



Methodological Evaluation of Community Health Centre Systems in Kenya: Quasi-Experimental Design for Measuring Clinical Outcomes

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Abstract

Community health centers (CHCs) in Kenya play a crucial role in delivering healthcare services to underserved populations. However, their effectiveness and efficiency have not been rigorously evaluated. A longitudinal study employing mixed-methods approach combining quantitative data from health records and qualitative insights via interviews with healthcare providers. The study utilised propensity score matching to balance the comparison groups. CHC performance varied significantly, with a notable improvement in treatment adherence rates among patients over two years ($p < .05$). The quasi-experimental design effectively captured system-level changes and clinical outcomes within CHCs across different regions of Kenya. Funding agencies should prioritise supporting infrastructure improvements to enhance patient care delivery efficiency in CHCs. 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, longitudinal study, quasi-experimental design, outcome measurement, public health intervention, community-based healthcare, programme evaluation*

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