Methodological Evaluation of District Hospitals Systems in South Africa Using a Difference-in-Differences Model to Assess Yield Improvement

Mpho Sekoto[1,2]**, Dumisozi Mathe**[3]**, Sipho Mkhize**[4,5]**, Thabo Khumalo**[6,7]

[1] Durban University of Technology (DUT)

[2] Cape Peninsula University of Technology (CPUT)

[3] Department of Epidemiology, South African Institute for Medical Research (SAIMR)

[4] Department of Public Health, University of Fort Hare

[5] Department of Internal Medicine, Durban University of Technology (DUT)

[6] South African Institute for Medical Research (SAIMR)

[7] Department of Pediatrics, University of Fort Hare

Author notes

Mpho Sekoto is affiliated with Durban University of Technology (DUT) and focuses on Medicine research in Africa.
Dumisozi Mathe is affiliated with Department of Epidemiology, South African Institute for Medical Research (SAIMR) and focuses on Medicine research in Africa.
Sipho Mkhize is affiliated with Department of Public Health, University of Fort Hare and focuses on Medicine research in Africa.
Thabo Khumalo is affiliated with South African Institute for Medical Research (SAIMR) and focuses on Medicine research in Africa.

Abstract

This study aims to evaluate the operational efficiency of district hospitals in South Africa by applying a Difference-in-Differences (DiD) model. A Difference-in-Differences model will be used, accounting for pre-existing differences between districts not directly influenced by the intervention to isolate its effect. Initial analysis suggests a positive trend in patient yield improvement, with an estimated increase of 15% over two years post-intervention. The DiD model successfully captured the impact of the interventions on district hospital performance, highlighting areas for further optimization. Future research should consider additional factors affecting healthcare systems and explore potential synergies between different intervention measures. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow} p\, X_i$, and uncertainty reported using confidence-interval based inference.

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