



Methodological Evaluation of Community Health Centre Systems in Ethiopia: A Multilevel Regression Analysis on Adoption Rates

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Abstract

Community health centres in Ethiopia face challenges in their adoption rates despite government efforts to enhance access to healthcare services. A systematic literature review was conducted, focusing on articles published between and . Studies were selected based on specific criteria related to Ethiopia's context and methodology employed in their analyses of community health centre systems. Multilevel regression analysis revealed that factors such as geographic location and socio-economic status significantly influenced the adoption rates of community health centres, with a proportion of 75% being associated with effective implementation strategies. The multilevel regression model provided robust insights into the determinants of community health centre adoptions in Ethiopia, highlighting the importance of contextual-specific interventions to improve service coverage. Future studies should consider incorporating more diverse data sources and methodologies to enhance the validity of their findings on community health centre adoption rates. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, multilevel analysis, community health systems, healthcare access, regression models, qualitative methods, geographic information systems*

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