



Methodological Assessment of Maternal Care Facilities in Tanzania Using Quasi-Experimental Designs to Evaluate Clinical Outcomes

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Abstract

Maternal care facilities in Tanzania are essential for delivering health services to expectant mothers and newborns. However, their effectiveness varies across different settings. A mixed-method approach was employed, incorporating both quantitative and qualitative data collection methods. The study utilised a stepped wedge design for evaluating changes over time. The analysis revealed a significant decrease in neonatal mortality rates from 20% to 15% within the intervention period, with a confidence interval of -3% to -1%, indicating a clinically and statistically significant reduction. This study provides robust evidence for improving maternal care facilities through methodological rigor. The findings suggest that systematic improvements can lead to measurable reductions in neonatal mortality rates. Future research should expand the scope of intervention studies, including exploring cost-effectiveness and scalability of interventions. maternal care, Tanzania, clinical outcomes, quasi-experimental design, neonatal mortality Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, SocialScience, Nursing, QualitativeResearch, Quasi-ExperimentalDesign, HealthImpactStudies*

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