



Breaking Barriers to Bike Share

Insights on Equity

Transportation Research and Education Center (TREC)
at Portland State University

National Institute for Transportation
and Communities (NITC)

Project Overview

Public bike share systems have rapidly expanded across the United States in recent years. However, there is evidence that significant portions of the population are underrepresented among bike share users, including people of color, along with lower-income, female, older adults and less-educated groups^{1,2}. Lack of bike share stations in neighborhoods with people of color and/or lower incomes is one factor^{3,4}, but does not completely explain the disparities in use. Cost, lack of payment options, lack of bank and credit cards accounts, and lack of familiarity with bike sharing are other potential barriers to people in these communities^{2,5}.

Efforts to overcome access and use barriers to bike share for underserved communities have been initiated in a number of cities, including those working with the Better Bike Share Partnership (BBSP) to launch and test potentially replicable

approaches to improve equity outcomes. These have included focused outreach efforts and bike share investments in low-income and underserved communities in several cities.

Bicycling and bike share have the potential to benefit disadvantaged communities by providing new options for accessing transit and jobs, while also providing an opportunity for recreation and physical activity. This research project aims to better understand perceptions and attitudes toward bicycling and bike share, along with the barriers to and opportunities for expanding the use of bike share in traditionally underserved neighborhoods, with a focus on communities of color and lower-income individuals. Findings provide insight into what strategies can be effective in attracting new and diverse users, and what benefits bike share can offer these potential participants.

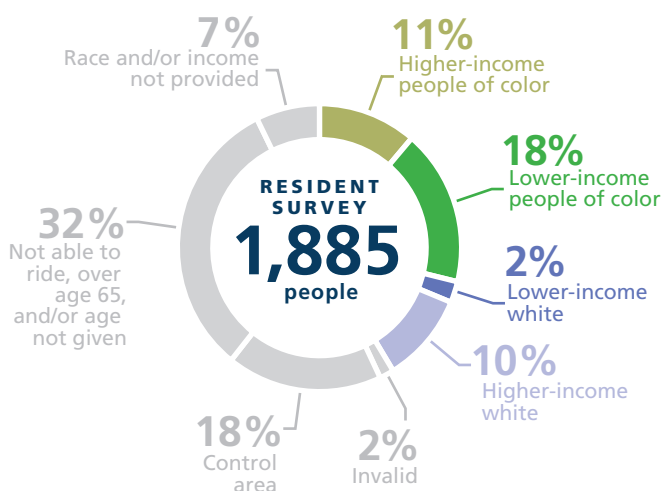
Methods

Nationwide Operator Survey

We first surveyed bike share system owners and operators to better understand and document current approaches toward serving low-income and minority populations. We asked about equity policies and metrics, the degree to which equity considerations affected system practices, what operators saw as key existing barriers for target populations, and organizational challenges to addressing those barriers. The research team invited representatives from 75 active and planned bike share systems (with at least 40 bikes) to take the survey, and received responses from 56 systems.

Resident Survey

To understand how people living in low-income neighborhoods and communities of color view bicycling and bike share, we surveyed residents living in areas targeted by BBSP efforts in three focus cities (Philadelphia, Chicago, and Brooklyn, New York). We also recruited residents from similar nearby neighborhoods that had not received BBSP outreach. We received 1,885 total responses (10.5% response rate), including in control areas. The populations in the study neighborhoods targeted for outreach were predominantly people of color (79-94%) and lower-income (36-61% of households under 150% of the poverty level). Survey respondents reasonably matched area



demographics on race/ethnicity and income, but were somewhat more likely to be women, older and more highly educated.

Four demographic categories formed the basis of our equity-focused analysis: Lower-income people of color, higher-income people of color, lower-income white, and higher-income white, with the last category representing the more typical current bike share users in U.S. cities. We also considered gender, age, and geographic differences in our analysis.

Rider Survey

To better understand how low-income people and people of color are using bike share, why they chose to use it, and what benefits it may offer to users, a survey was conducted of bike share members and other people who had received information or discounts through BBSP efforts. Working with the bike share operators in Philadelphia, Chicago and Brooklyn, surveys were emailed to current or past bike share members in the BBSP outreach areas. Members who received targeted outreach (such as joining an organized ride or taking a class) or certain equity focused discounts were also invited to take the survey. Of the people who completed the survey (n=1,092), we classified respondents into three groups for analysis: white higher-income (greater than 300% poverty guideline) riders (n=591), who have generally been the “typical” bike share user; lower-income and/or people of color who received BBSP-related discounts or program features, such as such as paying with cash (n=70, “participating target riders”); and lower-income and/or people of color who did not utilize BBSP-related program features (n=224, “non-participating target riders”). The remainder did not provide enough information to be placed in one of these groups.

Focus Cities: Bike Share Systems

The resident survey describes findings from people living near bike share stations placed in underserved communities of select BBSP cities: Philadelphia, Chicago, and Brooklyn. These neighborhoods were targeted for outreach related to BBSP programs,

along with control areas in two cities that did not receive BBSP targeted outreach. The rider survey also focused on these areas, along with some people citywide who received discounts or information through BBSP-related outreach.

CHICAGO	PHILADELPHIA	BROOKLYN																																																															
Study areas — = Outreach areas = Control areas • = Bike share station																																																																	
Resident survey respondents (■) vs. neighborhood population (▒)																																																																	
<p>Non white or hispanic 95% (Resident Survey) vs 95% (Neighborhood Population)</p> <p>Gender (percent female) 73% (Resident Survey) vs 58% (Neighborhood Population)</p> <p>Income</p> <table border="1"> <tr> <td>63%</td> <td>20%</td> <td>18%</td> </tr> <tr> <td>60%</td> <td>23%</td> <td>17%</td> </tr> <tr> <td>under \$35k</td> <td>\$35-75k</td> <td>\$75k+</td> </tr> </table> <p>Age</p> <table border="1"> <tr> <td>13%</td> <td>35%</td> <td>26%</td> <td>26%</td> </tr> <tr> <td>33%</td> <td>36%</td> <td>14%</td> <td>18%</td> </tr> <tr> <td>18-34</td> <td>35-54</td> <td>55-64</td> <td>65+</td> </tr> </table>	63%	20%	18%	60%	23%	17%	under \$35k	\$35-75k	\$75k+	13%	35%	26%	26%	33%	36%	14%	18%	18-34	35-54	55-64	65+	<p>Non white or hispanic 68% (Resident Survey) vs 79% (Neighborhood Population)</p> <p>Gender (percent female) 65% (Resident Survey) vs 53% (Neighborhood Population)</p> <p>Income</p> <table border="1"> <tr> <td>48%</td> <td>30%</td> <td>21%</td> </tr> <tr> <td>64%</td> <td>22%</td> <td>13%</td> </tr> <tr> <td>under \$35k</td> <td>\$35-75k</td> <td>\$75k+</td> </tr> </table> <p>Age</p> <table border="1"> <tr> <td>28%</td> <td>29%</td> <td>22%</td> <td>22%</td> </tr> <tr> <td>42%</td> <td>29%</td> <td>12%</td> <td>17%</td> </tr> <tr> <td>18-34</td> <td>35-54</td> <td>55-64</td> <td>65+</td> </tr> </table>	48%	30%	21%	64%	22%	13%	under \$35k	\$35-75k	\$75k+	28%	29%	22%	22%	42%	29%	12%	17%	18-34	35-54	55-64	65+	<p>Non white or hispanic 79% (Resident Survey) vs 84% (Neighborhood Population)</p> <p>Gender (percent female) 72% (Resident Survey) vs 55% (Neighborhood Population)</p> <p>Income</p> <table border="1"> <tr> <td>52%</td> <td>26%</td> <td>23%</td> </tr> <tr> <td>52%</td> <td>26%</td> <td>22%</td> </tr> <tr> <td>under \$35k</td> <td>\$35-75k</td> <td>\$75k+</td> </tr> </table> <p>Age</p> <table border="1"> <tr> <td>29%</td> <td>38%</td> <td>16%</td> <td>17%</td> </tr> <tr> <td>40%</td> <td>33%</td> <td>13%</td> <td>15%</td> </tr> <tr> <td>18-34</td> <td>35-54</td> <td>55-64</td> <td>65+</td> </tr> </table>	52%	26%	23%	52%	26%	22%	under \$35k	\$35-75k	\$75k+	29%	38%	16%	17%	40%	33%	13%	15%	18-34	35-54	55-64	65+
63%	20%	18%																																																															
60%	23%	17%																																																															
under \$35k	\$35-75k	\$75k+																																																															
13%	35%	26%	26%																																																														
33%	36%	14%	18%																																																														
18-34	35-54	55-64	65+																																																														
48%	30%	21%																																																															
64%	22%	13%																																																															
under \$35k	\$35-75k	\$75k+																																																															
28%	29%	22%	22%																																																														
42%	29%	12%	17%																																																														
18-34	35-54	55-64	65+																																																														
52%	26%	23%																																																															
52%	26%	22%																																																															
under \$35k	\$35-75k	\$75k+																																																															
29%	38%	16%	17%																																																														
40%	33%	13%	15%																																																														
18-34	35-54	55-64	65+																																																														
Bike share system development																																																																	
<p>Launch: June 2013 Access: 17 stations within Bronzeville neighborhood boundary at launch; 4 additional stations added in spring 2015</p>	<p>Launch: April 2015 Access: 17 BBSP-funded stations in or near targeted outreach areas at launch</p>	<p>Launch: May 2013 Access: 10 stations on the edge of the Bedford-Stuyvesant (Bed-Stuy) neighborhood; 26 stations added to central Bed-Stuy in summer 2015</p>																																																															
Discount pass option																																																																	
<p>Launch: July 2015 as Divvy for Everyone (D4E) Eligible: Households up to 300% of the poverty guideline Price: \$5/year initial (95% off) and \$50/year or \$5/mo renewal (50% off)</p>	<p>Launch: April 2016 as Indego30 Access Eligible: PA ACCESS cardholders (used for Cash Assistance, SNAP and Medical Assistance benefits) Price: \$5/month (67% off)</p>	<p>Launch: May 2013, multiple programs Eligible: NYCHA public housing residents and community-based credit union members Price: \$5/month (67% off)</p>																																																															
Cash payment option																																																																	
Yes, only for D4E	Yes, anyone	No																																																															
Key outreach partners (in addition to city & bike share system)																																																																	
Go Bronzeville, Slow Roll Chicago, Local Initiatives Support Corporation (LISC)	Bicycle Coalition of Greater Philadelphia	Bedford Stuyvesant Restoration Corporation (BSRC)																																																															
Key outreach activities																																																																	
D4E program promotion, group rides; attended local events; incorporated into personal credit-building program	Cash payment system; group rides; attended local events/meetings; advertising campaign; digital literacy and bike riding classes ("Digital Skills and Bicycle Thrills"); surveys and focus groups	Demonstrations of bicycle / system use; special events; organized rides; targeted promotion to NYCHA residents; incorporated into financial literacy program; prescribe-a-bike at two Bed-Stuy locations; surveys and focus groups																																																															

Operator Survey

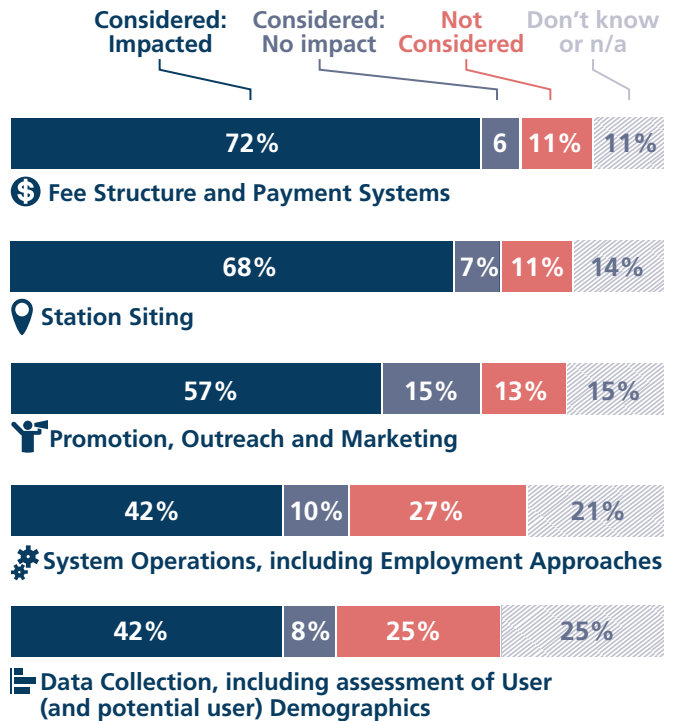
There have been indications that bike share operators are increasingly considering how to make their systems more equitably serve the cities in which they operate, including the introduction of subsidized memberships for low-income individuals and locating stations in traditionally underserved communities. This national survey of bike share operators sought to understand how they currently incorporate equity considerations into their systems, what barriers they see for underserved populations, and what challenges they have in achieving equity goals.

Our results from 56 operators indicated less than one in four surveyed systems have written policies around equity. However, many more systems incorporate equity into various system aspects. Larger bike share systems (over 500 bikes) were more likely to have a formal equity policy, with nearly half having one.

Equity considerations impacted station siting (68%); fee structure and payment systems (72%); and promotion and marketing (57%) in a majority of the systems and operations and data collection and analysis to lesser extents (42% each). Bike share systems that reported having an equity statement were more likely to indicate that they considered equity in a more impactful manner for each of the system aspects surveyed (differences were significant for fee structures, promotion, and data collection). Bike share systems with equity statements were also more likely to consider equity in more elements of their system planning and operations.

Asked to describe the top barriers faced by targeted equity users, operators cited price and payment barriers (mentioned by 50% of those that provided a response), lack of stations or bike facilities in underserved areas (mentioned by 43%), and lack of knowledge about the system (mentioned by 32%). Among bike share operators that described organizational barriers in achieving equity goals, over half (54%) cited funding and/or staffing levels within the organization.

How was equity considered in specific areas?





Current bicycling and bike share use

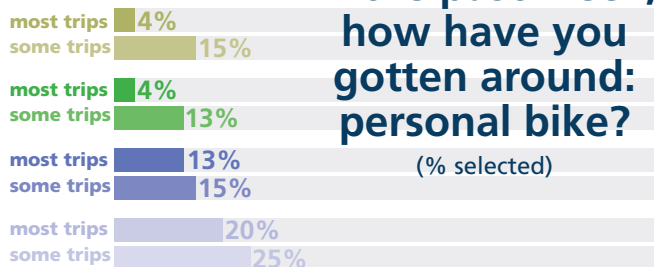
Currently, bike share is not a common transportation option for lower-income residents in these underserved communities. Overall, 4% of our survey respondents were members of their city's bike share program at the time of the survey, with significant differences depending on race and income. Only 2% of the lower-income residents (white or people of color) were members, compared to 5% of higher-income people of color and 10% of higher-income white residents. These rates for lower-income respondents are less than half that of estimated system-wide membership rates in our study cities, consistent with earlier findings from other North American cities.

More respondents had ridden a personal bike recently; however, people of color were much less likely to have done so. A fifth of higher-income white and 13% of lower-income white respondents reported riding a personal bicycle for most trips in the past week, while only 4% of people of color (regardless of income group) had done so. Overall, nearly half of respondents in the study neighborhoods (47%) reported having bicycled in the past year, but rates were significantly lower among people of color (32% and 45%, for lower- and higher-income people of color, vs. 59% and 72% for comparable white respondents).

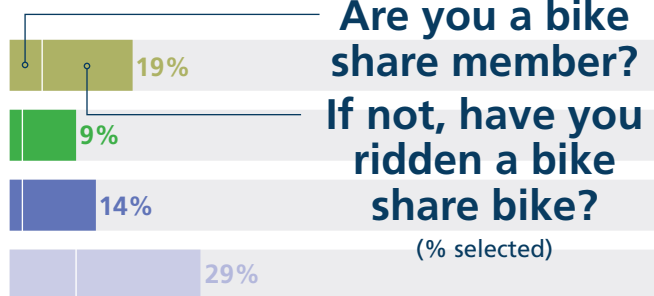
All of the people surveyed lived within about one-quarter mile of a bike share station. Therefore, differences in membership and use based on race and income cannot be explained simply by station siting.

Compared to the number of residents who were actually bike share members, higher shares have actually ridden one of the bike share bikes in their city at some point: 9% of lower-income people of color; 18% of higher-income people of color; 13% of lower-income white residents; and 29% of higher-income white residents. Comparing membership rates with ridership rates suggests that people of color and lower-income residents may be more likely to be casual users of the system, rather than regular members, and this aligns with previous research.

In the past week, how have you gotten around: personal bike?



Are you a bike share member? If not, have you ridden a bike share bike?



- Higher-income people of color
- Lower-income people of color
- Lower-income white
- Higher-income white



Barriers to bicycling

The biggest barrier to bicycling generally is concern about traffic safety, regardless of race or income. Nearly half (48%) of residents cited this as a big barrier to riding a bike in their neighborhood. Concerns about safety may be compounded for respondents of color (lower or higher-income), as they were much more likely to cite travel distances as being too far to go by bicycle (40-44%, compared to 17-23% of white respondents). It is unclear whether the places they travel are actually farther away, or if it reflects a difference in perceptions of bikeable distance. For other barriers to bicycling, important differences were noted across race and income groups.

For people of color, personal safety is also a concern. Race is an important factor in whether respondents feel their personal safety could be compromised, either as a victim of crime or as a target for police attention. For people of color, being lower-income further exacerbated the concerns. For example, 22% of lower-income respondents of color stated that a big barrier to biking could cause them to be harassed or a victim of crime. This compared to 17% of higher-income people of color and 7% of higher-income white residents. While a smaller share (11%) of lower-income respondents of color cited being a target for police attention as a big barrier to bicycling, this was still higher than for higher-income people of color (6%) and higher-income white residents (1%).

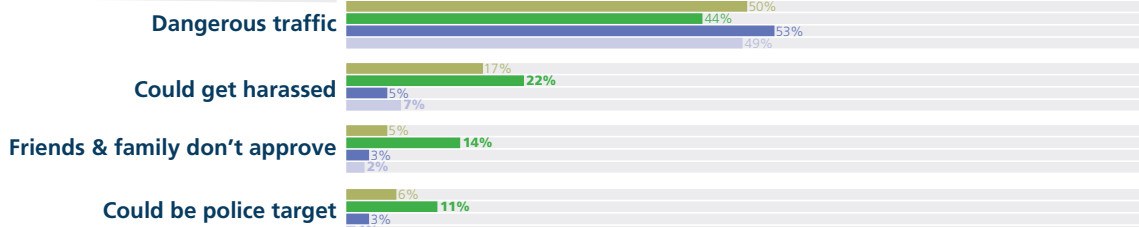
Other common perceptions of barriers to bicycling, such as comfort issues and social stigmas, do not appear to be major obstacles. For example, only 10% of residents cited messed-up hair or appearance as a big barrier to bicycling, with no significant differences by race or income. However, while only 4% of all residents stated that people thinking that they could not afford a car was a big barrier to riding a bicycle (generally, not just a bike share bike), 10% of lower-income respondents of color cited this as a big barrier. On the other hand, a high share of residents (75%) agreed that they see people like them using bike share, and this share was the same for respondents of color (both lower- and higher-income) as for higher-income white residents. At least in our study areas, social and cultural divides around bicycling did not seem to be nearly as substantial as is often presumed.

Lack of a bike or related gear is a big barrier for lower-income residents. Not having a bike or related gear, such as a helmet, lock or lights, was a big barrier for lower-income respondents. The cost of buying these things was cited as a big barrier by 41% of lower-income people of color and 37% of lower-income white respondents, which was much higher than for higher-income respondents (13-17%).

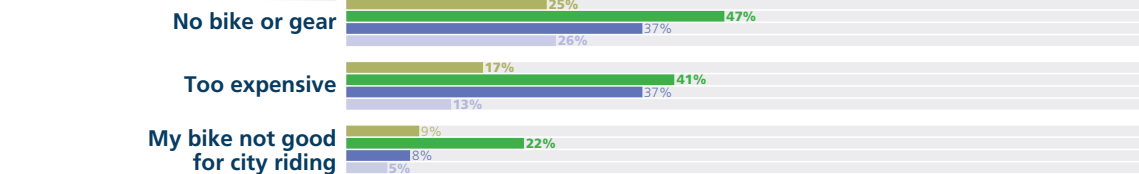
Barriers to bicycling more

% STATING BIG BARRIER, **xx%** = STATISTICALLY SIGNIFICANT DIFFERENCE

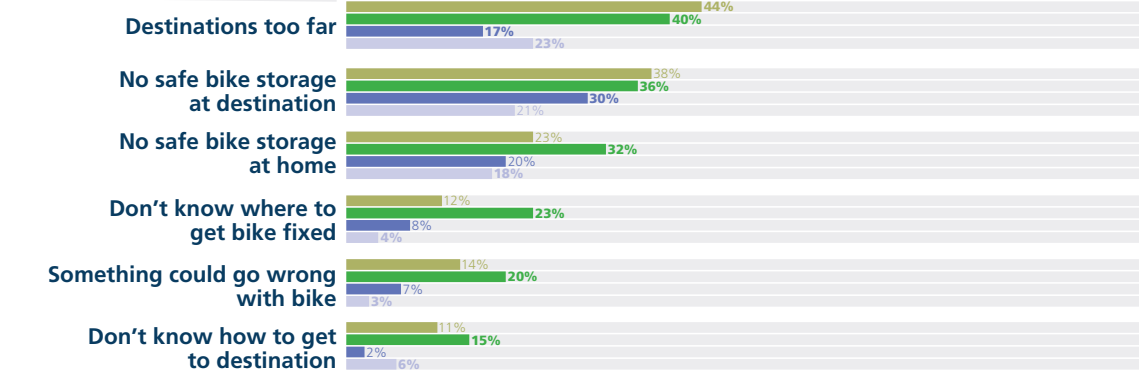
Safety



Cost & Possessions



Logistics



Physical Ability

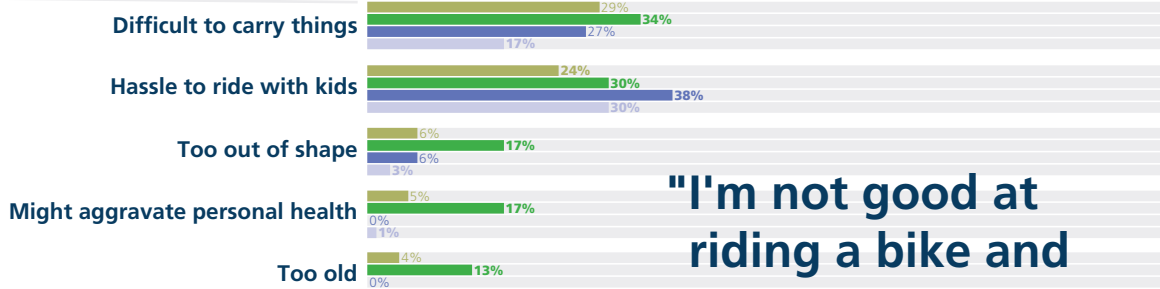
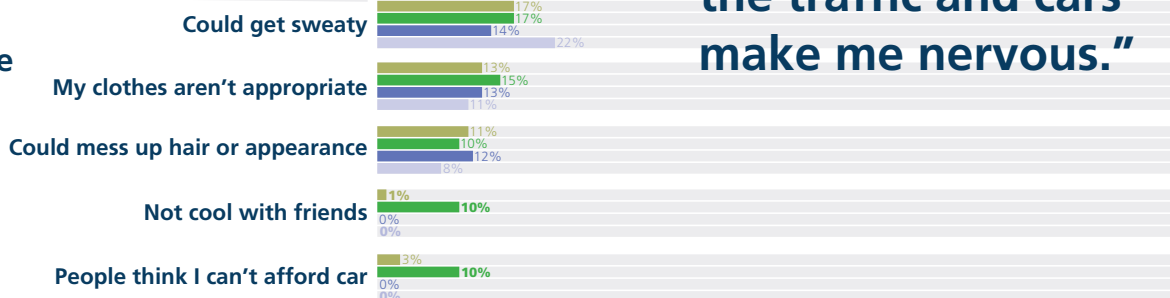
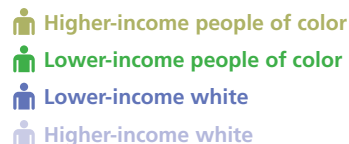


Image & Appearance



"I'm not good at riding a bike and the traffic and cars make me nervous."





Opportunities and need for bike share

Lower income residents currently have fewer mobility options. Less than half (49%) of lower-income respondents of color had a driver's license, compared with over 90% of the higher-income respondents, and made most of their trips on transit and by walking. Only 30% had a car available for use and only 17% had a working bicycle, though most of those who had a working bicycle used it for at least some trips in the most recent week.

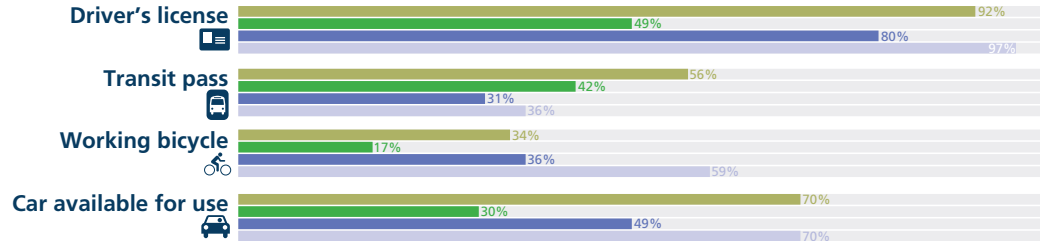
Bike share may address many of the major barriers to bicycling for these residents. Some of the most common barriers to bicycling cited by lower-income people of color included not having a bike or related gear (47%); not having a safe place to leave a bike at their destination (36%); the expense of buying a bike or related gear (41%); and not having a safe place to store a bike at home (32%); not knowing a place to get a bike fixed (23%); and worries about something going wrong with a bike, such as a flat tire (20%). Nearly all of these barriers were more significant for lower-income respondents of color than the other respondents, and many were among the top ten barriers to bicycling. They are all barriers that can be addressed with bike share.

There is strong interest among residents in these neighborhoods in using bike share more in the future. Of those who had an opinion, over half (56%) of lower-income respondents of color agreed that they would like to use bike share more. Moreover, 44% of this group indicated that they were likely to seek more information about using bike share, over 10 percentage points higher than the other demographic groups. In addition, 11% of all residents expected to become a member in the next 12 months, with no differences among race and income groups.

Residents generally have positive attitudes about bicycling and bike share. A large majority (73%) agreed that the city's bike share system "is useful for people like me." Agreement among lower-income respondents of color who had an opinion was equally high (74%). Residents see bicycling as a good way to get exercise (over 90% of all groups), to spend less on transportation (over 70% of all groups), and to spend time with friends or family (about half of respondents of color). These positive statements about bicycling generally apply to bike share as well, particularly for lower-income people of color. Getting exercise was cited by 71% of lower-income respondents of color as a reason they would use bike share, a rate much higher than other groups. Being able to ride with friends and family was cited by 48% of lower-income respondents of color, again higher than other demographic groups. As noted above, some common negative social and comfort perceptions of bicycling do not appear to be major barriers to encouraging more bike share use in these neighborhoods.

Do you currently have a _____?

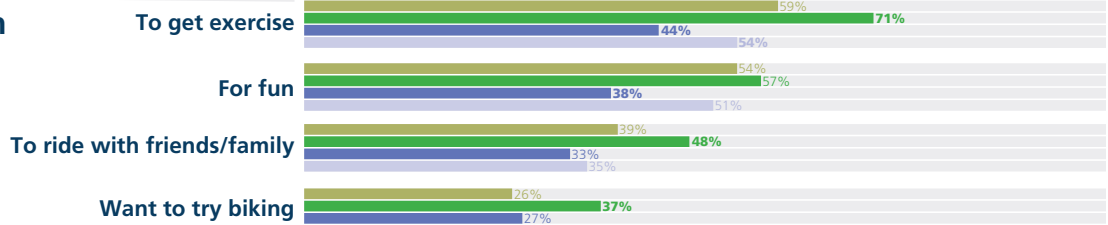
% YES



Reasons you would consider using bike share

% SELECTED, **xx%** = STATISTICALLY SIGNIFICANT DIFFERENCE

Fun / Recreation



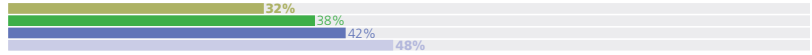
Other

To help the environment

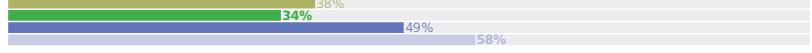


Utilitarian

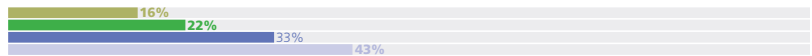
It's an easy way to get around



Stations are near my home / work / school



Saves me time compared to other transportation options



Saves me money compared to transportation options



Don't need a bike of my own



Don't want to rely on transit



To get to bus or rail stops



To get to jobs more easily



To get to social services



Other



"I already had a goal to start biking for better health, I just need more insight and info about the bike share system."

- Higher-income people of color
- Lower-income people of color
- Lower-income white
- Higher-income white

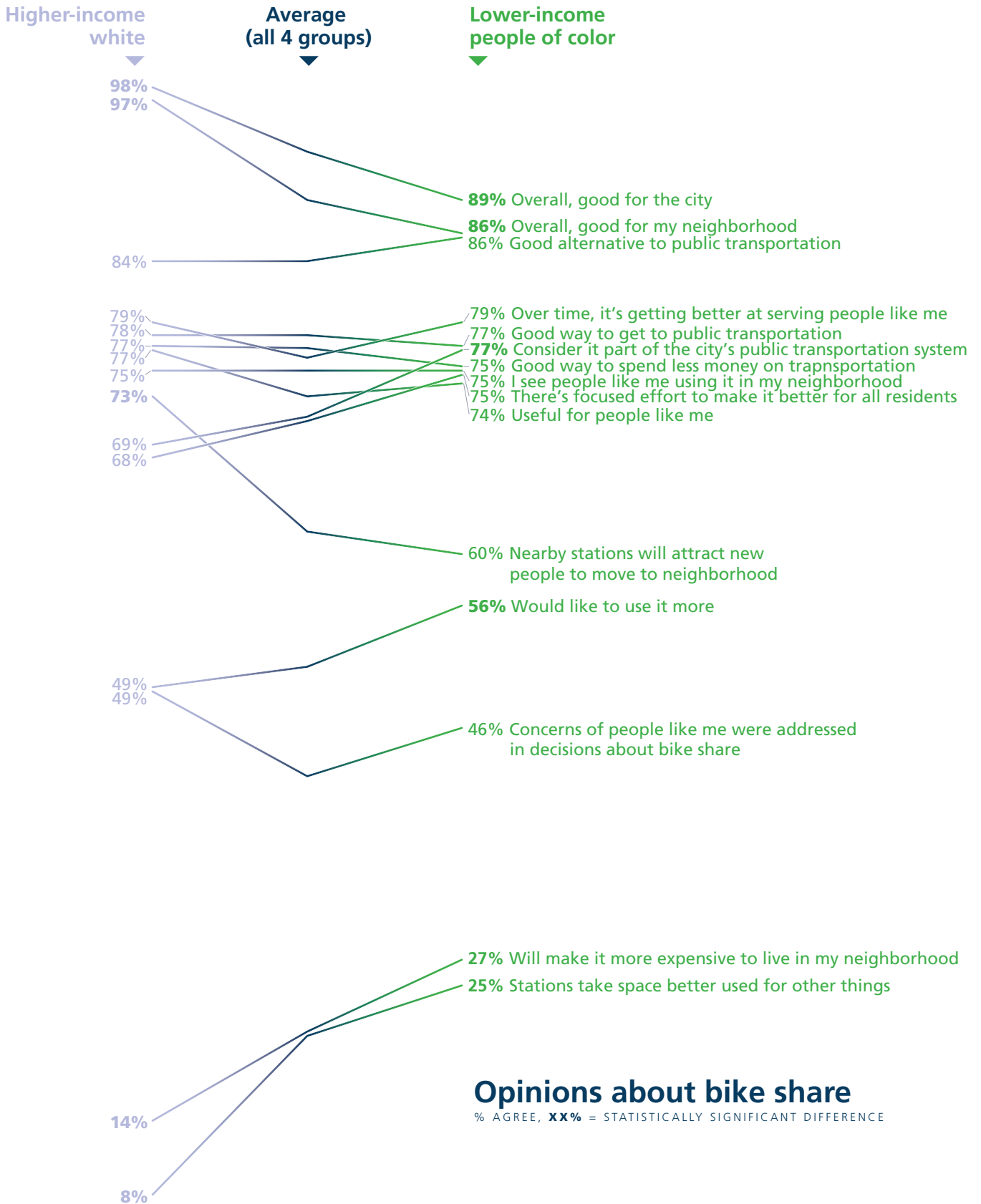


Awareness and perceptions of bike share

— **There is evidence that residents are recognizing the efforts to plan a more equitable bike share system.** A large majority (71%) agreed that “there is a focused effort to make [the bike share system] better for all residents in my neighborhood” and 76% agreed that “over time, the [bike share] program is getting better at serving the needs of people like me.” Agreement was similarly high among lower-income people of color, but lower among higher-income people of color. On the other hand, only 42% of residents felt that “concerns of people like me were addressed in decisions about [the bike share system] in my neighborhood. Agreement with this statement was lowest among higher-income people of color (only 29% vs. 46% of lower-income respondents of color).

— **Residents recognize the broader benefits of bike share for their neighborhood and city.** Nearly all respondents agreed that the bike share system was good for the city (93%) and their neighborhood (89%), though agreement was slightly lower among lower-income people of color (89% and 86%, respectively). Similarly high shares of all respondents agreed that bike share is a good alternative to public transit. The survey revealed some concerns about rising costs related both to bike share and neighborhood change, but only among a relatively small share of residents. For example, 27% of lower-income respondents of color agreed that “having [the bike share system] nearby will make it more expensive to live in the neighborhood.” Only 14% of higher-income white residents agreed with this statement.

— **Most residents had received some information about the bike share system.** Sixteen percent of all residents surveyed, and 25% of lower-income people of color, told us that they knew “nothing” about the bike share system. Still, 94% of respondents (including 91% of lower-income people of color) told us that they had heard about the system in some way prior to the survey. However, lower-income respondents of color received information from fewer sources. The most common source of information was the bike share kiosk itself, cited by 51% of all respondents, but only 39% of lower-income respondents of color; for 12% of respondents the kiosk was the only place they had gotten information about bike share. Lower-income people of color were less likely to get information from the internet (17% vs. 26% of higher-income people of color and 53% of higher-income white residents).



Opinions about bike share

% AGREE, **xx%** = STATISTICALLY SIGNIFICANT DIFFERENCE



Barriers to using bike share

People of color and lower-income residents cited more barriers to bicycling generally and to using bike share than higher-income white residents.

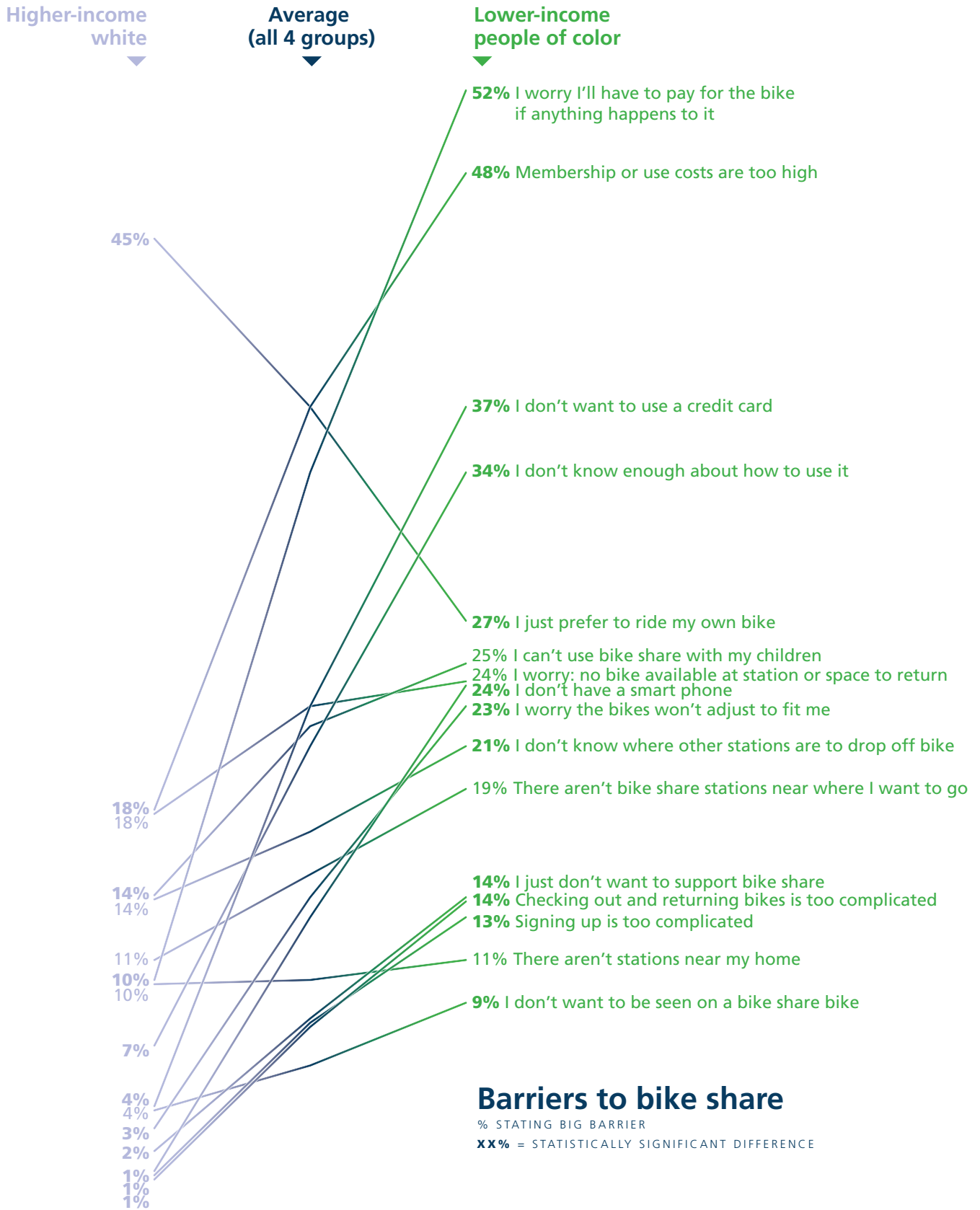
The extent of the barriers sometimes differed by race and/or income, though some barriers were universal.

City efforts to locate bike share stations in these neighborhoods have largely removed one of the most significant barriers to equitable bike share cited in the research—station siting. Nearly all (95%) of the residents had noticed a bike share station in their neighborhood. Only 10% indicated that not having bike share stations near their home was a big barrier to using bike share—one of the least common barriers among those mentioned. Having bike share stations near destinations is a slightly larger barrier, with 15% of all respondents citing this as a big barrier and no significant differences by race and income group. Another access and logistical issue—being concerned that there would be no bikes or open docks available at a station—was a big barrier for 23% of respondents, but without differences related to race or income.

The survey revealed important cost- and liability-related barriers to using bike share. High cost of membership was a big barrier for nearly half (48%) of lower-income respondents of color, compared to 33% of higher-income people of color, 40% of lower-income white and only 18% of higher-income white residents. In addition, 52% of lower-income respondents of color worried that they would have to pay for the bike if anything happened to it and cited that as a big barrier to using bike share. This compared to 31% of higher-income people of color, 17% of lower-income white and 10% of higher-income white residents. These figures reveal that concerns about price and being charged for theft or damage to the bike are related to both income, but also race.

"Accidents happen and I don't want to be responsible for things that are not mine."







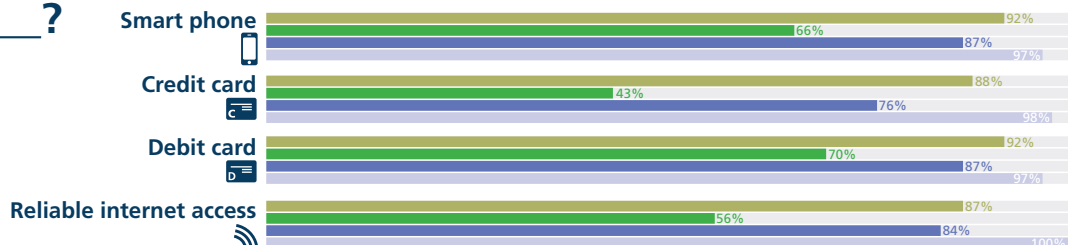
Barriers to using bike share (CONTINUED)

Many respondents, not just lower-income residents, felt that needing to use a credit or debit card, or a smartphone, was a barrier to using bike share (even when credit cards or smartphone were not actually system requirements). Lower-income respondents of color were much less likely to have a credit or debit card (43% and 70% respectively), a smartphone (66%), or reliable internet access (56%). These rates were significantly lower than all other respondents. Over one-third of lower-income respondents of color (37%) cited not wanting to use a credit card as a big barrier for using bike share, compared with 21% of higher-income people of color and 4% of higher-income white residents. Therefore, even though higher-income people of color had credit cards at nearly the same rate as higher-income white residents (88% and 98%, respectively), their use was a bigger barrier. On the other hand, not having a smartphone was listed as a big barrier by 24% of lower-income respondents of color, but only 1%-7% of the other respondent groups.

Lack of knowledge about the bike share system was a barrier. Most noticeably, 34% of lower-income respondents of color said that not knowing enough about how to use bike share was a big barrier, compared to 19% of higher-income people of color and 7% of higher-income white residents. On several questions, the majority of respondents indicated that they had “no idea” about the truth of the statement, including details about the cost of using the system (56%) and the availability of the reduced-price membership or pass option (63%).

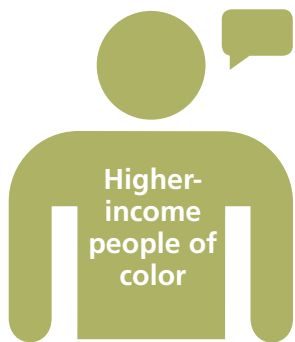
There were several areas of notable misconceptions about the bike share systems. Although none of the cities have mandatory helmet laws for bicycle riders, 18% of respondents thought that a helmet was required to use the system. Lower-income respondents were more likely to incorrectly assume a helmet is required to use bike share. Over one-in-five (21%) of lower-income respondents of color mistakenly thought that the bike share bike would lock if the user exceeded a time limit. Finally, even when cash options are available, most residents thought that using bike share requires a credit card (and lower-income people of color were least likely to know cash was an option).

Do you currently have a _____?
(% yes)



Barriers to bike share

SIZE OF WORDS IS SCALED TO % STATING BIG BARRIER



Higher-income people of color



Lower-income people of color



Lower-income white



Higher-income white





Opportunities for increasing bike share use

Residents, particularly lower-income and people of color, responded positively to the possible changes to increase bike share use. Because cost of using the system was the biggest barrier for many residents, discounted memberships, free transfers with public transit, and more short-term membership or pass options were the most appealing benefits/options/enticements. There were several benefits/discounts for which large shares of lower-income respondents stated that the change would make them somewhat or much more likely to use bike share and at significantly higher rates than higher-income respondents: discounted memberships (80-82%); free transfers to/from public transit (77-93%); and access to free or low cost helmets or other gear (72%). Several other changes were more appealing to people of color (and particularly those lower-income) over white respondents, including options to sign up or buy passes at a store instead of online; an easier way to pay with cash; “if more of my friends or family could ride with me;” and organized rides “for people like me.”

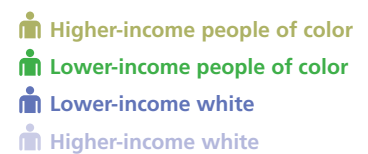
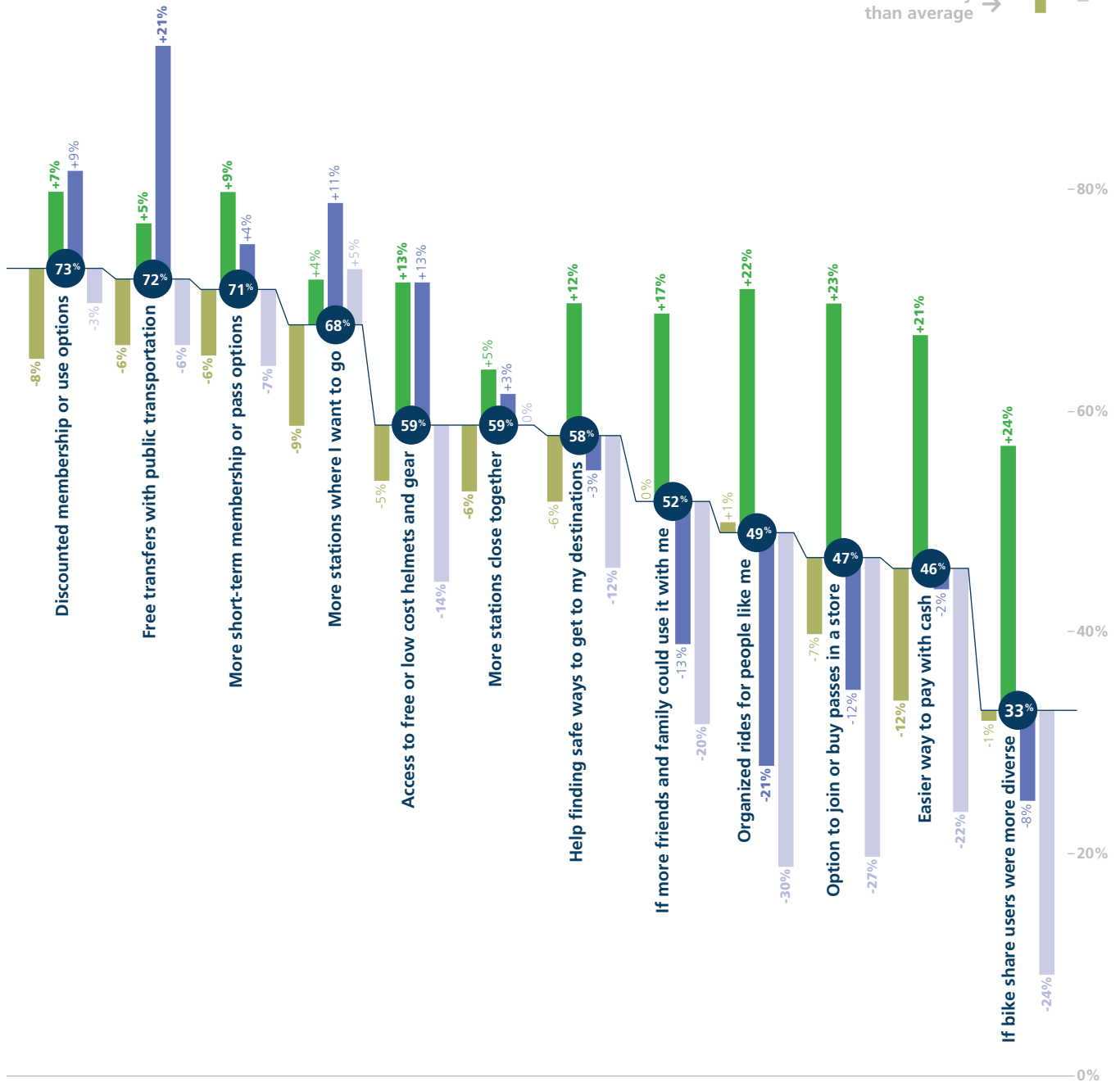
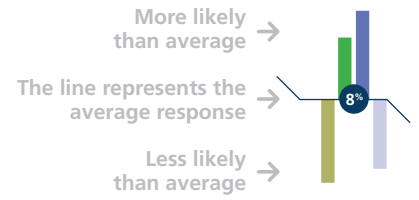
More personal sources of information may be more effective. While fewer residents received information from more personal sources, such as talking with someone from the bike share outreach program or at a community center or faith-based organization, these sources were correlated with higher rates of intent to use bike share in the future. Residents who received information via more passive modes, such as the bike share station, bus shelter ads, billboards, television, and radio had lower rates of intention to use bike share.

Given the multiple barriers related to lack of knowledge and/or misconceptions about bike share, marketing, education, and outreach efforts are key to increasing use. Outreach also needs to address the concerns and interests of the target market. The survey identified many of the possible motivations for lower-income people of color (such as getting exercise or saving money on transportation), along with some of the missing or incorrect information (such as needing a credit card, having discount options available, needing to wear a helmet, etc.). These findings may be useful in developing more effective informational materials.

Recreational reasons for using bike share were more broadly cited, particularly for lower-income people of color, but may be less motivating without accompanying utilitarian benefits. As noted above, lower-income respondents of color were more likely to list certain recreational motivations as reasons to try bike share, such as getting exercise or being able to ride with friends and family. At the same time, respondents of color were less likely to list utilitarian items as reasons they might try bike share, including saving them time compared to other transportation options, and not wanting to rely on transit. However, respondents who only listed recreation items as reasons they would consider using bike share were less likely to state that they intended to ride a bike share bike or to become bike share members in the future. Either making bike share more attractive for recreational use or making a better case for bike share’s transportation utility among people who currently only see recreational value might improve outreach results.

Would any of these things make you more likely to use bike share?

% SOMEWHAT OR MUCH MORE LIKELY
xx% = STATISTICALLY SIGNIFICANT DIFFERENCE



Rider Survey

— **For riders who were lower-income and/or people of color, and who engaged in BBSP-related discounts or payment options (“participating target riders”), bike share provided a new mobility option.** Only a third of participating target riders owned a working bicycle, compared to nearly two-thirds of white higher-income riders. However, lower-income and people of color (whether participating in BBSP-related programs or not) reported using bike share as frequently as white higher-income riders. Over a third of participating target riders said that bike share helped them overcome the expense of owning a bike (compared to 15% of white higher-income riders). Ninety-five percent of participating target riders indicated that bicycling makes them more independent in getting around (compared to 83% of white higher-income riders).

— **Discount and payment options were important membership enticements to lower-income people and to people of color.** Nearly two-thirds of participating target riders stated that finding out about the discount was important in their decision to sign up. In Philadelphia and Chicago, where cash payment was an option, a majority (65%) of participating target riders reported using cash for memberships or usage fees. Participating target riders were less likely to report other pathways to membership compared with higher-income whites, including: paying to ride a bike share bike before coming members (19% to 28%), having friends or family that had used bike share (19% to 40%), or first having used another bike share system (16 to 27%).

— **Both lower-income and people of color were more likely to use bike share for recreation and for job-seeking purposes.** Participating target riders were more likely to take bike share “just out for a ride or exercise” sometimes (74% said so, compared to 47% for higher income white), and less likely to use bike share for shopping or other errands (67% vs. 84%). People of color were less likely to use bike share only on weekdays (29-30% vs. 43% of higher-income whites), with a majority reporting a mix of weekend and weekday riding. On the other hand, lower-income and people of color were more likely to have used bike share to look for work, attend trainings, or get to job interviews (~20% vs. 11%).

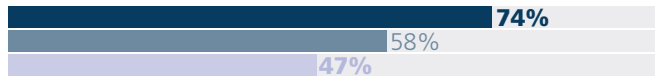
— **Benefits to people and communities beyond mobility:** In addition to increased mobility, participating target riders reported saving money on transportation (63% vs. 53% of white higher-income riders), with a substantial proportion reporting savings of more than \$20 per week (24% vs. 12% of higher-income whites). This suggests the use of bike share could have a value exceeding the discounted pass itself. Participating target riders also reported getting more exercise since joining (79% vs. 69% of higher-income whites).

— Lower-income riders in Chicago and Brooklyn—even those who were NOT receiving the program discount—were more likely to pay monthly (14% compared to 4% of higher-income white and 6% of higher-income people of color). **These members may be paying more on average to use the system than higher-income annual members, since monthly rates are 10-20% higher.**

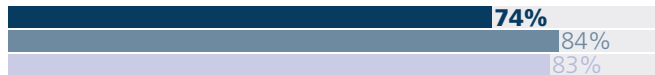
Note: analysis groups included: “participating target riders”—lower-income and/or people of color who participated in BBSP-related programs; “non-participating target riders”—lower-income and/or people of color who did not participate in BBSP-related programs; and, white higher-income riders.

Have you used bike share for this purpose?

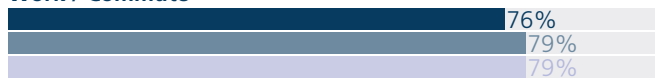
Just out for a ride / exercise



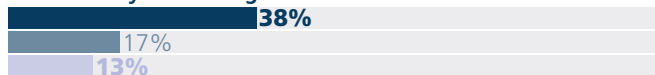
To / From Public Transit



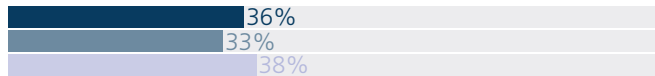
Work / Commute



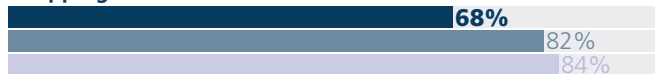
School / Daycare / Religious



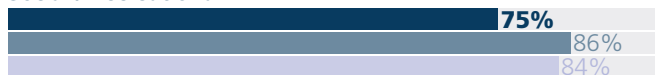
Medical / Dental



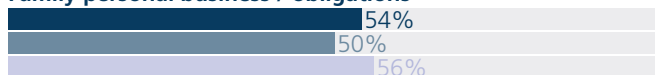
Shopping / Errands



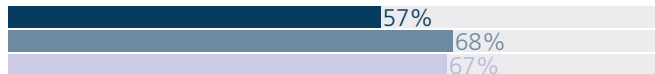
Social / Recreational



Family personal business / obligations



Meals



Look for work / Get to a job interview / Trainings



Participating target riders

Non-participating target riders

Higher-income white riders

xx% = STATISTICALLY SIGNIFICANT DIFFERENCE

References

1. Buck, D., R. Buehler, P. Happ, B. Rawls, P. Chung, and N. Borecki. (2013). Are Bikeshare Users Different from Regular Cyclists? A First Look at Short-Term Users, Annual Members, and Area Cyclists in the Washington, D.C., Region. Transportation Research Record. No. 2387 pp 112-119.
2. Shaheen, S., Martin, E., Chan, N.D., Cohen, A.P., and Pogodzinski, M. (2014). Public Bikesharing in North America During a Period of Rapid Expansion: Understanding Business Models, Industry Trends and User Impacts. MTI Report 12-29. Mineta Transportation Institute.
3. Ursaki, J. and L. Aultman-Hall. (2016). Quantifying the Equity of Bikeshare Access in U.S. Cities. Transportation Research Board Annual Meeting, 2016. Paper # 16-0426.
4. Smith, C. S., J.S. Oh, and C. Lei. (2015). Exploring the Equity Dimensions of US Bicycle Sharing Systems. Report TRCLC 14-01. Transportation Research Center for Livable Communities.
5. Hoe, N. (2015). Bike Sharing in Low-Income Communities: Perceptions and Knowledge April — October 2015. Temple University Institute for Survey Research Report.

Page 3 map sources: OpenStreetMap, Census TIGER/Line, Indego, Divvy, Citi Bike

For more information

Please see the project web page for each of the full reports, which include additional analysis details such as breakdowns by city, gender, and age. Survey instruments and frequencies will also be available at the project web page.

<http://trec.pdx.edu/research/project/884>

Acknowledgments

This research was funded by the Better Bike Share Partnership (a collaboration between the City of Philadelphia, Bicycle Coalition of Greater Philadelphia, the National Association of City Transportation Officials (NACTO), and PeopleForBikes, made possible by The JPB Foundation), and by the National Institute for Transportation and Communities (NITC), a program of the Transportation Research and Education Center (TREC) at Portland State University and a U.S. Department of Transportation university transportation center.

The research could not have been conducted without the significant participation of these city partners who shared their time and expertise, provided data, hosted our field visits, and provided feedback on surveys and findings: City of Philadelphia; Bicycle Transit Systems; Bicycle Coalition of Greater Philadelphia; Chicago DOT; LISC Chicago; Motivate; Go Bronzeville; Slow Roll Chicago; Bedford Stuyvesant Restoration Corporation; Citi Bike; NYC DOT; and NYC Department of Health and Mental Hygiene; along with NACTO and PeopleForBikes.

Authors

Nathan McNeil, Jennifer Dill, John MacArthur,
Joseph Broach, Steven Howland
Portland State University

