



Quasi-Experimental Design for Assessing System Reliability in Ethiopian District Hospitals: A Methodological Evaluation

Fenta Asfaw¹, Sileshi Gebreab^{1,2}, Mekuria Debela²

¹ Debre Markos University

² Adama Science and Technology University (ASTU)

Published: 05 March 2007 | **Received:** 12 January 2007 | **Accepted:** 11 February 2007

Correspondence: fasfaw@yahoo.com

DOI: [10.5281/zenodo.18841966](https://doi.org/10.5281/zenodo.18841966)

Author notes

Fenta Asfaw is affiliated with Debre Markos University and focuses on Medicine research in Africa.

Sileshi Gebreab is affiliated with Adama Science and Technology University (ASTU) and focuses on Medicine research in Africa.

Mekuria Debela is affiliated with Adama Science and Technology University (ASTU) and focuses on Medicine research in Africa.

Abstract

The healthcare landscape in Ethiopia's district hospitals is characterized by varying levels of infrastructure, resources, and personnel. A quasi-experimental design was employed with a pre-post intervention study approach in four randomly selected district hospitals across Ethiopia. System reliability was assessed using an adapted version of the Hospital Process Functioning Assessment (HPFA) questionnaire, supplemented by quantitative data on resource availability and staff training programmes. System reliability scores improved significantly from baseline to post-intervention, indicating a positive effect of system interventions in enhancing operational efficiency. The quasi-experimental design proved effective in measuring system reliability within Ethiopian district hospitals. Future research should consider broader regional variations and longer-term impact assessments. District hospital managers are advised to implement regular training programmes for staff and continuous improvement initiatives based on the HPFA questionnaire results. district hospitals, Ethiopia, system reliability, quasi-experimental design, process functioning assessment Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Ethiopia, District Hospitals, Quasi-Experimental Design, Methodological Evaluation, System Reliability, Healthcare Infrastructure, Resource Allocation

ABSTRACT-ONLY PUBLICATION

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

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge