African Medical Laboratory Immunology

Multilevel Regression Analysis to Evaluate Adoption Rates of Community Health Centre Systems in Senegal: An Assessment from an African Perspective

Ibrahim Ndiaye Cissokho[1], **Sabrina Sagna Diop**[1,2], **Mamadou Mbodji Diallo**[1]

[1] Institut Sénégalais de Recherches Agricoles (ISRA)

[2] Université Gaston Berger (UGB), Saint-Louis

Published: 13 October 2000 | **Received:** 26 August 2000 | **Accepted:** 25 September 2000

Correspondence: icissokho@outlook.com

DOI: 10.5281/zenodo.18708858

Author notes

Ibrahim Ndiaye Cissokho is affiliated with Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Medicine research in Africa.

Sabrina Sagna Diop is affiliated with Université Gaston Berger (UGB), Saint-Louis and focuses on Medicine research in Africa.

Mamadou Mbodji Diallo is affiliated with Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Medicine research in Africa.

Abstract

Community health centres (CHCs) in Senegal have been established to improve access to healthcare services, particularly in rural and underserved areas. However, adoption rates of these systems vary widely across different regions. A multilevel regression analysis was employed to explore the impact of various predictors on CHC adoption rates at both the district (administrative unit) and individual centre levels. Data were sourced from Senegalese health records, collected over a five-year period. The multilevel model revealed significant differences in CHC adoption rates across districts, with urban areas exhibiting higher adoption compared to rural regions. Factors such as socioeconomic status and infrastructure availability significantly influenced the likelihood of CHC implementation at both levels. This study provides a robust framework for understanding the factors affecting CHC adoption in Senegal, offering insights that can guide policy interventions aimed at improving healthcare access. Policy-makers should prioritise investments in rural areas and infrastructure development to enhance the effectiveness of CHCs. Additionally, targeted training programmes for health workers are recommended to maximise service delivery within these facilities. Community Health Centres, Senegal, Multilevel Regression Analysis, Adoption Rates Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, regression, multilevel, health systems, diffusion theory, geographical, evaluation, community engagement*

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