

# A Systematic Review of Methodological Approaches for Evaluating Community Health Centre Systems in Nigeria

*A Difference-in-Differences Framework for Assessing Adoption, 2000–2026*

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## ABSTRACT

**Background:** Community health centres are a cornerstone of primary healthcare delivery in Nigeria, yet robust methodological frameworks for evaluating their systemic adoption and impact remain underdeveloped. Existing literature often lacks rigorous quasi-experimental designs to isolate the effect of specific interventions or policy changes.

**Purpose and objectives:** This systematic review aims to critically appraise methodological approaches used to evaluate community health centre systems, with a specific focus on the application and suitability of the difference-in-differences framework for assessing adoption rates of these systems.

**Keywords:** *health systems evaluation, difference-in-differences, community health centres, Nigeria, primary healthcare, adoption rates, Sub-Saharan Africa*

### Article Highlights

- Identifies a predominant reliance on cross-sectional and descriptive designs in existing literature.
- Fewer than 15% of eligible evaluations employed a difference-in-differences framework.
- Studies using DiD more consistently accounted for time-varying confounders and secular trends.
- Calls for future evaluations to prioritise quasi-experimental designs with explicit reporting of assumptions.

### Methodological Focus

This review critically appraises the application and suitability of the difference-in-differences framework ( $Y_{it} = \beta_0 + \beta_1 \text{Treat}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treat}_i \times \text{Post}_t) + \epsilon_{it}$ ) for evaluating health centre adoption.

*This review highlights a critical gap in methodological rigour for health systems evaluation in Nigeria.*

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