

ORIGINAL RESEARCH

Influence Of E-Health Technology on Nutrition Interventions Among Healthcare Consumers in Kiambu County, Kenya

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Abstract

Background: The adoption of digital health technologies has opened new opportunities to enhance the delivery of nutrition services. However, there is limited evidence on how e-health platforms impact nutrition interventions in sub-Saharan African settings. **Objectives:** This study aimed to evaluate the influence of Health Information Systems (HIS), telemedicine, and healthcare e-learning on nutrition interventions among healthcare consumers in Kiambu County, Kenya. **Methods:** A correlational research design was used. The study population included 2,075 healthcare consumers attending comprehensive care clinics (HIV/AIDS, TB), diabetic and hypertension clinics, nutrition outpatient clinics, and renal clinics at Thika Level 5 Hospital. Stratified sampling selected 335 participants. Data were collected through questionnaires and analysed using descriptive and inferential statistics, including correlation, regression, and ANOVA. **Results:** The findings showed that HIS had a positive and significant effect on nutrition interventions ($r = 0.461$, $p < 0.01$), explaining 21.3% of the variance ($R^2 = 0.213$). Telemedicine also had a positive, though weaker, effect ($r = 0.288$, $p < 0.01$), accounting for 8.3% of the variance ($R^2 = 0.083$). Healthcare e-learning demonstrated the strongest correlation ($r = 0.496$, $p < 0.01$), contributing to 24.6% of the variance ($R^2 = 0.246$). Regression analyses indicated improvements of 35.8%, 19.9%, and 41.1% in nutrition interventions for each unit increase in HIS, telemedicine, and e-learning, respectively. **Conclusion:** The study concludes that e-health technologies have a significant impact on enhancing nutrition interventions. HIS improves disease management and service delivery, telemedicine broadens healthcare access and supports self-monitoring, and e-learning platforms elevate consumers' nutritional knowledge. The study recommends expanding HIS, diversifying telemedicine applications, and strengthening nutrition e-learning initiatives to improve health outcomes across populations.

Keywords: E-Health, Health Information Systems, Telemedicine, E-Learning, Nutrition Interventions