



A research proposal on the barriers to postnatal care services utilization among women in rural and urban communities in Delta State.

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Abstract

Background: The Postnatal period is usually defined as the first six weeks after birth and is a critical stage to the health and survival of both the newborn and the mother. Reports have shown that about 50% of maternal deaths and 40% of neonatal deaths occur within 24 hours after birth, yet only about 41.8% of women in Nigeria were reported to have received Postnatal Care in 2018. Despite the significant challenges and changes that occur in this period, it has been observed that standardized care is limited or underutilized.

Objective: The aim of this research is to determine the barriers to postnatal care service utilization among women in rural and urban communities in Delta State, Nigeria.

Methods: An exploratory sequential mixed-study design involving review of autobiographical case reports and quantitative sampling of 768 women of reproductive age (18-49 years) across 12 randomly selected communities in Delta State.

Expected outcome: This study will highlight the gaps and challenges of Postnatal Care (PNC) utilization in Delta State to inform evidence-based policy decisions on strengthening postnatal care service utilization, addressing regional disparities and other socio-demographic factors.

Significance: This study will significantly provide insight to inform evidence-based policy decisions on strengthening postnatal care service delivery and utilization while addressing regional disparities; consequently, improving maternal and child health outcomes.

Keywords: Maternal Health, Postnatal care, Utilization, Autobiographical case reports, Women of child bearing age.

1. Background

1.1 Introduction

The Postnatal, also known as postpartum period is a critical stage to the health and survival of both the newborn and the mother, yet appears to be the most neglected in the continuum of care for mother and child (Wassie et al., 2021). Postnatal care services may include advise to mother on breastfeeding, nutrition, family planning, and hygiene (Schrey-Petersen et al., 2021) as well as recovery from childbirth, care of the newborn and immunization (Umar et al., 2017). The concept of the continuum of care in maternal and child health (MCH) encompasses a comprehensive approach that addresses the health needs of women and children throughout their life cycles, from preconception, antenatal, intrapartum, and the postnatal period, extending to childhood and beyond (World Health Organization, 2022). However, compared to the antenatal and intrapartum periods, the postnatal period has not been given sufficient focus within

the context of various efforts aimed at reducing maternal mortality (Somefun & Ibisomi, 2016).

The World Health Organization's postnatal care model places the woman-newborn dyad at the Centre of care supported by quality care, family support and continued support from health services (Wojcieszek et. al., 2023). Pivotal to the postnatal care model is a 'positive postnatal experience', which is recognized as a significant endpoint for all women, newborns, parents and families after birth, and which lays the platform for improved short and longer-term health and well-being (WHO, UNICEF, UNFPA, 2023). To enable the provision of the essential postnatal care package, the hallmark of the WHO PNC model is the recommendation of at least four postnatal care contacts (fig 1). First ongoing care and monitoring in the first 24 hours after birth, followed by at least three other contacts (World Health Organization, 2022).

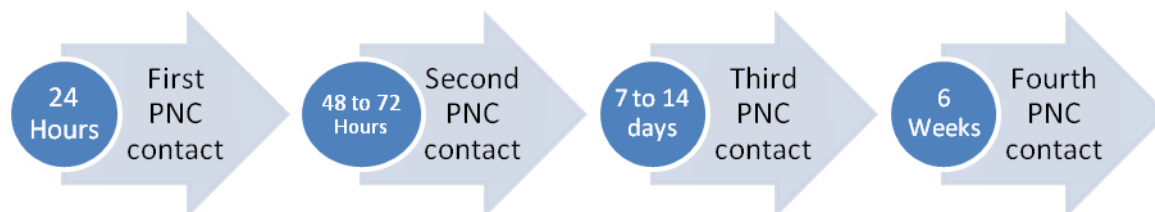


Fig. 1: WHO Postnatal Care Schedule

Despite this recommendation, studies done on postpartum care in developing countries shows that 7 out of 10 women do not receive any postpartum care, and mothers often only seek postnatal care in the event of complications after birth (Adams & Smith, 2018; Fort et al., 2006). It has been reported how for decades, considerable efforts have been made to ensure skilled birth attendance, with the aim of reducing morbidity and mortality among mothers and newborns. These efforts have substantially improved the number of births in health facilities, the proportion of deliveries attended by skilled health personnel in developing countries having increased from 56% in 1990 to 68% in 2012. Despite this increased coverage, 800 women and 7700 newborns still die each day from complications during pregnancy and

childbirth and in the postnatal period (World Health Organisation, 2016).

In Delta State, several National and State-level policies support the provision of maternal and child health care services (Delta State Government, 2010). However, specific attention needs to drawn to the rate of utilization of the individual components of care to enable targeted interventions in the areas that are lagging.

1.2 Synopsis of Literature

The World Health Organization (WHO) recommends that women have access to PNC services within the first 24 hours after childbirth and at least three additional visits within the first six weeks postpartum (World Health Organization, 2022). However, data indicate that global utilization rates vary significantly. According to the latest WHO report, only 41% of women worldwide accessed postnatal care within the

recommended timeframe, with stark contrasts observed between high-income and low-income countries (World Health Organization, 2022). For instance, the African regional average for postpartum care utilization is approximately 60%, which is slightly higher than Nigeria's reported rates (58%) (WHO, UNICEF, UNFPA et al., 2023). In contrast, countries such as Kenya and South Africa have achieved postpartum care utilization rates above 70%, while countries like Malawi, South Sudan and Tanzania PNC non-utilization rates as high as 43%, 56% and 51% respectively (Izudi et al., 2017; Konje et al., 2021; Phiri et al., 2015; WHO, UNICEF, UNFPA et al., 2023).

Sub-Saharan Africa experiences the lowest PNC utilization rates globally, with only

about 23% of women receiving PNC within the first 48 hours after delivery (UNICEF, 2022). Reports have shown that Sub-Saharan Africa (SSA) accounted for 66% (196,000) of all maternal deaths worldwide in 2017, yielding a maternal mortality ratio of 542 per 100,000 live births (World Health Organization, 2019). In a recent study by Cahyono et al., (2021), results indicated that the prevalence of PNC service utilisation among mothers aged 15-49 years in Indonesia was 70.94%; however, regional gaps in the utilisation of PNC services were indicated. Mothers in the Central of Indonesia had used PNC services 2.54 times compared to mothers in the Eastern of Indonesia (Cahyono et al., 2021).

Table 1: Comparative proportion of PNC non-utilization in some African countries.

S/N	Country	PNC non-utilization rates (%)	Reference
1	Malawi	43%	Phiri et al., 2015
2	Morocco	69%	Elkhoudri et al., 2017
3	Nigeria	42%	Agho et al 2016
4	South Sudan	56%	Izudi et al., 2017
5	Tanzania	51%	Konje et al 2021

The United Nations (UN) set a Sustainable Development Goals (SDGs) target to reduce the maternal mortality rate to less than 70 per 100,000 live births, with no individual country exceeding 140 maternal deaths per 100,000 by 2030, but meeting this goal is a difficult challenge (United Nations, 2020), particularly for developing countries like Nigeria, where the maternal mortality rate was three times higher than that set for the UN Millennium Development Goals (MDGs) in 2015 (United Nations, 2015). In 2013, NDHS reported that 58% of Nigerian women had no postnatal visit (National Population Commission and ICF International, 2014). A low utilization rate of PNC services contributes significantly to the high levels of maternal and infant mortality, which continue to be a challenge in Nigeria and other SSA states (World Health Organization et al., 2017). It is manifestly clear that identifying determinants of PNC service utilization are necessary to guide public health interventions (Dankwah et al., 2021). According to the 2018 Nigeria Demographic and Health Survey (NDHS), only 58% of women who had a live birth in the two years preceding the survey received any postnatal

care. This figure has shown only marginal improvement from previous surveys, indicating persistent challenges in PNC service utilization (National Population Commission (NPC) [Nigeria], 2019).

Empirical evidence indicates that postnatal care service utilization is significantly influenced by a complex interplay of socio-demographic, cultural, economic, and healthcare system factors.

For instance, **82%** of women with secondary education or higher received postpartum care, compared to only **36%** of those with no formal education (National Population Commission (NPC) [Nigeria], 2019). Higher education could mean better access to health information and hence better understanding of the benefits of maternity services (Dankwah et al., 2021; Mezmur et al., 2017). Furthermore, it is reported that utilization of postnatal care is related to knowledge about its importance, level of education, access to health services, counseling of postnatal care in institutional deliveries, and women's ability to prioritize their child's health needs over their own (Kumar, 2010). This corroborates an autobiographical case report by Omatsuli et al., (2024), which highlights lack of

knowledge about PNC services as a major barrier to its utilization and explicates the need for more health education among women of child-bearing age (Omatsuli et al., 2024). Other literature seems to unequivocally suggest that wealthier women have better access to maternal health services in general since they can afford the ancillary costs that are related to accessing PNC services (Singh et al., 2012); while availability of healthcare facilities and trained personnel have been reported to be a crucial determinant for PNC utilization. Regions with better healthcare infrastructure typically have higher rates of PNC access (Abdullahi & Usman, 2022).

Geographical barriers, particularly in rural areas can impede access to PNC as women living in remote locations often face challenges in reaching healthcare facilities

(Kumar et. al., 2022). According to evidence around the world, the magnitude of the non-utilization of PNC is tremendously high in rural communities compared to urban areas (Elkhoudri et al., 2017; Kim et al., 2019). Studies conducted on postpartum mothers in rural areas showed that majority of mothers in rural areas do not get postnatal care with proportion of 75.4% in Ethiopia (Amsalu et al., 2022), 82.0% in rural Bangladesh and 81% in Northwest Ethiopia (Kebede et al., 2019; Shahjahan et al., 2017). Other studies conducted in urban areas showed that the proportion of non-utilization of PNC was 38.6% in Sri Lanka (Perera et al., 2021), 69% in Morocco (Elkhoudri et al., 2017), 43.4% in Malawi (Phiri et al., 2015), 56% in South Sudan (Izudi et al., 2017) and 50.5% in Tanzania (Konje et al., 2021) (see fig. 2).

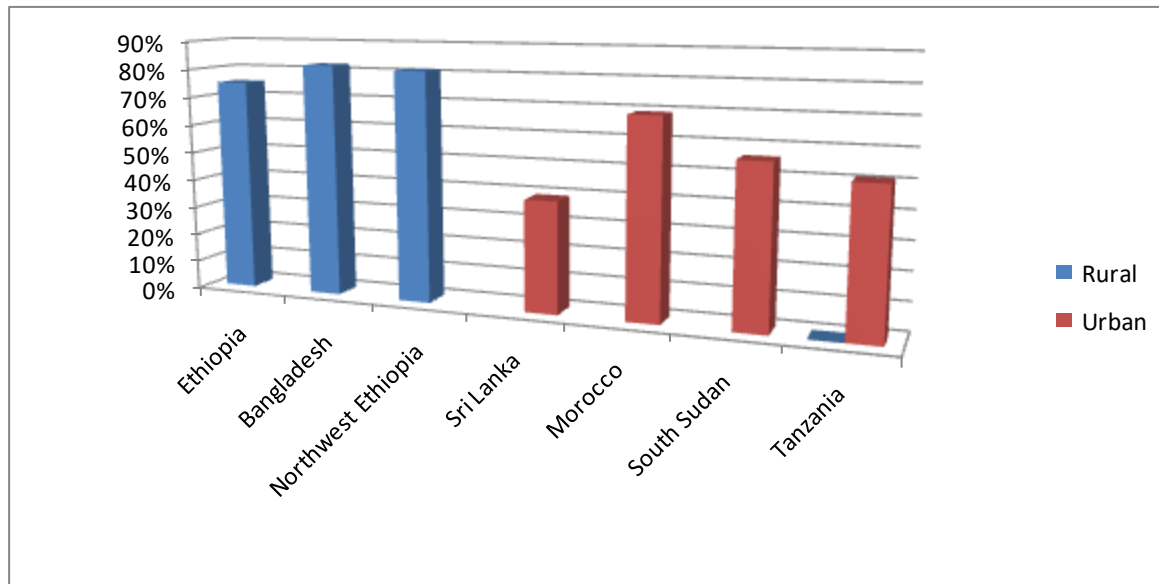


Fig. 2: Postnatal care non-utilization rate in some urban and rural areas

Population attributable risks (PARs) with non-use of postnatal care in Nigeria were reported as 68% for women who delivered at home and 37% for women who lacked knowledge of delivery complications (Agho et al., 2016). Cultural factors have also been reported to play a significant role in the low uptake of PNC services. Many women prioritize traditional practices over formal healthcare (Adedokun & Yaya, 2020).

1.3 Statement of problem

It has been reported that about 50% of maternal deaths and 40% of neonatal deaths occur within 24 hours after birth, yet only about 41.8% of women in Nigeria were

reported to have received Postnatal Care in 2018 (National Population Commission (NPC) [Nigeria], 2019). Despite the critical importance of PNC, utilization remains alarmingly low posing significant risks to maternal and neonatal health. Compared to the antenatal and intrapartum periods, the postnatal period has not been given sufficient focus in Primary health care centres, within the context of various efforts aimed at reducing maternal mortality (Somefun & Ibisomi, 2016).

A lack of maternal healthcare utilization frequently occurs, primarily in low- and middle-income countries, including Nigeria,

with considerable disparities between urban and rural dwellers (Agus, 2018; Flanagan et al., 2019; Paul & Chouhan, 2019; Ilesanmi & Akinmeyer, 2018). There is limited research and paucity of data on postnatal care (PNC) service utilization and its associated barriers in Delta State.

1.4 Significance of study

This study will significantly provide insight to inform evidence-based policy decisions on strengthening postnatal care service

delivery and utilization, addressing regional disparities and other socio-demographic factors; consequently improving maternal and child health outcomes.

1.5 Broad objective

The aim of this research is to determine the barriers to postnatal care services utilization among women of child- bearing age (WCA) in rural and urban communities in Delta State, Nigeria.

1.5.1 Specific objectives

Specific Objectives	Hypothesis
To assess the level of awareness of PNC services among WCA in rural and urban communities in Delta State, Nigeria.	There is no difference in the level of awareness of PNC services among WCA in rural and urban communities in Delta State, Nigeria..
To Identify the types of postnatal care services available in Primary Health Care facilities in rural and urban communities in Delta State, Nigeria.	There is no difference in the types of postnatal care services available in rural and urban communities in Delta State, Nigeria.
Determine the prevalence of postnatal care services utilization among women of reproductive age in rural and urban communities in Delta State, Nigeria.	There is no difference in the prevalence of utilization of postnatal care services among women in rural and urban communities in Delta State, Nigeria.
Identify the barriers to postnatal care services utilization among women of reproductive age in rural and urban communities in Delta State, Nigeria	There is no difference in the barriers to postnatal care services among women in rural and urban communities in Delta State, Nigeria.
Compare PNC Service utilization between rural and urban communities in Delta State, Nigeria.	There is no difference in Postnatal Care Service utilization in rural and urban communities in Delta State, Nigeria.

2. Methods

2.1. Study design

The proposed study is an exploratory sequential mixed-study design involving qualitative and quantitative sampling. The qualitative (QUAL) phase will involve semi-structured interviews of 20 women of child bearing age (18-49 years), selected by convenience sampling within the State, to generate auto-biographical case reports on their postnatal care experience. Data from auto-biographical reports will be organized and analysed manually by use of thematic approach and findings will inform subsequent quantitative (QUAN) data collection involving a community-based cross-sectional study to investigate the prevalence and perceived barriers to utilization of postnatal care services among a larger, randomly selected women of reproductive age (768) using a semi-structured interviewer-administered questionnaire. The exploratory sequential technique is distinct because it explores a concept before validating it, allowing for greater versatility in discovering novel ideas offered by the QUAL approach (Cooper & Schindler, 2013)

2.2.1 Study area

Delta State, carved from the former Bendel State on August 27th 1991 is situated in the South-South geopolitical zone of Nigeria. It is an oil producing State with its capital located at the Northern end, Asaba. The State is divided into three senatorial districts- Delta North, Delta South and Delta Central with a total of twenty-five (25) local government areas, having an estimated population of 4,098,401 (male: 2,074,316; female: 2,024,085) (National Population Commission, 2010). The study will be carried out in 12 randomly selected communities (6 urban and 6 rural) within 6 randomly selected LGAs across the 3 senatorial districts in the State.

2.2.2 Study population/ Sampling technique

Study participants for the qualitative phase will include 20 women of reproductive age (18-49 yrs) selected by convenience sampling while that of the quantitative phase will include 768 women of reproductive age (18-49 years) across 12 randomly selected communities using a multi-staged random sampling technique (see fig. 3).

STAGE 1: 6 LGAs out of 25

STAGE 2: 2 Communities from each LGA

STAGE 3: 64 Women from each community

Fig. 3: Multi-staged random sampling of QUAN study participants

Table 2: Randomly selected communities and sample size distribution

S/N	Senatorial District	LGAs	Communities	No. of Participants (Women 18-49 yrs)
1	Delta North	Oshimili South, Ika South	Okonala&Umuagu, Agbor Ob&Emuhu	128 128
2	Delta South	Bomadi, Isoko South	Bomadi&, Akugbene, Oleh&Olomoro	128 128
3	Delta Central	Ughelli North, Uvwie	Uwherhu&Ekiugbo, Orhorhe&Ugberikoko	128 128
	Total			768

Table 3: Inclusion and exclusion criteria of selecting study participants

S/N	Inclusion	Exclusion
1	Women of child bearing age (18-49) years who had given birth previously.	Women of child bearing age (18-49) who have never given birth.
2	Women of child bearing age (18-49) years who have resided in the community for a minimum of six months.	Women of child bearing age (18-49) years who have resided in the community for less than six months.
3	Those willing to participate	Those not willing to participate

2.2.3 Ethical considerations

Ethical clearance for the study will be obtained from the ethical committee, Novena University, Ogume as well as State Ministry of Health Research Ethical Committee (MOHREC) and Delta State Primary Health Care Agency, Asaba. Informed consent will be obtained from each of the participants after detailed explanation of the study procedure with assurance of confidentiality of the information that will be collected

2.2.4 Data collection

Qualitative data:

Semi-structured interviews with mainly open-ended questions will be conducted.

The interview guide will contain open-ended questions created by the authors, focused on demographic characteristics, knowledge, utilization and barriers to skilled postnatal. Before use, the interview guide will be evaluated by experts and pre-tested.

Quantitative data

Quantitative [QUAN] data will be collected using a semi-structured, interviewer-administered questionnaire consisting of 30 items assessing details such as demographic characteristics, knowledge, and barriers to skilled postnatal care and PNC utilization. The data collection tool is a standard reliable

and validated resource adapted partly from the World Health Organization (WHO) Maternal WOICE tool on postnatal care (Takada et al., 2019) as well as identified thematic areas in the QUAL study.

2.3 Scope of the study

This study focuses on postnatal care service utilization among women of child bearing age in rural and urban communities in Delta State, exploring factors such as socio-demographic characteristics, health system factors and regional disparities.

2.4. Operational process/plan

- i. A total of Six (6) research assistants will be recruited across the six selected LGAs and trained on data collection techniques and ethical guidelines.
- ii. The semi-structured questionnaires will be administered to participants by the interviewer at the community level, adhering strictly to all ethical guidelines.
- iii. Data will be coded to maintain confidentiality and entered into the computer.
- iv. Statistical analysis will be done using SPSS version 22.0.
- v. Information obtained will be presented using Tables, Bar charts Pie charts and

expressed as frequencies and percentages.

2.6. SWOT analysis

To evaluate research viability, a SWOT analysis was conducted to identify the

strengths, weaknesses, opportunities, and threats related to postnatal care service utilization in the State districts (Table 4).

Table 4: SWOT analysis

Strengths	Weakness	Opportunities	Threats
Existing Health care infrastructure	Dependence on self-reported data.	Growing interest in maternal and child health research.	Competing research priorities.
Robust methodology employing mixed-methods.	Poor health education about PNC importance and benefits.	Partnerships and collaborations.	Paucity of data on PNC research in Delta State.
Well trained research team.	Cultural and traditional barriers.	Academic and professional peer review	Economic instability.
Government programs and policies supporting maternal and newborn health.		Emerging technologies.	

3.0 Expected outcomes

Empirical evidence indicates that postnatal care service utilization in Nigeria is significantly influenced by a complex interplay of socio-demographic, cultural, economic, and healthcare system factors. The study is expected to access knowledge of postnatal care services in women of child bearing age in both rural and urban communities. Furthermore, identification of barriers and gaps from both the rural and urban communities will give a holistic view of the prevailing situation and provide insight on perceived regional disparities in health services utilization.

4.0 Conclusion

A comprehensive understanding of the determinants of postnatal care service utilization is essential for developing targeted, data-driven public health interventions. The study will highlight critical gaps in maternal and child health care with emphasis on postnatal care services, with the aim of improving health outcomes and reducing maternal and infant morbidity and mortality. This project is targeted to be completed by the end of 2025.

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Conflict of Interest:

None.

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