

A Systematic Review of the Nexus Between Campus Green Spaces and Mental Well-Being in Mainland China and Hong Kong

Jueshan Liu^{1*}, Yumei Chen¹, Anthony Orji²

¹ Sichuan Vocational College of Health and Rehabilitation, Zigong, Sichuan, China

² Department of Economics, University of Nigeria, Nsukka, Enugu, Nigeria

Abstract

Objective: This systematic review examines the association between campus green spaces and mental well-being among university students, with a specific focus on evidence from mainland China and Hong Kong. It synthesizes findings on how different measures of greenness relate to mental health outcomes, including stress, anxiety, depression, life satisfaction, and psychological well-being.

Methods: The systematic search was conducted in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines and the PRISMA-S extension for reporting search strategies. Five databases (Web of Science, PubMed/MEDLINE, CNKI, CrossRef, and OpenAlex) were searched. Studies were screened against predetermined eligibility criteria, and data were extracted and synthesized using a structured narrative approach due to methodological heterogeneity.

Results: A total of 988 records were identified, of which 22 studies were selected after initial screening and full-text assessment. Most studies showed that spending time in campus green spaces was associated with improved mental health outcomes, including lower levels of stress, anxiety, and depressive symptoms, as well as greater life satisfaction. Studies reported more reliable results using subjective greenness assessments than objective measurements such as the Normalized Difference Vegetation Index (NDVI). Identified pathways included physical activity, social interaction, and place attachment, all of which influenced the relationship between campus green spaces and mental well-being.

Conclusion: The findings indicate that exposure to campus green spaces is associated with better mental health among university students in mainland China and Hong Kong. Although the evidence base is methodologically diverse, the review demonstrates that campus green infrastructure can serve as a cost-effective and scalable strategy for promoting mental well-being. This geographically focused synthesis contributes to a better understanding of how campus green spaces support student mental health in high-density urban contexts.

Keywords: Campus green spaces, Environmental health, Green infrastructure, Mental well-being, Psychological well-being, Student mental health, Systematic review.