

Walking, Cycling, and Mental Health: An Umbrella Review

Sonja Kahlmeier^{1,2}, Tom Rous³, Ahmadreza Faghih-Imani⁴, Dena Kasraian³

¹ City Health, Zürich, Switzerland

² World Health Organization European Centre for Environment and Health, Bonn, Germany

³ Built Environment Department, Eindhoven University of Technology, Eindhoven, The Netherlands

⁴ Centre for Environmental Policy, Imperial College London, London, United Kingdom

Purpose: Physical inactivity is a public health challenge. Almost half of its associated health costs are related to mental health problems, for which walking and cycling are often more feasible forms of physical activity than sports. This study presents the first umbrella review to date on walking, cycling, and mental health.

Methods: A systematic literature search was carried out in Scopus and PubMed, complemented by Semantic Scholar and Research Rabbit. Systematic, narrative, or scoping reviews, and selected studies in age groups with scarce evidence, were included if they specifically addressed mental health aspects and cycling or walking. Through a deductive and inductive iterative process, mental health outcomes were grouped. Data is being charted and summarised, distinguishing active mobility/cycling/walking, age groups, interventions, and nature-based approaches.

Results: Titles of 1,277 and abstracts of 219 publications were screened, and 53 were included for inspection. Of those, 27 did not meet inclusion criteria. Eleven reviews on adults, one review and two cross-country cross-sectional studies on children and young people, one review on older adults, two on interventions, and nine on nature-based approaches were included. Active travel, cycling and walking, are positively associated with mental health. Walking is beneficial for depressive symptoms, and those already depressed could benefit more. In RCTs, walking interventions significantly reduce depressive symptoms, and ≥ 0.25 miles (0.4 km) of walking per day seems protective against developing depressive symptoms. Walking also reduces anxiety symptoms in adults in RCTs. However, in both cases, for real-life active mobility, current evidence is insufficient to draw conclusions. Emerging evidence from low-and middle-income countries shows adolescents who actively travel to school have 12% lower odds for depressive symptoms than their peers. Walking is associated with lower psychological stress in adults. In people with disabilities, adaptive cycling is associated with increased wellbeing. Initial evidence suggests nature-based walking provides additional mental health benefits.

Conclusion: The results support investments to promote safe active mobility as feasible, low-cost options to enhance mental health across large parts of the population.

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