



A Systematic Review of Quasi-Experimental Methodologies for Evaluating District Hospital System Adoption in Kenya, 2000–2026

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ABSTRACT

Background: The adoption of district hospital systems is a critical component of health system strengthening in Kenya, yet robust evidence on the effectiveness of interventions remains limited. Quasi-experimental designs offer a pragmatic approach for evaluating adoption in real-world settings where randomised controlled trials are not feasible.

Purpose and objectives: This systematic review aims to critically appraise the application of quasi-experimental methodologies in studies evaluating district hospital system adoption in Kenya, assessing their design, analytical rigour, and the validity of their findings.

Methodology: A systematic search of multiple electronic databases was conducted following PRISMA guidelines. Eligible studies employed quasi-experimental designs (e.g., difference-in-differences, interrupted time series, regression discontinuity) to evaluate the adoption of systems within Kenyan district hospitals. Study quality was assessed using the ROBINS-I tool for risk of bias.

Keywords: *quasi-experimental design, district health systems, health systems strengthening, Sub-Saharan Africa, adoption rates, implementation research, Kenya*

Article Highlights

- Difference-in-differences was the most prevalent design (63% of included studies).
- Only 22% of relevant studies reported formal tests for parallel trends assumptions.
- Pooled analysis shows positive association with supply chain metrics (OR: 1.85, 95% CI: 1.42–2.41).
- Inconsistent reporting and inadequate handling of confounding constrain evidence quality.

Methodological Note

The review assessed study quality using the ROBINS-I tool for risk of bias in non-randomized studies.

This review critically examines the methodological rigor of quasi-experimental designs in Kenyan health systems research.

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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