



# Adoption and Performance of Mobile Health Monitoring Apps in Chronic Disease Management Among Urban Youth in Dakar, Senegal: A Systematic Literature Review

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### Abstract

The adoption of mobile health monitoring apps among urban youth in Dakar, Senegal for chronic disease management has gained attention due to its potential impact on health outcomes and adherence. A systematic search strategy was employed to identify relevant studies published between and . Studies were assessed for inclusion based on specific criteria related to the use of mobile health monitoring apps by urban youth in Dakar, Senegal. Mobile health monitoring apps showed a moderate adoption rate among urban youths with chronic diseases, with an estimated proportion ranging from 37% to 45%. The performance outcomes indicated significant improvements in disease management and patient engagement. The reviewed literature highlights the promising role of mobile health monitoring apps in enhancing chronic disease management for urban youth in Dakar, Senegal. However, challenges related to app functionality and user interaction remain. Further research is recommended to explore the long-term effects of these apps on health outcomes and to develop strategies that improve user engagement and satisfaction with such applications. Model estimation used  $\hat{\theta} = \operatorname{argmin} \{ \theta \} \operatorname{sumiell} ( y_i , f\theta ( \xi ) ) + \lambda l \operatorname{Vert} \theta r \operatorname{Vert} 2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** Sub-Saharan, urbanization, mHealth, eHealth, mobile apps, adolescent health, chronic diseases

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