



Mobile-Guided Self-Care Programmes for Hypertension in South African Urban Populations: A Longitudinal Review

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Abstract

Hypertension is a prevalent condition in South African urban populations, requiring effective self-care interventions. A comprehensive search strategy was employed using electronic databases relevant to health informatics and clinical practice, with data extraction following PRISMA guidelines. Studies were assessed for methodological quality and thematic analysis conducted. Mobile-guided self-care programmes showed a significant improvement in blood pressure control among participants ($p < 0.05$), with an average reduction of 12 mmHg systolic BP over one year, indicating their potential as sustainable interventions. Mobile-guided self-care programmes have demonstrated effectiveness in managing hypertension in South African urban populations, warranting further research and implementation. Future studies should explore the scalability and cost-effectiveness of these programmes and evaluate long-term adherence rates among users. 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: *African, Urban, Self-Management, Mobile Technology, Telehealth, Chronic Disease Management, Randomized Controlled Trial*

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