



Cost-Effectiveness Assessment of Community Health Centres in Nigeria Using Multilevel Regression Analysis

Femi Adeyemo¹

¹ Agricultural Research Council of Nigeria (ARC�)

Published: 06 November 2011 | **Received:** 22 August 2011 | **Accepted:** 06 October 2011

Correspondence: fadeyemo@gmail.com

DOI: [10.5281/zenodo.18918230](https://doi.org/10.5281/zenodo.18918230)

Author notes

Femi Adeyemo is affiliated with Agricultural Research Council of Nigeria (ARC�) and focuses on Medicine research in Africa.

Abstract

Community health centres in Nigeria play a crucial role in primary healthcare delivery, but their cost-effectiveness remains underexplored. A multilevel regression model was employed to analyse data from 50 health centres across 10 states, accounting for both individual-level patient characteristics and contextual-level factors such as geographical location and socio-economic status. Robust standard errors were used to account for potential heteroscedasticity. The analysis revealed significant variations in service outcomes among different regions, with a regression coefficient indicating that urban centres had better health indicators compared to rural counterparts ($p < 0.05$). Community health centres exhibit varying levels of cost-effectiveness across Nigeria, necessitating targeted interventions to optimise resource deployment and improve healthcare accessibility. Public health policymakers should prioritise investments in urban areas where community health centres demonstrate superior performance, potentially through targeted funding or capacity-building initiatives. Treatment effect was estimated with $\text{text}\{ \text{logit} \}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, primary care delivery, multilevel analysis, cost-benefit assessment, health system evaluation, regression modelling, geographic information systems*

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

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



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge