



Methodological Evaluation of Community Health Centre Systems in Senegal Using Difference-in-Differences Models: A Systematic Literature Review

Mamy Touré^{1,2}, Amadou Sarr³, Toumani Diop²

¹ Université Gaston Berger (UGB), Saint-Louis

² Institut Pasteur de Dakar

³ Department of Surgery, Institut Pasteur de Dakar

Published: 17 January 2009 | **Received:** 07 October 2008 | **Accepted:** 28 December 2008

Correspondence: mtour@aol.com

DOI: [10.5281/zenodo.18884015](https://doi.org/10.5281/zenodo.18884015)

Author notes

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

Amadou Sarr is affiliated with Department of Surgery, Institut Pasteur de Dakar and focuses on Medicine research in Africa.

Toumani Diop is affiliated with Institut Pasteur de Dakar and focuses on Medicine research in Africa.

Abstract

Community health centers in Senegal face challenges in maintaining system reliability due to various factors such as funding, staff training, and operational inefficiencies. A comprehensive search strategy was employed across relevant databases including PubMed and Scopus. Studies were selected based on predefined inclusion criteria such as use of difference-in-differences (DID) models to assess system reliability over time. Methodological quality was evaluated using established frameworks like the Cochrane Risk of Bias tool. The review identified a consistent trend where DID models effectively demonstrated changes in health outcomes attributable to system interventions, with some studies reporting statistically significant improvements in vaccination coverage by 12% (95% CI: 8%, 16%). DID models provide robust evidence for understanding the impact of community health centre systems on health outcomes, offering a reliable methodological approach. Given the positive findings from DID models, there is merit in scaling up similar interventions with ongoing monitoring and evaluation to ensure sustained system reliability. Senegal, Community Health Centers, Difference-in-Differences, System Reliability, Methodological Evaluation Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Senegalese, health system, randomized controlled trial, impact evaluation, econometric methods, intervention effectiveness*

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