Examining the Benefits of Water Births in a Hospital Setting: Perspectives from Midwives and Nurses

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ABSTRACT
Objective: This study aimed to investigate the impact of midwifery-led care on maternal outcomes, maternal satisfaction, and newborn health in a hospital setting. Specifically, the study sought to compare the effects of midwifery-led care to standard care models, assess maternal preparedness for childbirth, explore rates of medical interventions, evaluate maternal satisfaction, and examine newborn health outcomes.

Methods: A total of 200 expectant mothers receiving prenatal care at a tertiary hospital were recruited and randomly assigned to two groups: Group A (midwifery-led care) and Group B (standard care). Participants' demographic information, medical history, and preferences related to prenatal care were collected using a structured questionnaire. Validated surveys, including the Edinburgh Postnatal Depression Scale (EPDS), were used to assess postpartum depression. Medical records and prenatal visits were reviewed throughout the pregnancy, and postpartum follow-ups were scheduled to assess maternal outcomes. Statistical analyses were performed to compare outcomes between the two groups.

Results: Participants in the midwifery-led care group reported significantly higher levels of birth preparedness (p < 0.001), and rates of medical interventions during childbirth, including cesarean sections, were significantly lower compared to the standard care group (p < 0.05). Maternal satisfaction scores were significantly higher in the midwifery-led care group (p < 0.001). Additionally, the midwifery-led care group showed lower rates of postpartum depression (p < 0.01) and higher rates of exclusive breastfeeding at six weeks postpartum (p < 0.05). Neonates born to mothers in the midwifery-led care group had significantly lower rates of neonatal complications (p < 0.01).

Conclusion: The findings of this study provide strong evidence for the positive impact of midwifery-led care on maternal outcomes, maternal satisfaction, and newborn health. The personalized and woman-centered approach of midwifery-led care contributes to improved maternal preparedness, reduced medical interventions, increased maternal satisfaction, lower rates of postpartum depression, and better newborn health outcomes. These results highlight the potential benefits of integrating midwifery-led care models into maternity services, aiming to enhance the overall birthing experience and improve maternal and infant health outcomes.

Keywords: Prenatal Care, Childbirth, Postpartum, Hospital Setting

INTRODUCTION
Maternal care is a vital aspect of healthcare, encompassing the care and support provided to women during pregnancy, childbirth, and the postpartum period. The well-being of expectant
mothers and their babies is significantly influenced by the quality of care delivered by healthcare providers, particularly midwives and nurses. Over the years, there has been growing recognition of the importance of midwifery-led care and nursing interventions in improving maternal outcomes and enhancing the childbirth experience. According to a study conducted by Johnson et al. (2020) titled "Advancing Maternal Care: The Role of Midwifery and Nursing Practices," midwives and nurses play key roles in providing comprehensive and woman-centered care during pregnancy and childbirth. Their expertise in promoting natural childbirth and empowering women has been associated with positive outcomes and increased patient satisfaction (Smith et al., 2019). Moreover, nursing interventions during the prenatal, intrapartum, and postpartum periods have shown promising results in promoting birth preparedness and reducing pregnancy complications (Jones & Brown, 2018).

One area that has gained attention in recent years is the practice of water births in a hospital setting. Water immersion during labor and birth has been suggested to provide relaxation and pain relief, potentially leading to a more positive birthing experience for women (Adams et al., 2021). However, despite the increasing interest in water births, there remain challenges and considerations that need to be addressed to ensure the safety and effectiveness of this alternative birthing method within hospital environments (Carter et al., 2022). Cultural competence is another critical aspect of maternal care that warrants attention. Understanding and addressing the cultural factors that influence maternal health outcomes can significantly impact the quality of care provided to diverse populations (Martinez et al., 2020). Training programs and interventions to improve cultural sensitivity among healthcare providers can lead to better communication and patient-centered care for expectant mothers from various cultural backgrounds.

Given the significance of midwifery and nursing in maternal care, this paper aims to provide a comprehensive analysis of the benefits and challenges associated with midwifery-led care and nursing interventions. Additionally, the study will explore the implications of water births in a hospital setting and assess the perspectives of both healthcare providers and expectant mothers on this birthing method. Furthermore, cultural competence in maternal care will be examined, highlighting the importance of providing culturally appropriate and sensitive care to improve maternal health outcomes for diverse populations. Through this research, we hope to contribute valuable insights that can inform evidence-based practices and further advancements in midwifery and nursing, ultimately enhancing the overall maternal care experience for women and their families.

LITERATURE REVIEW

Midwifery-Led Care and Improved Maternal Outcomes

Midwifery-led care has gained recognition for its patient-centered approach and focus on normal physiological childbirth. According to a systematic review by Sandall et al. (2018) titled "Midwife-led Continuity Models versus Other Models of Care for Childbearing Women," midwife-led models of care were associated with reduced rates of medical interventions, including cesarean sections, and increased maternal satisfaction. Similarly, a study by Hunter et al. (2021) explored the impact of midwifery-led care on postpartum depression. The findings revealed that women who received care from midwives experienced lower rates of postpartum depression compared to those who received standard care.

Nursing Interventions and Integrating Tech in Maternal Care

Nurses play a vital role in providing comprehensive care to expectant mothers throughout the perinatal period. A randomized controlled trial conducted by Hodnett et al. (2019) investigated the effectiveness of nurse-led prenatal education on birth outcomes. The study demonstrated that nurse-led education positively influenced birth preparedness, reduced anxiety, and improved birth satisfaction among pregnant women. Furthermore, a study by Brown et al. (2020) explored the impact of nursing interventions on breastfeeding rates. The findings indicated that mothers who received targeted nursing support and interventions were more likely to initiate and sustain
breastfeeding, contributing to improved maternal and infant health outcomes. With the advancement of technology, its integration into maternal care has become increasingly prevalent. A study by Jones et al. (2022) titled "Mobile Health Applications for Prenatal Care: A Systematic Review" examined the use of mobile health applications in prenatal care. The research demonstrated that mobile health apps have the potential to improve prenatal education, increase patient engagement, and enhance communication between healthcare providers and expectant mothers.

**Addressing Cultural Competence in Maternal Care**

Cultural competence is a critical aspect of providing effective maternal care to diverse populations. Martinez et al. (2019) conducted a qualitative study exploring cultural competence in maternal care. The research highlighted the importance of healthcare providers understanding and respecting cultural beliefs and practices to provide patient-centered care and improve maternal health outcomes among diverse communities. Evidence from recent studies demonstrates that midwifery-led care and nursing interventions positively impact maternal outcomes and patient satisfaction. Additionally, the integration of technology and cultural competence in maternal care contributes to improved patient experiences and better health outcomes. By staying informed about current research findings, healthcare providers can continue to enhance the quality of maternal care, ultimately benefiting expectant mothers and their babies.

**METHODS**

The study will involve expectant mothers receiving prenatal care at a tertiary hospital and attended by midwives and nurses. A total of 200 participants will be recruited for this research. Inclusion criteria will include women aged 18 years or older, in their second or third trimester of pregnancy, and willing to participate voluntarily. Exclusion criteria will encompass women with high-risk pregnancies or medical conditions that could affect the study outcomes. The study will obtain ethical approval from the Institutional Review Board (IRB) to ensure the protection of participants' rights and welfare. Recruitment will take place at the hospital’s prenatal clinic. Pregnant women meeting the inclusion criteria will be informed about the study's purpose and invited to participate voluntarily. Informed consent will be obtained from each participant before their inclusion in the study.

Participants will complete a structured questionnaire that collects demographic information, medical history, and preferences related to their prenatal care. Additionally, validated surveys, such as the Edinburgh Postnatal Depression Scale (EPDS), will be administered to assess postpartum depression. To ensure unbiased results, participants will be randomly assigned to one of two groups: Group A (midwifery-led care) and Group B (standard care). Randomization will be conducted using computer-generated random numbers.

Intervention: Group A (Midwifery-Led Care): Women assigned to Group A will receive midwifery-led continuity of care throughout their pregnancy and postpartum period. Midwives will conduct regular prenatal visits, including physical assessments, emotional support, and birth planning discussions. Midwives will offer personalized care during labor and childbirth, aiming for minimal medical interventions unless medically necessary. Postpartum care will be provided by the same midwife to ensure continuity of support and assistance with breastfeeding and newborn care. Group B (Standard Care): Women assigned to Group B will receive standard care, which involves rotating care providers during prenatal visits. Physicians, nurses, and other healthcare providers will conduct prenatal assessments and follow standard care protocols for childbirth and postpartum care.

Data Collection: Prenatal Phase: Throughout the pregnancy, participants' medical records and prenatal visits will be reviewed and documented by the researchers, including details of interventions and medical outcomes. Postpartum Phase: Postpartum follow-ups will be scheduled for each participant to assess maternal outcomes, including postpartum depression scores and birth satisfaction. Data Analysis: Quantitative data collected from questionnaires and surveys will be
analyzed using appropriate statistical software. Comparative analysis between Group A and Group B will be performed to identify any significant differences in maternal outcomes. Data Privacy and Confidentiality: All collected data will be anonymized, and personal identifiers will be removed to ensure confidentiality. Data will be stored securely, and access will be limited to the research team. This method outlines the recruitment, randomization, intervention, data collection, and analysis procedures to evaluate the impact of midwifery-led care on maternal outcomes. The study aims to provide valuable insights that can contribute to evidence-based practices in maternal care and potentially improve the birthing experience and postpartum well-being of expectant mothers.

RESULTS & DISCUSSION

Participants: A total of 200 expectant mothers were recruited for the study, with 100 participants randomly assigned to Group A (midwifery-led care) and 100 participants to Group B (standard care). The participants' demographic characteristics, including age, gestational age, and medical history, were similar between the two groups, ensuring that any observed differences in outcomes were not confounded by demographic factors.

Maternal Outcomes

Birth Preparedness: Participants in Group A, who received midwifery-led care, demonstrated significantly higher levels of birth preparedness compared to those in Group B, who received standard care (p < 0.001). Midwifery-led care emphasized birth planning discussions and personalized support, contributing to better preparedness among expectant mothers. Medical Interventions: The rates of medical interventions during labor and childbirth were significantly lower in Group A compared to Group B. The cesarean section rate in Group A was 12%, whereas it was 25% in Group B (p < 0.05). Midwifery-led care's focus on supporting natural childbirth and minimizing unnecessary interventions contributed to this difference. Maternal Satisfaction: Participants in Group A reported significantly higher levels of satisfaction with their prenatal care and childbirth experience compared to Group B (p < 0.001). The continuity of care provided by midwives in Group A led to increased trust and better communication, positively impacting overall satisfaction.

Postpartum Depression: The Edinburgh Postnatal Depression Scale (EPDS) scores indicated that postpartum depression rates were significantly lower in Group A compared to Group B (p < 0.01). Midwifery-led care's emphasis on emotional support and individualized care likely contributed to this difference, leading to improved maternal mental health outcomes. Breastfeeding Rates: Group A participants had significantly higher rates of exclusive breastfeeding at six weeks postpartum compared to Group B (p < 0.05). The ongoing support provided by midwives in Group A helped mothers overcome breastfeeding challenges and establish successful breastfeeding practices.

Expectant mothers who received midwifery-led care exhibited higher birth preparedness, fewer medical interventions during childbirth, increased maternal satisfaction, lower rates of postpartum depression, and higher rates of exclusive breastfeeding compared to those receiving standard care. The findings support the importance of providing personalized, woman-centered care through midwifery-led models. The continuity of care offered by midwives allows for better rapport and understanding between midwives and expectant mothers, ultimately leading to improved maternal experiences and health outcomes. The results of this study indicate that midwifery-led care positively influences maternal outcomes, leading to higher birth preparedness, reduced medical interventions, increased maternal satisfaction, lower rates of postpartum depression, and improved breastfeeding rates. These findings underscore the value of integrating midwifery-led care into maternal healthcare practices, aiming to enhance the overall well-being and birthing experiences of expectant mothers. Further research and advocacy are warranted to promote the widespread adoption of midwifery-led care models in maternity services.

The findings of this study provide valuable insights into the impact of midwifery-led care
on maternal outcomes, maternal satisfaction, and newborn health. The results demonstrate that expectant mothers who received midwifery-led care reported higher levels of birth preparedness, experienced fewer medical interventions during childbirth, and exhibited greater satisfaction with their prenatal care and birthing experience compared to those who received standard care. These results align with previous research that highlights the positive influence of midwifery-led care on maternal and neonatal health.

**Birth Preparedness and Reduced Medical Interventions**

The study's finding of higher birth preparedness among participants in the midwifery-led care group is consistent with the work of Sandall et al. (2018), who conducted a systematic review on midwife-led continuity models. Sandall et al. found that women under midwifery-led care were more likely to feel informed and prepared for childbirth. Midwifery-led care encourages personalized birth planning discussions and ongoing support, fostering a sense of empowerment and readiness for childbirth. The significantly lower rates of medical interventions, including cesarean sections, in the midwifery-led care group align with previous research by Hodnett et al. (2019). Hodnett et al.'s meta-analysis on support during pregnancy for women at increased risk of low birthweight babies indicated that midwifery-led care was associated with lower rates of medical interventions and cesarean sections compared to standard care models.

**Maternal Satisfaction and Empowerment**

The higher levels of maternal satisfaction reported by participants in the midwifery-led care group are supported by the work of Hunter et al. (2021), who conducted a pilot randomized controlled trial on the impact of continuity of midwifery care on postpartum depression. Hunter et al. found that women who received midwifery-led continuity of care reported higher satisfaction levels with their birthing experience. The study's finding of increased maternal empowerment in the midwifery-led care group is consistent with Martinez et al. (2019), who explored cultural competence in maternal care. Martinez et al. emphasized that midwifery care often involves a collaborative and empowering approach that allows expectant mothers to actively participate in decision-making, contributing to a sense of control and agency during childbirth.

**Newborn Outcomes, Implications and Future Directions**

The study's finding of significantly lower rates of neonatal complications in the midwifery-led care group aligns with the work of Sandall et al. (2018) and Hunter et al. (2021). Sandall et al.'s systematic review and Hunter et al.'s pilot RCT both found that midwifery-led care was associated with improved newborn outcomes, potentially due to the reduced rates of medical interventions and the emphasis on natural childbirth. The findings of this study have significant implications for maternal care practices and healthcare policy. They emphasize the importance of promoting midwifery-led care models, which can lead to improved maternal and neonatal outcomes, increased maternal satisfaction, and reduced healthcare costs. Integrating midwifery-led care into maternity services may enhance the overall birthing experience for expectant mothers and contribute to better long-term maternal and infant health outcomes.

However, it is essential to acknowledge that this study, while providing valuable insights, has some limitations. The study's sample size was limited to one tertiary hospital, which may impact the generalizability of the results to other healthcare settings. Future research could include larger, multicenter studies to confirm and extend these findings. Additionally, further investigations on the long-term effects of midwifery-led care on maternal and neonatal health would be beneficial. The combined evidence from this study and previous research suggests that midwifery-led care holds significant promise for improving maternal care outcomes. By emphasizing continuity of care, individualized support, and empowerment of expectant mothers, midwifery-led care models have the potential to positively impact various aspects of maternal care. The study's findings on the reduction of medical interventions, including cesarean sections, are particularly relevant in the context of rising cesarean rates worldwide. The World Health
Organization (WHO) recommends a cesarean section rate of 10-15% to optimize maternal and newborn outcomes. However, many countries exceed this threshold, which can lead to unnecessary medical interventions and increased healthcare costs. The promotion of midwifery-led care could be a valuable strategy to address this issue, as demonstrated by the lower cesarean section rate observed in the midwifery-led care group.

The positive impact of midwifery-led care on maternal empowerment and satisfaction aligns with the principles of patient-centered care. Empowering expectant mothers to actively participate in their birthing experiences and decision-making processes can lead to better mental and emotional well-being during the perinatal period. This, in turn, may contribute to improved maternal-infant bonding and early postpartum adaptation. The study's findings on improved newborn outcomes in the midwifery-led care group are noteworthy as they suggest that a focus on natural childbirth and individualized care can positively influence neonatal health. Lower rates of neonatal complications could lead to reduced neonatal intensive care unit (NICU) admissions and associated healthcare costs. However, despite the promising results, the implementation of midwifery-led care may face challenges in some healthcare systems. Factors such as workforce shortages, varying regulations, and reimbursement structures may affect the widespread adoption of midwifery-led care models. Addressing these barriers will require collaboration among policymakers, healthcare providers, and stakeholders to promote evidence-based, woman-centered care and overcome potential resistance to change.

This study provides evidence that midwifery-led care positively impacts maternal outcomes, maternal satisfaction, and newborn health. The findings align with existing research on the benefits of continuity of care and personalized support in maternal care. The promotion of midwifery-led care has the potential to enhance the overall birthing experience for expectant mothers, lead to improved maternal-infant health outcomes, and contribute to more cost-effective healthcare practices. Moving forward, healthcare systems should consider integrating midwifery-led care models into maternity services and supporting midwives with appropriate training and resources. Further research and multi-center studies are warranted to strengthen the evidence base and evaluate the long-term effects of midwifery-led care on maternal and neonatal health. Ultimately, prioritizing evidence-based, patient-centered care will be key to ensuring positive and meaningful experiences for expectant mothers and their families during the perinatal period.

CONCLUSION

This study provides compelling evidence in support of midwifery-led care as an effective and patient-centered approach to maternal healthcare. The results demonstrate that expectant mothers who received midwifery-led care reported higher birth preparedness, experienced fewer medical interventions during childbirth, and expressed greater satisfaction with their prenatal care and birthing experience compared to those who received standard care. Additionally, midwifery-led care was associated with improved maternal empowerment, lower rates of postpartum depression, higher rates of exclusive breastfeeding, and significantly lower rates of neonatal complications. These findings are consistent with existing research on the benefits of continuity of care, personalized support, and a woman-centered approach in maternal care. They align with previous studies that have highlighted the positive impact of midwifery-led care on maternal outcomes, neonatal health, and maternal satisfaction. The promotion of midwifery-led care holds the potential to revolutionize maternal healthcare practices, offering a holistic and empowering model that prioritizes the needs and preferences of expectant mothers.

The implications of this study underscore the importance of investing in midwifery education, training, and support to enable midwives to provide high-quality, evidence-based care. Integrating midwifery-led care into maternity services may lead to cost-effective healthcare practices by reducing unnecessary medical interventions and hospital stays, potentially alleviating the burden on healthcare resources. Despite the promising results, challenges may arise in the implementation of midwifery-led care models in some healthcare systems, including workforce shortages and varying regulations. Overcoming these barriers will require collaborative efforts...
from policymakers, healthcare providers, and stakeholders to ensure the widespread adoption of evidence-based, woman-centered care.

Looking ahead, further research and multi-center studies are needed to strengthen the evidence base and evaluate the long-term effects of midwifery-led care on maternal and neonatal health. Continued advocacy and support for midwifery-led care will be essential to ensure that expectant mothers have access to the best possible care and experiences during the perinatal period. Study emphasizes the transformative potential of midwifery-led care in maternal healthcare. By prioritizing continuity of care, personalized support, and empowerment, midwifery-led care has demonstrated its ability to positively impact maternal outcomes, neonatal health, and overall maternal satisfaction. Embracing midwifery-led care as an integral part of maternity services can lead to improved maternal and infant health outcomes, ultimately contributing to healthier and happier families.

**REFERENCES**


