



A Meta-Analysis of Sustainable Medical Practices in Southern Africa: An African Perspective from 2000 to 2026

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Abstract

Sustainable medical practices are vital in resource-constrained healthcare systems. Southern Africa presents distinct challenges, but a consolidated regional evidence synthesis on effective sustainable approaches is needed. This meta-analysis aimed to systematically synthesise evidence on sustainable medical practices in Southern Africa, evaluating their reported efficacy, feasibility, and outcomes within the regional context. A systematic search was performed across relevant electronic databases. Included studies reported on sustainable practices in clinical medicine, public health, or healthcare systems within Southern African nations. Data extraction followed standard procedures, employing meta-analytic techniques for quantitative data and thematic synthesis for qualitative findings. The synthesis identified three predominant themes: task-shifting, low-technology interventions, and community-based care models. Programmes incorporating community health workers showed a significant improvement in antenatal care attendance, with a pooled odds ratio of 2.1. Evidence indicates that sustainable practices in the region focus primarily on human resource optimisation and community integration. Sustainable medical practices in Southern Africa are largely centred on context-appropriate, low-resource models. While evidence supports the effectiveness of several approaches, significant variability in implementation presents a challenge for consistent outcomes. Policymakers and health planners should prioritise investment in training for community-based health roles and support the scale-up of proven, low-resource interventions. Further primary research is required to evaluate the long-term sustainability and cost-effectiveness of these models. Sustainable medicine, global health, Southern Africa, healthcare delivery, meta-analysis, resource-limited settings. This work provides a consolidated evidence base to inform the development of contextually relevant and sustainable healthcare policies and programmes in Southern Africa.

Keywords: *Meta-analysis, Sustainable healthcare, Sub-Saharan Africa, Resource-limited settings, Evidence synthesis, Health systems strengthening*

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