

Active Travel: evidence and insights from UK longitudinal population studies

Key points

- Active Travel describes people making their everyday ‘journeys for a purpose’, for example their commute to work, by walking, cycling or skating, rather than motorised transport.
- The UK’s Chief Medical Officer’s guidelines adopt a life course approach to health, recommending different levels and types of physical activity for general health benefits across key life stages.
- Longitudinal population studies provide unique sources of evidence on patterns of active travel and how they change over the life course as well as how active travel relates to other aspects of people’s lives, such as health and wellbeing.
- Research based on longitudinal population study data finds that journeys of walking and cycling maintain and improve physical and mental health across the life course.
- However, they also show it is important that means of active travel are easily accessible to everyone so it can become part of their daily routine, for example, higher street connectivity or walkability in the local environment promotes active travel.
- Considering how to facilitate active travel when planning our local environments and infrastructure can have a transformative effect on individuals, communities, and the wider population.



What are longitudinal population studies?

Longitudinal population studies collect a wide range of data from thousands of people across the UK throughout their lives. This provides rich insights into many domains of people’s complex lives, including the ways people travel, the determinants and barriers to active travel, and how this interacts with environmental and policy changes. Data from these studies also allow for consideration of national and regional factors, enable comparisons across generations, and help to understand how patterns and habits change over people’s lives.

Why is active travel important?

For the individual it can help promote:

- Healthier weights
- Lower likelihoods of diseases, such as diabetes and hypertension
- Significant mental health benefits

Broader benefits include:

- Cleaner air
- The promotion of environmentally friendly behaviours
- Benefits for the community, such as reduced traffic congestion

Research findings from longitudinal population studies



Active travel and physical health

- **Active travel is associated with lower likelihoods of being overweight or obese, having diabetes, or hypertension** [1]. Research has shown that compared with using private transport, commuting by public or active transport modes is predictive of lower BMI [2].
- **Active travel has been shown to increase high-impact physical activity for older adults, which is good for bone health** [3]. As public transport use increases once adults become eligible for free bus passes (currently age 60 in England and Wales), this has the benefit of increasing physical activity [4], reducing age-related declines in walking speed [5] and is associated with lower levels of obesity [5][6].
- **A change in commuting mode from car to active travel benefits physical health, particularly among females** [7]. Switching to active travel for the journey to school has been shown to be associated with lower BMI and body fat among 14-year-old schoolchildren [8].
- **Active travel behaviours have been shown to continue through adolescence**, which is associated with lower BMIs by age 17 compared to those with a consistently passive travel pattern, particularly in males [10]. Walking or cycling to school contributes substantially to children's overall physical activity levels, especially for those living more than ½ mile away [9].

Active travel and mental health

- **Research demonstrates positive mental health benefits from active travel.** One study based in London found that walking to work is significantly associated with higher life satisfaction compared to commuting by car [11]. Switching from car travel for the daily commute was associated with increased levels of positive mental health for both males and females [11].
- **Public transport use can also benefit mental health but appears to be connected to levels of infrastructure connectivity** [11][12]. Those who considered the public transport infrastructure in their area as excellent were more than 1.5 times more likely to choose to walk or cycle journeys of less than 2-3 miles, than those who thought the infrastructure was poor [12]. Frequent users of public transport who considered public transport infrastructure to be poor were significantly more likely to report worse mental health, compared to frequent users who regarded infrastructure as excellent [12].
- **Commuters who maintained cycling to work for a one-year period reported lower sickness absences and improved mental health** than commuters who travelled by non-active means, according to longitudinal examinations of commuting modes [13].
- **Free bus passes are associated with an increase in public transport use and have benefits to cognitive function in older age.** Increased public transport use might promote cognitive health through encouraging intellectually, socially and physically active lifestyles [14].



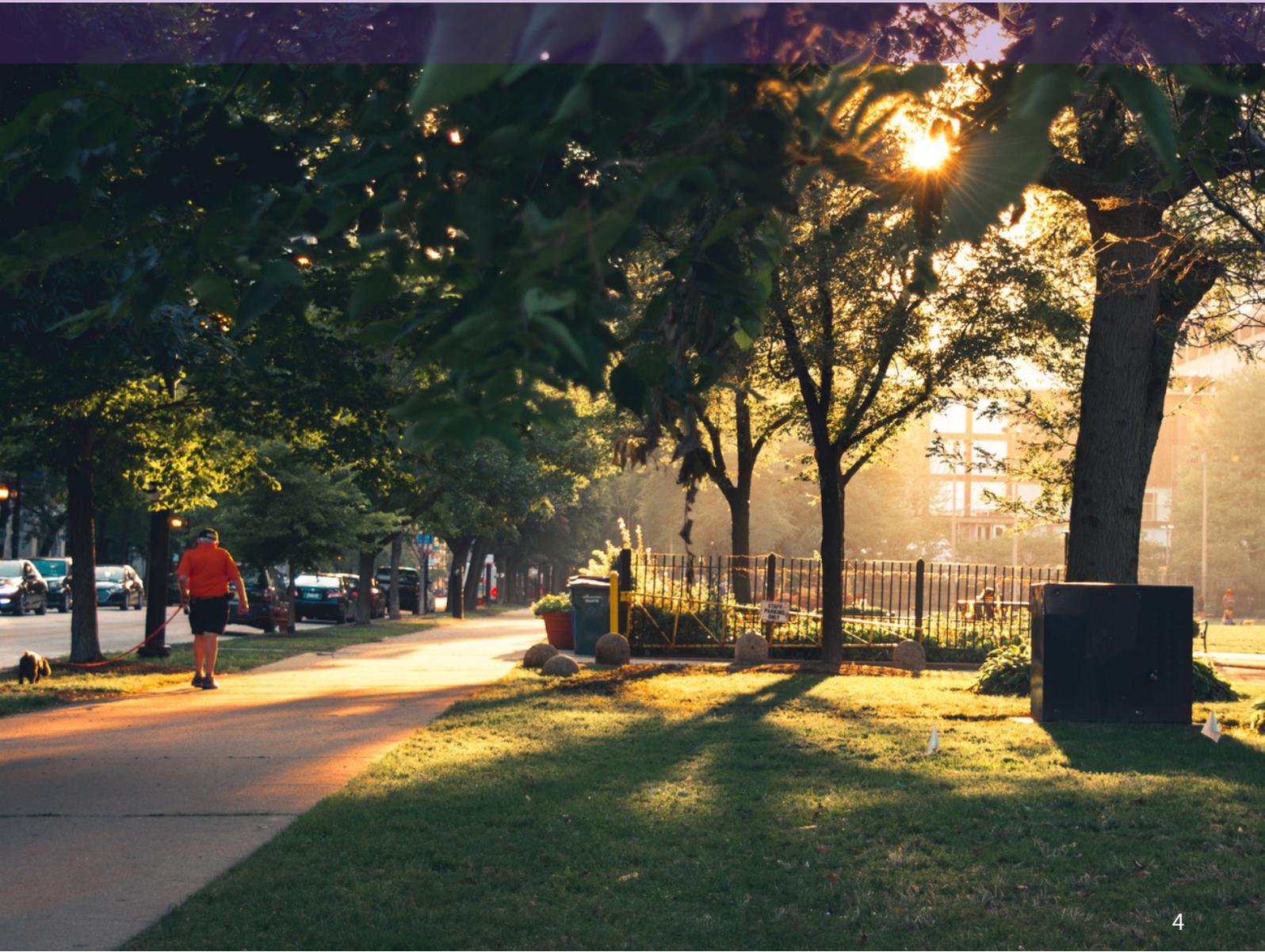
What promotes active travel?

- **Urban residents were found to be significantly more likely to frequently engage in active travel than rural residents** according to research which recommends that urban and rural communities should be considered separately in relation to outcomes and policy decisions [15].
- **Unequal access or additional barriers to physical activity exist** across both education and demographic subgroups, with individuals who were highly educated, older, and male least likely to engage in active travel behaviours [16].
- **For children, those participating in regular sporting activity were more likely to engage in active travel behaviours than their less-active peers**, while those eating fast food once a week or less were more likely to travel actively than less-healthy eaters [17].
- **Factors that promote greater levels of active travel include higher street connectivity or walkability in the local environment [18][19]**, which is particularly important in promoting active travel to and from school for young people. Although distance to school was correlated with active travel, research using longitudinal data shows that a walkable environment had an even larger association with the probability of children using active travel for their journeys to school [19].
- **Adolescents' cycling to school is more prevalent in areas with more adult cycling commuting [20]**. Research on the provision of cycling training in school shows that trained children were more likely to cycle to school than untrained children. However, despite this, boys were significantly more likely to travel to school by bike than girls [21].
- **Programmes and policies promoting sustainable active travel behaviours are likely to work best when aimed at those in early adulthood [22]**. Analysis across the life course has shown that middle-aged adults (aged 45-55) and older adults (aged over 55) were significantly less likely to initiate walking/cycling during the six-year study period than younger adults (aged 16-34) [22].



Active travel, clean air and climate change

- **Changes in active travel have significant lifecycle carbon emissions benefits.** An average person exchanging one car journey per day for cycling for four days a week would decrease mobility-related lifecycle CO2 emissions by about 0.5 tonnes per year [23].
- **The implementation of new infrastructure designed to support greater active travel has resulted in population-level increases in walking, cycling and physical activity [24][25]** as well as improved wellbeing, healthier weight and reduced health inequalities [25].
- **Environmental attitudes, including concerns over climate change, have an important influence on commuter mode choice [26] [27].** Use of deliberative methods, e.g., combining travel diaries with discussion events, can help to overcome the gap between people's stated intentions and actual pro-environmental behaviours, thus contributing to better policy making [27].
- **There is exciting potential to link existing longitudinal population study data to new data** on air pollution, travel infrastructure and consumer behaviours, e.g., the Bradford Clean Air evaluation [28].
- **A recent review of communication strategies for behavioural change, highlighted the potential role of targeted localised information** to reshape social norms and identities, and potentially lead to effective action to tackle air pollution through behavioural solutions [29].



Policy priorities and recommendations

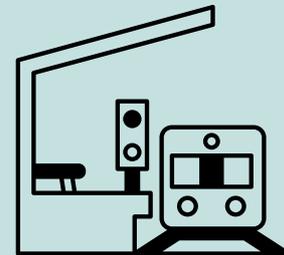
Younger age groups

- Target younger adults with active travel programmes and policies as an efficient means to increase and sustain participation in active commuting.
- Create more walkable environments to maximise the positive impact of walking to school.
- Develop extensive education programmes (for example in cycling) to help improve health through exercise awareness and reduce incidence of accidents.



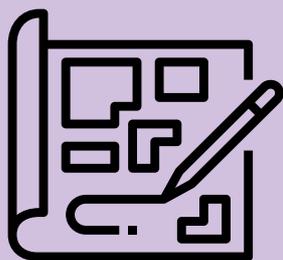
Older age groups

- Transport policies can serve as public health tools to promote cognitive health in ageing populations. It is therefore important to improve access to good quality public transport to boost the physical and mental health of older adults.
- Engage with community planners to address perceptions of neighbourhood safety which encourage recreational walking and physical activity.



Working-age people

- Encourage employers to promote and incentivise active travel and its benefits to employees.
- Strive for greater collaboration between public health and transport planners to support cycling-to-work schemes through the design of safe and attractive neighbourhoods in which people can easily move around.
- Establish a norm for urban and rural planners to consider improvements to street connectivity and prioritise the needs of walkers and cyclists in terms of making the local built environment more accessible.



Clean air and climate change

- Increase active travel, focusing on encouraging people to substitute travel in motorised vehicles for cycling or walking, to make significant reductions in CO2 emissions.
- Provide environmentally friendly alternative forms of travel; people take concerns over climate change into account when choosing how to travel, but the options need to be available to them.
- Local policymakers and planners should collaborate on the creation of new, easily accessible active travel infrastructure. Such approaches should be supplemented with targeted and localised communication strategies.



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