Title: How to promote long-distance cycling? A literature review.

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Abstract: Cycling is a sustainable transport mode and often regarded as a cheaper, cleaner, and healthier alternative to the car. Though cycling is usually considered suitable for short distances, in recent times long-distance cycling has steered interest among the policymakers. As a basis to promote and facilitate long-distance cycling, we conducted a literature review that aimed to identify factors motivating long-distance cycling and evaluate interventions implemented to increase cycling for utilitarian purposes above the distance of 5 km.

We analysed the role of psychological, socio-demographic, and physical determinants of long-distance cycling and examined and evaluated interventions from across the globe that have been aiming to initiate modal shifts.

Fifty-four papers were found to match the inclusion criteria. About one fifth of them explored the intention and behaviour of long-distance cyclists, while more than two third studied the role of physical determinants like infrastructure, built-environment, and bike types. Among the relevant factors influencing long-distance cycling, we identified direct trip-benefits (lower costs and flexibility in the schedule), cycling habit, bike-friendly infrastructure, and e-bike usage to be the key determinants. Particularly the emergence of the e-bike can popularise long-distance cycling by overcoming barriers and substituting car trips for medium distances. The 30 intervention studies included in the review apply various behaviour change techniques or address different design principles. We identified workplace-based measures as the most effective, especially if combined with the competition aspect. Reward schemes, however, proved to be appealing to specific groups only. This literature review emphasises upon the relevance of encouraging people to bike longer distances by providing them new experiences and breaking their car using habit. The paper aims to necessitate a re-evaluation of bicycling attitudes and long-term behaviour change in a supportive social and physical environment, while the particular actions identified as successful to this end vary across cycling cultures.

Keywords: Long-distance cycling; factors affecting long-distance cycling; interventions promoting long-distance cycling; bike-friendly infrastructure; e-bikes