



Methodological Assessment of Community Health Centres Systems in Tanzania Using Quasi-Experimental Design for Risk Reduction Measurement

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Abstract

Community health centres (CHCs) in Tanzania play a vital role in primary healthcare delivery, yet their effectiveness and efficiency require rigorous evaluation. A comprehensive search strategy was employed, including electronic databases such as PubMed and Web of Science. Studies were screened based on predefined inclusion criteria focusing on quasi-experimental design applications in Tanzania's CHC systems. The analysis identified a significant trend towards using pre-post designs with control groups to measure risk reduction outcomes, though variability in implementation quality was noted. Quasi-experimental designs are widely used but inconsistent application and measurement of risk reduction metrics pose methodological challenges that need addressing. Standardised guidelines for quasi-experimental design should be developed and implemented to ensure robust evaluation of CHC systems' effectiveness in Tanzania. Treatment effect was estimated with $\text{text} \{ \logit \} (\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: African geography, community health centers, quasi-experimental design, evaluation methods, public health systems, statistical analysis, health outcomes assessment

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