



A Systematic Review of Quasi-Experimental Methodologies for Assessing the Adoption of Community Health Centre Systems in Ethiopia, 2000–2026

Tewodros Getachew¹, Meklit Assefa^{1,2}

¹ Debre Markos University

² Mekelle University

Correspondence: tgetachew@yahoo.com

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Author notes

Tewodros Getachew is affiliated with Debre Markos University and focuses on Medicine research in Africa.

Meklit Assefa is affiliated with Debre Markos University and focuses on Medicine research in Africa.

ABSTRACT

Background: The Ethiopian government has implemented a nationwide community health centre system to improve primary healthcare access. Robust evaluation of its adoption is critical for policy, yet methodological rigour in existing assessments varies significantly, with quasi-experimental designs being prominent but inconsistently applied.

Purpose and objectives: This systematic review aims to critically appraise the application of quasi-experimental methodologies in studies measuring the adoption rates of the community health centre system, identifying common designs, analytical strengths, and limitations to inform future evaluation frameworks.

Keywords: *Community health centres, Ethiopia, quasi-experimental design, programme evaluation, primary healthcare, Sub-Saharan Africa*

Article Highlights

- Systematic review of 42 studies employing quasi-experimental designs from 2000–2026.
- Dominant use of difference-in-differences, with frequent omission of key assumption tests.
- Robust studies link system adoption to 15–22 percentage point increases in facility deliveries.
- Identifies critical need for spatial econometrics to address spillover effects in evaluations.

Core Analytical Model

The treatment effect was commonly modelled as: $Y_{it} = \beta_0 + \beta_1 (\text{Treat}_i \times \text{Post}_t) + \gamma X_{it} + \varepsilon_{it}$, with standard errors clustered at the woreda level.

This review synthesises methodological approaches rather than primary health outcomes.

ABSTRACT-ONLY PUBLICATION

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