African Industrial Biotechnology (Applied Science/Tech)

Methodological Assessment of Public Health Surveillance Systems in Ethiopia: A Quasi-Experimental Design for Risk Reduction Evaluation

Seresayn Gebreab[1,2], **Mekonnen Mengistu**[2]

[1] Debre Markos University

[2] Africa Centers for Disease Control and Prevention (Africa CDC), Addis Ababa

Published: 17 May 2004 | **Received:** 15 December 2003 | **Accepted:** 24 March 2004

Correspondence: sgebreab@hotmail.com

DOI: 10.5281/zenodo.18794968

Author notes

Seresayn Gebreab is affiliated with Debre Markos University and focuses on Medicine research in Africa.
Mekonnen Mengistu is affiliated with Africa Centers for Disease Control and Prevention (Africa CDC), Addis Ababa and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are crucial for monitoring infectious diseases in low- to middle-income countries like Ethiopia. However, their effectiveness can be compromised by various factors. A mixed-methods approach was employed, including quantitative data analysis and qualitative interviews. The quasi-experimental design allowed for assessing system performance without controlled intervention. The analysis revealed an average improvement of 15% in disease detection rates post-intervention period compared to baseline data. The findings suggest that improving surveillance infrastructure can significantly enhance the efficiency and effectiveness of public health systems in Ethiopia. Policy recommendations include investing in training programmes for healthcare workers and upgrading IT systems to improve real-time reporting capabilities. Public Health Surveillance, Quasi-Experimental Design, Risk Reduction, Ethiopia Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Ethiopia, Geographic Information Systems (GIS), Quasi-Experimental Design, Surveillance, Evaluation, Public Health, Spatial Analysis*

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

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

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge