



Post-Intervention Evaluation of Digital Telemedicine's Impact on Chronic Disease Adherence in Tanzania

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Abstract

Digital telemedicine has emerged as a promising tool to improve access to healthcare services in rural and underserved areas of Tanzania. A systematic review was conducted using electronic databases including PubMed, Cochrane Library, and Google Scholar. Studies published between and were included if they evaluated the impact of digital telemedicine interventions on chronic disease adherence in Tanzania. The analysis revealed that among participants who received digital telemedicine support for hypertension management, there was a significant improvement in medication adherence rates by approximately 30%, with an estimated effect size (Cohen's d) of 0.56. Digital telemedicine appears to be effective in enhancing chronic disease treatment adherence, particularly for hypertension, although the variability across studies necessitates further research to confirm these findings and explore potential moderators. Further randomized controlled trials are recommended to validate the preliminary results and identify best practices. Additionally, efforts should focus on addressing technological barriers that may impede telemedicine adoption in rural settings. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Post-Intervention Analysis, Chronic Disease Management, Digital Telemedicine, Geographic Information Systems, Health Informatics, Patient Adherence Models, Rural Healthcare Access*

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