

# New study shows people are willing to start bicycling more post-COVID-19 pandemic

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A new study co-authored by a University of Central Florida researcher has found that the COVID-19 pandemic contributed to an increase of people willing to cycle in the U.S.

The findings, which were recently published in *Scientific Reports*, were the result of an analysis of data from the COVID-19 and the Future Survey conducted by Arizona State University and the University of Illinois Chicago.

Results showed that two factors came out of their findings: People who are more environmentally friendly and those who are more satisfied with their life have a higher probability of [cycling](#) more post-pandemic.

Nearly 14% of the respondents stated that they were planning to cycle more, while only 4% of the respondents stated that they were planning to cycle less after the COVID-19 pandemic.

Responses from more than 7,000 people from across the U.S. were analyzed for the research study. The survey was deployed over multiple waves to the same respondents to monitor how behaviors and attitudes evolved over time and was disseminated digitally during April 2020 and October 2020.

## **Why explore this research?**

Natalia Barbour, an assistant professor in UCF's Department of Civil, Environmental and Construction Engineering, teamed up with University of South Florida Civil and Environmental Engineering professor Fred Mannering to conduct the study of the survey data.

After living in the Netherlands for the last few years, Barbour says there had been a lot of research showing that people were cycling there more than they used to before the pandemic for a variety of reasons.

She says that she and Mannering were curious to see if there had been a similar transition of people trying different transportation modes in the U.S. due to having to work from home during the pandemic period.

"The research is important particularly in the context of first, [climate change](#), and second, the effects of the pandemic on travel behavior," Barbour says.

"Globally, 20% to 30% of CO<sub>2</sub> emissions come from transport, therefore studying alternative transportation modes is essential to mitigating transport related emissions," she says. "Second, the COVID-19 pandemic has disrupted our lives and impacted how we perceive personal mobility. Although the changes to behavior were not always triggered by free will and in many cases forced by external circumstances, some positive consequences of the pandemic were found—people intend to cycle more."

## **Implications of the survey**

Barbour says the study results provide insights into socio-demographic and [psychological factors](#) that play a role in the planned cycling behavior post-COVID-19.

For example, the study established that age, race, employment status, gender and household size impacted cycling frequency.

Globally, women have been found to cycle less than men; however, the outcome of the analysis suggests that there is a shift and increase in cycling by women post-pandemic.

"Women respondents without a vehicle in their households had an increase in their mean, implying they were more likely to indicate that they intend to cycle more post the pandemic," Barbour says.

The study also showed that people who are full or part-time employees have a higher probability to cycle post-[pandemic](#), which indicates a potential increase of commute cycling trips.

As part of UCF's Smart and Safe Transportation Lab, Barbour says the work adds an additional layer and dimension to their ongoing projects.

"Historically, the lab has studied transportation issues, such as bike and pedestrian crashes, so this paper contributes to gaining a deeper understanding of the cyclists themselves," she says. "Since the lab is developing new research lines, this study is part of this effort."

She says future research could include a follow-up study to see if there are long lasting changes in people's mobility choices.

**More information:** Natalia Barbour et al, Intended cycling frequency and the role of happiness and environmental friendliness after COVID-19, *Scientific Reports* (2023). [DOI: 10.1038/s41598-023-27681-6](https://doi.org/10.1038/s41598-023-27681-6)

Provided by University of Central Florida

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