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1-17-2020

Bicycling Toward Equity: Opportunities, Barriers, and Policies for Vulnerable Groups

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Recommended Citation

Dill, Jennifer; MacArthur, John; and McNeil, Nathan, "Bicycling Toward Equity: Opportunities, Barriers, and Policies for Vulnerable Groups" (2020). *PSU Transportation Seminars*. 185.

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Women of Color on Two Wheels

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www.pedbikeimages.org



[www.pedbikeimages.org/Shawn Turner](http://www.pedbikeimages.org/Shawn_Turner)



Survey Data

Chicago

Philadelphia

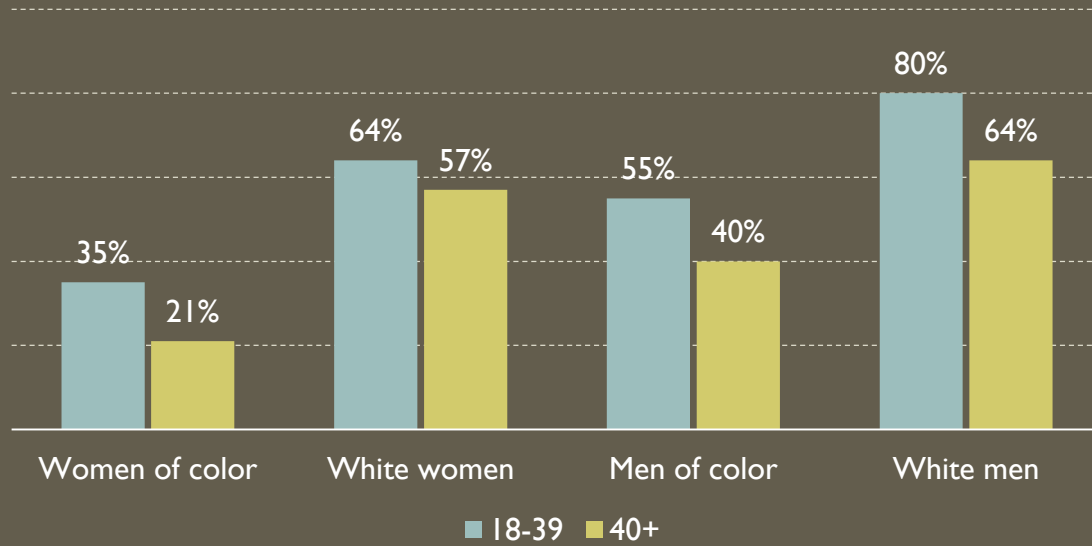
Brooklyn, NYC



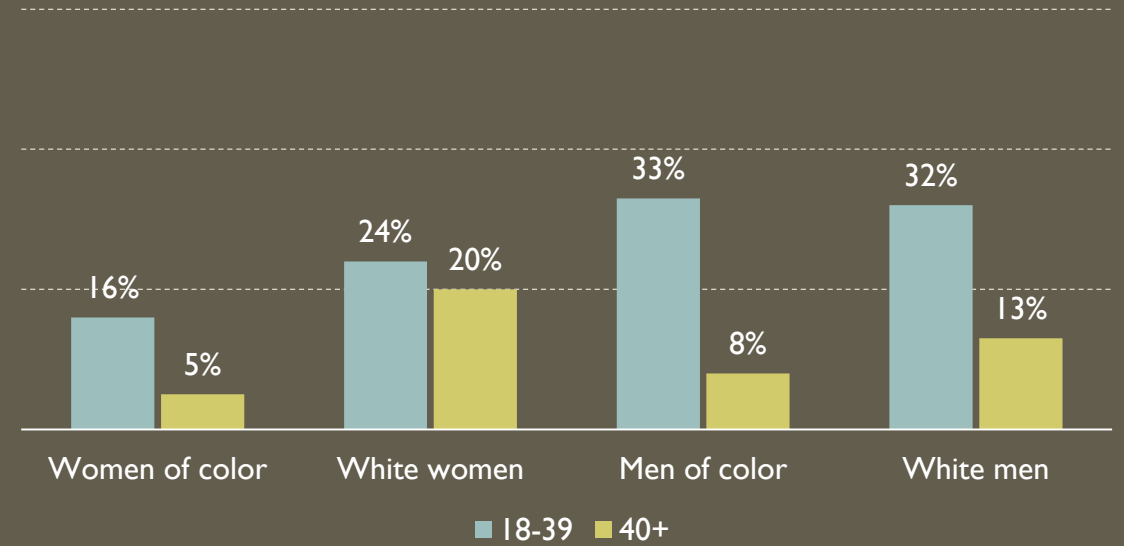
	Women of color	White women	Men of color	White men
Age (mean)	49.8	36.7	52.4	38.2
Children in HH	36%	21%	26%	18%
Employed	61%	87%	50%	90%
Black or African American	85%		78%	
HH income below 300% of poverty	67%	21%	63%	13%
n	619-696	167-172	265-280	129-136

Analysis limited to respondents who said they were physically able to ride a bike.

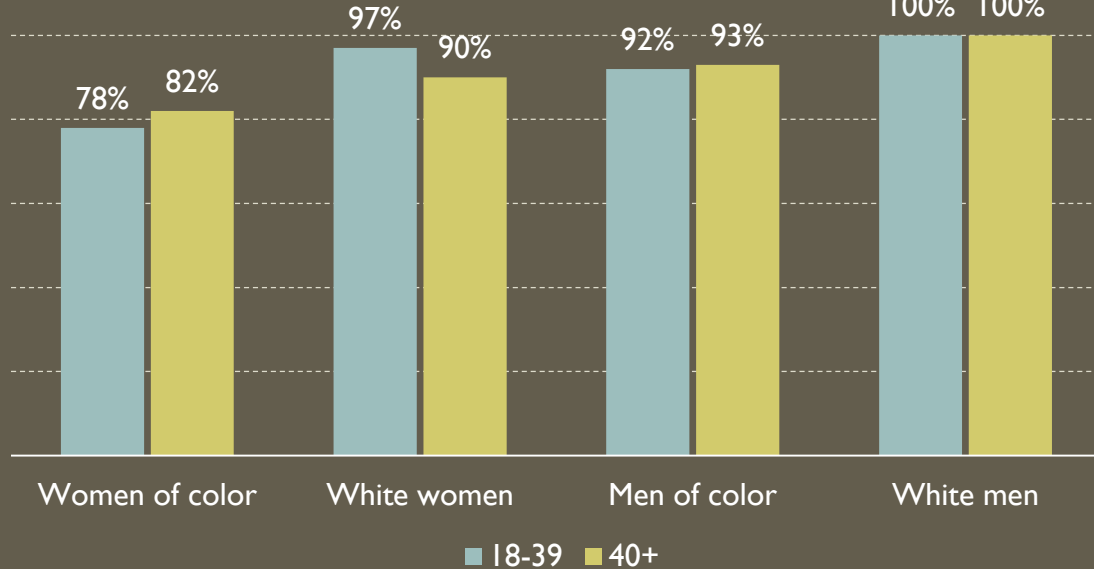
Rode a bike in the past 12 months



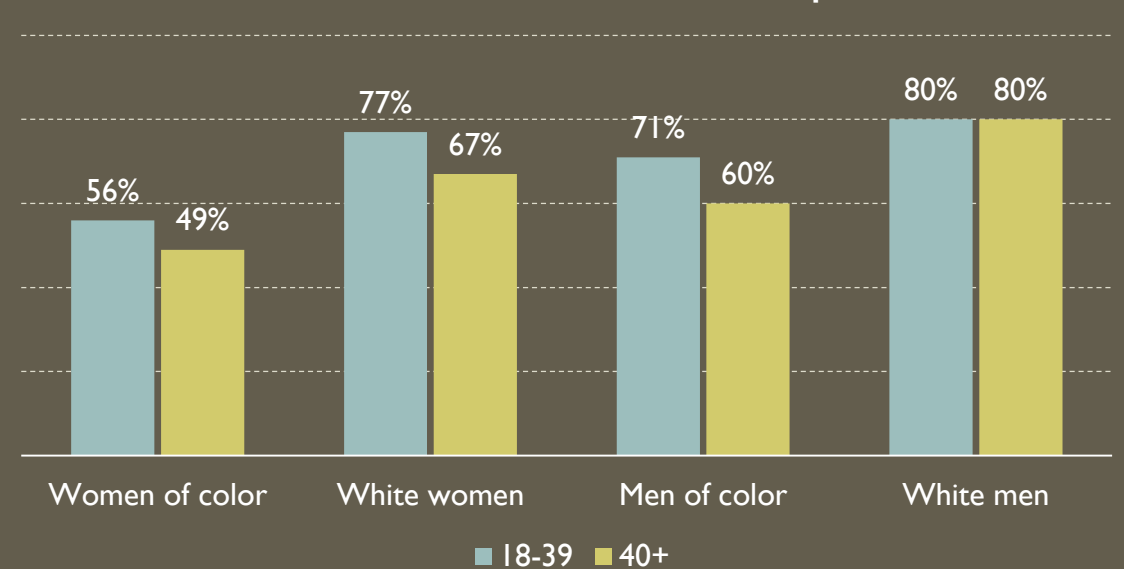
Has ridden a bikeshare bike



Knows how to ride a bike well



Would like to ride more for transportation



Compared to white men...	Women of color are	41% as likely to want to ride more for transportation	28% as likely to have ridden a bike in the past 12 months
	White women are	just as likely	52% as likely
	Men of color are	just as likely	50% as likely

Controlling for
income
education
age
having a bicycle
knowing how to ride a bike well

Differences ...

< positive
than all

- Related to both race and gender

< positive than
all whites
= men of color

- Related more to race than gender

< positive than
all men
= white women

- Related more to gender than race

**For brevity, only presenting
items where 20% or more
of the WoC agree**

Differences in attitudes

< positive than all

- I often **see people like me riding** bikes in my neighborhood (69%)
- There are **better ways for me to get around** than by bicycling (88%)
- Riding a bike would make me more independent in getting around (39%)
- **Bikeshare is useful for people like me** (64%)
- Getting more people to bike is good for the env't (87%); will help make comm. healthier (85%)
- Overall, bikeshare is good for the city/neighborhood (87%/83%)

< positive than all whites = men of color

- **City should invest** in projects that make riding bike safer & easier (84%)
- People on bikes make roads less safe for others (48%)
- Bike lanes make it harder to get around my neighborhood (28%)
- Bikeshare stations take up space that would be better used for other things (26%)

< positive than all men = white women

- Riding a bike would be a **good way for me to get exercise** (91%)
- Riding a bike would be a **good way for me to spend time with friends or family** (47%)

Differences in Barriers to biking

> barrier than all

- The places I need to go are **too far** away to reach on a bike (53%)
- **Carrying things** on a bike is too difficult (41%)
- **Too expensive** to buy a bike/gear (35%)
- I don't have a **safe place to store** a bike at home (33%)
- Something **could go wrong w/** bike (25%)

> barrier than all whites = men of color

- There might not be a **safe place** to leave a bike at the places I go (42%)
- Riding a bike could cause me to be **harassed/victim of crime** (26%)
- I don't know a good place to **get a bike fixed** (20%)

> barrier than all men = white women

- **Traffic** makes riding a bike in my neighborhood feel dangerous (55%)
- **I don't have a bike** or related gear (41%)

No differences:

Riding a bike would make me sweaty (20%)
The clothes I wear are not appropriate for biking (17%)

Differences in Barriers to bikeshare

> barrier
than all

> barrier than
all whites
= men of color

> barrier than
all men
= white women

- **I worry that I'll have to pay** for the bike if anything happens (45%)
- **Costs** are too high (43%)
- I don't want to use a **credit card** (35%)
- I don't have a **smart phone** (22%)

- **I can't use bikeshare with my children** (27%)

Interest in bikeshare

55% of younger women of color and 43% of older women of color (40+) would like to use bikeshare more

Reasons for using bikeshare in future	Women of color	White women	Men of color	White men
To get exercise	67%	52%	61%	50%
For fun	56%	44%	47%	49%
To ride with friends/family	40%	30%	42%	33%
To help the environment	34%	41%	39%	35%
Stations are near my home/work/school	31%	52%	35%	55%
Want to try biking	31%	24%	28%	15%
It's an easy way to get around	29%	45%	37%	48%
Saves me time vs. other modes	15%	40%	23%	39%

What would make respondents much more likely to use bikeshare

Reasons for using bikeshare in future	Women of color	White women	Men of color	White men
Free transfers between public transportation and bikeshare	32%	44%	33%	45%
More short-term membership or pass options	30%	31%	28%	30%
Discounted membership or use options	29%	33%	31%	34%
Access to free or low cost helmets and other gear	27%	21%	24%	16%
Help finding safe ways to get where I need to go	26%	27%	23%	17%
Option to sign up/buy passes at a store instead of online	23%	9%	24%	8%
If more of my friends/family could use bikeshare with me	23%	7%	21%	10%
More bikeshare stations where I want to go	23%	35%	26%	37%
Organized rides for people like me	21%	7%	16%	6%
Easier way to pay with cash	20%	9%	19%	11%
More bikeshare stations close together	19%	23%	22%	25%

Conclusions

- Women of color bike less, but many are interested in biking more
- Most do not see the utility of bicycling for transport, but are possibly motivated for exercise, fun, and social reasons
- Traffic safety is the biggest barrier, which is related to gender, not race
- Many other differences are correlated more with race than gender, particularly social and economic factors
- Need for qualitative research and evaluation of policy/program changes



Adaptive Bike Share: Expanding Bike Share to People with Disabilities and Older Adults

TREC Friday Seminar January 17, 2020

*Presented at 1394 – Bicycling Toward Equity: Opportunities, Barriers, and Policies for Vulnerable Groups
TRB Annual Meeting - January 2020*

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Portland State
UNIVERSITY

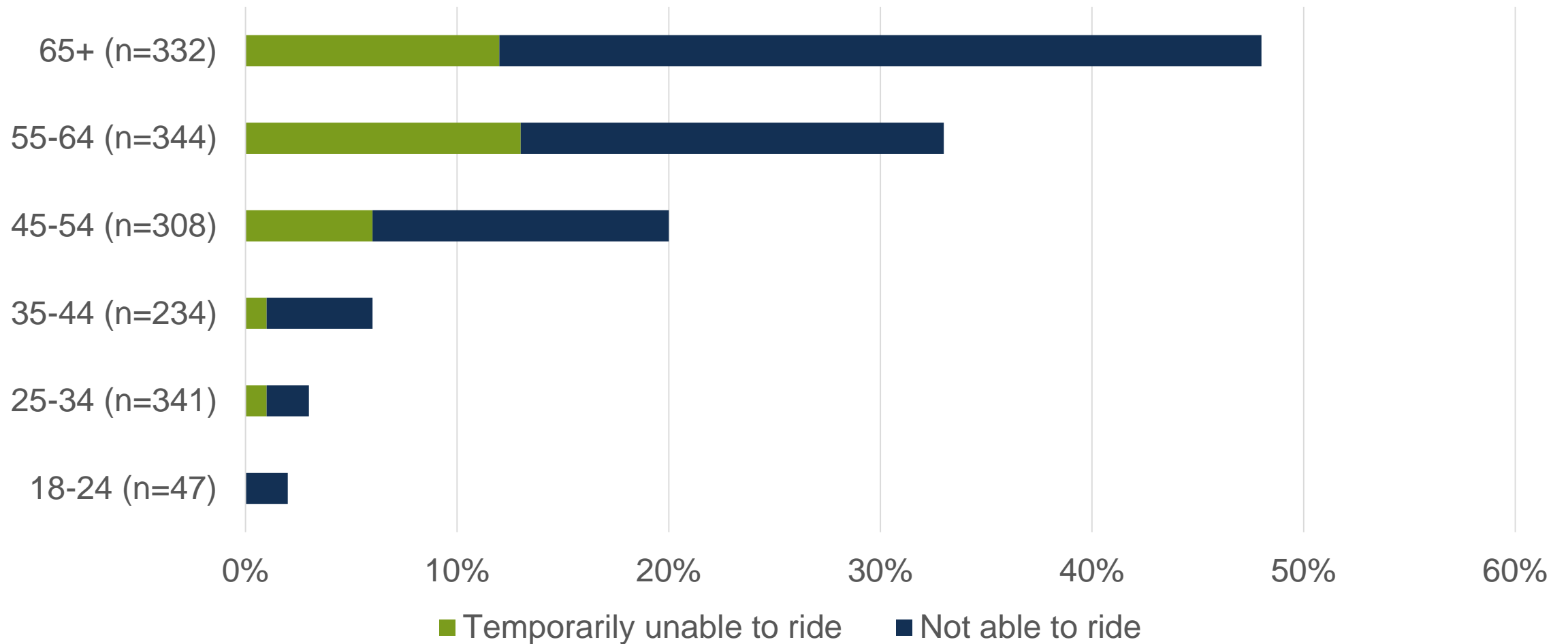
BREAKING BARRIERS TO BIKE SHARE

RESULTS FROM A RESIDENT SURVEYS

Market / Need

insights from a survey in low-income communities of color

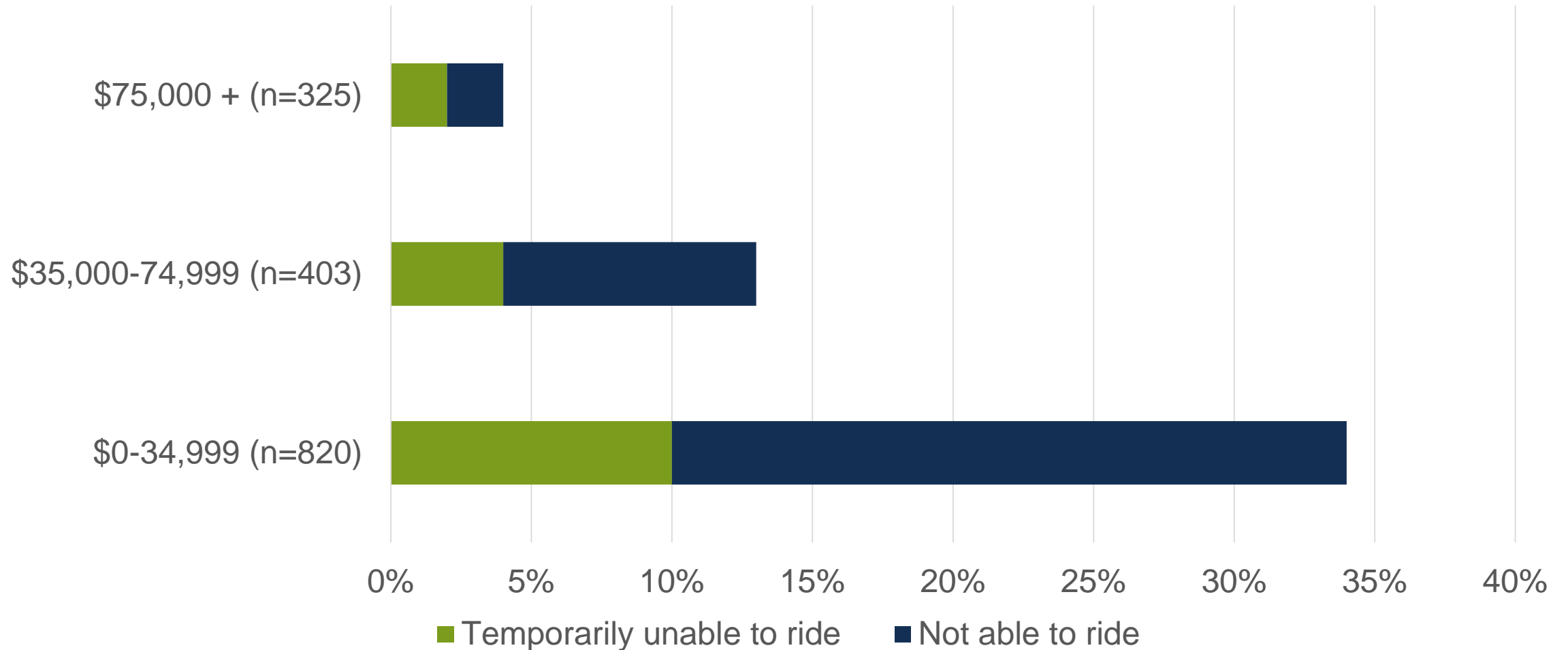
Ability to ride, by age



Market / Need

insights from a survey in low-income communities of color

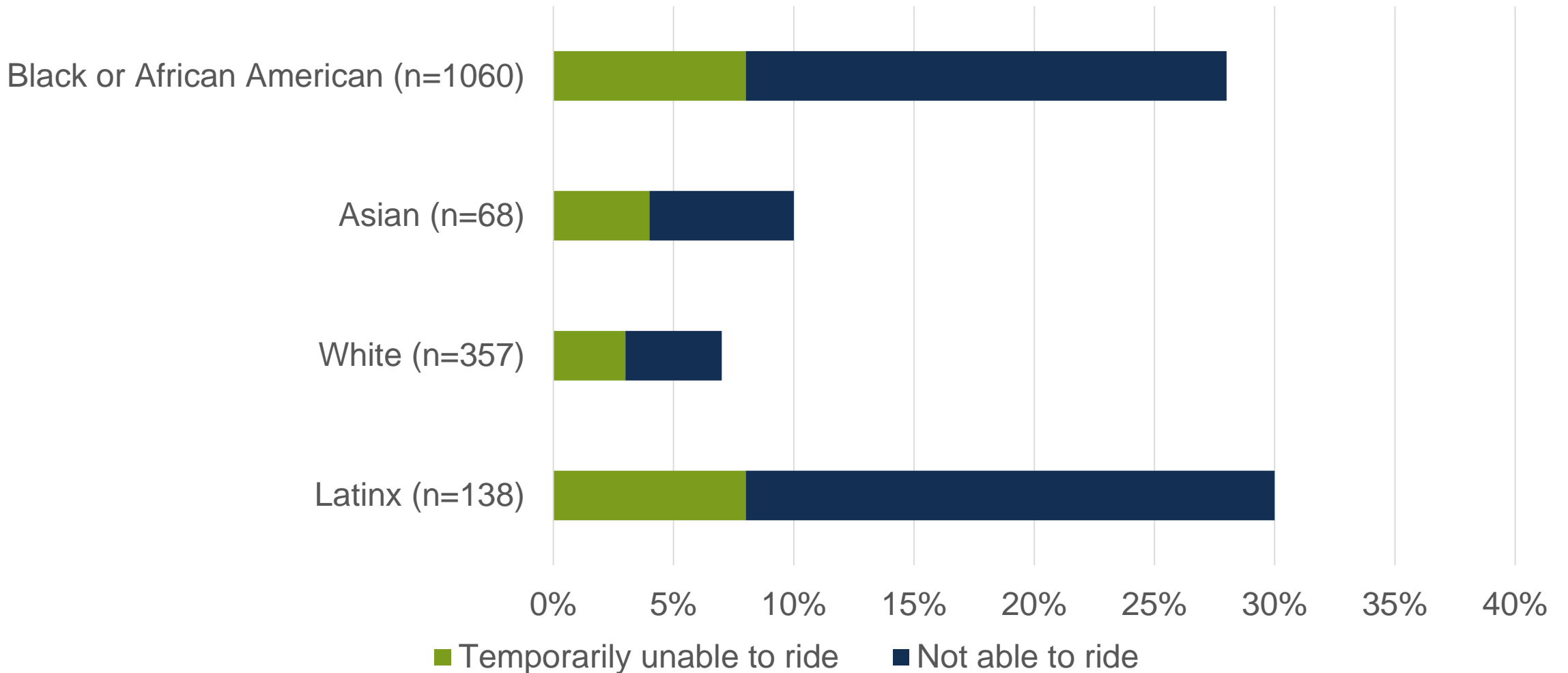
Ability to ride, by income



Market / Need

insights from a survey in low-income communities of color

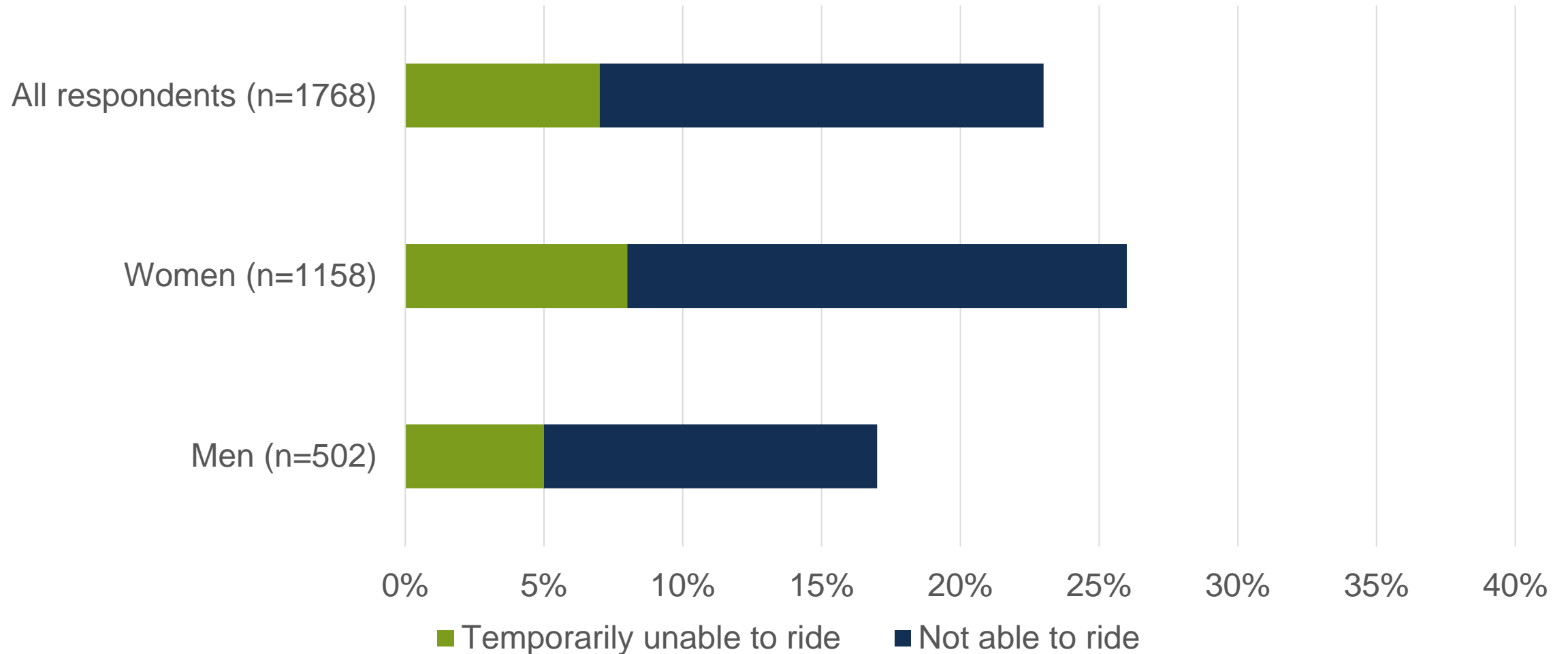
Ability to ride, by race and ethnicity



Market / Need

insights from a survey in low-income communities of color

Ability to Ride, by gender

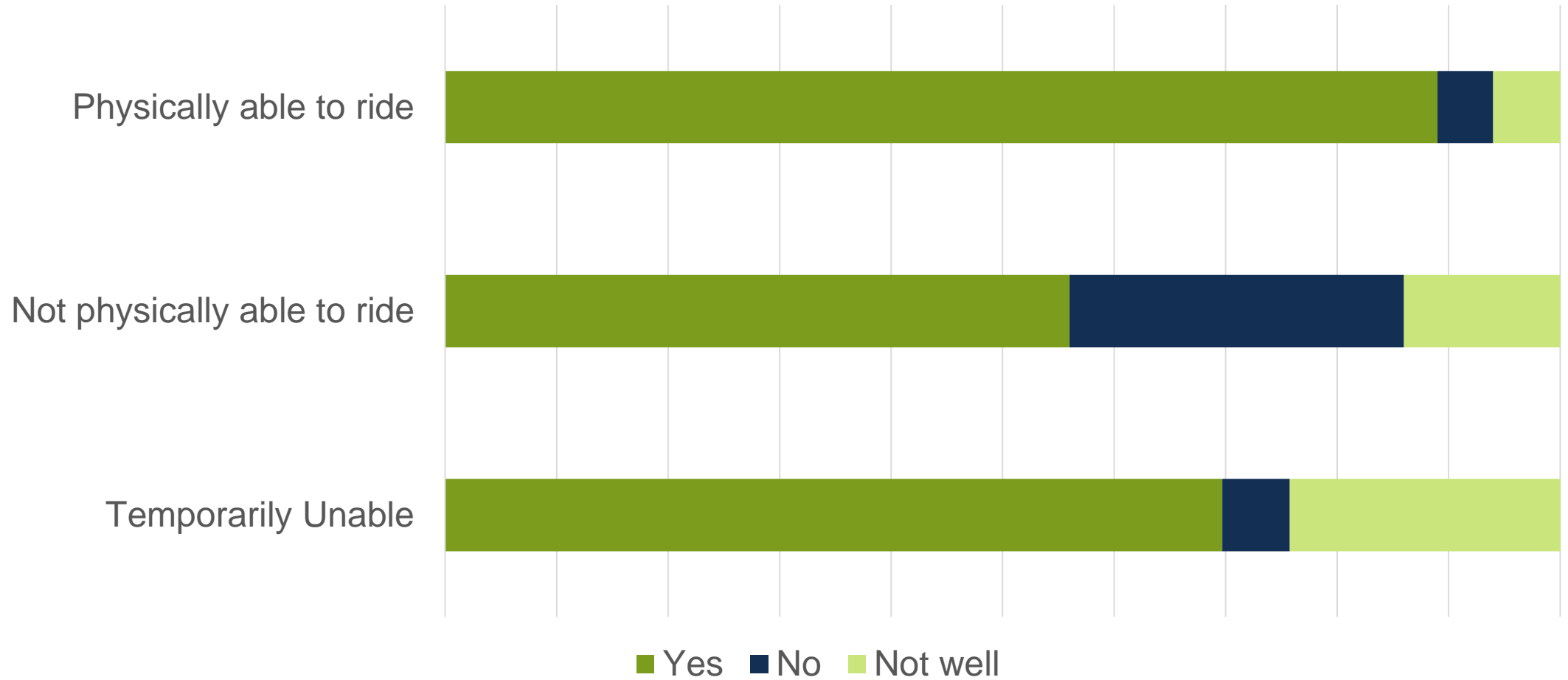


Market / Need

insights from a survey in low-income communities of color

Do you know how to ride a bike?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

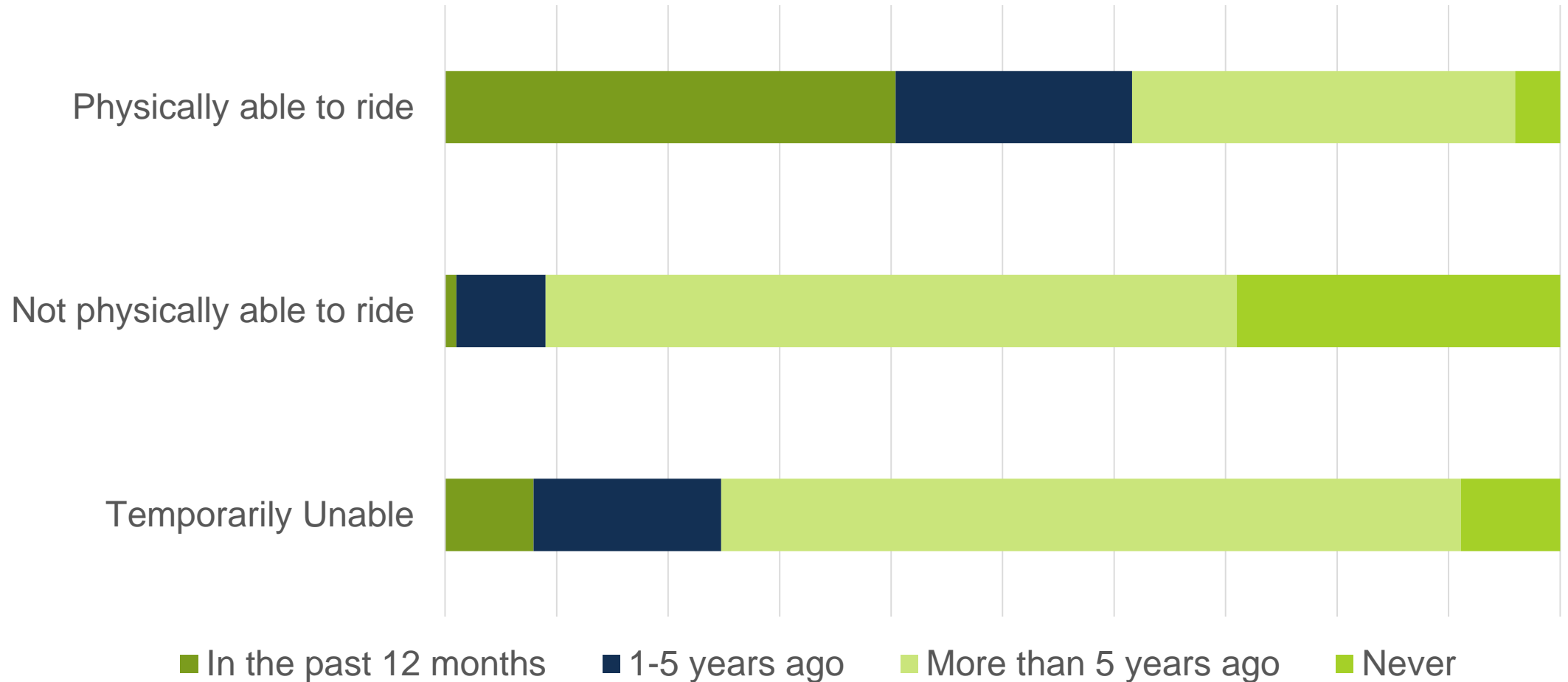


Market / Need

insights from a survey in low-income communities of color

When did you last ride a bicycle?

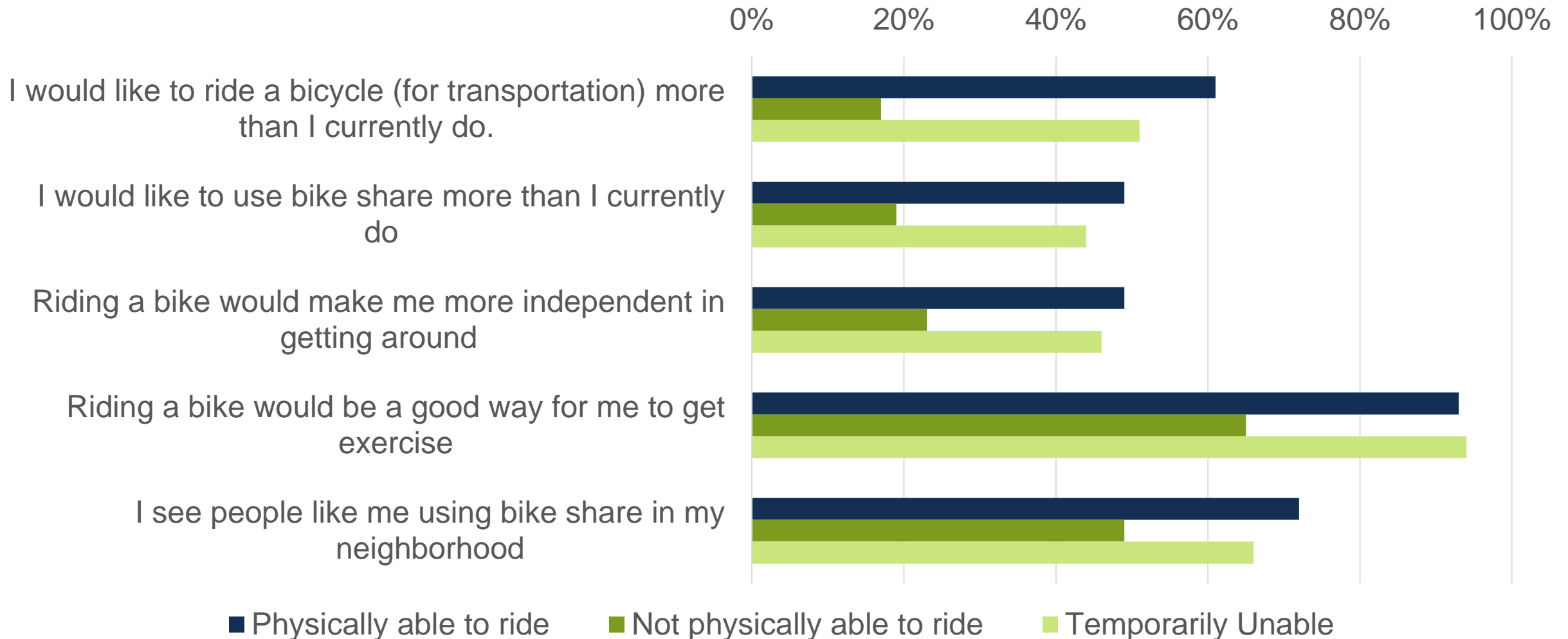
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Market / Need

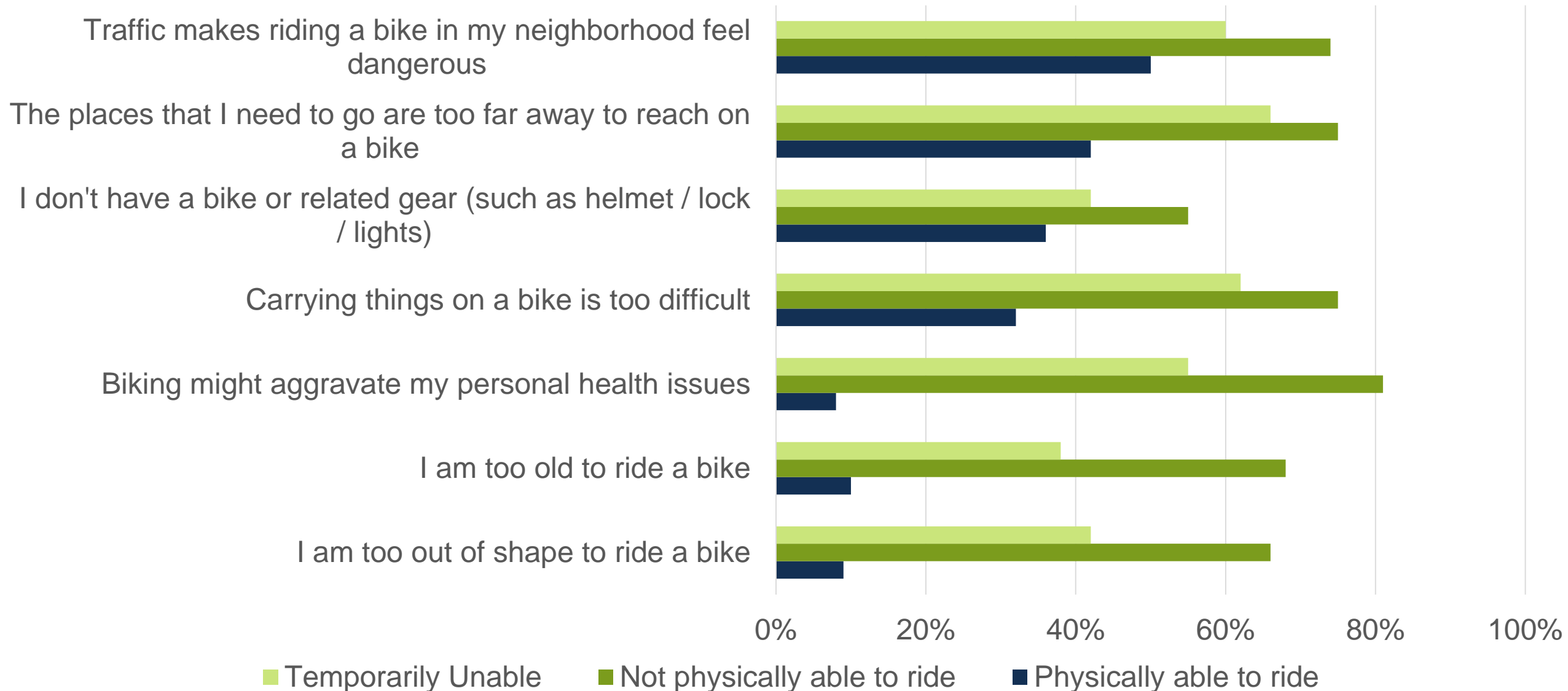
insights from a survey in low-income communities of color

Interest / Use for biking, Percent Agree



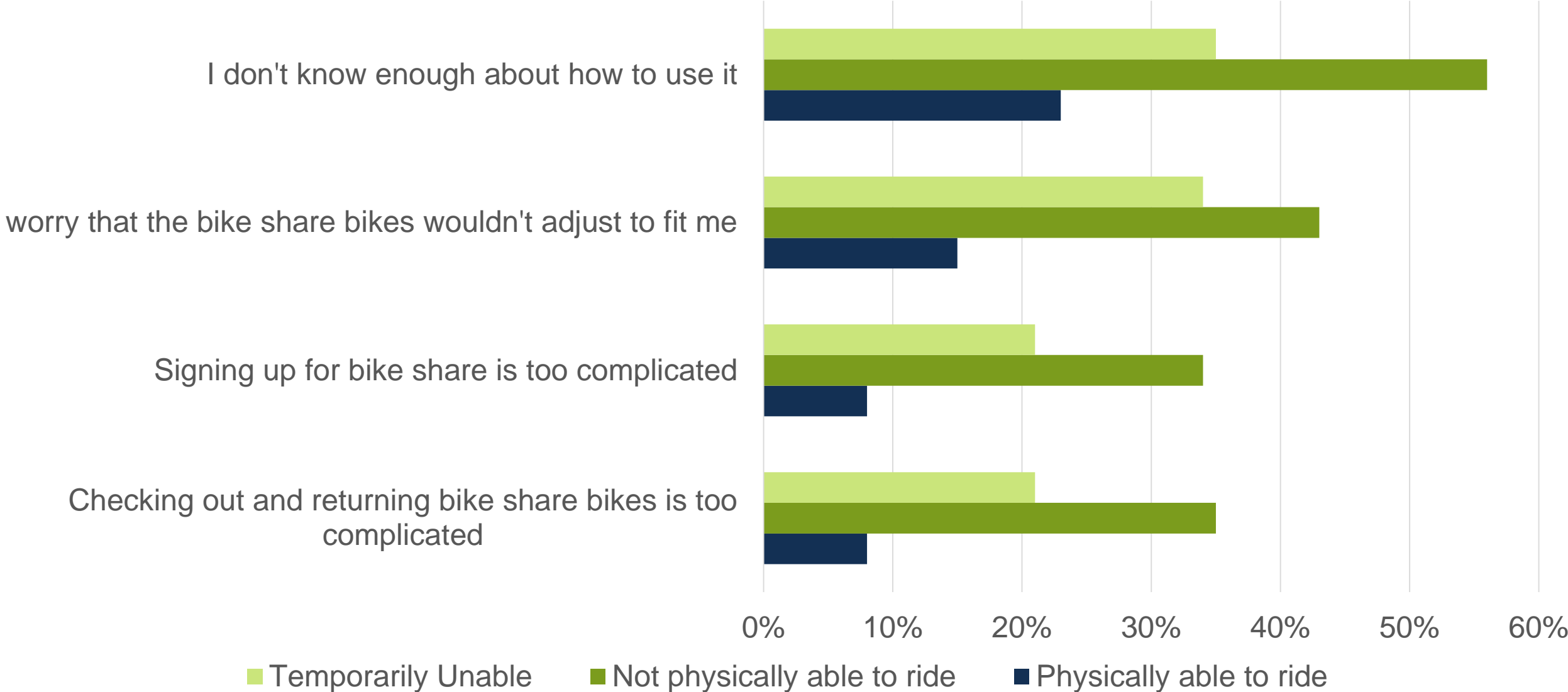
Barriers to bicycling

Bicycling Barriers, Percentage stating each is a “big barrier”



Barriers – specific to bike share

Barriers to bike share, Percentage stating each is a “big barrier”



ADAPTIVE CYCLING

Results from National Scan of Bike Share Equity Programs

Equality vs. Equity

Equality



Equity



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Adaptive Bicycles



Trikes/quadracycles



Tandems



Hand cycles



Electric bikes/scooters

Emerging Programs

- Of the **70 systems** that responded to the survey, **10** indicated that they had adaptive bikes in their systems: BIKETOWN, in Portland, OR, BublR in Milwaukie, WI, Blue Bikes in New Orleans, LA, CoGo Bike Share in Columbus, OH, LimeBike Ithaca in Ithaca, NY, mBike in College Park, MD, MoGo in Detroit, MI, PeaceHealthRides in Eugene, OR, and Pedal Corvallis in Corvallis, OR.



Bike Library Model

- Pick-up location, rental store usually near recreational access
- Specific hours of operations, reservations
- Staff to assist sizing and questions
- Parking or storage for personal equipment
- Various types of equipment available
- Cost per hour/day, discount programs



Partnerships



MADE POSSIBLE BY...



Ralph C. Wilson Jr.
Legacy Funds
OF THE
Community Foundation
FOR SOUTHEAST MICHIGAN



High value for individual users



Adaptive Biketown offers folks the ability to choose within their abilities a recreational vehicle of sorts to experience our beautiful city in a new way which is not only fun, but also good for the body, for the mind, and for the soul. - Deidre Hall

Integrated Model

- Integrated into existing bike share system, same pricing
- Limited model types
- Limited access for some, parking
- Various pricing models
- No storage



Challenges facing the programs and operators

- Who to serve and how?
- Integration
- Cost
- Logistics and density
- Personalized assistance/fitting
- Maintenance
- Types of bikes



Further work is needed

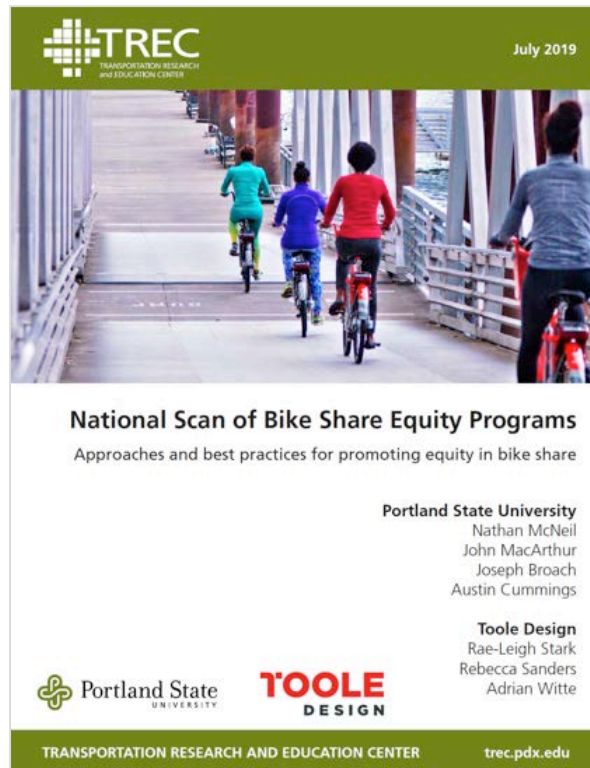
- Develop a better understanding of the needs and experiences of people with disabilities with regard to cycling/bike share.
- Explore how to design and scale the bike share systems to be more inclusive to all users.
- Develop new technologies and vehicles that can expand current bike share systems
- Understand how to structure, fund, and manage adaptive bike share programs to maximize their ongoing viability.

Contact Information

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National Scan of Bike Share Equity Programs

<https://trec.pdx.edu/research/project/1278>



Thanks to all individuals that share information on their programs.