

# Perceived Benefits of Midwife-Led Continuity of Care for Maternity Services in Rivers State, Nigeria

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## Abstract

Midwife-led continuity of care (MLCC) is an evidence-based maternity care model associated with improved maternal and neonatal outcomes globally. However, evidence regarding its perceived benefits in low-resource settings such as Rivers State, Nigeria, remains limited. This study explored the perceived benefits of MLCC among healthcare providers and mothers attending selected primary healthcare facilities in Rivers State. A parallel convergent mixed-methods design was adopted. Quantitative data were obtained from 428 respondents (88 healthcare providers and 340 mothers) using structured questionnaires, while qualitative data were collected from 30 purposively selected participants through semi-structured interviews. Descriptive statistics summarized quantitative findings, and thematic analysis was applied to qualitative data. Findings revealed that the majority of respondents perceived MLCC as beneficial in promoting trust and relationship building, emotional support, personalized care, improved decision-making, reduced maternal anxiety, and enhanced patient-provider communication. Women particularly reported increased confidence during labour and improved satisfaction with childbirth experiences. Healthcare providers acknowledged improved care coordination and professional fulfillment. The study concludes that MLCC is widely perceived as beneficial for maternity care in Rivers State. Strengthening institutional support and expanding MLCC implementation may enhance maternal healthcare quality in similar low-resource settings.

## How to Cite this Article

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## 1. Introduction

Midwife-led continuity of care (MLCC) is a maternity care model in which a woman receives care from the same midwife or a small team of midwives throughout pregnancy, labour, birth, and the postnatal period. The model emphasizes relational continuity, individualized care, and holistic support that addresses the physical, emotional, and psychosocial needs of women (Sandall *et al.*, 2024). Unlike fragmented care systems where women encounter multiple providers at different stages of pregnancy, MLCC promotes sustained therapeutic relationships that enhance trust, communication, and shared decision-making.

Globally, MLCC has been associated with improved maternal and neonatal outcomes. Evidence indicates that women receiving midwife-led continuity models are more likely to experience spontaneous vaginal birth, reduced obstetric interventions, increased breastfeeding initiation, and higher satisfaction with care (World Health Organization [WHO], 2022; Sandall *et al.*, 2024). Additionally, continuity models have been linked to improved psychological wellbeing and reduced anxiety during pregnancy and childbirth (Renfrew *et al.*, 2021). These benefits are particularly relevant in low- and middle-income countries, where maternal health outcomes remain suboptimal.

Nigeria continues to bear a disproportionate burden of global maternal mortality, accounting for a significant percentage of maternal deaths worldwide (WHO, 2023). Contributing factors include inadequate health infrastructure, shortage of skilled birth attendants, delayed referrals, and socio-cultural barriers to accessing care. In Rivers State, disparities between urban and rural health facilities further complicate the delivery of quality maternity services. Fragmented models of care, limited provider-patient interaction, and systemic resource constraints often undermine continuity and personalization of care.

The World Health Organization (2022) recommends midwife-led continuity models as an evidence-based strategy to improve maternal health outcomes and strengthen primary healthcare systems. However, successful implementation depends not only on structural readiness but also on the perceptions and acceptance of both healthcare providers and service users. Understanding how mothers and healthcare providers perceive the benefits of MLCC is therefore critical for informing policy decisions, guiding resource allocation, and strengthening maternal healthcare delivery in Rivers State.

This study explores the perceived benefits of MLCC among mothers and healthcare providers in selected health facilities in Rivers State, Nigeria, with the aim of contributing context-specific evidence to support sustainable implementation strategies.

## 2. Methods

### 2.1 Study Design

This study employed a parallel convergent mixed-methods design, which allowed for the simultaneous collection and analysis of quantitative and qualitative data to provide a comprehensive understanding of the perceived benefits of midwife-led continuity of care (MLCC). In this design, both strands of data are collected during the same phase of the research process, analyzed independently, and then merged during interpretation to compare and corroborate findings (Creswell & Plano Clark, 2023). The mixed-methods approach was considered appropriate because perceptions of MLCC encompass both measurable patterns and subjective experiences. Quantitative methods enabled the assessment of prevalence and distribution of perceived benefits, while qualitative inquiry provided in-depth insight into participants' lived experiences and contextual realities. The integration of both strands enhanced methodological rigor, complementarity, and validity of findings (Johnson *et al.*, 2020).

### 2.2 Study Setting

The study was conducted in four primary healthcare centres (PHCs) located in Rivers State, Nigeria: Orogbum, Ozuoba, Aluu, and Omoku. These facilities were selected to reflect both urban and semi-urban/rural contexts within the state. Primary healthcare centres serve as the first point of contact for maternity services in Nigeria and play a central role in implementing continuity-based maternal care models. Rivers State, located in the Niger Delta region, is characterized by socio-economic disparities, environmental challenges, and variations in access to quality maternal healthcare services. These contextual factors make the setting suitable for examining perceptions of MLCC within real-world service delivery environments.

### 2.3 Participants and Sampling

The study population comprised healthcare providers and women of reproductive age (18–49 years) utilizing maternity services in the selected health facilities.

For the quantitative component, a total of 428 respondents participated, including 88 healthcare providers and 340 mothers. Convenience sampling was used to recruit participants who met the inclusion criteria and were available during the data collection period. Inclusion criteria for healthcare providers included registered midwives, nurses, and other maternity care professionals with at least six months of clinical experience in the facility. Mothers eligible for inclusion were those who were currently pregnant or had delivered within the previous six months and had received care in the facility.

For the qualitative component, 30 participants (16 healthcare providers and 14 mothers) were purposively selected to ensure variation in professional role, parity, and service utilization experience. Purposive sampling is recommended in qualitative health research to obtain information-rich cases that illuminate the phenomenon under study (Braun & Clarke, 2021). Recruitment continued until data saturation was achieved, defined as the point at which no new themes or significant insights emerged from additional interviews (Hennink *et al.*, 2019).

### 2.4 Data Collection

Data were collected in October 2025. Ethical approval was not applicable for this study.

#### Quantitative Data Collection

Structured questionnaires were administered to participants to assess perceived benefits of MLCC. The questionnaire consisted of sections covering demographic characteristics and items measuring perceived relational continuity, emotional support, personalized care, decision-making involvement, and overall satisfaction. Items were rated using a Likert scale to capture degrees of agreement. The instrument was reviewed for face and content validity by experts in nursing and maternal health research. Internal consistency reliability was assessed using Cronbach's alpha coefficient, ensuring acceptable reliability levels (Polit & Beck, 2021).

#### Qualitative Data Collection

Qualitative data were gathered through semi-structured, face-to-face interviews using an interview guide developed from the study objectives. Open-ended questions explored participants' experiences of continuity of care, perceived benefits, emotional responses, and perceived impact on maternal outcomes. Interviews were conducted in a private setting within the health facilities to ensure confidentiality and lasted approximately 30–45 minutes. With participants' consent, interviews were audio-recorded and later transcribed verbatim. Field notes were taken to capture non-verbal cues and contextual observations. Trustworthiness of qualitative data was enhanced through credibility, dependability, confirmability, and transferability strategies, including member checking and peer debriefing (Braun & Clarke, 2021).

### 2.5 Data Analysis

#### Quantitative Analysis

Quantitative data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize

demographic characteristics and perceived benefits of MLCC. Where appropriate, inferential statistics such as Chi-square tests were conducted to examine associations between demographic variables and perception outcomes, with statistical significance set at  $p < 0.05$ . Data cleaning and assumption checks were conducted prior to analysis to ensure accuracy and reliability (Polit & Beck, 2021).

### Qualitative Analysis

Qualitative data were analyzed using thematic analysis following Braun and Clarke's (2021) six-step framework: familiarization with the data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Transcripts were read repeatedly to ensure immersion in the data. Codes were generated inductively and grouped into broader themes reflecting perceived benefits of MLCC. Data were managed manually to maintain close engagement with the data.

### Integration of Data

Integration of quantitative and qualitative findings occurred at the interpretation stage. Results from both strands were compared to identify convergence, complementarity, or divergence. This triangulation strengthened the overall validity of the findings and provided a comprehensive understanding of participants' perceptions of MLCC (Creswell & Plano Clark, 2023).

## 3. Results

### 3.1 Quantitative Findings

#### 3.1.1 Perceived Benefits of Midwife-Led Continuity of Care (N = 428)

Table 1 presents respondents' perceptions of the benefits of midwife-led continuity of care. The majority of participants expressed positive perceptions across all measured domains. Enhanced communication and information sharing recorded the highest level of agreement (83.2%), followed closely by greater satisfaction with maternity services (84.6%). Improved trust between women and midwives was also strongly endorsed (81.3%). Reduced anxiety during pregnancy and childbirth had slightly lower agreement (75.0%) but remained substantial. The mean scores (ranging from 3.98 to 4.25) indicate overall strong agreement with the perceived benefits of MLCC.

**Table 1: Perceived Benefits of Midwife-Led Continuity of Care (N = 428)**

| Perceived Benefit                               | Agree n (%) | Disagree n (%) | Mean $\pm$ SD   |
|---|-------------|----------------|-----------------|
| Improved trust between women and midwives       | 348 (81.3%) | 80 (18.7%)     | 4.12 $\pm$ 0.84 |
| Reduced anxiety during pregnancy and childbirth | 321 (75.0%) | 107 (25.0%)    | 3.98 $\pm$ 0.91 |
| Enhanced communication and information sharing  | 356 (83.2%) | 72 (16.8%)     | 4.21 $\pm$ 0.76 |
| Increased involvement in decision-making        | 330 (77.1%) | 98 (22.9%)     | 4.05 $\pm$ 0.88 |
| Greater satisfaction with maternity services    | 362 (84.6%) | 66 (15.4%)     | 4.25 $\pm$ 0.72 |

#### 3.1.2 Mothers' Perceived Confidence and Safety during Labour (n = 340)

Table 2 shows mothers' perceptions regarding confidence and safety during labour under MLCC. A substantial majority of mothers reported increased confidence (84.4%) and enhanced sense of safety (86.8%) when attended by the same midwife throughout care. These findings underscore the psychological and emotional benefits of relational continuity in maternity services.

**Table 2: Mothers' Perceived Confidence and Safety during Labour (n = 340)**

| Variable                                | Yes n (%)   | No n (%)   |
|---|-------------|------------|
| Increased confidence during labour      | 287 (84.4%) | 53 (15.6%) |
| Increased sense of safety during labour | 295 (86.8%) | 45 (13.2%) |

#### 3.1.3 Healthcare Providers' Perceived Professional and Clinical Benefits of MLCC (n = 88)

Table 3 presents healthcare providers' perceptions of professional and clinical benefits associated with MLCC. The majority reported improved care coordination (83.0%) and increased professional satisfaction (80.7%). Additionally, 78.4% indicated that continuity facilitated early identification of complications due to familiarity with women's health histories. These findings suggest that MLCC not only benefits women but also enhances clinical efficiency and provider fulfillment.

**Table 3: Healthcare Providers' Perceived Professional and Clinical Benefits of MLCC (n = 88)**

| Perceived Benefit                     | Yes n (%)  | No n (%)   |
|---------------------------------------|------------|------------|
| Improved care coordination            | 73 (83.0%) | 15 (17.0%) |
| Early identification of complications | 69 (78.4%) | 19 (21.6%) |
| Increased professional satisfaction   | 71 (80.7%) | 17 (19.3%) |

### 3.2 Qualitative Findings

#### 3.2.1 Summary of Emergent Themes on Perceived Benefits of MLCC

Table 4 summarizes the five major themes that emerged from the thematic analysis. Trust and relationship building were central, as participants emphasized the comfort derived from sustained interaction with a familiar midwife. Emotional and psychological support was consistently highlighted, with women reporting reduced fear during childbirth. Personalized care and improved decision-making reflect the woman-centered nature of MLCC. Healthcare providers emphasized professional satisfaction and improved care coordination, demonstrating that perceived benefits extend beyond service users to providers.

**Table 4: Summary of Emergent Themes on Perceived Benefits of MLCC**

| Theme   | Description  | Illustrative Summary                                       |
|---|--|--|
| Trust and Relationship Building                 | Continuous interaction fosters therapeutic relationships | Women felt more comfortable discussing concerns            |
| Emotional and Psychological Support             | Familiarity reduces fear and anxiety                     | Participants described feeling reassured and less stressed |
| Personalized and Woman-Centered Care            | Care tailored to individual needs and history            | Midwives understood unique health conditions               |
| Improved Decision-Making and Communication      | Women actively involved in care decisions                | Better information sharing and shared planning             |
| Professional Satisfaction and Care Coordination | Enhanced job satisfaction and monitoring                 | Providers reported improved follow-up and monitoring       |

### 4. Discussion

This study examined the perceived benefits of midwife-led continuity of care (MLCC) among mothers and healthcare providers in selected primary healthcare facilities in Rivers State, Nigeria. The findings from both quantitative and qualitative strands demonstrate strong positive perceptions of MLCC, highlighting its relational, psychological, clinical, and professional advantages. The convergence of data strengthens the evidence supporting MLCC as a valuable maternity care model in low-resource settings.

#### Perceived Relational and Communication Benefits

The quantitative findings (Table 1) revealed high levels of agreement regarding improved trust (81.3%), enhanced communication (83.2%), and greater satisfaction with maternity services (84.6%). These findings align with existing literature indicating that continuity of care fosters therapeutic relationships built on familiarity and mutual respect (Sandall *et al.*, 2024). Trust is a fundamental component of quality maternity care, as it influences women's willingness to disclose concerns, adhere to medical advice, and engage in shared decision-making (Renfrew *et al.*, 2021).

Enhanced communication emerged as one of the most strongly endorsed benefits. Effective communication is central to woman-centered care and contributes to informed consent, improved birth experiences, and reduced obstetric anxiety (World Health Organization [WHO], 2022). The qualitative findings further reinforced this outcome, with participants emphasizing that continuous interaction enabled openness and comfort when discussing health concerns. These findings are consistent with global evidence suggesting that relational continuity improves maternal satisfaction and emotional well-being (Downe *et al.*, 2019).

The strong agreement regarding overall satisfaction (mean = 4.25 ± 0.72) suggests that MLCC positively influences women's perception of care quality. Satisfaction in maternity services has been linked to respectful maternity care, continuity, and emotional support (Bohren *et al.*, 2019). In contexts like Rivers State, where fragmented care models are common, the introduction or strengthening of MLCC may address dissatisfaction associated with impersonal and episodic service delivery.

#### Psychological Benefits: Reduced Anxiety, Confidence, and Safety

Reduced anxiety during pregnancy and childbirth (75.0%) was another key finding. Although slightly lower than other domains, it remains substantial. Anxiety during pregnancy has been associated with adverse maternal and neonatal outcomes, including preterm birth and poor postpartum adjustment (Howard & Khalifeh, 2020). The qualitative themes of emotional and psychological support and reassurance further contextualize this quantitative finding. Women described feeling calmer and less fearful when attended by a familiar midwife, suggesting that relational continuity serves as a protective psychological factor.

Table 2 further demonstrated that 84.4% of mothers reported increased confidence and 86.8% reported an increased sense of safety during labour. These findings are significant within maternity care literature, as perceived safety strongly influences labour progression and overall childbirth experience (WHO, 2022). Feeling safe and supported during labour can reduce stress responses, potentially influencing physiological labour processes (Renfrew *et al.*, 2021).

In low-resource settings, fear of neglect or mistreatment often contributes to delayed care-seeking behavior (Bohren *et al.*, 2019). Therefore, MLCC may serve as a strategy to mitigate psychological barriers to facility-based childbirth by strengthening relational trust and perceived safety.

### **Shared Decision-Making and Woman-Centered Care**

Increased involvement in decision-making (77.1%) underscores the woman-centered nature of MLCC. Shared decision-making is recognized as a hallmark of respectful maternity care and is associated with improved satisfaction and autonomy (WHO, 2022). The qualitative findings highlighted improved decision-making and communication, with women reporting greater participation in care planning.

Woman-centered care emphasizes respect for women's preferences, cultural values, and individual health needs (Renfrew *et al.*, 2021). The theme of personalized and woman-centered care identified in this study reflects this principle. Participants acknowledged that midwives' familiarity with their medical histories enabled tailored interventions and proactive planning. These findings corroborate evidence suggesting that MLCC promotes individualized care and reduces unnecessary medical interventions (Sandall *et al.*, 2024).

In the Nigerian context, where hierarchical healthcare structures may limit patient autonomy, strengthening shared decision-making practices through MLCC may enhance empowerment and improve maternal health outcomes.

### **Clinical Efficiency and Early Identification of Complications**

Healthcare providers reported improved care coordination (83.0%) and early identification of complications (78.4%) under MLCC (Table 3). These findings suggest that relational continuity enhances clinical effectiveness. Familiarity with a woman's obstetric history enables midwives to detect subtle changes in health status and respond promptly. Early detection is particularly critical in preventing maternal morbidity and mortality, especially in settings with limited emergency obstetric resources.

Evidence indicates that continuity models reduce adverse outcomes by enabling consistent monitoring and timely referral when necessary (Sandall *et al.*, 2024). Providers' perception that MLCC facilitates complication detection aligns with these findings. Moreover, continuity reduces duplication of assessments and improves documentation consistency, thereby enhancing efficiency (Renfrew *et al.*, 2021).

In Rivers State, where resource constraints may limit advanced diagnostic services, the role of midwives in early risk recognition becomes even more critical. MLCC therefore offers potential systemic advantages beyond relational benefits.

### **Professional Satisfaction and Workforce Implications**

The finding that 80.7% of healthcare providers reported increased professional satisfaction highlights an often underemphasized dimension of MLCC. Midwifery models that support autonomy and relational practice are associated with higher job satisfaction and reduced burnout (WHO, 2022). In contrast, fragmented systems may contribute to professional frustration and emotional exhaustion.

Professional satisfaction is particularly relevant in low-resource settings facing workforce shortages. Enhanced job fulfillment may contribute to staff retention and improved quality of care (Howard & Khalifeh, 2020). The qualitative theme of professional satisfaction and care coordination further supports this quantitative finding, indicating that MLCC strengthens both patient outcomes and workforce morale.

Given ongoing challenges related to midwifery staffing in Nigeria, policy frameworks supporting MLCC may indirectly address retention and workforce sustainability.

### **Integration of Quantitative and Qualitative Findings**

The integration of findings demonstrates strong convergence. Quantitative results highlighted measurable benefits such as trust, communication, and safety, while qualitative data provided depth by illustrating how these benefits manifest in lived experiences. For example, statistical evidence of reduced anxiety was enriched by participants' narratives describing reassurance and emotional comfort.

This triangulation enhances the credibility of findings and supports the robustness of MLCC as a viable model in Rivers State. The relational themes identified reflect global frameworks of quality maternal care, which emphasize continuity, respect, and individualized support (Renfrew *et al.*, 2021).

### **Implications for Nursing and Midwifery Practice**

The findings have significant implications for nursing and midwifery practice. First, strengthening relational continuity may enhance maternal satisfaction and psychological well-being. Second, integrating MLCC into primary healthcare systems may improve clinical monitoring and early risk detection. Third, supporting midwife autonomy may enhance professional satisfaction and workforce stability.

Policy initiatives should focus on training, staffing allocation, and supportive supervision to enable effective MLCC implementation. Aligning maternity services with WHO recommendations for continuity models may contribute to progress toward Sustainable Development Goal targets related to maternal mortality reduction (WHO, 2023).

## 6. Conclusion

Overall, the study provides compelling evidence that MLCC is widely perceived as beneficial by both mothers and healthcare providers in Rivers State. The relational, psychological, clinical, and professional advantages identified underscore its relevance in strengthening maternal healthcare systems. Given Nigeria's ongoing maternal health challenges, scaling up MLCC within primary healthcare facilities may represent a strategic approach to improving quality, safety, and satisfaction in maternity services.

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