African Management Information Systems (Business/ICT crossover)

Wearable Technology's Impact on Cardiopulmonary Health Indicators Among Urban Elderly Diabetics in Lagos City: A Time-Specific Analysis

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Abstract

Urban elderly diabetics in Lagos City face unique health challenges due to environmental factors and lifestyle choices. A mixed-methods approach was employed with data from wearable devices tracked for six months in the city's urban areas. Data analysis included time-series and regression models to assess impact. Wearable technology usage led to significant reductions (30%) in average blood pressure readings among participants, indicating a positive health improvement trend. The study highlights the potential of wearable technology to monitor and improve cardiopulmonary health indicators for urban elderly diabetics in Lagos City. Further research should explore long-term effects and broader applicability across different demographic groups and regions. Wearable Technology, Urban Elderly Diabetics, Cardiopulmonary Health, Time-Series Analysis Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, Urbanization, Wearables, IoT, Telemonitoring, Seniors, Cardiopulmonary, Epidemiology*

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