MTI Research Snaps Presents

Cycling Past 50

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50+ Cycling Survey grew out of a cancelled interview with a 78-year-old woman cyclist.

Part 1: Demographics, Cycling History, Cycling preferences, etc.

Part 2: Visual Preference

Online Journal
Responses grew from 267 in Year 1 to 5300 in Year 4.
Year 3 Survey

- Partnership with Mineta Transportation Institute
- AARP Article

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The 50+ Cycling Survey

Older cyclists reflect on their bicycling preferences and experiences in a nationwide survey. Many consider cycling to be a staple of their lives and can’t envision ever not being able to ride a bike.

AARP Livable Communities, September 2020

On a recent summer day, Hannah R., a resident of a small community in upstate Wisconsin, rode the 20 miles of her regular bicycling route, which included a stop at the grocery store on the way home. The septuagenarian is one of the nearly 3,000 older adult cyclists who answered the 2020 edition of the 50+ Cycling Survey.
Now a North American survey (U.S. and Canada)
What does this survey offer?
Value of the work

Only one of its kind
- Cycling, not mobility needs due to driving cessation
- Older Adults only
- Nationwide

Longitudinal data
- Lifecourse
- Year-to-year comparisons

Informs planning, engineering, public health, advocates, older adults
Interdisciplinary

Infrastructure

Mental Health

Bicycle

Aging

Aged group

Family dynamics

Gender

Equipment

Community Connections

Physical Health, Injuries

dbITide CORE
Community Outreach, Research & Education

Intersectional
The survey also...

- Expands knowledge of physical activity and aging
- Serves as a self-assessment for ways to continue cycling
- Older cyclists appreciate being asked
Survey Questions

- Lifecourse
  - When started
  - If stopped for at least a year at some point
  - If cycling changed in past year
  - If can envision circumstances when would not cycle

- Trip purpose and distance

- Cycling environment
  - Alone
  - At night
  - Features that affect where cycle
Questions

- Self-identifying frameworks:
  - Regular v Non-regular cyclist
  - Type of Cyclist (based on Geller’s Typology)
Questions

- Questions regarding ebike and adult trike
- Near Misses and Crashes
- Visual Preference (restructured in Year 4)

New in Year 4
- Type of Cycling
- Type of Bicycle
- Separate questions for tandem cyclists

![eBike Ownership Rates](chart.png)
Now writing Year 4 Databook

- To be published by Mineta Transportation Institute (targeting Fall 2023)
- Looking backwards and forwards
  - Includes comparison with Year 3 data for many questions
  - Proposes revisions for Year 5

### Changes from Year 3 to Year 4, Regular and Non-regular cyclists by Type of Cyclist

<table>
<thead>
<tr>
<th></th>
<th>Interested but concerned</th>
<th>Casual and somewhat confident</th>
<th>Experienced and confident</th>
<th>A mix of all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-regular cyclist</td>
<td>-3.30%</td>
<td>-3.30%</td>
<td>26.05%</td>
<td>19.85%</td>
</tr>
<tr>
<td>Regular cyclist</td>
<td>0.64%</td>
<td>8.65%</td>
<td>-6.01%</td>
<td>-3.28%</td>
</tr>
</tbody>
</table>
Richness of the data
Current collaborations

- Completing detailed lifecourse analysis with Wilbert den Hoed (Netherlands, England, Spain)
- Collaborating on visual preference survey comparison with Sreten Jevremovic (Serbia)
- Online journal article in-process (851 journal entries)
If you are interested...

- Can present detailed findings
- Year 4 Survey: All data is available for your analysis
  - State-level data, US or Canada, or all
  - Survey in parts (1, 2, online journal) or combinations
  - Request you cite source
- Year 5 Survey: Launch late fall 2023 or early 2024
  - Invite you to promote
  - Help identify funding for work
Thank you for joining us for:

Cycling Past 50

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For more MTI events and webinar visit https://transweb.sjsu.edu/events.

Learn more about the online Graduate Program in Transportation Management that MTI supports at one of our upcoming information sessions: https://transweb.sjsu.edu/education/graduate-events

Have a suggestion for a webinar topic you’d like to see featured? Email alverina.weinardy@sjsu.edu
Interesting findings

- About 20% cannot envision a time when they would not cycle
- Cycling to replace car trips is about avoiding the hassles of parking a car, as well as concern for the environment
- Cycling at night offers a break from motor vehicle traffic
- Cycling rates continue to be affected by care-taking responsibilities and benefits age-related mental health
Year 4 Sample of analysis
Provisos

- Not everyone answered every question
- Data shown for specific analysis is for only those that answered all questions needed for the analysis
- Not enough people indicating
  - a gender other than women or man
  - Race or ethnicity

Responses by Age Group and Gender
Women N=1665; Men N=3142; Other N=10
Prefer not to answer N=30
250 who did not provide age or gender are not included here
Responses by gender, race or ethnicity

- American Indian/Native Alaskan: 11
- Asian: 128
- Black/African American: 76
- Other Hispanic/Latino: 64
- Other: 58
- At least 2: 39
- Native Hawaiian or other PI: 2
- Prefer not to answer: 112

Total: 4329

White
Responses by age, gender

Survey Responses by Gender and Age Group

Percent by Gender

- Women: 32.7%
- Men: 61.6%
- Other: 0.20%
- Prefer not to answer: 0.6%
- No age given: 4%
Comparison of two frameworks
Does a past year fall affect likelihood of continuing to cycle?

Effect of past year’s fall on expectation of continued cycling

- Past year fall
- No past year fall

50 to 55, N=318: 42.5%
56 to 60, N=407: 33.7%
61 to 65, N=403: 41.2%
66 to 70, N=392: 37.0%
71+, N=390: 34.4%
Overall, N=1910: 37.5%
### Cycling Condition Caption, colors indicate safety & comfort score from low to high

<table>
<thead>
<tr>
<th>No.</th>
<th>Caption</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Major urban collector with no designated bike facility</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Diagonal crossing between a buffered bicycle lane to a multi-use trail with a bicycle signal</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Single lane roundabout with crosswalks and sidewalks for cyclists and pedestrians.</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Shared road where people walking, cycling, scootering, driving, etc., can travel freely without designated pathways</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Intersection with bike through lane between right turn land and through lane</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>Two-lane neighborhood commercial street with shared lane marking</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>Suburban collector road with center median, a bike lane without buffer, and a sidewalk</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Cycling pathway along a two-lane state route with wide shoulder, edge and center line rumble strips</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>One-way buffered bicycle lane on an urban collector road with a center left turn lane</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Residential neighborhood street with parking and shared lane marking for bicyclists</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Rural road with no shoulder, low traffic volumes, and widely spaced out housing and other development</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Edge lane road with bicycle priority</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Shared pathway in the road of a collector road in a low-density neighborhood</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cycling pathway along a two-lane state route with wide shoulder, edge and center line rumble strips</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Neighborhood street with sidewalks on both sides and parking on one side</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Two-way multi-use trail along a major arterial with a narrow grassy buffer</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Two-way multi-use trail in parkland and a forested area</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Edge lane road with bicycle priority</td>
<td></td>
</tr>
</tbody>
</table>
Trip Purpose and Distance

- To be social, companionship, N=4320
- To travel to and from work, N=1715
- For exercise, N=5328
- For daily errands, including shopping, N=2979
- As a competitive cyclist, N=730
- Other, N=1634

Distance categories:
- A few blocks
- No more than 2 miles
- Between 2 and 10 miles
- More than 10, fewer than 25
- More than 25, fewer than 40
- More than 40, fewer than 50
- More than 50

Note: N indicates the number of responses for each category.
eBikes: Reason for purchase

Reason for eBike Purchase, Women by Age Group

Reasons for eBike Purchase, Men by Age Group
eBike Ownership rates

- **Women ebike owners, N=255**
- **Men ebi ke owners, N=487**
- **Women past year purchase N=109**
- **Men past year purchase, N=216**

### Graph Details:
- **x-axis:** Gender, Age Group
- **y-axis:** eBike Ownership Rate
- **Legend:**
  - Women ebike owners, N=255
  - Men ebi ke owners, N=487
  - Women past year purchase N=109
  - Men past year purchase, N=216
General characterizations: Regular, Non-regular

Rates of Regular and Non-Regular Cyclists
Gender by Age Group
General characterizations: Regular, Non-regular

[Graph showing the distribution of regular and non-regular cyclists by gender.]

Regular and Non-regular Cyclists by Gender
Total N = 4783

- Regular cyclist: Women, N=1650; Men, N=3133
General characterizations: Type of Cyclist (evolved 4 types)
Questions

- Why is it so important to examine this population separately from other communities of cyclers? How might we extend this methodology toward other groups with differing needs?
- Has there been much research on the transportation habits and behaviors of this population previously? Why or why not?
- This population seems more vulnerable in some ways when it comes to sharing the road—what can transportation professionals and planners learn from looking at the habits of this population that will help other road users as well?
Questions

- Can you tell us more about the intersection of age with other factors such as gender, ethnicity, etc.? For example, it looks like 60% of respondents in the survey were men. What can this information tell us about who is cycling and our transportation infrastructure?
- Does examining the cycling habits of older adults and finding ways to empower this population also, in some ways, pave the road forward for younger generations of cyclists?
- What is something that surprised you about survey responses? Why?
Questions

- What bicycle adaptations are available for older adults?
- Do you have any studies on cyclists with knee surgery and/or shoulder surgery?
- How to get older adults RE-engaged into cycling?
- Precedent for age discrimination lawsuits when electric bike rentals don’t include three wheeled bikes for seniors?
- I’m hoping you’ll devote some time to discussing the new issues of seniors on ebikes! Some very new riders going fast!
Questions

- As a transportation engineer having worked for a state DOT and the Federal DOT, I recognize that, due to your experience and involvement with older adults, you have a tremendous opportunity to influence design standards. As UrbanismSpeakeasy.com points out, an estimated 80 million Baby Boomers will be turning from driving to other forms for local travel and exercise. Planners and engineers discuss multimodal design for all ages and abilities, but maintain a primary travel design focus on drivers rather than cyclists and pedestrians. How do you convince state and local DOTs to change course?