



# Mobile Health Apps and Diabetic Management in Rural Tanzania: A Longitudinal Study of HbA1c Levels and Patient Satisfaction,

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## Abstract

This study addresses a current research gap in Medicine concerning 0. Use of Mobile Health Apps Amongst Rural Tanzanian Diabetics: Longitudinal Data Showing HbA1c Levels and Patient Satisfaction Scores in Tanzania. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. 0. Use of Mobile Health Apps Amongst Rural Tanzanian Diabetics: Longitudinal Data Showing HbA1c Levels and Patient Satisfaction Scores, Tanzania, Africa, Medicine, case study This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T X$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Tanzania, Rural Health, Mobile Apps, Diabetes Management, HbA1c, Patient Satisfaction, Longitudinal Studies

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