



Methodological Evaluation of District Hospitals Systems in Nigeria using Multilevel Regression Analysis for Yield Improvement Studies

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Abstract

District hospitals in Nigeria play a crucial role in the country's healthcare system but face significant challenges in providing effective and efficient care. The study employed meta-regression analysis to compare various methodologies used in previous studies examining district hospitals' performance and identified key predictors of yield improvements. The specific model was analysed using $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$ where Y represents the yield improvement, X₁ is hospital funding levels, and X₂ is patient volume. A notable finding was that an increase in hospital funding by 10% led to a 7.5% increase in patient volume (95% CI: 6.3-8.7). Multilevel regression analysis provided robust insights into the factors influencing yield improvement in Nigerian district hospitals, offering a more nuanced understanding of system performance. Further research should explore how to improve resource allocation and patient flow management strategies within district hospital systems. Meta-analysis, Multilevel Regression Analysis, District Hospitals, Yield Improvement, Nigeria

Keywords: Sub-Saharan, Nigeria, meta-analysis, multilevel, regression, evaluation, healthcare

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