



Methodological Evaluation of Community Health Centre Systems in Ethiopia Using Quasi-Experimental Design

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Abstract

Community health centers in Ethiopia play a critical role in primary healthcare delivery. However, their effectiveness and efficiency have not been systematically evaluated. A mixed-method approach combining quantitative data analysis (paired t-test) and qualitative interviews to assess service delivery, patient satisfaction, and programme impact. The paired t-test revealed a statistically significant average increase of 15% in vaccination coverage among children under five years old compared to baseline. The quasi-experimental design demonstrated the potential for evaluating community health centre systems, highlighting improvements in service delivery metrics. Further research should include longitudinal studies and incorporate feedback mechanisms to enhance service quality and patient satisfaction. 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, public health systems, quasi-experimental design, community healthcare, outcome measurement, resource allocation, evaluation techniques*

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