Multilevel Regression Analysis for Evaluating Clinical Outcomes in Nigerian Community Health Centres Systems

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Abstract

The effectiveness of community health centers in Nigeria is often questioned due to varying outcomes across different regions. A multilevel logistic regression model was employed to analyse the impact of various factors at both individual (patient) and healthcare facility levels. The model accounts for clustering effects within different regions. The multilevel regression analysis revealed that patient socioeconomic status significantly influenced treatment adherence, with a coefficient of -0.56 (95% CI: -0.72 to -0.40). This study provides evidence on the importance of addressing patient socioeconomic factors for better clinical outcomes in Nigerian community health centers. Interventions targeting socioeconomic disparities should be prioritised, alongside continuous monitoring and evaluation of healthcare practices. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\smile}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, Multilevel, Logistic, Regression, Evaluation, Community, Health*

ABSTRACT-ONLY PUBLICATION

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

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