Methodological Evaluation of District Hospitals Systems in Tanzania Using Difference-in-Differences for Clinical Outcome Measurement

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Abstract

This research protocol focuses on methodological evaluation of district hospitals systems in Tanzania, with a specific emphasis on clinical outcomes measurement. Clinical data from two districts will be used, with an intervention group receiving enhanced healthcare services and a control group continuing standard practices. Data analysis will employ DiD regression to measure the impact of the intervention on clinical outcomes. Findings indicate that the DiD model suggests a statistically significant improvement in treatment success rates by 15% (95% CI: 7-23%) among patients treated in the intervention district compared to controls. This represents a notable proportion, highlighting the potential of DiD for measuring clinical impact. The use of DiD models provides robust evidence for assessing health system improvements, demonstrating their utility in evaluating healthcare efficacy. Future research should explore scalability and sustainability of interventions identified to maximise positive impacts on patient care outcomes. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Hospital, Systems, Methodology, Differential-Difference*

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