

FREEDOM FROM THE STATION: SPATIAL EQUITY IN ACCESS TO DOCKLESS BIKE SHARE

WHO IS USING FREE-FLOATING BIKE SHARE AND WHAT ARE THE BARRIERS TO ACCESS?

Bikesharing systems have been used around the world to increase mobility, recreation, urban health, and sustainability. Use of bikeshare by diverse groups is needed to ensure that benefits are equally afforded to all populations. In the U.S., operators have generally concentrated station-based bike share in areas that favor advantaged populations. While many cities have implemented equity strategies that increase access to bike share in low-income and communities of color, station placement remains a barrier.

Bikesharing systems that do not require stations (i.e., “dockless,” or “free-floating” bikeshare) launched in North America in 2017. Seattle was the first city to launch free-floating bike share systems. These systems allow users to locate bikes using Global Positioning Systems (GPS), and then lock bikes in place at their destination.

One-third of Seattle adults surveyed reported trying free-floating bikeshare. These users were disproportionately young, male, White, resided closer to the city center, and already more likely to have or use a bicycle.

While uptake within the adult Seattle residents surveyed was high (33%), sociodemographic characteristics of users of the free-floating bike share pilot mirrored previous findings from station-based systems across North America. Free-floating bike share systems do shift geographic access, however results show that additional work is needed to encourage use by diverse populations.

“The study found that while all neighborhoods across Seattle were served by free-floating bike share, disparities remained in who was using the bikes.” said Jana Hirsch, Assistant Research Professor at the Urban Health Collaborative, Drexel University.

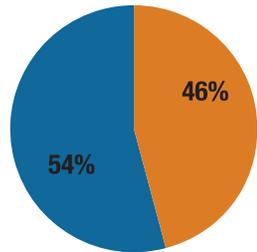
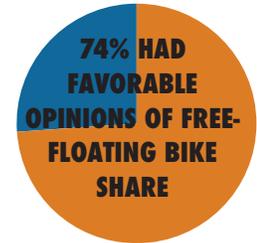


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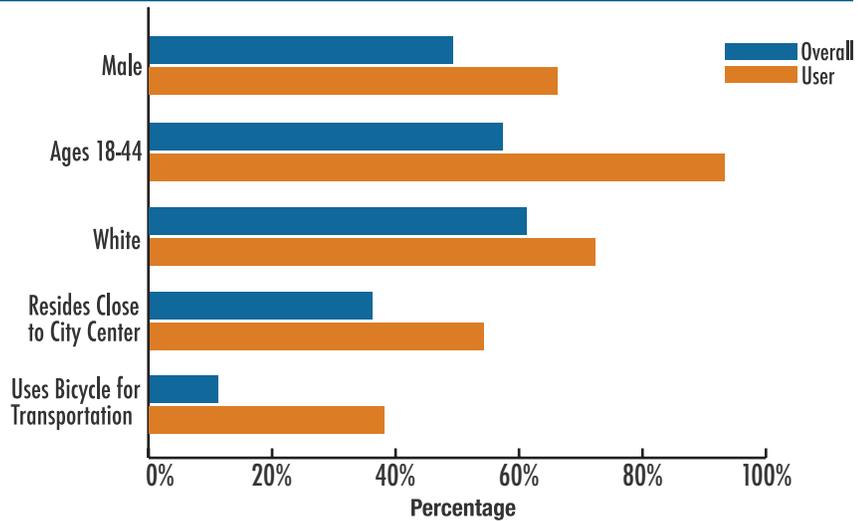
WHO IS USING FREE-FLOATING BIKE SHARE



UPTAKE WITHIN ADULT SEATTLE RESIDENTS SURVEYED WAS 33%



46% OF SURVEY RESPONDENTS COULD BE CLASSIFIED AS OPEN NON-USERS



Of the 67% who did not use bike share in the previous 6 months, just under half (46%) could be classified as open non-users. *Open non-users are defined as individuals who did not try the free-floating bike share but said they would be open to trying in the future.* Compared to the closed non-users, open non-users were younger and female. They had greater access to a working bicycle, higher rates of bicycling in Seattle, and higher rates of riding any bicycle in the previous 6 months.

BARRIERS REPORTED:

- Safety
- Social
- Spatial Access
- Physical Size
- Operation
- Technology
- Cost

RESPONDENTS WHO DID NOT REPORT WHITE OR ASIAN RACE WERE MORE LIKELY TO IDENTIFY GEOGRAPHIC ACCESS, BICYCLE SIZE, OR COST AS BARRIERS.



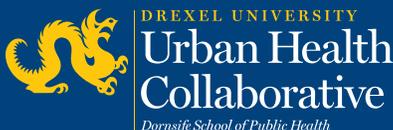
ADDRESSING BARRIERS

To address these issues, cities have used permitting to require implementation of:

- low-income payment plans
- payment systems for the unbanked
- non-smartphone options.

Addressing the two largest barriers (social and environmental) may engage non-users. Outreach initiatives to reach low-income residents may increase access. Similarly, the introduction of diverse bicycle types may encourage use among different populations. If cities and operators work together to address current limitations, free-floating bike share may increase urban health, equity, and sustainability.

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