Methodological Evaluation of Community Health Centres Systems in Nigeria Using Multilevel Regression Analysis for Adoption Rates Assessment

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Abstract

{ "background": "Community health centers (CHCs) in Nigeria are essential for providing accessible healthcare services to underserved populations. However, their adoption and effectiveness vary significantly across different regions.", "purposeandobjectives": "The purpose of this study is to evaluate the systems of CHCs in Nigeria using multilevel regression analysis with an emphasis on measuring the adoption rates of these centers. The objectives are to identify factors influencing CHC adoption at both individual and community levels, and to assess their impact on healthcare outcomes.", "methodology": "The methodology will employ mixed-effects logistic regression models for analysing data collected from multiple sources including administrative records and surveys conducted in various Nigerian states. The specific model equation is $logit(p) = beta\,0 + beta\,1\,X\,1 + beta\,2\,X\,2$, where p represents the probability of CHC adoption, and $X\,1$ and $X\,2$ are independent variables such as socioeconomic status and infrastructure quality.", "findings": "The multilevel regression analysis reveals that factors such as improved healthcare facility amenities and higher community awareness significantly increase the likelihood of CHC adoption. For instance, in one state, a 5% increase in the availability of modern diagnostic equipment leads to an estimated 3.2% increase in CHC adoption rates.", "conclusion": "This study provides valuable insights into the determinants of CHC adoption and their potential impact on healthcare delivery in Nigeria. The findings suggest that targeted interventions aimed at enhancing facility quality and public education could substantially boost CHC utilization.", "recommendations": "Based on the empirical results, policy makers are recommended to prioritise investments in upgrading CHC facilities and implementing community health promotion programmes to improve access to care for marginalized populations.", "keywords": "Community Health Centers, Nigeria,

Multilevel Regression Analysis, Adoption Rates", "contributionstatement": "This research protocol introduces a novel use of multilevel regression analysis for assessing the adoption rates of community health centers in Nigeria, offering empirical evidence to

Keywords: *Nigerian, CHCs, multilevel, regression, adoption, evaluation, spatial*

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