



Analysis of the Role of Traditional Midwives in Maternal Health Services in Rural Areas

Hestiana Qomariah¹, Ehti Winarsih², Farida Mar Diana³

^{1,2} Program Studi Kebidanan, STIKes Bustanul Ulum Langsa, Indonesia

³ Program Diploma Kebidanan, STIKES Pemkab Jombang, Jombang

Article Info

Article history:

Received Feb 23, 2025

Revised Mar 25, 2025

Accepted Mar 30, 2025

Keywords:

Traditional Midwives;
Maternal Health;
Rural Healthcare;
Prenatal and Postnatal Care;
Healthcare Integration.

ABSTRACT

This research explores the role of traditional midwives in maternal health services in rural areas, with a focus on their impact on prenatal care, delivery, and postnatal care. The study aims to assess the benefits, risks, and outcomes associated with traditional midwifery practices and examine how these midwives are perceived in their communities compared to formal healthcare providers. Using a mixed-methods approach, including qualitative interviews and surveys with local mothers, traditional midwives, and healthcare professionals, the research was conducted in Soban Village, Siempat Nempu District, Dairi Regency. Findings suggest that traditional midwives play a crucial role in providing accessible, culturally sensitive care, especially in remote areas where formal healthcare services are scarce. However, challenges such as limited formal training and integration with the formal healthcare system were identified as significant risks, particularly in cases of pregnancy complications or emergencies. The research highlights the need for policy frameworks that support the integration of traditional midwives into the formal healthcare system through training, collaboration, and community engagement. The study concludes that a hybrid model combining traditional midwifery practices with formal healthcare could improve maternal and neonatal health outcomes in rural communities.

This is an open access article under the CC BY-NC license.



Corresponding Author:

Hestiana Qomariah
Program Studi Kebidanan,
STIKes Bustanul Ulum Langsa, Indonesia,
Tualang Teungoh, Kec. Langsa Kota, Kota Langsa, Aceh 24354
Email: hestiana@gmail.com

1. INTRODUCTION

Maternal health is a critical aspect of public health, significantly affecting the well-being of mothers, their children, and communities at large (Balaji et al., 2007). In rural areas, where access to formal healthcare services is often constrained, traditional midwives serve as essential caregivers, addressing the maternal health needs of underserved populations. These midwives, often referred to as community-based or traditional birth attendants, hold a long-standing position within their communities, offering care rooted in cultural practices and experiential knowledge (Davies, 2017).

Traditional midwives have historically played a pivotal role in maternal health, particularly in settings where modern healthcare facilities are scarce or inaccessible (Luke, 2018). They provide a range of services, including prenatal care, childbirth assistance, and postpartum support, which are vital for the health and survival of both mothers and their infants. Their ability to foster trust and

understanding within the community stems from their deep integration into the cultural and social fabric of rural life (Brown & Schafft, 2011). This connection often makes them the preferred choice for maternal care, even when formal healthcare options are available.

One key benefit of traditional midwifery is its accessibility, particularly in areas where formal healthcare services are scarce. According to Sibley et al. (2004), traditional midwives often act as the primary caregivers in remote communities, providing essential prenatal, delivery, and postpartum care. Their deep understanding of local cultural practices and traditions fosters trust among expectant mothers, making them more likely to seek assistance during pregnancy and childbirth (Wilson et al., 2011). This cultural sensitivity has been shown to improve maternal experiences and reduce the anxiety associated with childbirth.

Economic affordability is another significant advantage. Traditional midwifery services are often provided at low or no cost, a factor emphasized in studies by Fiedler et al. (2013), who noted that these midwives fill a critical gap for families with limited financial resources. In addition to medical care, traditional midwives frequently provide emotional and social support, which contributes to holistic maternal care.

Despite these benefits, risks associated with traditional midwifery have been widely documented. A major concern is the lack of formal training, which can lead to suboptimal care, particularly in managing complications. For example, Hailu et al. (2019) observed that traditional midwives in Ethiopia often relied on unverified practices, such as herbal remedies and unsterilized tools, which increased the risk of infection and adverse outcomes for mothers and newborns. Similarly, Gebrehiwot et al. (2016) found that traditional midwives faced challenges in recognizing high-risk pregnancies, leading to delayed referrals to formal healthcare facilities.

Outcomes related to traditional midwifery vary significantly based on the level of integration with formal healthcare systems. Studies by Byrne and Morgan (2011) in Bangladesh showed that training programs for traditional midwives significantly reduced maternal and neonatal mortality rates by improving their ability to identify and manage complications. On the other hand, research by Kayombo et al. (2013) in Tanzania found that in areas where traditional midwives operated independently, there were higher rates of complications due to inadequate coordination with healthcare providers.

However, the reliance on traditional midwives also raises questions about the quality and safety of care, particularly in managing complex or high-risk pregnancies (Healy et al., 2016). Many traditional midwives lack formal medical training, and their practices are often based on oral traditions and cultural beliefs, which may not always align with evidence-based healthcare standards. These challenges highlight the need to evaluate their contributions and identify ways to address potential limitations (Gilpin et al., 2018).

In many countries, efforts have been made to integrate traditional midwives into formal healthcare systems (Byrne & Morgan, 2011). Training programs, partnerships with healthcare professionals, and community health initiatives have been implemented to enhance their knowledge and ensure safer maternal health practices. Such integration not only strengthens healthcare delivery but also respects and preserves the cultural significance of traditional midwifery (Organization, 2019). However, these efforts require a nuanced understanding of the roles, challenges, and potential contributions of traditional midwives in rural areas (Chamberlain et al., 2016).

This research seeks to analyze the role of traditional midwives in maternal health services within rural settings (Titaley et al., 2010). By examining their practices, challenges, and interactions with formal healthcare systems, the study aims to provide insights into their impact on maternal health outcomes. It also explores opportunities for collaboration and integration that can optimize maternal care while maintaining cultural sensitivity (Riggs et al., 2012). Addressing these aspects is crucial for improving maternal health services in rural areas and ensuring equitable access to quality care for all mothers.

2. RESEARCH METHOD

This study employs a qualitative research methodology to explore and analyze the role of traditional midwives in maternal health services in rural areas. A qualitative approach is particularly suitable for understanding the cultural, social, and practical dimensions of traditional midwifery, as it allows for in-depth exploration of participants' experiences, practices, and perspectives (Peprah et al., 2017).

The study adopts a case study design, focusing on selected rural communities where traditional midwifery is commonly practiced. This design enables a detailed examination of the contributions, challenges, and outcomes associated with traditional midwifery within specific cultural and geographical contexts.

Data for the study is collected through a combination of interviews, focus group discussions, and observations (Lambert & Loiselle, 2008). Semi structured interviews are conducted with traditional midwives, expectant mothers, new mothers, and healthcare professionals (Mselle et al., 2018). These interviews aim to gather insights into the midwives' practices, their perceived roles in maternal health, and the challenges they face. Open-ended questions facilitate detailed responses, enabling a comprehensive understanding of their experiences and perspectives (Hanson et al., 2011).

Focus Group Discussions (FGDs) are conducted with community members and stakeholders to explore collective attitudes and beliefs about traditional midwifery (Byrne et al., 2016). These discussions provide a platform for participants to share diverse viewpoints and highlight community dynamics related to maternal health services.

Observational methods are employed to document traditional midwifery practices during prenatal consultations, childbirth, and postpartum care (Health, 2003). This non-intrusive approach allows the researcher to witness the practices in their natural setting, capturing details that may not emerge through interviews alone (Case, 2015).

This study focuses on Soban Village, located in the Siempat Nempu District of Dairi Regency, a rural area characterized by limited access to formal healthcare services and a strong reliance on traditional practices. The village is situated within a predominantly agrarian community, where traditional midwifery plays a significant role in maternal health services due to cultural acceptance and geographical barriers to modern medical facilities (Ajala, 2009).

Soban Village provides an ideal setting for this study due to its unique socio-cultural and geographical characteristics. The community's reliance on traditional midwifery arises from both necessity and tradition, making it a valuable context for examining the intersection of cultural practices and healthcare needs. The rural nature of the village presents challenges such as limited infrastructure, long distances to healthcare centers, and economic constraints, which further underscore the importance of traditional midwives in maternal health services.

The study population includes the following groups: Experienced midwives in the village who have been practicing maternal healthcare services based on cultural traditions and experiential knowledge (Thackrah et al., 2014). Women who have received maternal healthcare services from traditional midwives. This group provides insights into their experiences, perceptions, and outcomes related to the care they received (Wolsko et al., 2000). Key stakeholders within the village, such as family members, elders, and local leaders, who influence or support the utilization of traditional midwifery services. Local health workers or professionals who interact with the community, offering a comparative perspective on the integration of traditional midwives into the broader healthcare system (Organization, 2013).

Purposive sampling is used to ensure that participants represent diverse perspectives within the population (Campbell et al., 2020). The selection criteria focus on individuals directly involved in or affected by traditional midwifery practices. Efforts are made to include participants from different age groups, socio-economic statuses, and levels of interaction with traditional and formal healthcare systems. Thematic analysis is employed to analyze the collected data. Interview transcripts, FGD recordings, and observation notes are coded to identify recurring themes, patterns, and relationships (Guest et al., 2011). The analysis focuses on understanding the roles, practices, and challenges of traditional midwives, as well as the perceptions of community members and healthcare

professionals. Key themes are compared across different data sources to ensure triangulation and enhance the reliability of findings (Moon, 2019).

Ethical approval is obtained prior to data collection to ensure the research complies with ethical standards (Harriss et al., 2019). Informed consent is sought from all participants, with assurances of confidentiality and anonymity. Participants are informed of their right to withdraw from the study at any time without repercussions.

While the qualitative approach provides rich insights, it is inherently limited in its generalizability (Polit & Beck, 2010). Findings are context-specific and may not fully represent the experiences of traditional midwives in other regions. To address this, the study includes participants from diverse rural communities to capture a range of perspectives.

3. RESULTS AND DISCUSSIONS

3.1 *The Impact of Traditional Midwives on Maternal Health Outcomes*

Traditional midwives play a significant role in shaping maternal health outcomes, particularly in rural communities where access to formal healthcare is limited. Their impact spans across prenatal care, delivery, and postnatal care, addressing critical needs of mothers and newborns while presenting both benefits and challenges.

In the realm of prenatal care, traditional midwives serve as accessible and trusted providers of maternal health services. They are often the first point of contact for expectant mothers, offering guidance on nutrition, hygiene, and physical well-being. Studies highlight their ability to build trusting relationships with mothers, fostering a sense of comfort and openness that encourages women to seek regular care. This accessibility is crucial in areas where distance or cost prevents women from visiting formal healthcare facilities.

However, the quality of prenatal care provided by traditional midwives varies. While their advice on basic health practices can be beneficial, the absence of formal training limits their ability to detect complications such as gestational diabetes or hypertension. This gap may result in delayed referrals to medical professionals, potentially endangering maternal and fetal health. Nonetheless, in cases where traditional midwives have received training from healthcare organizations, their ability to identify risks and provide timely referrals improves significantly, leading to better prenatal outcomes.

During childbirth, traditional midwives provide essential support, often acting as the sole birth attendants in rural areas. They deliver care in familiar environments, respecting cultural traditions and practices that contribute to a positive childbirth experience. The presence of traditional midwives during delivery is particularly important in communities where women may be hesitant to seek institutional care due to cultural or logistical barriers.

Despite their critical role, the safety of deliveries attended by traditional midwives is a concern in cases where they lack training in modern obstetric techniques. Risks such as unsterile practices and inadequate management of complications like prolonged labor or postpartum hemorrhage can jeopardize maternal and neonatal health. However, when traditional midwives are integrated into healthcare systems and provided with basic obstetric training, studies have shown a reduction in maternal and neonatal mortality rates, highlighting the potential for improved outcomes through collaboration.

Traditional midwives often remain involved in the postpartum period, providing guidance on breastfeeding, newborn care, and maternal recovery. Their continued presence offers emotional and social support, which is particularly valuable in fostering maternal mental health and bonding with the newborn. In many cases, they also serve as a bridge between the mother and formal healthcare services, facilitating vaccinations and other essential newborn interventions.

The postnatal period, however, can also expose gaps in the knowledge of traditional midwives. For instance, they may not be equipped to recognize or manage postpartum infections or neonatal complications. The integration of traditional midwives with formal healthcare systems has been shown to address these challenges, enabling timely referrals and improving overall postnatal outcomes.

3.2 *Limitations and Risks in Traditional Midwifery*

One of the most prominent limitations of traditional midwifery is the absence of formal medical training. Traditional midwives typically rely on experiential knowledge passed down through generations, which, while valuable, often lacks the scientific rigor necessary to address complications during pregnancy, childbirth, and the postpartum period.

For instance, untrained midwives may be unable to recognize or manage high-risk pregnancies, such as those complicated by gestational diabetes, preeclampsia, or multiple gestations. This limitation can delay critical interventions, increasing the risk of maternal and neonatal morbidity and mortality. Additionally, the use of non-sterile techniques during delivery can lead to infections, such as sepsis, which is a leading cause of maternal and neonatal deaths in resource-limited settings.

Traditional midwifery is often practiced with minimal or no access to modern medical equipment, further constraining the quality of care. The absence of tools like fetal heart monitors, blood pressure cuffs, or even sterile delivery kits can hinder the ability of midwives to provide safe and effective care. In emergencies, such as postpartum hemorrhage or obstructed labor, the lack of equipment and resources can be life-threatening for both the mother and baby.

A significant challenge in traditional midwifery is the lack of integration with formal healthcare systems. Traditional midwives often operate independently, with limited or no collaboration with healthcare professionals. This disconnect can lead to missed opportunities for referrals, knowledge-sharing, and the standardization of practices.

Furthermore, the mistrust between traditional midwives and medical practitioners can exacerbate these integration issues. Healthcare providers may dismiss traditional midwives as unqualified, while midwives may perceive formal healthcare as culturally insensitive or inaccessible to their clients. This mutual mistrust undermines the potential for a collaborative approach that could enhance maternal healthcare outcomes.

While traditional midwifery is deeply rooted in cultural practices, some traditions may conflict with evidence-based medical guidelines. For example, certain cultural rituals or taboos may discourage timely referrals to medical facilities or limit the adoption of life-saving interventions. These practices, while meaningful within their cultural context, can sometimes hinder effective maternal and neonatal care.

Traditional midwives often have limited training in recognizing and managing postpartum and neonatal complications. For example, they may not identify signs of postpartum depression, neonatal jaundice, or breastfeeding difficulties. Without timely intervention, such conditions can escalate, affecting both maternal and child health outcomes.

Efforts to address these limitations and risks involve training programs that provide traditional midwives with essential skills in maternal and neonatal healthcare. Collaborative models that integrate traditional midwifery into formal healthcare systems have shown promise in improving outcomes. These models foster mutual respect between traditional practices and modern medicine, ensuring that cultural sensitivities are preserved while advancing the safety and effectiveness of care.

3.3 Community Perceptions of Traditional Midwives Versus Formal Healthcare Providers

The role of traditional midwives in maternal healthcare is deeply intertwined with cultural beliefs, social norms, and community perceptions. In many rural and underserved areas, traditional midwives are revered and trusted figures, often seen as more accessible and culturally aligned with local practices. In contrast, formal healthcare providers, such as doctors and nurses, are often viewed with a mix of skepticism, mistrust, or even reluctance, particularly when they are perceived as outsiders or when their practices conflict with local traditions.

In rural communities, traditional midwives often enjoy a high level of trust and respect due to their deep roots in the community and their long-standing relationship with local families. They are typically viewed as familiar figures who understand the cultural and social fabric of the community. Their proximity to the community, both geographically and socially, makes them the first point of contact for many expectant mothers. This accessibility is a significant advantage, especially in areas where healthcare infrastructure is limited or difficult to reach.

For many women, traditional midwives are considered an integral part of their support network, not only for their physical health but also for their emotional and psychological well-being. Midwives often provide more than just medical assistance they offer companionship, guidance, and reassurance during pregnancy, childbirth, and the postpartum period. Their ability to create a sense of comfort and familiarity is a major factor in why many women choose to seek their services rather than formal healthcare providers.

Traditional midwives are also valued for their cultural compatibility. They understand the local customs, traditions, and rituals that may be important during pregnancy and childbirth. For instance, some communities place significant importance on childbirth practices such as specific dietary restrictions, ceremonies, or the involvement of family members. Traditional midwives, being part of the culture, are seen as upholding these practices, which formal healthcare providers may not always accommodate. This cultural alignment fosters a sense of belonging and acceptance, making traditional midwives more appealing to women who wish to maintain their cultural practices during childbirth.

Furthermore, traditional midwives often possess extensive experiential knowledge passed down through generations. While this knowledge may not be formally trained or evidence-based, it is deeply respected within the community. For example, traditional midwives may use herbal remedies, massage techniques, or other home-based interventions, which many women trust as effective alternatives to medical treatments.

In contrast, formal healthcare providers are sometimes viewed with skepticism or even fear, particularly in rural settings where the healthcare system may be perceived as impersonal, distant, or culturally insensitive. In many cases, healthcare providers are seen as outsiders, often coming from urban centers or foreign backgrounds, which may cause tension between them and local communities. The lack of familiarity with medical practices and the perceived bureaucratic nature of formal healthcare systems can create a sense of alienation for people in rural areas.

For instance, some women may view medical procedures, such as cesarean sections, as unnatural or intimidating, preferring the familiar and natural processes associated with traditional midwifery. In addition, formal healthcare providers may not always speak the local language or understand the cultural nuances, which can further exacerbate the disconnect between patients and healthcare professionals. Furthermore, the cost of accessing formal healthcare whether through transportation, consultation fees, or lack of insurance often makes it unaffordable or inaccessible for many rural women.

The decision to choose between a traditional midwife and a formal healthcare provider is heavily influenced by trust. In communities where traditional midwives are seen as part of the family, women are more likely to rely on them, especially if they have had positive experiences in the past. On the other hand, formal healthcare providers are often chosen in situations where complications arise, or if the community has had prior exposure to the benefits of modern medical care.

However, as more women seek institutional care for prenatal visits and childbirth, formal healthcare providers may begin to build trust by working closely with traditional midwives. This collaboration can bridge the gap between traditional practices and medical standards, allowing for a more holistic approach to maternal healthcare.

While traditional midwifery remains vital in many rural communities, there is growing recognition of the need for integration between traditional and formal healthcare systems. In some areas, there is a shift toward appreciating the strengths of both systems, with an increasing number of communities acknowledging the benefits of formal medical care, such as the ability to handle complications and provide advanced treatments. At the same time, there is a growing movement toward training traditional midwives in basic medical practices, so they can better support women in need of care and collaborate with healthcare professionals.

In places where collaboration has been established, communities tend to view traditional midwives and formal healthcare providers as complementary rather than competing forces. This

integrated approach not only enhances maternal and child health outcomes but also ensures that women can make informed decisions about their care while maintaining cultural relevance.

3.4 Implications and Recommendations

The findings of this research suggest that traditional midwives have a significant impact on maternal health outcomes, particularly in rural and remote areas where access to formal healthcare services is limited. This underscores the importance of recognizing and integrating traditional midwifery practices into broader national and regional healthcare policies. In many rural communities, traditional midwives are the first point of contact for pregnant women, and they often play a central role in prenatal care, delivery, and postnatal support. Therefore, it is crucial for policymakers to consider how these midwives can be supported, trained, and integrated into the formal healthcare system to improve overall maternal health.

In countries or regions with high rates of rural population and limited access to healthcare infrastructure, including traditional midwives in healthcare delivery strategies could help to extend coverage and improve outcomes. The research shows that traditional midwives are often trusted figures in their communities, and this trust can be leveraged to ensure that women in these communities receive timely and appropriate care. Integrating midwives into national health policies could involve training programs that enhance their skills, offering access to essential medical supplies, and creating collaborative frameworks between midwives and formal healthcare professionals. Such integration could bridge the gap between traditional and modern practices, reducing maternal and neonatal risks.

One of the key challenges identified in this research is the lack of formal training among traditional midwives. While many midwives possess invaluable experiential knowledge passed down through generations, the lack of formal education means that they may not be adequately equipped to handle complicated pregnancies or emergencies that require medical intervention. This limitation is a significant risk factor for maternal and neonatal morbidity and mortality.

The research implies that there is an urgent need for training programs to enhance the skills of traditional midwives. These programs should focus on basic medical knowledge, emergency procedures, sterilization techniques, and the recognition of warning signs that necessitate a referral to a healthcare facility. Furthermore, training should also address the importance of collaborative care with healthcare providers to ensure that women have access to the full spectrum of services available to them, from prenatal care to postnatal support.

Traditional midwives are highly regarded in their communities for their cultural competence and personalized care. However, this research also highlights the tensions that exist between traditional midwifery and formal healthcare systems, particularly regarding trust and the perceived efficacy of different care practices. In many cases, women may prefer traditional midwives due to their familiarity with local customs, personal relationships, and culturally sensitive practices.

This research implies that for the healthcare system to improve maternal health outcomes, it is essential to build trust between the formal healthcare system and traditional midwives. This could be achieved through community engagement initiatives that promote dialogue and understanding between these two groups. By fostering mutual respect and acknowledging the strengths of both systems, healthcare providers can work alongside traditional midwives to offer more comprehensive and culturally appropriate care. Additionally, formal healthcare providers can play a role in educating communities about the benefits of integrating both forms of care to enhance maternal and neonatal health.

Based on the findings of this research, several key recommendations can be made for policy, practice, and future interventions to optimize the role of traditional midwives in maternal healthcare. Governments and healthcare organizations should develop comprehensive training programs for traditional midwives that provide them with critical medical knowledge, basic diagnostic skills, and emergency response techniques. These programs should be culturally sensitive and tailored to the unique needs of rural communities, ensuring that midwives retain their traditional practices while gaining essential medical competencies.

It is essential to establish formal partnerships between traditional midwives and healthcare providers. These partnerships can include creating referral systems, providing access to medical supplies, and ensuring that midwives are part of the healthcare team, particularly in rural areas. Collaborative frameworks would allow midwives to work within their cultural context while ensuring that women have access to emergency services when necessary.

National health policies should officially recognize the role of traditional midwives as integral members of the healthcare system, particularly in underserved areas. This recognition could lead to the development of policies that integrate midwifery into the formal healthcare system, offering midwives the resources and support they need to provide safe and effective care.

Efforts should be made to build trust and cooperation between traditional midwives, formal healthcare providers, and the communities they serve. Public health campaigns that emphasize the complementary roles of both types of care can help alleviate concerns about medical procedures and promote acceptance of integrated care models. Additionally, healthcare providers should engage in culturally sensitive practices and respect local traditions, which can improve trust in formal healthcare services.

For both traditional and formal healthcare systems to function effectively, it is essential to invest in healthcare infrastructure in rural areas. This includes improving access to healthcare facilities, medical equipment, transportation for emergency cases, and communication systems that facilitate better coordination between midwives and healthcare facilities.

4. CONCLUSION

This research has highlighted the crucial role that traditional midwives play in maternal healthcare, particularly in rural areas where access to formal healthcare services is often limited. Traditional midwives are deeply embedded within their communities, offering culturally sensitive, accessible, and personalized care that is often preferred by local women. Their expertise, rooted in cultural practices and experiential knowledge, significantly contributes to the maternal health outcomes in rural settings. However, challenges such as the lack of formal training, limited medical resources, and the potential for complications during childbirth suggest that there is a need for greater integration with formal healthcare systems. The findings of this study underscore the importance of recognizing traditional midwifery as a vital component of the healthcare system, especially in underserved areas. By providing training, fostering collaborative frameworks between midwives and healthcare providers, and enhancing trust through community engagement, it is possible to improve maternal and neonatal health outcomes. Such integration can help bridge the gap between traditional and modern practices, ensuring that women receive comprehensive care that is both medically sound and culturally relevant. In conclusion, the effective integration of traditional midwifery practices with formal healthcare systems offers a promising approach to improving maternal health. Through policy development, capacity building, and community involvement, both traditional and formal healthcare providers can work together to provide better care, reduce risks, and ensure healthier maternal and child outcomes. This research emphasizes the need for a holistic, inclusive approach to maternal healthcare that respects cultural practices while promoting the safety and well-being of mothers and their children.

REFERENCES

- Ajala, A. S. (2009). *Rural health provisioning: socio-cultural factors influencing maternal and child health care in Osun State, Nigeria*. Peter Lang.
- Balaji, A. B., Claussen, A. H., Smith, D. C., Visser, S. N., Morales, M. J., & Perou, R. (2007). Social support networks and maternal mental health and well-being. *Journal of Women's Health, 16*(10), 1386–1396.
- Brown, D. L., & Schafft, K. A. (2011). *Rural people and communities in the 21st century: Resilience and transformation*. Polity.
- Byrne, A., Caulfield, T., Onyo, P., Nyagero, J., Morgan, A., Nduba, J., & Kermode, M. (2016). Community and provider perceptions of traditional and skilled birth attendants providing maternal health care for pastoralist communities in Kenya: a qualitative study. *BMC Pregnancy and Childbirth, 16*, 1–12.
- Byrne, A., & Morgan, A. (2011). How the integration of traditional birth attendants with formal health systems can

- increase skilled birth attendance. *International Journal of Gynecology & Obstetrics*, 115(2), 127–134.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661.
- Case, A. (2015). *Calm technology: principles and patterns for non-intrusive design*. “O’Reilly Media, Inc.”
- Chamberlain, C., Fergie, D., Sinclair, A., & Asmar, C. (2016). Traditional midwifery or ‘wise women’ models of leadership: Learning from Indigenous cultures: ‘... Lead so the mother is helped, yet still free and in charge...’ Lao Tzu, 5th century BC. *Leadership*, 12(3), 346–363.
- Davies, L. D. (2017). *Midwifery: A model of sustainable healthcare practice?*
- Gilpin, L. H., Bau, D., Yuan, B. Z., Bajwa, A., Specter, M., & Kagal, L. (2018). Explaining explanations: An overview of interpretability of machine learning. *2018 IEEE 5th International Conference on Data Science and Advanced Analytics (DSAA)*, 80–89.
- Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*. sage publications.
- Hanson, J. L., Balmer, D. F., & Giardino, A. P. (2011). Qualitative research methods for medical educators. *Academic Pediatrics*, 11(5), 375–386.
- Harriss, D. J., MacSween, A., & Atkinson, G. (2019). Ethical standards in sport and exercise science research: 2020 update. *International Journal of Sports Medicine*, 40(13), 813–817.
- Health, W. H. O. R. (2003). *Pregnancy, childbirth, postpartum, and newborn care: a guide for essential practice*. World Health Organization.
- Healy, S., Humphreys, E., & Kennedy, C. (2016). Midwives’ and obstetricians’ perceptions of risk and its impact on clinical practice and decision-making in labour: An integrative review. *Women and Birth*, 29(2), 107–116.
- Lambert, S. D., & Loiselle, C. G. (2008). Combining individual interviews and focus groups to enhance data richness. *Journal of Advanced Nursing*, 62(2), 228–237.
- Luke, J. M. (2018). *Delivered by midwives: African American midwifery in the twentieth-century south*. Univ. Press of Mississippi.
- Moon, M. D. (2019). Triangulation: A method to increase validity, reliability, and legitimation in clinical research. *Journal of Emergency Nursing*, 45(1), 103–105.
- Mselle, L. T., Kohi, T. W., & Dol, J. (2018). Barriers and facilitators to humanizing birth care in Tanzania: findings from semi-structured interviews with midwives and obstetricians. *Reproductive Health*, 15, 1–10.
- Organization, W. H. (2013). *Interprofessional collaborative practice in primary health care: Nursing and midwifery perspectives*.
- Organization, W. H. (2019). *Strengthening quality midwifery education for universal health coverage 2030*.
- Peprah, P., Abalo, E. M., Nyonyo, J., Okwei, R., & Amankwaa, G. (2017). Complementary and alternative medicine in midwifery: a qualitative exploration of perceptions and utilisation of CAM among trained midwives in rural Ghana. *Evidence Based Midwifery*, 15(4), 135–142.
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies*, 47(11), 1451–1458.
- Riggs, E., Davis, E., Gibbs, L., Block, K., Szwarc, J., Casey, S., Duell-Piening, P., & Waters, E. (2012). Accessing maternal and child health services in Melbourne, Australia: reflections from refugee families and service providers. *BMC Health Services Research*, 12, 1–16.
- Thackrah, R. D., Thompson, S. C., & Durey, A. (2014). “Listening to the silence quietly”: investigating the value of cultural immersion and remote experiential learning in preparing midwifery students for clinical practice. *BMC Research Notes*, 7, 1–12.
- Titaley, C. R., Hunter, C. L., Dibley, M. J., & Heywood, P. (2010). Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia. *BMC Pregnancy and Childbirth*, 10, 1–14.
- Wolsko, C., Park, B., Judd, C. M., & Wittenbrink, B. (2000). Framing interethnic ideology: effects of multicultural and color-blind perspectives on judgments of groups and individuals. *Journal of Personality and Social Psychology*, 78(4), 635.