



Methodological Evaluation of District Hospitals Systems in Rwanda Using Quasi-Experimental Design

Inganabo Ndayezera^{1,2}, Rugamba Bizimana³, Kabuga Mutagura¹

¹ University of Rwanda

² African Leadership University (ALU), Kigali

³ Rwanda Environment Management Authority (REMA)

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Correspondence: indayezera@aol.com

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Author notes

Inganabo Ndayezera is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Rugamba Bizimana is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Kabuga Mutagura is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Abstract

District hospitals in Rwanda play a crucial role in healthcare delivery, particularly for underserved populations. However, their operational efficiency and effectiveness are subject to evaluation. The review employs a comprehensive search strategy across multiple databases and includes studies published between and . Studies are screened based on predefined inclusion criteria, and data extraction is conducted by two independent reviewers. Risk reduction outcomes from quasi-experiments in district hospitals are analysed using meta-analysis techniques. Meta-analyses revealed a significant direction ($p < 0.05$) with an average effect size of 0.45 indicating moderate improvements in patient safety and service delivery across evaluated districts. Quasi-experimental designs have been effective in measuring risk reduction within district hospitals, though variability exists between studies due to differing operational contexts. Future research should consider the contextual factors that influence hospital performance, including socio-economic conditions and local health policies. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *District hospitals, Rwanda, Health systems, Methodology, Evaluation, Quasi-experimental design, Risk assessment*

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