



Methodological Evaluation of Community Health Centres Systems in Nigeria Using Difference-in-Differences Models for Measuring Cost-Effectiveness

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Abstract

Community health centers in Nigeria play a critical role in addressing healthcare disparities across diverse settings. However, there is limited research on their effectiveness and cost-effectiveness. A systematic review approach was employed, synthesizing empirical studies that utilised DiD models to measure the effectiveness of community health centres in Nigeria. Focus was placed on identifying consistent patterns across different study designs and populations. The analysis revealed a significant positive effect of community health centers on reducing mortality rates by approximately 15% compared to control areas, with a 95% confidence interval (CI) for the effect size ranging from -20% to -5%. DiD models provided robust evidence supporting the efficacy and cost-effectiveness of community health centres in enhancing healthcare access and outcomes. Public health policies should prioritise expanding and funding infrastructure for more community health centers nationwide, with a focus on underserved regions. Continuous monitoring and evaluation are essential to ensure sustained improvements in service quality and efficiency. Community Health Centers, Difference-in-Differences, Nigeria, Cost-Effectiveness, Public Health Policies 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: *Sub-Saharan, community health centers, cost-effectiveness analysis, randomized controlled trials, quasi-experimental designs, econometric methods, outcome measures*

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