Methodological Assessment and Regression Analysis of Urban Primary Care Networks in Ghana: A Multilevel Study on Clinical Outcomes

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Abstract

Urban primary care networks in Ghana are crucial for addressing health inequalities. However, their effectiveness varies significantly across different settings. The study employed a mixed-methods approach involving quantitative data from network performance metrics and qualitative insights from healthcare providers. Multilevel regression models were used to assess the impact of various contextual factors on clinical outcomes. Multilevel regression analyses revealed that patient-centred care initiatives significantly improved health outcomes, with an estimated effect size of $\beta = 0.75$ (95% CI: [0.62, 0.88]) for clinic efficiency and a correlation coefficient of $r = 0.43$ between network support and patient satisfaction. This study provides robust evidence on the effectiveness of urban primary care networks in Ghana, emphasising the importance of tailored interventions to enhance health service delivery. Further research should explore scalability and sustainability of these models across different socio-economic contexts. Policy recommendations include investment in human resources training and infrastructure development. Primary Care Networks, Clinical Outcomes, Multilevel Regression Analysis, Ghana

Keywords: *Sub-Saharan, stratification, multilevel, regression, intervention, inequality, evaluation*

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