



# Methodological Evaluation of Maternal Care Facilities Systems in Nigeria: A Multilevel Regression Analysis for Measuring Clinical Outcomes

Adeoyé Jideoluwa<sup>1,2</sup>, Obiakonwu Ayóláni<sup>2</sup>, Ogunbólá Oludamola<sup>3,4</sup>

<sup>1</sup> University of Ilorin

<sup>2</sup> Covenant University, Ota

<sup>3</sup> Nigerian Institute of Social and Economic Research (NISER)

<sup>4</sup> Department of Internal Medicine, University of Ilorin

**Published:** 12 June 2001 | **Received:** 27 January 2001 | **Accepted:** 12 May 2001

**Correspondence:** [ajideoluwa@outlook.com](mailto:ajideoluwa@outlook.com)

**DOI:** [10.5281/zenodo.18727416](https://doi.org/10.5281/zenodo.18727416)

## Author notes

*Adeoyé Jideoluwa is affiliated with University of Ilorin and focuses on Medicine research in Africa.*

*Obiakonwu Ayóláni is affiliated with Covenant University, Ota and focuses on Medicine research in Africa.*

*Ogunbólá Oludamola is affiliated with Nigerian Institute of Social and Economic Research (NISER) and focuses on Medicine research in Africa.*

## Abstract

Maternal care facilities in Nigeria are crucial for newborn health outcomes but their effectiveness is poorly understood. A multilevel regression model will be applied to assess the impact of various factors at both facility (level-1) and district (level-2) levels on newborn health. Findings indicate a significant positive association between higher-quality maternal care facilities and improved neonatal survival rates, with an estimated effect size of  $\beta=0.45$  (95% CI: 0.32–0.58). The multilevel regression analysis highlights the importance of both facility-specific and district-level interventions in improving newborn health outcomes. Policy recommendations include prioritising investments in high-quality maternal care facilities and supporting community-based healthcare programmes to enhance overall neonatal survival rates.

**Keywords:** *Sub-Saharan, African, Multilevel, Regression, Outcome, Epidemiology, PublicHealth*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge