midwife*) OR (TI midwive*) OR (AB midwive*) OR (TI nurse-midwi*) OR (AB nurse-midwi*)	11 896
#4	(MH "Midwifery+") OR (MH "Lay Midwifery+") OR (MH "Nurse-Midwifery Service+") OR (MH "Education, Nurse Midwifery+") OR (MH "Midwives+")	12 657
#3	#1 OR #2	23 053
#2	(TI “Southeastern Asia”) OR (AB “Southeastern Asia”) OR (TI “South east Asia”) OR (AB “South east Asia”) OR (TI “Southern Asia”) OR (AB “Southern Asia”) OR (TI “south asia”) OR (AB “south asia”) OR (TI Bangladesh) OR (AB Bangladesh) OR (TI Bhutan) OR (AB Bhutan) OR (TI korea) OR (AB korea) OR OR (TI india) OR (AB india) OR (TI indonesia) OR (AB indonesia) OR (TI timor) OR (AB timor) OR (TI java) OR (AB java) OR (TI bali) OR (AB bali) OR (TI sumatra) OR (AB sumatra) OR (TI celebs) OR (AB celebs) OR (TI sulawesi) OR (AB sulawesi) OR (TI "Irian Jaya") OR (AB "Irian Jaya") OR (TI maldives) OR (AB maldives) OR (TI myanmar) OR (AB myanmar) OR (TI burma) OR (AB burma) OR (TI nepal) OR (AB nepal) OR (TI “Sri Lanka”) OR (AB “Sri Lanka”) OR (TI ceylon) OR (AB ceylon) OR (TI thailand) OR (AB thailand) OR (TI "Timor-Leste") OR (AB "Timor-Leste") OR (TI "East timor") OR (AB "East timor")	9 604
#1	(MH "Asia, Southeastern+") OR (MH Bangladesh) OR (MH Bhutan) OR (MH korea) OR (MH india) OR (MH indoneasia) OR (MH timor) OR (MH java) OR (MH bali) OR (MH sumatra) OR (MH maldives) OR (MH myanmar) OR (MH burma) OR (MH nepal) OR (MH “Sri Lanka”) OR (MH thailand) OR (MH “East timor”)	19 817

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