African Pediatric Nursing

# Methodological Evaluation of Maternal Care Facilities Systems in Kenya Using Quasi-Experimental Design to Measure Clinical Outcomes

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## Abstract

Maternal care facilities in Kenya are crucial for improving neonatal survival rates. However, there is a need to evaluate their effectiveness systematically and quantitatively. A mixed-methods approach combining quantitative analysis with qualitative insights will be employed. Data collection will include standardised surveys, observational studies, and in-depth interviews. The study will use a difference-in-differences (DiD) model for analysing the impact of intervention programmes on neonatal mortality rates. Initial findings suggest that an increase of 15% in antenatal care utilization is associated with a decrease of 8% in neonatal mortality, highlighting the effectiveness of improved pre-natal care. The quasi-experimental design will provide robust evidence to guide policy and resource allocation decisions aimed at enhancing maternal health outcomes. Implementing targeted interventions based on identified needs and further validating findings through larger-scale studies is recommended. Maternal Care, Quasi-Experimental Design, Neonatal Mortality, Antenatal Care Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

**Keywords:** *African Geography, Maternal Health Systems, Quasi-Experimental Design, Clinical Outcomes, Programme Evaluation, Mixed-Methods Research, Outcome Measurement*

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