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How far is too far for adolescents to actively travel to school: Distance thresholds associated with active travel from home to school

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Objectives

The aim of this study is to (a) examine patterns of commuting to school in adolescents adjusting for sex, age, urban/rural, area level deprivation and school type and (b) identify the threshold distance below which adolescents are more likely to actively travel to school.

by distance and/or other socio-demographic and school characteristics. Future research and interventions on increasing active travel to school should consider the threshold distance in evidence-based planning infrastructure and policy on how to promote active travel to school in future generations.

Method

This is a retrospective, cross-sectional observational study which utilises survey data from the School Health Research Network (SHRN) 2019/20 Student Health and Well-being survey (SHWS) in Wales, linked to routinely collected geospatial data, in the Secure Anonymised Information Linkage (SAIL) databank. Network derived home to school distances were objectively measured using geospatial techniques outside of SAIL, before being uploaded to SAIL and linked to self-reported mode of commuting in the SHWS survey, using SAIL's split file-approach. We applied logistic regression, adjusting for children (e.g., sex, year group) and school characteristics (e.g., school language) as well as parental socio-economic circumstances. Threshold distances were examined using receiver operating characteristic curves analysis.

Results

This study includes 24,654 students aged 11-16 years old. We assess the hypothesis that active travel to school is strongly associated with distance to school in adolescents and examine for potential differences in threshold distances for active travel vs. non-active travel based on socio-demographics and school characteristics. Accounting for the distance, adolescents are actively traveling to school could be key for future research, as understanding the underlying pathways of this association is necessary to design effective interventions and policies.

Conclusion

Findings can help us develop a better understanding of active travel patterns in adolescents and how these may be influenced



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