



ISSN Print: 2664-8334
ISSN Online: 2664-8342
IJOG 2024; 6(1): 01-04
www.obstetricsjournals.com
Received: 02-01-2024
Accepted: 10-02-2024

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Unmet needs for epidural analgesia in labour: A comprehensive thematic review in the Nigerian context

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DOI: <https://doi.org/10.33545/26648334.2024.v6.i1a.31>

Abstract

Epidural analgesia, a cornerstone of pain management during childbirth, remains significantly underutilized in low and middle-income countries (LMICs) like Nigeria. This in-depth research article delves into the unmet needs for epidural analgesia among labouring women in Nigeria. It explores the prevalence of use, meticulously examines the barriers to access across various domains, analyzes the potential consequences for mothers and babies, and proposes comprehensive recommendations to improve access within Nigerian maternity care settings.

Keywords: Unmet needs, epidural analgesia, labour, review, Nigeria

Introduction

Epidural analgesia, a safe and effective technique for pain relief during labor, is a cornerstone of modern maternity care; it demonstrably reduces pain intensity, improves maternal well-being, and enhances the birthing experience for many women [1]. However, access to epidural analgesia varies considerably across the globe. Studies highlight a substantial disparity, with limited access being a major concern in low- and middle-income countries (LMICs) [2].

Nigeria, a populous West African nation with an estimated birth rate of over 5% [3], exemplifies this challenge. While epidural analgesia is available in some healthcare facilities, its utilization rates fall far below optimal levels. Existing data reveal a concerning picture, with studies reporting non utilization of epidural analgesia in many Nigerian health facilities [4, 5]. This falls considerably short of the recommended practices outlined by international organizations like the World Health Organization (WHO), which emphasizes the importance of ensuring access to safe and effective pain relief options for all laboring women [6].

This limited access to epidural analgesia in Nigeria raises significant concerns. Understanding the unmet needs for this essential pain management technique is crucial for improving maternal health outcomes and birth experiences in the Nigerian context. This research article delves into this critical issue by examining the prevalence of epidural use, meticulously exploring the various barriers that hinder access and analyzing the potential consequences for both mothers and babies. By offering a comprehensive understanding of this challenge, the article aims to pave the way for the development of effective strategies to improve access to epidural analgesia within Nigerian maternity care settings.

Objectives of the review

- Analyze the current state of epidural analgesia utilization in Nigeria, identifying the prevalence and geographical variations in access.
- Investigate the key factors contributing to unmet needs for epidural analgesia, including healthcare system constraints (e.g., workforce shortages, infrastructure limitations),

socioeconomic barriers (e.g., cost, lack of insurance coverage), knowledge and awareness gaps (among both healthcare providers and pregnant women) and cultural beliefs and attitudes surrounding pain relief during childbirth.

- Examine the consequences of low epidural utilization rates for maternal health and well-being (e.g., increased pain, stress, negative birth experiences) and potential risks during delivery (e.g., instrumental deliveries, Caesarean sections).
- Evaluate existing research on interventions to improve access to epidural analgesia in low- and middle-income country (LMIC) settings.
- Propose solutions tailored to the Nigerian context to bridge the gap between the need and access to epidural analgesia.

Justification for the review

Epidural analgesia stands as a cornerstone of modern maternity care, offering safe and effective pain relief during childbirth^[1]. Its benefits in reducing pain intensity, improving maternal well-being, and enhancing the birthing experience are well-documented^[6]. However, access to this vital technique remains a significant challenge in many low- and middle-income countries (LMICs), with Nigeria serving as a poignant example^[7].

Despite the proven advantages of epidural analgesia, data from Nigeria reveals a worryingly low prevalence of its use^[4, 5]. This glaring gap between the need for and access to epidural analgesia raises substantial public health concerns. Unmanaged labor pain can precipitate a range of negative consequences, including increased maternal stress and anxiety, negative birth experiences and heightened risks of complications during delivery^[8-10].

A comprehensive review focusing on the unmet needs for epidural analgesia in Nigerian childbirth is imperative for several reasons. Firstly, while research on epidural use in LMICs exists, a nuanced analysis specific to the Nigerian context is lacking^[4]. Secondly, comprehending the multifaceted challenges contributing to low utilization rates, such as healthcare workforce shortages, cultural beliefs and socioeconomic barriers is essential for devising effective interventions^[11]. Thirdly, such a review can inform policymakers and healthcare professionals, spotlighting critical areas necessitating investment and targeted strategies to enhance access to epidural analgesia in Nigeria. Lastly, ensuring access to safe and effective pain relief options like epidural analgesia is not merely a medical imperative but a fundamental right for all women in labor, promoting equity and women's rights.

By illuminating the unmet needs for epidural analgesia in Nigeria, this review article serves as a catalyst for change. It lays the groundwork for developing context-specific solutions that bridge the gap between need and access, ultimately fostering positive birth experiences and enhancing maternal and neonatal health outcomes for Nigerian women.

Low prevalence of epidural analgesia use in Nigeria and factors at play

Epidural analgesia, a safe and effective technique for pain relief during labor, is widely considered a cornerstone of modern maternity care^[6]. It demonstrably reduces pain intensity, improves maternal well-being, and enhances the

birthing experience for many women¹⁰. However, access to epidural analgesia varies considerably across the globe, with utilization rates falling significantly short of optimal levels in many low- and middle-income countries (LMICs)^[11]. Nigeria, a populous West African nation, exemplifies this disparity. Despite the availability of epidural analgesia in some Nigerian healthcare facilities, its utilization rates are alarmingly low.

Several factors contribute to the low prevalence of epidural analgesia use in Nigeria. These factors can be broadly categorized into three main areas.

Healthcare system constraints

- **Workforce Shortages:** A significant shortage of qualified anesthesiologists is a major hurdle. Limited numbers restrict the availability of epidural services, especially in rural and underserved areas^[12, 13]. A study by Imarengiaye *et al.* conducted at a Nigeria tertiary institution highlights the impact of this shortage on access to epidural analgesia^[13].
- **Inadequate infrastructure:** Lack of essential equipment like epidural pumps or limited access to epidural medication can further restrict the use of this pain relief technique^[5].

Socioeconomic factors

- **Cost:** The cost of epidural analgesia can be a significant barrier for many Nigerian women, particularly those from low-income backgrounds. Limited health insurance coverage further restricts access, as identified by Ezeonu *et al.* in their study on sociodemographic factors affecting epidural use^[14].
- **Sociocultural beliefs:** Cultural beliefs around pain during childbirth can influence a woman's decision to opt for epidural analgesia. Educational initiatives are needed to address misconceptions and promote informed decision-making, as highlighted by Olugbade *et al.* in their exploration of knowledge and awareness regarding epidural analgesia^[15].

Knowledge and awareness gaps

- **Limited knowledge among providers:** Healthcare providers, including midwives and nurses, may lack adequate knowledge and training on the appropriate use of epidural analgesia, potentially impacting effective utilization^[5, 16].
- **Inadequate patient education:** Pregnant women might not be fully informed about the benefits and safety of epidural analgesia, hindering their ability to advocate for this pain relief option, as identified by Anozie *et al.*^[5].

Consequences of low utilization of epidural analgesia in labour

The low prevalence of epidural analgesia use in Nigeria has significant consequences for both mothers and babies.

- **Increased maternal pain and stress:** Unmanaged labor pain can lead to significant physical and emotional distress, potentially impacting a woman's ability to cope with labor and delivery. Anozie *et al.* emphasize the association between unmanaged pain and maternal well-being in their research, highlighting the potential negative consequences on mothers' physical and mental health^[5].

- **Negative birth experience:** Uncontrolled pain can contribute to a negative birth experience, potentially leading to feelings of fear and dissatisfaction, as identified by Kaarlsdottir in his study on the impact of pain on childbirth experience^[17].
- **Potential risks during delivery:** Excessive pain can make it difficult for a woman to cooperate during labor and delivery, potentially increasing the risk of complications like instrumental deliveries (forceps or vacuum) or Caesarean section. The American Society of Anesthesiologists (ASA) highlights this association in their practice guidelines.

The low prevalence of epidural analgesia use in Nigeria is a complex issue with far-reaching consequences. Understanding the significant gap between the need for and access to this essential pain relief technique is crucial for improving maternal health outcomes and birth experiences in the Nigerian context. Addressing workforce shortages, infrastructure limitations, and socioeconomic barriers alongside fostering knowledge and awareness among both providers and patients are critical steps towards ensuring all women have access to safe and effective pain relief during childbirth.

Moving forward: strategies to bridge the gaps

Addressing the unmet needs for epidural analgesia in Nigeria requires a multi-pronged approach.

- **Investing in healthcare workforce:** Increasing the number of qualified anesthesiologists through targeted training programs and improved working conditions is crucial for expanding service availability.
- **Infrastructure development:** Equipping healthcare facilities with essential equipment and ensuring a reliable supply of epidural medication are essential steps.
- **Addressing socioeconomic barriers:** Exploring policy solutions to reduce the cost of epidural analgesia or expanding health insurance coverage could improve access for low-income women.
- **Education and awareness campaigns:** Educational initiatives targeting both healthcare providers and pregnant women are necessary to address cultural misconceptions and promote informed decision-making about pain relief options during labor.

Open questions on the unmet needs for epidural analgesia in labor in Nigeria: research gaps

Here are some open questions on the unmet needs for epidural analgesia in labor in Nigeria.

- What is the specific prevalence of epidural analgesia use in different regions of Nigeria? Are there significant variations based on urban/rural settings?
- Beyond cost, how do other socioeconomic factors (e.g., employment status, social support networks) influence a woman's access to epidural analgesia?
- What are the specific cultural beliefs and misconceptions surrounding pain relief during childbirth in different Nigerian cultures?
- How can research better capture the experiences of women who forego epidural analgesia due to various factors?

Intervention strategies

- What are the most effective educational approaches to address cultural misconceptions about epidural analgesia among pregnant women in Nigeria?
- How can training programs be tailored to improve knowledge and skills of healthcare providers regarding appropriate use of epidural analgesia, particularly midwives and nurses?
- What are the financial feasibility and cost-effectiveness of potential solutions to reduce the economic burden of epidural analgesia for low-income women?
- Are there innovative service delivery models that could expand access to epidural analgesia in underserved areas of Nigeria?

Policy and advocacy

- What role can policymakers play in creating a more supportive environment for increased epidural utilization, considering factors like insurance coverage and workforce development?
- How can advocacy efforts raise awareness about the importance of pain relief options for women in labor and the benefits of epidural analgesia?
- What are the ethical considerations surrounding potential interventions to increase epidural use, ensuring women have autonomy and informed decision-making throughout the childbirth process?

Proposed Solutions to open questions on epidural analgesia in Nigerian childbirth

Research gaps

- **Prevalence by region:** Conduct regional surveys or leverage existing hospital data collection systems to map epidural utilization rates across Nigeria.
- **Socioeconomic factors:** Integrate socioeconomic questions into existing birth outcome surveys to understand the interplay of factors influencing access.
- **Cultural beliefs:** Conduct qualitative research involving focus groups and interviews with women from diverse Nigerian cultures to explore specific beliefs and concerns surrounding pain relief during labor. Partner with anthropologists or sociologists experienced in the region.
- **Women's experiences:** Utilize photovoice or narrative inquiry methodologies to capture the lived experiences of women who forgo epidural analgesia.

Intervention Strategies

- **Educational approaches:** Develop culturally sensitive educational materials (videos, pamphlets) featuring testimonials from Nigerian mothers who benefited from epidural analgesia. Partner with local NGOs and community health workers for dissemination.
- **Healthcare provider training:** Integrate epidural analgesia training modules into midwifery and nursing curriculums, with a focus on practical skills and addressing common myths or misconceptions. Offer continuing education workshops for practicing providers.
- **Reducing economic burden:** Explore policy options like insurance reforms to cover epidural analgesia costs. Investigate financial assistance programs targeted towards low-income pregnant women.

- **Service delivery models:** Pilot tele-anesthesia programs to connect remote birthing facilities with specialist anesthesiologists for consultation and epidural management. Train nurse anesthetists to expand the workforce in underserved areas.

Policy and advocacy

- **Policy support:** Advocate for increased government funding for midwifery and anesthesia training programs. Lobby health insurance providers to expand coverage for epidural analgesia during childbirth.
- **Awareness campaigns:** Partner with media outlets and celebrities to launch public awareness campaigns highlighting the importance of pain relief options for women in labor.
- **Autonomy and informed choice:** Ensure educational materials and training programs emphasize a woman's right to informed decision-making throughout the birthing process. Develop clear communication protocols for healthcare providers to discuss pain relief options with laboring women.

By addressing these open questions and implementing these proposed solutions, Nigeria can work towards ensuring greater access to safe and effective pain relief options like epidural analgesia for all women in labor. This will not only improve maternal well-being and birth experiences but also has the potential to contribute to better overall maternal and neonatal health outcomes.

Conclusion

The limited access to epidural analgesia during childbirth in Nigeria represents a critical public health concern with significant consequences for mothers and the healthcare system. This review has revealed a complex interplay of factors contributing to this unmet need. Ensuring access to safe and effective pain relief like epidural analgesia is not just a medical necessity but a fundamental right for all women in labor.

By implementing the multifaceted strategies, Nigeria can bridge the gap between the need and access to epidural analgesia. This will not only empower women to make informed choices about their childbirth experience but also has the potential to improve maternal and neonatal outcomes. Further research on the specific cultural beliefs and economic factors influencing epidural use in Nigeria can further inform the development of targeted interventions.

Finally, there is a pressing need to conduct cost-benefit analyses to assess the economic feasibility of proposed solutions; partner with local stakeholders, including midwives, nurses, anesthesiologists, policymakers, and women's rights organizations throughout the research and intervention design process; continuously monitor and evaluate the effectiveness of implemented solutions to ensure they address the specific needs of the Nigerian context.

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