Factors Affecting Use of Active and Sustainable Transportation Among UC Irvine Undergraduate Students

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Abstract: The objective of this study was to understand the factors and barriers that affect UC Irvine (UCI) students’ use of active and sustainable transportation to travel to the main UCI campus. 37 undergraduate students were recruited through the UCI Sustainability Resource Center (SRC). Students were interviewed about their use of inactive, active, and sustainable transportation. Students reported that “Convenience”, “Time”, and “Cost” affected their transportation methods. Students living less than two miles away from campus could more easily use active and sustainable transportation than students living farther from UCI. Students recommended that UCI revise its campus policies regarding bicycle and skateboard use and improve the Anteater Express (AE) system to accommodate periods of high traffic and expand resources to students living farther from campus.

Objective: This practicum project used surveys and focus groups to identify trends, barriers, and other factors that affect students’ commutes. Findings will inform resources provided by UCI Transportation and SRC.

Introduction/Background: Climate change impacts the health and well-being of populations through dramatic shifts in weather patterns and natural disasters. Policy changes in high-income countries (HICs) were developed to reduce greenhouse gas (GHG) emissions and improve carbon neutrality.1 Under the Carbon Neutrality Initiative (CNI), the University of California aims to be carbon neutral by 2025.2 UCI has implemented programs to promote energy-efficient transportation methods. Recently, more students are using on-demand ride-share services to travel throughout campus. The UCI Transportation Center is attempting to improve students’ use of active and sustainable transportation through campus-wide changes. However, it is necessary to understand students’ commutes and how UCI can intervene.

Method: Undergraduate students were recruited through the SRC. The goal was to conduct four focus groups with equal amounts of students living on/closer to campus and farther from UCI. Four focus groups were conducted, however the majority of students lived on/closer to campus. Participants (n=37) completed surveys and were asked about the following in the focus groups:

- Active/sustainable transportation barriers and usage
- Opinions on using on-demand ride-share services
- Suggestions for UCI to facilitate active/sustainable transportation
- Perceived health and environmental impacts from active/sustainable transportation

Results: Major Themes in Focus Group Responses

Convenience
- Participants living on campus could more easily use active/sustainable transportation than students living farther away.
- “On-campus housing and Anteater Express make walking easier.”
- “Walking is faster than the bus.”
- “Biking to class is convenient.”
- “On-campus schedules are irregular, getting on/Off is easier.”

Cost
- Participants closer to campus reported that active transportation is less costly.
- Students with disposable income may be more likely to use Lyft/Uber.
- “Using Lyft/Uber is not a huge impact on my wallet.”
- “People who have money don’t care.”
- “Parking is expensive.”

Distance
- Living farther from campus hindered participants’ ability to use active/sustainable transportation.
- “UC shuttle should go to Pink West, since many students live there.”
- “Since I live in West, it’s much faster to walk than drive.”

Health Impacts
- Participants reported mental and physical benefits from using active and sustainable transportation.
- “Better physical health.”
- “Less stress dealing with traffic.”
- “Walking helps with losing weight.”

Flexible bike/skateboard campus policies

Discussion: Survey and focus group results showed that students living on/near campus could use active/sustainable transportation because driving was unnecessary. They reported that the AE and campus bicycle/skateboard policies should also be lenient. Students living farther from campus reported that public transportation was unreliable and inefficient. These students would benefit from an expanded AE system or carpool programs. Future studies should focus on students living farther from campus since the majority of participants lived in UCI housing. Additional research could also assess how socioeconomic background affects transportation methods since this could affect students’ use of active/sustainable transportation and Lyft/Uber.

Conclusions: UCI can take different actions to improve students’ use of active/sustainable transportation:

- Expanded AE network with efficient routes and affordable fares
- Flexible bike/skateboard campus policies
- On-campus safety systems to prevent bicycle theft
- More transportation resources for students with longer commutes

Overall, “Convenience”, “Cost”, and “Distance” were common themes affecting participants’ commutes. Although, participants perceived some mental and physical health benefits from using active/sustainable transportation.

Acknowledgments: I’d like to thank Carolyn Hernandez at UCI Transportation, In the Green, Climatepedia, EarthReps, the SRC, and Dr. Lebron.

References: