

## A SYSTEMATIC REVIEW ON THE CHALLENGES OF DENGUE PREVENTION AND CONTROL WORLDWIDE: AN UPDATE

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### ABSTRACT

*INTRODUCTION: Dengue fever, a mosquito-borne disease, poses significant public health challenges, particularly in tropical and subtropical regions. Effective management of dengue control and prevention faces hurdles such as rapid urbanization, climate change, and socioeconomic disparities. OBJECTIVE: This systematic review examines these challenges by synthesizing strategies for dengue prevention and control from the appraised articles. METHODOLOGY: We conducted a thorough search of literature published between 2013 and 2024, utilizing databases including Scopus, ScienceDirect, and PubMed. The review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for transparency and completeness and used the Joanna Briggs Institute (JBI) framework for quality and risk of bias assessment. RESULTS: The search returned 1461 articles, with 84 from Scopus, 302 from ScienceDirect, and 1075 from PubMed. After thorough screening, six studies met the review inclusion criteria. The risk of bias assessment indicated moderate to high quality in the studies, with scores ranging from 5 to 9 out of 10. The studies covered a range of populations, including community members, health officers, healthcare workers, caregivers, and health surveillance experts from diverse regions such as Malaysia, Thailand, the Dominican Republic, and Brazil. The review primarily included qualitative studies and one case report. These studies explored various themes, namely community behaviour, stakeholder challenges, sociodemographic factors, and environmental issues. CONCLUSION: Effective dengue management requires integrated strategies that blend traditional methods with innovative approaches. Engaging the community and coordinating with stakeholders are essential for enhancing the efficacy of control measures. Future research should focus on developing sustainable, community-driven interventions and improving inter-sectoral collaboration to address the complex challenges of dengue prevention and control.*

Keywords: tropical disease, zoonotic disease, integrated strategies, mosquito-borne disease, qualitative studies

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