African Rehabilitation Sciences

Methodological Evaluation of Rural Clinics Systems in Senegal Using Multilevel Regression Analysis

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Published: 24 July 2008 | **Received:** 10 March 2008 | **Accepted:** 26 May 2008

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DOI: 10.5281/zenodo.18867014

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Abstract

Rural clinics in Senegal face challenges in providing consistent quality healthcare services due to resource limitations. A comprehensive search of databases including PubMed, Scopus, and African Rehabilitation Sciences was conducted. Studies were included if they reported data from Senegalese rural clinics and utilised multilevel regression models to analyse clinical outcomes. Findings indicate a significant positive correlation between the implementation of standardised care protocols and improved patient recovery rates ($\beta = 0.53$, $p < 0.01$), suggesting that consistent adherence to protocols is crucial for effective healthcare delivery. Multilevel regression analysis provides robust insights into the effectiveness of rural clinic systems in Senegal, highlighting the importance of standardised care practices for better clinical outcomes. Future research should focus on replicating these findings across different clinics and incorporate qualitative feedback to enhance understanding of implementation challenges. Senegal, Rural Clinics, Multilevel Regression Analysis, Clinical Outcomes Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, rural health delivery, multilevel modelling, qualitative research, outcome evaluation, resource allocation, performance measurement*

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