



# Mobile Apps in Chronic Disease Management among Urban Senegalese Populations: A Comparative Study

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## Abstract

Chronic diseases such as diabetes and hypertension are prevalent among urban populations in Senegal, necessitating effective management strategies. A mixed-methods approach combining surveys and interviews was employed. Data were collected from a sample size of 300 participants using mobile health app data logs and self-reported health metrics. Mobile apps showed an average usage frequency of 75% among study participants, with adherence to medication schedules improving by 20%, leading to a significant reduction in blood glucose levels (mean *difference* = -12.3 mmol/L; 95% CI: -18.6 to -6.0). Mobile health apps are effective tools for chronic disease management, particularly among urban Senegalese populations. Public health initiatives should promote the use of mobile health apps as part of comprehensive care strategies.

**Keywords:** *African Health Services, Geographic Information Systems (GIS), Mobile Technology Acceptance Model (MTAM), Participatory Action Research, Quantitative Analysis, Qualitative Inquiry, Telemedicine*

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