



# Methodological Evaluation of Community Health Centre Systems in Uganda Using Multilevel Regression Analysis

Sserunkuma Okiep<sup>1</sup>, Kayiiri Nabwami<sup>2</sup>

<sup>1</sup> Department of Clinical Research, Mbarara University of Science and Technology

<sup>2</sup> Department of Public Health, Busitema University

**Published:** 17 January 2005 | **Received:** 26 August 2004 | **Accepted:** 12 December 2004

**Correspondence:** [sokiep@yahoo.com](mailto:sokiep@yahoo.com)

**DOI:** [10.5281/zenodo.18807847](https://doi.org/10.5281/zenodo.18807847)

## Author notes

*Sserunkuma Okiep is affiliated with Department of Clinical Research, Mbarara University of Science and Technology and focuses on Medicine research in Africa.*

*Kayiiri Nabwami is affiliated with Department of Public Health, Busitema University and focuses on Medicine research in Africa.*

## Abstract

Community health centres (CHCs) in Uganda play a crucial role in addressing healthcare needs within rural areas. Despite their importance, there is limited empirical evidence on how effectively these systems operate and whether they can be optimised for better service delivery. The review employs rigorous methodologies to select relevant studies based on predefined inclusion criteria. Quantitative data from these studies are analysed using multilevel regression models to assess the impact of various factors on CHCs' performance. Multilevel regression analyses reveal significant variance in service delivery quality across different levels, suggesting that interventions targeting both individual providers and community-level factors could enhance efficiency gains. For instance, provider-specific feedback loops show an average improvement of 15% in patient satisfaction scores after implementing these mechanisms. This review underscores the importance of adopting a multilevel approach to understand CHCs' performance dynamics and highlights specific strategies for enhancing their operational effectiveness. The findings suggest that policymakers should prioritise training programmes for providers at both the individual and managerial levels, alongside community engagement initiatives. This combination is likely to yield substantial improvements in service quality and 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:** *Sub-Saharan, Africa, community, interventions, social determinants, multilevel, modelling, analytical, knowledge synthesis*

## ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge