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Methodological Evaluation of Community Health Centre Systems in Uganda Using Difference-in-Differences Model for System Reliability Assessment

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Abstract

Community health centres in Uganda face challenges in maintaining high reliability due to resource constraints. A systematic review was conducted using databases such as PubMed, Web of Science, and Google Scholar. Studies were selected based on inclusion criteria related to impact evaluation methods for healthcare systems in Uganda. The analysis revealed that the difference-in-differences model showed a significant improvement ($p < 0.05$) in system reliability when compared to baseline conditions, indicating its effectiveness in assessing health system performance. The use of DID as an assessment tool for evaluating community health centre systems can enhance understanding and improve resource allocation strategies. Health policymakers should consider implementing the difference-in-differences model in future studies to gauge system reliability more accurately. Community Health Centres, Difference-in-Differences Model, System Reliability, Healthcare Systems, Uganda Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Uganda, Community Health Centres, Methodological Evaluation, Reliability Assessment, Difference-in-Differences, Randomized Controlled Trials, Hierarchical Linear Modelling*

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