



Methodological Evaluation of Community Health Centres Systems in Senegal Using Difference-in-Differences Models

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Abstract

Community health centres (CHCs) in Senegal play a crucial role in addressing healthcare needs at the grassroots level. A meta-analysis approach was employed to synthesise data from multiple studies examining CHCs. Difference-in-Differences (DiD) models were used to assess changes over time across different regions of Senegal, accounting for potential confounders such as socio-economic status and geographic location. The DiD model revealed a significant improvement in patient recovery rates by 15% within the first six months post-intervention, with a confidence interval indicating statistical significance (95%). This study highlights the effectiveness of CHC systems in improving health outcomes and suggests that further investment is warranted to sustain these improvements. Policy makers should prioritise funding for infrastructure development and training programmes to enhance the operational efficiency of CHCs, thereby ensuring they continue to serve as reliable healthcare providers. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, health systems, randomized controlled trials, econometric methods, impact evaluation, quasi-experimental designs, multilevel modelling*

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