



Development and Evaluation of Mobile Health Apps for Type 2 Diabetes Mellitus Self-Management among Urban Senegalese Elders in Malawi: A Focus on Glycosylated Hemoglobin Levels

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Abstract

This study addresses a current research gap in Medicine concerning Development and Evaluation of Mobile Health Apps for Self-Management of Type 2 Diabetes Mellitus among Urban Senegalese Individuals: Focus on Glycosylated Hemoglobin Levels in Malawi. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A mixed-methods design was used, combining survey and interview data collected over the study period. 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. Development and Evaluation of Mobile Health Apps for Self-Management of Type 2 Diabetes Mellitus among Urban Senegalese Individuals: Focus on Glycosylated Hemoglobin Levels, Malawi, Africa, Medicine, survey research This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: African, Diabetes, Mobile Health, Self-Management, Glycosylated Hemoglobin, Epidemiology, Qualitative Analysis

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