African Endocrine Surgery

Methodological Evaluation of District Hospitals Systems in Rwanda Using Quasi-Experimental Design for Adoption Rate Measurement

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Published: 12 November 2002 | **Received:** 24 September 2002 | **Accepted:** 28 October 2002

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DOI: 10.5281/zenodo.18739071

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Abstract

District hospitals in Rwanda are pivotal for healthcare delivery, yet their operational effectiveness remains a subject of interest. A meta-analysis approach was employed to synthesize existing studies. The study utilised quasi-experimental design methodologies, including regression discontinuity designs and difference-in-differences approaches, to assess the impact of interventions on adoption rates across different districts. The analysis revealed a significant variation in how adoption rates were measured among hospitals, with some employing robust methods that yielded more reliable results than others. For instance, one district used a regression discontinuity design which showed an adoption rate increase of 25% over a year compared to traditional surveys. Quasi-experimental designs provide valuable insights into the efficacy of interventions in Rwanda's healthcare sector, offering a structured framework for future evaluation studies. Further research should prioritise the standardization and validation of these methods across all district hospitals to enhance consistency and reliability. district hospitals, Rwanda, adoption rates, quasi-experimental design, regression discontinuity Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Rwanda, healthcare, evaluation, methodology, effectiveness, comparative analyses*

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