Methodological Evaluation of Maternal Care Facilities Systems in Tanzania: Panel Data Estimation for Clinical Outcomes,

Nkumbula Ndege[1,2]**, Chituwo Chiziki**[3,4]**, Simba Simiyu**[1]**, Kasimbi Mwanza**[5]

[1] Tanzania Wildlife Research Institute (TAWIRI)

[2] Tanzania Commission for Science and Technology (COSTECH)

[3] Department of Clinical Research, Tanzania Wildlife Research Institute (TAWIRI)

[4] Department of Internal Medicine, University of Dar es Salaam

[5] Department of Public Health, National Institute for Medical Research (NIMR)

Author notes

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

Chituwo Chiziki is affiliated with Department of Clinical Research, Tanzania Wildlife Research Institute (TAWIRI) and focuses on Medicine research in Africa.

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

Kasimbi Mwanza is affiliated with Department of Public Health, National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Abstract

The healthcare system in Tanzania faces challenges in maternal care facilities, leading to suboptimal clinical outcomes. This study employs a fixed effects regression model with robust standard errors to analyse data from multiple rounds of observations over time, focusing on Tanzania's maternal health care system. A significant positive relationship between the number of healthcare facilities and improved neonatal survival rates (proportion increased by 15%) was observed in panel analysis. The fixed effects regression model effectively captured the impact of facility systems on clinical outcomes, providing a robust estimate of their influence. Investment should be prioritised in expanding and improving existing maternal care facilities to enhance overall health outcomes. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\neg}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African healthcare, maternal health, panel data, fixed effects model, clinical outcomes, resource allocation, econometric methods*

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