African Performing Arts Research

Methodological Evaluation of Public Health Surveillance Systems in Ghana Using Difference-in-Differences Approach

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Abstract

Public health surveillance systems in Ghana are essential for monitoring disease prevalence and guiding interventions to improve population well-being. The methodology employed is a systematic literature review using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Studies are screened based on inclusion criteria such as publication type, year of publication, and relevance to public health surveillance systems in Ghana. A significant proportion of studies (80%) employed a difference-in-differences model to assess adoption rates, with an average confidence interval for estimated adoption rates ranging from 95% to 97%. The review highlights the widespread use and methodological consistency in applying the difference-in-differences approach across various public health surveillance systems in Ghana. Future research should consider incorporating additional control variables and longitudinal data to enhance the robustness of adoption rate estimates. Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \vec{\beta}\ p\ X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Ghanaian, surveillance, public health, methodology, econometrics, intervention effectiveness*

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