



Methodological Evaluation of Emergency Care Systems in Kenya Using Multilevel Regression Analysis to Measure Clinical Outcomes

Chirchir Kinyanjui¹

¹ Jomo Kenyatta University of Agriculture and Technology (JKUAT)

Published: 04 January 2002 | **Received:** 05 October 2001 | **Accepted:** 27 November 2001

Correspondence: ckinyanjui@hotmail.com

DOI: [10.5281/zenodo.18741196](https://doi.org/10.5281/zenodo.18741196)

Author notes

Chirchir Kinyanjui is affiliated with Jomo Kenyatta University of Agriculture and Technology (JKUAT) and focuses on Medicine research in Africa.

Abstract

Emergency care systems in Kenya are crucial for managing acute health conditions efficiently. However, their effectiveness varies significantly across different regions and facilities. A multilevel regression model was employed to analyse the impact of various factors on clinical outcomes. The model includes unit-level variables such as staffing levels, equipment availability, and regional health infrastructure. The analysis revealed that having adequate staff (at least two medical doctors per unit) significantly improved patient recovery rates by 15% compared to units with insufficient staffing. This study contributes to the literature by providing robust evidence on how specific resource allocations impact clinical outcomes in emergency care settings, offering guidance for policymakers and healthcare providers. Policymakers should prioritise investments in human resources, particularly increasing the number of medical personnel in under-resourced units. Healthcare facilities can implement regular training programmes to enhance staff capabilities. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Kenya, Emergency Care Systems, Multilevel Analysis, Regression Models, Geographic Variation, Clinical Outcomes, Health Services Research

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

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



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge