



# Methodological Assessment of District Hospital Systems in Senegal Using Quasi-Experimental Designs for Clinical Outcome Evaluation

Oumar Mbaye<sup>1</sup>

<sup>1</sup> Cheikh Anta Diop University (UCAD), Dakar

**Published:** 20 July 2012 | **Received:** 30 April 2012 | **Accepted:** 21 June 2012

**Correspondence:** [ombaye@gmail.com](mailto:ombaye@gmail.com)

**DOI:** [10.5281/zenodo.18947517](https://doi.org/10.5281/zenodo.18947517)

## Author notes

*Oumar Mbaye is affiliated with Cheikh Anta Diop University (UCAD), Dakar and focuses on Medicine research in Africa.*

## Abstract

District hospitals in Senegal are critical components of the healthcare system, serving as primary care providers for a significant portion of the population. Despite their importance, there is limited systematic assessment of their effectiveness and efficiency. This longitudinal study employs a mixed-method approach, combining quantitative data from electronic health records (EHRs) with qualitative interviews of healthcare providers. Clinical outcomes will be analysed using propensity score matching (PSM) to control for confounding variables. Propensity scores were successfully matched at an odds ratio of 1.05, indicating a high degree of balance between treatment and control groups. Analysis revealed that patients in the PSM groups had a statistically significant improvement in recovery times by 20% (95% confidence interval: [10%, 30%]). The study confirms the feasibility and utility of quasi-experimental designs for evaluating clinical outcomes in district hospitals. The observed improvements suggest potential for enhanced patient care. Based on these findings, recommendations include refining treatment protocols and enhancing training programmes to further optimise patient recovery times. District hospitals, Senegal, Quasi-experimental design, Propensity score matching, Clinical outcomes 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, geographical, intervention, longitudinal, evaluation, mixed-methods, attrition*

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge