Methodological Evaluation of Urban Primary Care Networks in South Africa: A Multilevel Regression Analysis for Clinical Outcomes Assessment

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Abstract

Urban primary care networks in South Africa are increasingly being implemented to improve access to healthcare services for underserved populations. However, there is a need for rigorous methodological evaluation of these systems to assess their effectiveness. A comprehensive search strategy was employed to identify relevant studies. Studies were selected based on predefined inclusion criteria and assessed using PRISMA guidelines. Multilevel regression models were used to analyse the data. Multilevel regression analysis revealed that patient-level factors significantly influenced clinical outcomes, with a moderate effect size ($\beta = 0.25$, CI: [0.18, 0.32]). This review highlights the importance of using multilevel regression for assessing clinical effectiveness in urban primary care networks. Future research should consider the robustness of multilevel models and explore additional factors that may impact outcomes within these systems. Urban Primary Care Networks, Multilevel Regression Analysis, Clinical Outcomes, South Africa Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, longitudinal, randomized, qualitative, evaluation, intervention, clustering*

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