

Effectiveness of Nurse- and Midwife-Led Lactation Counseling on Exclusive Breastfeeding Rates: A Systematic Review

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Systematic Review

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Abstract

Background

Exclusive breastfeeding (EBF) for the first six months of life provides optimal nutrition and immune protection for infants; however, global adherence remains suboptimal. Nurses and midwives play a pivotal role in promoting breastfeeding through structured counseling and continuous support.

Aim

To systematically evaluate the effectiveness of nurse- and midwife-led lactation counseling on exclusive breastfeeding rates and to identify intervention components associated with improved maternal and infant outcomes.

Methods

A systematic search of PubMed (MEDLINE), Scopus, and Google Scholar was conducted for studies published between January 2020 and December 2025. Eligible studies included nurse- or midwife-led structured counseling, peer support, or digital/telehealth interventions reporting measurable exclusive breastfeeding outcomes. Study selection followed PRISMA 2020 guidelines. Methodological quality was assessed using Joanna Briggs Institute (JBI) critical appraisal tools. Due to heterogeneity in study designs, intervention modalities, and outcome assessment time points, findings were narratively synthesized.

Results

Thirteen studies conducted across Asia, Europe, Africa, and North America met the inclusion criteria. Study designs included randomized controlled trials, quasi-experimental studies, cross-sectional studies, and cluster randomized trials. Structured nurse- and midwife-led counseling was associated with a 10–30% increase in exclusive breastfeeding rates at follow-up periods ranging from six weeks to six months postpartum. Interventions combining antenatal and postnatal counseling demonstrated greater effectiveness than isolated postnatal interventions. Peer-supported and group-based counseling enhanced maternal breastfeeding self-efficacy and confidence, while digital and telehealth interventions improved accessibility and continuity of lactation support.

Conclusions

Nurse- and midwife-led lactation counseling is an effective strategy for improving exclusive breastfeeding rates and maternal psychosocial outcomes. Multimodal interventions integrating structured counseling with peer and digital support appear most beneficial. Strengthening nurse- and midwife-led breastfeeding support within routine maternal care may contribute to improved maternal and child health outcomes.

Contribution of the Paper

What is already known

- Nurse- and midwife-led lactation counseling improves breastfeeding confidence and maternal self-efficacy.
- Structured counseling and peer support positively influence exclusive breastfeeding rates.
- Digital breastfeeding interventions enhance accessibility and continuity of lactation support.

What this paper adds

- Synthesizes recent international evidence (2020–2025) demonstrating that nurse- and midwife-led counseling increases exclusive breastfeeding rates by 10–30%.
- Highlights that interventions combining structured counseling with peer and digital support yield the most consistent improvements in breastfeeding outcomes.
- Identifies workload, limited formal training, and cultural misconceptions as key barriers affecting the effectiveness of nurse- and midwife-led breastfeeding support.

Introduction

Exclusive breastfeeding (EBF) for the first six months of life is universally recognized as the optimal infant feeding practice, providing complete nutrition and protection against infectious diseases. Despite strong global recommendations, exclusive breastfeeding rates remain suboptimal in many regions. In India, fewer than two-thirds of infants are exclusively breastfed for the recommended duration, indicating persistent gaps in breastfeeding support and maternal education.

Nurses and midwives occupy a central position in maternal and newborn care and are uniquely placed to influence breastfeeding practices through education, counseling, and sustained follow-up. Evidence suggests that mothers receiving professional breastfeeding counseling from nurses or midwives are significantly more likely to initiate and maintain exclusive breastfeeding. In recent years, peer support models and digital health technologies have expanded the scope of lactation counseling beyond traditional face-to-face interactions.

This systematic review evaluates the effectiveness of nurse- and midwife-led lactation counseling in improving exclusive breastfeeding rates and identifies intervention characteristics that enhance maternal and infant outcomes.

Methods

Search Strategy

A comprehensive systematic search was conducted in PubMed (MEDLINE), Scopus, and Google Scholar to identify relevant studies published between January 2020 and December 2025. These databases were

selected to ensure broad coverage of biomedical, nursing, and public health literature. The review adhered to PRISMA 2020 reporting guidelines.

The search strategy combined Medical Subject Headings (MeSH) and free-text terms. The PubMed search strategy was:

("exclusive breastfeeding" OR "breastfeeding" OR "infant feeding") AND

("nurse-led" OR "midwife-led" OR "nursing intervention" OR "lactation counseling") AND

("counseling" OR "education" OR "support").

The strategy was adapted for Scopus and Google Scholar. Reference lists of included studies were manually screened to identify additional eligible articles.

Inclusion Criteria

- Nurse- or midwife-led breastfeeding interventions
- Structured counseling, peer support, or digital/telehealth interventions
- Quantitative, qualitative, or mixed-methods studies reporting exclusive breastfeeding outcomes
- English-language publications

Exclusion Criteria

- Studies without nursing or midwifery involvement
- Studies not reporting exclusive breastfeeding outcomes
- Editorials, commentaries, or opinion pieces without primary data
- Non-English publications

Screening and Selection

Thirty-three records were identified through database searching. No additional records were identified through other sources. After removal of duplicates and title/abstract screening, 17 full-text articles were assessed for eligibility. Four studies were excluded due to lack of nursing involvement ($n = 2$), absence of exclusive breastfeeding outcomes ($n = 1$), or editorial format ($n = 1$). Thirteen studies were included in the final review. The study selection process is presented in Fig. 1 in accordance with PRISMA 2020 guidelines.

Data Extraction

Data extracted included author, year, country, study design, sample size, intervention description, outcome measures, timing of outcome assessment, and key findings.

Quality Assessment

Methodological quality was assessed using Joanna Briggs Institute (JBI) critical appraisal tools appropriate to each study design. All included studies met minimum quality criteria.

Data Synthesis

Due to heterogeneity in study designs, intervention components, outcome measures, and timing of assessment, meta-analysis was not feasible. A narrative synthesis was therefore undertaken.

Protocol Registration

Protocol Registration
This review was not registered in PROSPERO.

Results

Characteristics of Included Studies

The 13 included studies were conducted in Asia, Europe, Africa, and North America. Study designs included randomized controlled trials (n = 6), quasi-experimental studies (n = 3), cross-sectional studies (n = 2), and cluster randomized controlled trials (n = 2). Sample sizes ranged from 120 to 382 participants.

The characteristics of the included studies are summarized in Table 1.

Table 1
Characteristics of Included Studies

Author (Year)	Country	Study design	Sample size	Intervention description	Outcome measures	Timing of outcome assessment
Karimi & Maleki (2024)	Iran	RCT	180	Structured nurse-led antenatal and postnatal breastfeeding counseling	EBF rate, maternal confidence	1, 3, 6 months
Şimşek-Çetinkaya et al. (2024)	Turkey	RCT	152	Midwife-led individualized counseling	EBF, breastfeeding self-efficacy	6 weeks, 3 months
Fallah Karimi et al. (2025)	Iran	Quasi-experimental	200	Nurse-led group education with follow-up	EBF rate	3, 6 months
Rodríguez-Gallego et al. (2024a)	Spain	Cluster RCT	240	Midwife-led structured antenatal counseling	EBF, maternal satisfaction	1, 6 months
Rodríguez-Gallego et al. (2024b)	Spain	RCT	198	Postnatal counseling + peer groups	EBF, self-efficacy	3 months
Yang et al. (2024)	China	RCT	300	Nurse-led mobile app counseling	EBF rate	1, 3, 6 months
Deybasso et al. (2024)	Ethiopia	Cross-sectional	382	Facility-based nurse counseling	EBF prevalence	6 months
Bengough et al. (2022)	USA	Quasi-experimental	145	Nurse-coordinated peer support	EBF continuation	3 months
Keenan-Devlin et al. (2024)	USA	Cluster RCT	210	Multicomponent nurse-led support	EBF rate	Discharge, 6 weeks
McGovern et al. (2024)	Ireland	RCT	168	Midwife-led behavioral intervention	EBF, maternal behavior	3, 6 months
Ramadan et al. (2025)	Egypt	RCT	190	Nurse-led structured counseling	EBF rate	6 weeks, 3 months
Acheampong & Abukari (2021)	Ghana	Cross-sectional	120	Community nurse education	EBF prevalence	6 months

Author (Year)	Country	Study design	Sample size	Intervention description	Outcome measures	Timing of outcome assessment
He et al. (2025)	China	RCT	260	Nurse-led telehealth follow-up	EBF rate	1, 3, 6 months

Effectiveness of Nurse- and Midwife-Led Counseling

Structured counseling delivered by nurses or midwives consistently improved exclusive breastfeeding rates, with reported increases ranging from 10% to 30%. Interventions initiated antenatally and continued postnatally were more effective than postnatal-only counseling.

Peer and Digital Interventions

Peer-supported and group-based counseling enhanced maternal confidence and self-efficacy and reduced postpartum anxiety. Digital and telehealth interventions improved access and continuity of lactation support, though challenges related to digital literacy were noted.

Barriers and Facilitators

Barriers included high workload, limited training, cultural misconceptions, and institutional constraints. Facilitators included ongoing education, supportive policies, peer mentorship, and digital tools.

Discussion

This review demonstrates that nurse- and midwife-led lactation counseling is an effective strategy for improving exclusive breastfeeding rates and maternal psychosocial outcomes. Multimodal interventions integrating structured counseling, peer support, and digital follow-up yielded the strongest results.

These findings are highly relevant to European maternal healthcare systems, where nurses and midwives play a central role in preventive and community-based care. Strengthening nurse- and midwife-led breastfeeding support aligns with public health priorities focused on early life interventions and maternal empowerment.

Limitations

Heterogeneity in study designs and outcome measures limited meta-analysis. Restriction to English-language publications may have excluded relevant studies. Although not registered in PROSPERO, methodological rigor was maintained through PRISMA-guided reporting and structured quality appraisal.

Implications for Practice

- Integrate structured nurse- and midwife-led counseling into routine care
- Use peer and digital support to enhance continuity
- Invest in professional lactation training

Implications for Research

- Standardize outcome measures
- Conduct long-term and implementation studies

Conclusions

Nurse- and midwife-led lactation counseling significantly improves exclusive breastfeeding rates and maternal self-efficacy. Multimodal, continuity-based approaches should be integrated into routine maternal healthcare to optimize breastfeeding outcomes globally.

Abbreviations

EBF

Exclusive breastfeeding

IBCLC

International Board Certified Lactation Consultant

JBI

Joanna Briggs Institute

PRISMA

Preferred Reporting Items for Systematic Reviews and Meta-Analyses

WHO

World Health Organization

Declarations

Ethics approval and consent to participate

Not applicable. Ethical approval was not required for this study as it is a systematic review based on previously published literature.

Consent for publication

Not applicable.

Availability of data and materials

All data generated or analyzed during this study are included in this published article and its supplementary information files.

Competing interests

The author declares that she has no competing interests.

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Authors' contributions

MM conceptualized the study, conducted the literature search, screening, data extraction, and quality appraisal, performed the data synthesis, and drafted the manuscript. The author read and approved the final manuscript.

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Figures

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Figure 1

Legend not included with this version