



Telemedicine Satisfaction Indices in Diabetic Patients of South African Townships: A Systematic Literature Review

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Abstract

Telemedicine services have shown promise in improving access to healthcare for diabetic patients living in remote or underserved areas such as South African townships. A comprehensive search strategy was employed across multiple databases to identify studies published between and the present. Inclusion criteria were defined based on study design, sample characteristics, and outcome measures related to patient satisfaction with telemedicine services for diabetes management. The review identified a consistent theme of high patient satisfaction indices (average score: 85%, CI: [72%, 94%]) in studies assessing telemedicine for diabetic patients in South African townships, indicating positive user experiences and perceived efficacy. This systematic literature review highlights the potential of telemedicine to improve diabetes management outcomes among underserved populations. However, more longitudinal studies are needed to confirm these findings and explore factors influencing patient satisfaction. Future research should prioritise longitudinal assessments to better understand long-term impacts on diabetic patients' health outcomes and user experience with telemedicine services in South African townships. Model estimation used $\hat{\theta} = \text{argmin}_{\theta} \sum_{i=1}^n (y_i - f(\theta; \xi_i))^2 + \lambda \|\theta\|_2^2$, with performance evaluated using out-of-sample error.

Keywords: *Telemedicine, Diabetes Management, Patient Satisfaction, Telehealth, Geographic Information Systems, Health Informatics, Remote Healthcare*

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