Mobile Health Monitoring Systems for Diabetes Management among Urban Youth in Nairobi, 2008

James Ochieng Anyanga[1,2]**, Nelly Wambugu Kiura**[2,3]**, David Nduati Matiwa**[1]**, Judy Mungai Kilonzimbi**[1]

[1] Department of Data Science, University of Nairobi

[2] Department of Artificial Intelligence, Kenya Medical Research Institute (KEMRI)

[3] University of Nairobi

Author notes

James Ochieng Anyanga is affiliated with Department of Data Science, University of Nairobi and focuses on Computer Science research in Africa.

Nelly Wambugu Kiura is affiliated with Department of Artificial Intelligence, Kenya Medical Research Institute (KEMRI) and focuses on Computer Science research in Africa.

David Nduati Matiwa is affiliated with Department of Data Science, University of Nairobi and focuses on Computer Science research in Africa.

Judy Mungai Kilonzimbi is affiliated with Department of Data Science, University of Nairobi and focuses on Computer Science research in Africa.

Abstract

This study examines the use of mobile health monitoring systems to manage diabetes among urban youth aged 18-25 in Nairobi, Kenya. A mixed-methods approach was employed, involving surveys, interviews, and a pilot deployment of a custom-built mobile app designed to monitor glucose levels and provide health recommendations. The mobile app showed an average improvement in daily blood sugar monitoring by 15% among users compared to non-users, with the most engaged users reporting a 20% reduction in hospital admissions for diabetes-related complications. Mobile health monitoring systems demonstrated significant potential for enhancing diabetes management among urban youth in Nairobi. Further research should focus on scalability and integration into existing healthcare infrastructure to ensure widespread access. Policy recommendations include advocating for funding mobile technology initiatives within the public health sector. mobile health, diabetes management, urban youth, Nairobi, Kenya Model estimation used $\{\hat{\theta}\} = argmin\{\theta\} \, sumi \, ell(y_i, f\theta(\xi)) + \lambda lVert\theta rVert\,2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, Mobile Apps, mHealth, Adolescents, Epidemiology*

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