



Methodological Assessment of District Hospital Systems in Kenya: Quasi-Experimental Evaluations of Efficiency Gains

Wambugu Nyikal¹, Ngaren Amooti², Kisii Otieno^{2,3}

¹ Department of Surgery, Technical University of Kenya

² Egerton University

³ Department of Public Health, Technical University of Kenya

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Correspondence: wnyikal@yahoo.com

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Author notes

Wambugu Nyikal is affiliated with Department of Surgery, Technical University of Kenya and focuses on Medicine research in Africa.

Ngaren Amooti is affiliated with Egerton University and focuses on Medicine research in Africa.

Kisii Otieno is affiliated with Egerton University and focuses on Medicine research in Africa.

Abstract

This study addresses a current research gap in Medicine concerning Methodological evaluation of district hospitals systems in Kenya: quasi-experimental design for measuring efficiency gains in Kenya. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured review of relevant literature was conducted, with thematic synthesis of key findings. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Methodological evaluation of district hospitals systems in Kenya: quasi-experimental design for measuring efficiency gains, Kenya, Africa, Medicine, systematic review This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, District Hospitals, Methodology, Quasi-Experimental Design, Efficiency, Evaluation, Health Systems Reform

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