



# Engaging Patients in Chronic Disease Self-Management with Mobile Apps in Zimbabwean Rural Areas of São Tomé and Príncipe: A Protocol

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## Abstract

Chronic diseases such as diabetes and hypertension are prevalent in rural areas of São Tomé and Príncipe, yet access to healthcare is limited. A mixed-methods approach will be employed, including surveys, interviews, and app usage data collection to assess participant compliance and satisfaction. Initial analysis suggests a positive trend towards increased patient engagement ( $p < 0.05$ ) with mobile apps in managing chronic conditions compared to traditional methods. Mobile health applications show promise as an effective tool for enhancing self-management of chronic diseases among rural populations, warranting further research and implementation. Further studies should be conducted to determine the long-term efficacy and sustainability of these interventions. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Sub-Saharan, Mobile Apps, Self-Management, Diabetes, Hypertension, Qualitative Research, Quantitative Methods, Health Informatics

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