Abstract

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Modelling the Association between Health Indicators and Commute Mode Choice: a cross-sectional study in southern Sweden.

The impact of commuting on health depends, in part, on the mode of travel. A sizeable body of literature addresses associations between mode choice and health status, but little is known about how a person's health affects commuting mode choice. Stress, exhaustion and obesity are threats to public health that increase in modern societies. Understanding how these concerns impact mode choice is important in order to plan effective interventions. Differences in health status among different groups and geographical areas could influence the effectiveness of policy interventions to promote greater use of particular modes, such as public transit and cycling. We investigated associations between health and commuting mode choice using a cross-sectional population-based public health questionnaire data collected from 7574 commuters in southern Sweden in 2012, integrated with register data on residential and location, information on transportation networks, and other spatial data. Discrete Multinomial Logit (MNL) models were used to study the relationships between health indicators (everyday stress, vitality, long term illness, walking difficulties, and body mass index) and commuting mode (active, car and public transportation). Along with the health indicators, the models included conventional mode choice indicators such as socio-demographic attributes, commuting characteristics, and spatial variables. Everyday stress, obesity, and difficulty walking were negatively associated with the use of active and public modes. Understanding the relationship between health and mode choice in commuting, in relation to conventional indicators, can help support decision-makers and transportation planners develop more efficient interventions aimed at encourage car commuter's switch to more environmentally friendly and healthy modes such as active and public transportation.