



Methodological Evaluation of District Hospitals Systems in South Africa Using Quasi-Experimental Design for Risk Reduction Measurement

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Abstract

This study focuses on evaluating the effectiveness of district hospitals in South Africa by examining their systems. A systematic review approach will be employed to analyse data from multiple studies conducted across different district hospitals in South Africa. The analysis will use meta-regression models with robust standard errors to account for variability among the studies. The findings indicate that while some interventions have shown a significant reduction in patient readmission rates ($p < 0.05$), there is still room for improvement in areas such as staff training and equipment availability. This study highlights the need for further research into specific risk reduction strategies to optimise hospital management systems. District health authorities should prioritise investment in human resources, particularly in enhancing the skills of healthcare providers and improving infrastructure. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Sub-Saharan, Quasi-experimental, Evaluation, Healthcare, Methodology, Districts*

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