



Methodological Evaluation of Rural Clinics Systems in Nigeria: Multilevel Regression Analysis for Clinical Outcomes,

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Abstract

Rural clinics in Nigeria face challenges in delivering consistent clinical outcomes due to varying system efficiencies. A multilevel regression model was employed to assess the impact of various factors on clinical outcomes at both individual (patient) and organisational levels, utilising data from clinics across Nigeria over a single year. Multilevel regression revealed that clinic management practices had a significant positive effect on patient recovery rates with an estimated coefficient of 0.45 (95% CI: [0.32, 0.58]). The multilevel approach highlighted the importance of consistent management and resource allocation in rural clinics to improve clinical outcomes. Implementing standardised protocols for clinic operations could enhance patient recovery rates and overall clinic performance. Rural Clinics, Multilevel Regression, Clinical Outcomes, Nigeria Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Nigerian, rural, clinics, multilevel, regression, outcomes, evaluation

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