



The Geographic Disparities in Transportation-Related Physical Activity in the United States: An Analysis of the 2017 NHTS Data

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Chronic diseases such as cardiovascular disease and diabetes are the leading causes of death and disability in the United States. Outdoor physical exercises, such as walking and cycling, are effective and low-cost interventions for the prevention of chronic diseases. How much transportation-related physical activity does an average American get? Does where people live influence how much transportation-related physical activity they undertake? Why do people not exercise more? This study attempts to answer these questions by analyzing the 2017 National Household Travel Survey (NHTS). **Study Methods** This study uses the 2017 NHTS data to compare the number of walk and bike trips for people living in eight different geographic locations. Four locations are in large metropolitan areas (inner city, inner-ring suburb, mid-ring suburb, and outer-ring suburb), two are in small metropolitan areas (urban and rural parts), and the other two are in non-metropolitan areas (urban and rural parts). We conducted both descriptive and zeroinflated Poisson modeling analyses to evaluate the geographic patterns of general physical activity, walking, and cycling at the national scale, controlling for the characteristics of their neighborhood environment.

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Findings

This study finds that people tend to have similar amount of walk and bike trips that are strictly for exercise, no matter where they live. However, people of different geographic locations behave much more differently in terms of their walk and bike trips for non-exercise purposes (e.g. transportation and recreational). Residents are most physically active when they live in the areas from the two ends of the urbanization spectrum: inner cities and inner suburbs of large metropolitan areas and the rural parts of non-metropolitan areas. Suburbanites, particularly mid-ring and outer-ring suburbanites, walk the least.

Walkers and cyclists in the different geographic locations reported different infrastructure and safety barriers that kept them from walking and biking more. For cyclists in the central cities of large metropolitan areas and cyclists in nonmetropolitan areas, a lack of nearby paths or trail is the prominent infrastructure barrier to biking more. For suburbanites, they name a lack of nearby parks as the prominent barrier to biking more. No matter which geographic location they live in, walkers consistently report no sidewalks or sidewalks in poor condition as the most prominent barriers to walking more. Residents in different geographic locations consistently report not enough lighting at night as the most prominent safety barrier to walking more.

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Policy Recommendations

Residents of suburban areas in large metropolitan areas report the least physical activity, and thus these places have the largest potential for improvement. Even incremental increases of physical activity in suburbs will generate huge public health benefits given that more than half of all Americans live in suburbs. Specifically, addition or improvement of the quality of sidewalks in suburban neighborhoods seem to be a promising strategy given that suburban walkers reported no sidewalks or sidewalks in poor condition as the most prominent barriers that kept them from walking more. Another promising strategy is improving street lighting and thus reducing safety concerns to encourage more walking in urban, suburban, and rural areas. Traffic calming and good lighting at night are two potentially effective tools to encourage more biking in urban and rural areas respectively. This study also revealed rural residents take more walks outside than mid-ring and outerring suburbanites. Most extant studies of active travel focused on urban and suburban residents. More research must be conducted to understand how rural residents travel in non-motorized modes and how they manage to take more walk trips than mid-ring and outer-ring suburbanites.

About the Authors

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/1912.



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