



Evaluating Community Health Centre Systems in Tanzania: A Mixed Methods Study on Efficiency Gains Using Quasi-Experimental Design

Kamijja Simba^{1,2}, Nyoni Rukororo^{2,3}, Munyua Mwanga⁴

¹ Ardhi University, Dar es Salaam

² Mkwawa University College of Education

³ Department of Internal Medicine, Ardhi University, Dar es Salaam

⁴ National Institute for Medical Research (NIMR)

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Correspondence: ksimba@hotmail.com

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Author notes

Kamijja Simba is affiliated with Ardhi University, Dar es Salaam and focuses on Medicine research in Africa.

Nyoni Rukororo is affiliated with Department of Internal Medicine, Ardhi University, Dar es Salaam and focuses on Medicine research in Africa.

Munyua Mwanga is affiliated with National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Abstract

Community health centres in Tanzania are pivotal for healthcare delivery but face challenges in operational efficiency. A mixed-methods approach combining quantitative (utilising regression analysis) and qualitative data collection methods was employed to assess system performance in Tanzania's healthcare sector. Regression analysis revealed an average efficiency gain of 15% across participating health centres, with a confidence interval indicating robustness of the results. Qualitative interviews highlighted areas for improvement such as staff training needs and resource allocation strategies. The quasi-experimental design demonstrated significant potential in measuring efficiency gains within community health centre systems in Tanzania, providing actionable insights to enhance healthcare delivery. Implementing targeted interventions based on findings from this study can lead to improved operational efficiencies and better patient outcomes. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, community health systems, mixed methods, quasi-experimental design, regression analysis, validity, reliability*

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