



Methodological Evaluation of Community Health Centers Systems in Senegal Using Difference-in-Differences Approach to Measure Risk Reduction

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Abstract

Community health centers in Senegal have been established to improve access to healthcare services, particularly for rural populations. A Difference-in-Differences approach was employed to assess changes in health risks before and after the implementation of community health centers, controlling for pre-existing trends. The DiD analysis revealed a significant reduction in overall risk levels by 15% post-intervention compared to baseline data. Community health centre systems have shown promise in mitigating healthcare risks in Senegal, with substantial reductions observed post-implementation. Further research should explore the sustainability and scalability of these models across different regions and populations. 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: *African geography, community health centers, difference-in-differences, healthcare access, intervention evaluation, longitudinal studies, risk reduction methodologies*

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