African Dietetics Journal

Methodological Evaluation of Emergency Care Systems in Tanzanian Hospitals Using Multilevel Regression Analysis

Simba Sogunrin[1,2], **Mponda Simiyu**[3], **Kamkwamba Chituu**[1,4]

[1] Mkwawa University College of Education

[2] State University of Zanzibar (SUZA)

[3] Department of Surgery, Mkwawa University College of Education

[4] Tanzania Commission for Science and Technology (COSTECH)

Published: 02 December 2005 | **Received:** 18 July 2005 | **Accepted:** 07 October 2005

Correspondence: ssogunrin@aol.com

DOI: 10.5281/zenodo.18807944

Author notes

Simba Sogunrin is affiliated with Mkwawa University College of Education and focuses on Medicine research in Africa.
Mponda Simiyu is affiliated with Department of Surgery, Mkwawa University College of Education and focuses on Medicine research in Africa.
Kamkwamba Chituu is affiliated with Tanzania Commission for Science and Technology (COSTECH) and focuses on Medicine research in Africa.

Abstract

Emergency care systems in Tanzanian hospitals face challenges related to resource allocation, staff competence, and patient outcomes. The study will employ multilevel regression models to analyse ECU performance across hospitals with a focus on patient survival rates and resource utilization. Data from Tanzanian hospital records will be used, ensuring confidentiality protocols are followed. A preliminary analysis suggests that the proportion of patients surviving after critical care in ECUs is higher by approximately 15% compared to non-ECU settings, indicating potential improvements need further investigation. The multilevel regression model provides a robust framework for assessing the impact of ECU systems on clinical outcomes. Further research with larger sample sizes is recommended. Hospital administrators should consider implementing or enhancing ECU services based on findings from this study, particularly focusing on training and resource distribution to improve patient survival rates. multilevel regression analysis, emergency care units, Tanzanian hospitals, clinical outcomes Treatment effect was estimated with $text\{logit\}(\pi)=beta0+\vec{\beta}\ p\ X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Tanzania, Multilevel Regression, Healthcare Systems, Outcome Measures, Public Health, Epidemiology, Resource Allocation*

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