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Is bikesharing more dangerous than regular bicycling?

Mineta's free report compares the risk factors in bikesharing to that in regular bicycle usage.

San Jose, CA – March 7, 2016 – The growth of bikesharing in the United States is transforming urban transportation; yet safety concerns remain about bikesharing: helmet use is lower among participants, who are also more likely to be infrequent bicyclists and less familiar with the local terrain. Researchers at the Mineta Transportation Institute conducted an analysis, and its peer-reviewed report, Bikesharing and Bicycle Safety, concluded that the rates of collision and injury among bikesharing participants were lower than rates among regular bicyclists. The primary author was Elliot Martin, PhD, who collaborated with Adam Cohen, Jan Botha, PhD, and Susan Shaheen, PhD.

Dr. Martin pointed out that "bicycle design may be playing a role in slowing down the bikesharing bicyclist, making them engage in less risky behavior. The wide body and sturdy build of the bicycle has the feel of a heavy mountain bike, and this design may reduce the degree to which dangerous maneuvers are made on these bicycles. This would imply that the bicycle design is influencing the bicyclist to act in a safer way."

The study conducted longitudinal data analysis of bicycle collisions and bikesharing activity in three metropolitan areas: 1) Washington DC, 2) Minneapolis-St. Paul, and 3) the San Francisco Bay Area, to determine whether risk of an accident was higher among bikesharing participants versus regular bicyclists. The fact that it was lower suggests provocative new areas of research.

Aside from the sturdier build and slower speeds of bikeshare bicycles, other factors may influence their unexpectedly good safety record. These include additional design features, such as their bright paint colors and the fact that they light up at night. There is also the possibility that bikeshare users may be more cautious than regular bicyclists.

One possible explanation that was advanced for the greater-than-anticipated safety record of bikeshare programs was the notion that they contributed to a "safety in numbers" effect, in which large numbers of bicyclists in an urban environment inspire automobile drivers to slow down—or maintain higher levels of awareness that bicyclists may be present. The analysis did not find evidence of such an effect in the cities studied. This suggests, at least in the context of bikesharing, that the present size of bikesharing activity is not large enough to impose such an effect on other bicyclists or that such an effect is limited overall in the context of bicycling. Further study of bikesharing safety and its impact on other bicyclists will remain an important area of research as bikesharing and bicycling continue to grow in size and mode share.

Tweet this: Are participants in bikeshare programs at higher risk of accident or injury than

regular bicyclists? MTI says, no. http://transweb.sjsu.edu/project/1204.html

ABOUT THE PRINCIPAL INVESTIGATOR

Elliot Martin, PhD, is an MTI Research Associate Assistant Research Engineer at the Transportation Sustainability Research Center (TSRC) within the Institute of Transportation Studies at the University of California, Berkeley. He holds a PhD in civil and environmental engineering and a dual Master's degree in transportation engineering and city planning, all from the University of California, Berkeley. He worked as an Assistant Economist at the Federal Reserve Bank of Richmond, and graduated from Johns Hopkins University with a Bachelor's degree in economics and computer science.

Bios of all other research team members are included in the report.

ABOUT THE MINETA TRANSPORTATION INSTITUTE

The Mineta Transportation Institute (MTI) conducts research, education, and information and technology transfer, focusing on multimodal surface transportation policy and management issues, especially as they relate to transit. The Institute has been funded by Congress through the US Department of Transportation's (DOT) Office of the Assistant Secretary for Research and Technology University Transportation Centers Program, the California Department of Transportation (Caltrans), and by other public and private grants and donations, including grants from the US Department of Homeland Security. The Institute operates from the College of Business at San José State University. Visit MTI at transweb.sjsu.edu

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