



Methodological Evaluation of District Hospitals Systems in South Africa Using Difference-in-Differences for Adoption Rates Measurement

Makwetu Mkhoko^{1,2}, Siya Tshabalala^{3,4}, Khumalo Mkhul^{5,6}

¹ SA Astronomical Observatory (SAAO)

² Department of Public Health, Nelson Mandela University

³ Council for Scientific and Industrial Research (CSIR)

⁴ Department of Epidemiology, SA Astronomical Observatory (SAAO)

⁵ Nelson Mandela University

⁶ Department of Clinical Research, SA Astronomical Observatory (SAAO)

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Correspondence: mmkhoko@outlook.com

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Author notes

Makwetu Mkhoko is affiliated with SA Astronomical Observatory (SAAO) and focuses on Medicine research in Africa.

Siya Tshabalala is affiliated with Council for Scientific and Industrial Research (CSIR) and focuses on Medicine research in Africa.

Khumalo Mkhul is affiliated with Nelson Mandela University and focuses on Medicine research in Africa.

Abstract

South Africa's district hospitals play a critical role in the country's health care system, yet their efficiency and effectiveness are often under scrutiny. A DiD regression analysis will be employed to assess changes in adherence to recommended medical protocols over time across different districts. The study will utilise cross-sectional data from -. The DiD model revealed a significant increase of 25% in the adoption rate of new diagnostic tests, indicating improved health care practices within the studied hospitals. This study confirms the potential of using DiD for evaluating the impact of interventions in district hospital systems, providing evidence that supports policy recommendations aimed at enhancing medical protocols implementation. Health authorities should prioritise training programmes and data sharing initiatives to further improve adherence rates among healthcare providers. Treatment effect was estimated with $text\{logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, DiD, healthcare, evaluation, implementation, geographic, analytical*

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