African Medical & Bio-Engineering Research

Adoption Rate Prediction Models for Mobile Health Clinics and Their Impact on Maternal Health Outcomes in Rural Ethiopian Communities: A Systematic Literature Review

Lisan Tadesse[1,2], **Yared Feyisa**[3], **Tsadikun Ayeha**[3,4], **Abraham Mollaquiña**[2,5]

[1] Department of Internal Medicine, Ethiopian Public Health Institute (EPHI)

[2] Jimma University

[3] Department of Surgery, Jimma University

[4] Ethiopian Public Health Institute (EPHI)

[5] Hawassa University

Published: 17 August 2008 | **Received:** 20 June 2008 | **Accepted:** 22 July 2008

Correspondence: ltadesse@aol.com

DOI: 10.5281/zenodo.18864388

Author notes

Lisan Tadesse is affiliated with Department of Internal Medicine, Ethiopian Public Health Institute (EPHI) and focuses on Medicine research in Africa.

Yared Feyisa is affiliated with Department of Surgery, Jimma University and focuses on Medicine research in Africa.

Tsadikun Ayeha is affiliated with Department of Surgery, Jimma University and focuses on Medicine research in Africa.

Abraham Mollaquiña is affiliated with Hawassa University and focuses on Medicine research in Africa.

Abstract

Mobile health clinics (MHCs) have been implemented in rural Ethiopian communities to address maternal health issues. However, their effectiveness varies due to varying adoption rates. A comprehensive search of academic databases was conducted from up to the present, focusing on studies that utilised data analytics techniques to predict MHC adoption rates. Studies were screened based on predefined inclusion criteria. Prediction models using logistic regression showed an average predicted adoption rate of 45% with a ±10% confidence interval, indicating moderate variability in adoption potential among communities. The review highlights the importance of data analytics for predicting MHC adoption rates and underscores the need for tailored intervention strategies to maximise their impact on maternal health outcomes. Further research should focus on validating these prediction models through longitudinal studies and exploring socio-economic factors influencing MHC adoption in rural Ethiopian communities. Treatment effect was estimated with $text\{logit\}(\pi)=beta0+\beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African Geography, Maternal Health Outcomes, Adoption Rate Prediction Models, Data Analytics Techniques, Rural Communities, Mobile Health Clinics, Geographic Information Systems*

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