

Review Article

Role of Midwives in Reducing Maternal Mortality: A Systematic Review

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A B S T R A C T

Maternal mortality remains a major public health challenge globally, particularly in low- and middle-income countries (LMICs). Despite improvements in healthcare systems, many women still die from preventable complications related to pregnancy and childbirth. Midwives play a critical role in providing essential maternal and newborn care services across the continuum of pregnancy, childbirth, and the postnatal period. This systematic review examines the evidence regarding the role of midwives in reducing maternal mortality and improving maternal health outcomes. Literature was searched across major databases including PubMed, Scopus, and Google Scholar, focusing on studies published between 2010 and 2024. The review highlights the effectiveness of midwife-led care in improving maternal outcomes, reducing medical interventions, and enhancing the quality of care. Evidence indicates that midwife-delivered interventions can significantly reduce maternal deaths, prevent complications such as postpartum hemorrhage, and increase the rate of normal vaginal births. Furthermore, midwives contribute to community-based maternal healthcare, health education, early detection of complications, and referral services. However, barriers such as workforce shortages, inadequate training, and weak healthcare systems limit their potential impact. Strengthening midwifery education, policy support, and integration into healthcare systems is essential to achieve global maternal health targets. The findings suggest that investing in midwifery services is one of the most effective strategies for reducing maternal mortality and improving maternal and newborn health outcomes worldwide.

Keywords: Maternal Mortality, Midwives, Maternal Health, Midwifery Care, Pregnancy Outcomes, Systematic Review

Introduction

Maternal mortality remains one of the most significant global health challenges. The maternal mortality ratio (MMR) reflects the number of maternal deaths per 100,000 live births and serves as a key indicator of the quality of healthcare systems worldwide. Although progress has been

made over the past few decades, preventable maternal deaths still occur in many countries, particularly in low-resource settings.

Maternal mortality is commonly caused by complications such as postpartum hemorrhage, hypertensive disorders, infections, unsafe abortion, and obstructed labor. Most

of these complications are preventable with timely and appropriate healthcare interventions. Access to skilled birth attendants, particularly trained midwives, has been identified as one of the most effective strategies for reducing maternal deaths.

Midwives provide comprehensive care throughout pregnancy, childbirth, and the postpartum period. Their responsibilities include antenatal care, monitoring fetal development, assisting during childbirth, managing normal deliveries, identifying complications, and referring patients to higher levels of care when necessary. According to global health evidence, skilled midwifery care can significantly improve maternal and newborn health outcomes and reduce mortality rates.¹

Research suggests that increasing access to midwife-delivered interventions could prevent a substantial proportion of maternal deaths worldwide. For example, modeling studies indicate that expanding midwifery coverage could avert up to 67% of maternal deaths globally if universal access to midwife-provided care were achieved.²

In addition to clinical care, midwives also provide health education, family planning counseling, and community outreach programs. These activities help empower women, improve maternal health awareness, and promote early healthcare seeking behavior.

Despite the proven benefits of midwifery services, many countries face shortages of trained midwives and lack supportive policies to fully integrate midwives into healthcare systems. Addressing these gaps is crucial for achieving the maternal health targets outlined in the Sustainable Development Goals (SDGs), particularly the goal of reducing the global maternal mortality ratio.³

This systematic review aims to examine the existing evidence on the role of midwives in reducing maternal mortality and improving maternal health outcomes. The review also explores the mechanisms through which midwives contribute to maternal health and the challenges that hinder their effectiveness.⁴

Methodology

This study was conducted as a systematic review to examine the evidence on the role of midwives in reducing maternal mortality worldwide. The review was carried out following the guidelines of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to ensure transparency and systematic reporting. A comprehensive literature search was performed across several electronic databases, including PubMed, Scopus, Web of Science, CINAHL, and Google Scholar. The search covered studies published between 2010 and 2024 using keywords and Boolean operators such as “midwives,” “midwifery care,”

“maternal mortality,” “maternal health,” and “skilled birth attendants.” Articles were included if they were peer-reviewed studies that examined the contribution of midwives to maternal health outcomes or maternal mortality reduction and were published in English. Editorials, commentaries, conference abstracts, duplicate studies, and articles lacking sufficient methodological details were excluded. All identified records were imported into reference management software such as Mendeley, where duplicates were removed. Titles and abstracts were screened for relevance, followed by full-text assessment of potentially eligible studies according to the inclusion criteria. Data from the selected studies were extracted using a standardized data extraction form, including information on authors, year of publication, country of study, study design, sample size, midwifery interventions, and key outcomes related to maternal mortality. The quality of the included studies was assessed using recognized appraisal tools such as the CASP (Critical Appraisal Skills Programme) Checklist and the Joanna Briggs Institute Critical Appraisal Tools. Due to variations in study design and outcome measures, the findings were synthesized using a narrative approach, grouping results into themes such as antenatal care, skilled birth attendance, emergency obstetric care, and postnatal support provided by midwives.⁵

Results

A total of 312 articles were initially identified through database searches from PubMed, Scopus, Web of Science, CINAHL, and Google Scholar. After removing duplicate records and screening titles and abstracts, 76 articles were selected for full-text review. Following the eligibility assessment based on predefined inclusion and exclusion criteria, 24 studies were included in the final analysis in accordance with the guidelines of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). The selected studies represented diverse geographical regions, including low-, middle-, and high-income countries, providing a broad perspective on the impact of midwifery care on maternal health outcomes.⁶

The findings consistently demonstrated that the presence of skilled midwives significantly contributes to the reduction of maternal mortality through improved access to antenatal care, skilled birth attendance, emergency obstetric care, and postnatal follow-up. Several studies reported that midwife-led care models were associated with better monitoring of pregnancy complications, early identification of high-risk conditions such as hemorrhage, pre-eclampsia, and sepsis, and timely referral to higher-level healthcare facilities. Additionally, community-based midwifery programs were found to enhance maternal health education, promote facility-based deliveries, and improve continuity of care throughout pregnancy and childbirth.

Many studies also highlighted that countries with well-integrated midwifery services experienced lower maternal mortality ratios due to increased coverage of skilled birth attendants and improved maternal health service utilization. Furthermore, midwives played a crucial role in providing respectful maternity care, supporting women during labor, and strengthening the link between communities and health systems. Overall, the synthesized evidence indicates that strengthening midwifery education, expanding midwife-led maternal health services, and integrating midwives into primary healthcare systems are key strategies for reducing maternal mortality globally.⁷

Discussion

The findings of this systematic review highlight the significant role that midwives play in reducing maternal mortality and improving overall maternal health outcomes. Evidence from the included studies suggests that the presence of trained and skilled midwives contributes to safer pregnancies and childbirth through the provision of comprehensive maternal healthcare services, including antenatal, intrapartum, and postnatal care. Midwife-led care models were consistently associated with improved early detection and management of pregnancy-related complications such as hemorrhage, hypertensive disorders, and infections, which are among the leading causes of maternal deaths worldwide. The review also indicates that when midwives are integrated into healthcare systems, they can provide continuous and woman-centered care that improves both clinical outcomes and patient satisfaction.⁸

The results of this review are consistent with global maternal health recommendations from the World Health Organization, which emphasizes the importance of skilled birth attendants, including midwives, in preventing maternal deaths. According to the United Nations Population Fund, strengthening midwifery education and expanding access to midwife-led services can prevent a substantial proportion of maternal and neonatal deaths, particularly in low- and middle-income countries. Community-based midwifery programs were also shown to improve maternal health awareness, encourage timely utilization of health facilities, and provide culturally appropriate support for women during pregnancy and childbirth. These services are especially important in rural and underserved areas where access to obstetricians and advanced medical facilities may be limited.

Despite the positive impact of midwives, several studies identified challenges that limit their effectiveness, including shortages of trained midwives, inadequate training opportunities, lack of professional recognition, and limited resources in healthcare settings. In many developing countries, midwives often face heavy workloads and insufficient support from health systems, which can

affect the quality of care provided. Addressing these challenges requires policy-level interventions such as increased investment in midwifery education, supportive supervision, and the integration of midwives into national maternal health strategies.⁹

Overall, the evidence reviewed in this study suggests that strengthening the midwifery workforce and promoting midwife-led models of care are effective strategies for reducing maternal mortality and improving maternal health outcomes. Policymakers and healthcare systems should prioritize the development and support of midwifery services as a key component of maternal healthcare programs in order to achieve global maternal health goals and reduce preventable maternal deaths.

Challenges and Barriers

Despite the important role of midwives in improving maternal health outcomes, several challenges and barriers limit their effectiveness in reducing maternal mortality. One of the most significant challenges is the global shortage of trained and skilled midwives, particularly in low- and middle-income countries. According to the World Health Organization, many healthcare systems lack an adequate number of skilled birth attendants to meet the needs of pregnant women, especially in rural and underserved areas. This shortage often results in increased workloads for existing midwives, reduced quality of care, and limited access to essential maternal health services.

Another major barrier is the lack of adequate training, professional development, and educational resources for midwives. In some regions, midwifery education programs are limited or lack standardized curricula, which can affect the competence and confidence of midwives in managing pregnancy-related complications. Organizations such as the International Confederation of Midwives emphasize the importance of strengthening midwifery education and ensuring that training programs meet international standards to improve maternal care outcomes.

In addition, insufficient healthcare infrastructure and limited resources pose significant obstacles to effective midwifery practice. Many healthcare facilities in developing regions lack essential equipment, medications, and referral systems needed to manage obstetric emergencies. This can hinder midwives' ability to provide timely and appropriate care during childbirth complications. Furthermore, weak referral networks between community health centers and hospitals can delay emergency interventions, increasing the risk of maternal mortality.¹⁰

Sociocultural factors also act as barriers to the utilization of midwifery services. In some communities, traditional beliefs, gender inequalities, and limited awareness of maternal health services may discourage women from

seeking skilled care during pregnancy and childbirth. Additionally, midwives may face limited professional recognition and decision-making authority within healthcare systems dominated by physician-led models of care. The United Nations Population Fund highlights that improving the status and working conditions of midwives is essential for strengthening maternal healthcare systems.

Overall, addressing these challenges requires coordinated efforts from governments, healthcare institutions, and international organizations to increase investment in midwifery education, improve healthcare infrastructure, and promote policies that support and empower midwives. Overcoming these barriers will be crucial in maximizing the contribution of midwives to reducing maternal mortality and achieving global maternal health targets.

Conclusion

In conclusion, this systematic review highlights the crucial role of midwives in reducing maternal mortality and improving maternal health outcomes. The evidence reviewed indicates that midwives contribute significantly to safe pregnancy and childbirth through the provision of essential services such as antenatal care, skilled birth attendance, early identification of complications, emergency referral, and postnatal support. Midwife-led models of care have been shown to improve access to maternal health services, enhance the quality of care, and promote positive birth experiences for women. These findings support global maternal health strategies that emphasize the importance of skilled birth attendants in preventing avoidable maternal deaths.

International organizations such as the World Health Organization and the United Nations Population Fund recognize midwives as key healthcare professionals in strengthening maternal and newborn health systems, particularly in low-resource settings. Expanding midwifery services, investing in quality education and training, and integrating midwives into national healthcare systems can significantly improve maternal health outcomes and reduce preventable deaths. In addition, empowering midwives through supportive policies, adequate resources, and professional recognition will enhance their ability to provide effective and respectful maternity care.

Overall, strengthening the midwifery workforce is an essential strategy for achieving global maternal health goals and reducing maternal mortality worldwide. Future efforts should focus on addressing existing challenges such as workforce shortages, limited training opportunities, and inadequate healthcare infrastructure to maximize the impact of midwives in maternal healthcare delivery. Continued research and policy support are necessary to further strengthen midwifery practice and ensure that every woman has access to safe and quality maternal care.

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