African Rheumatology Journal

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

Muhamedin Shinyua[1], **Fatu Nkatha**[1,2], **Kamila Mwesigwa**[3]

[1] Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha

[2] Department of Public Health, Tanzania Wildlife Research Institute (TAWIRI)

[3] Tanzania Wildlife Research Institute (TAWIRI)

Published: 05 December 2010 | **Received:** 31 July 2010 | **Accepted:** 11 November 2010

Correspondence: mshinyua@outlook.com

DOI: 10.5281/zenodo.18901902

Author notes

Muhamedin Shinyua is affiliated with Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha and focuses on Medicine research in Africa.

Fatu Nkatha is affiliated with Department of Public Health, Tanzania Wildlife Research Institute (TAWIRI) and focuses on Medicine research in Africa.

Kamila Mwesigwa is affiliated with Tanzania Wildlife Research Institute (TAWIRI) and focuses on Medicine research in Africa.

Abstract

In Tanzania, district hospitals play a crucial role in healthcare delivery. However, their performance varies significantly, necessitating systematic evaluation. A mixed-method approach was employed to assess the implementation of a novel ultrasound machine across 10 randomly selected district hospitals. Data were collected through pre- and post-intervention surveys, and quantitative analysis used logistic regression models with robust standard errors to estimate adoption rates. The quasi-experimental design revealed an adoption rate of approximately 75% for the new diagnostic tool among participating districts, indicating a significant improvement in healthcare practices. This study demonstrates the effectiveness of using quasi-experimental designs to measure adoption rates in district hospital systems and highlights the need for further research to ensure consistent implementation. District health authorities should prioritise training programmes and continuous support for healthcare providers to maximise the benefits of new technologies. Quasi-Experimental Design, Adoption Rates, District Hospitals, Tanzania Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow} p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Tanzania, quasi-experimental, healthcare systems, evaluation methodologies, district hospitals, adoption rates*

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