Methodological Evaluation of Rural Clinics Systems in Ghana Using Multilevel Regression Analysis for Clinical Outcomes Measurement

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Abstract

Rural clinics in Ghana face challenges in maintaining consistent quality of care over time. A longitudinal study employing multilevel regression analysis to assess the impact of various factors on clinical outcomes across multiple clinics. Multilevel models revealed significant variations in patient recovery rates between clinics, with a coefficient of -0.53 (95% CI: [-0.71, -0.34]) indicating lower performance in some settings compared to others. The study underscores the importance of clinic-specific interventions and resources for improved clinical outcomes among rural populations. Investment in training programmes tailored to specific clinics should be prioritised to enhance their effectiveness in delivering quality care. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

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