Multilevel Regression Analysis of Urban Primary Care Networks in Kenya: Methodological Evaluation and Clinical Outcomes Measurement

Kibet Gitonga[1], Murungi Okeyo[2], Kinyanjui Wambugu[3]

[1] Kenyatta University

[2] International Centre of Insect Physiology and Ecology (ICIPE), Nairobi

[3] Department of Public Health, Maseno University

Author notes

Kibet Gitonga is affiliated with Kenyatta University and focuses on Medicine research in Africa.
Murungi Okeyo is affiliated with International Centre of Insect Physiology and Ecology (ICIPE), Nairobi and focuses on Medicine research in Africa.
Kinyanjui Wambugu is affiliated with Department of Public Health, Maseno University and focuses on Medicine research in Africa.

Abstract

Urban primary care networks in Kenya are essential for addressing healthcare inequalities, particularly in underserved urban areas. However, their effectiveness and scalability need rigorous evaluation. A longitudinal study employing multilevel regression analysis to assess the impact of urban primary care networks on patient outcomes across multiple levels (individual, network). Multilevel regression analysis revealed significant improvements in patient satisfaction scores by 15% over a two-year period within the urban primary care networks. The study underscores the potential for multilevel regression analysis to enhance understanding of urban primary care networks' efficacy and guide future policy development. Further research should explore the sustainability of these improvements and their broader applicability across different urban settings in Kenya. primary care networks, multilevel regression, clinical outcomes, longitudinal study, urban health systems Treatment effect was estimated with $\text{logit}(\pi) = beta\,0 + \beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Kenya, Primary Care Networks, Multilevel Analysis, Hierarchical Regression, Geographic Information Systems, Clinical Outcomes, Data Quality Assessment*

ABSTRACT-ONLY PUBLICATION

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

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