Characteristics and factors influencing bicycling at an urban university: Results of a campus survey

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Presenter Disclosures

John A. Steward

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

“No relationships to disclose”
Georgia State University

• Located in Atlanta, Georgia
• Approximately 32,000 students attend downtown campus
• Approximately 4,400 employees
• University has transitioned rapidly from mainly a commuter college to a large, research university over the past 15 years
• Vision: global leader in innovation in education and urban research
• University has begun to embrace sustainability in its design and operations
Atlanta *Does Not* Compare Favorably to Major U.S. Cities for Bicycling

<table>
<thead>
<tr>
<th></th>
<th>Bicycle to Work: Percent of Commute Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major U.S. Cities</td>
<td>1.0</td>
</tr>
<tr>
<td>Atlanta-Marietta-Sandy Springs MSA</td>
<td>0.17</td>
</tr>
<tr>
<td>City of Atlanta</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Source: Atlanta Regional Commission. 2014 Transportation Fact Book
Milestones toward Improving Bicycling at Georgia State

- Received EPA P3 grant for student-led investigation of bicycling for transportation (2009)
- Received charter for a student organization “Panther Bikes” (2010)
- Received technical assistance from Atlanta Regional Commission and formed campus bike planning committee (2014)
- Conducted university-wide bicycling survey (Fall 2014)
- Complete bicycling plan (planned, end of 2015)
Bicycling for Transportation - Survey Overview

• Administered in October 2014
• 40 questions total
• Asked about modes of transportation, lifetime bicycling experience, and bicycling to campus during first 6 weeks of Fall 2014 semester
• Perceptions of bicycling on campus and in community
• How to create better bicycling opportunities at Georgia State
• Status with University (student, employee, or both)
• Health and physical activity indicators
• Demographics
Research Questions

• How does the health status of bicycle riders and non-riders differ?
• What portion of the study population live within a reasonable bicycle commuting distance?
• What factors are reported to present in current riders environment?
• What factors are perceived to be important to encouraging more bicycle riding to campus?
• How do riders/non-riders perceptions of bicycling differ?
Survey Distribution and Response

• Qualtrics® web-based survey
• Invitations sent to 41,016 email addresses at Georgia State
  • 31,642 students
  • 9374 non-students*
• Overall response rate of those invited to participate = 13.4%
  Participation rate of those who began survey= 82%

*Non-students included faculty, staff, and contractors. Duplicates were eliminated prior to distribution.
<table>
<thead>
<tr>
<th></th>
<th>Respondents (%)</th>
<th>Georgia State (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>41</td>
</tr>
<tr>
<td>Female</td>
<td>66</td>
<td>59</td>
</tr>
<tr>
<td><strong>Race:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>57</td>
<td>39</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Asian</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>3</td>
<td>0.2</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Ethnicity:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>
Distribution of Age among Survey Respondents

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Bicyclists</th>
<th>Not Bicyclists</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 24</td>
<td>48</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>25 to 34</td>
<td>34</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>35 to 44</td>
<td>10</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>45 to 64</td>
<td>8</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>65 plus</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Percent (%)

Age Group
Percent of Respondents by Commuting Mode*
By Student/Faculty Status

*Mode used to or from campus all or most of the time; multiple choices possible
Percent of Respondents Who Reported Having Ever Ridden a Bicycle

- Yes, during past year: 46.7% (Students), 48.5% (Faculty), 47.2% (Overall)
- Yes, not during past year: 47.6% (Students), 47.4% (Faculty), 47.6% (Overall)
- No: 5.6% (Students), 4.0% (Faculty), 5.1% (Overall)
Persons Who Reported Bicycling to Campus At least One Time during Fall 2014 Semester

- N= 546
- 60% male; 80% White, 15% Black; 12% Hispanic
- Rode for transportation an average of 3 days in the past 7 days
- Averaged 60 minutes of bicycling on days ridden to campus
- 77% reported general health very good or excellent; 3% fair or poor
Geographic Distribution of Bike Commuters, Georgia State (2014)

Legend
- Bike During the Semester

Buffer
- Less than 1 mile
- 1 to less than 5 miles
- 5 to 10 miles
Self-Reported Health Status
Self-Reported General Health Status

<table>
<thead>
<tr>
<th>General Health Status</th>
<th>Bicyced</th>
<th>Did not bicycle</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>26</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Very Good</td>
<td>48</td>
<td>43</td>
<td>44</td>
</tr>
<tr>
<td>Good</td>
<td>21</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Fair</td>
<td>2</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Bicyclists rode a bike to, from, or around campus during the past 7 days
Days Participated in Physical Activity
By Bicycling Status*

*Rode a bike to get to, from, around campus during the past 7 days
Environmental Factors

Photo credit: Atlanta Bicycle Coalition
Bicyclist Respondents and Perceptions* of Residential Neighborhood Environment

![Bar Chart]

*Strongly agree or agree with indicator
Bicyclist Respondents and Perceptions* of Route Environment

<table>
<thead>
<tr>
<th>Route Environment</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasonable Distance</td>
<td>93%</td>
<td></td>
</tr>
<tr>
<td>Low Air Pollution</td>
<td>77%</td>
<td>24%</td>
</tr>
<tr>
<td>Low Noise Level</td>
<td>76%</td>
<td>27%</td>
</tr>
<tr>
<td>Interesting Features</td>
<td>77%</td>
<td>27%</td>
</tr>
<tr>
<td>Pleasant Trip Experience</td>
<td>76%</td>
<td>24%</td>
</tr>
<tr>
<td>Hilly Route</td>
<td>70%</td>
<td>75%</td>
</tr>
<tr>
<td>Unsafe Motor Vehicles</td>
<td>75%</td>
<td>76%</td>
</tr>
<tr>
<td>Unsafe Route Conditions</td>
<td>76%</td>
<td>71%</td>
</tr>
<tr>
<td>Need for Detours</td>
<td>71%</td>
<td></td>
</tr>
<tr>
<td>Properties in Disrepair</td>
<td>44%</td>
<td>57%</td>
</tr>
<tr>
<td>Weather makes unpleasant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Strongly agree or agree with indicator
Bicyclist Respondents and Perceptions* of Campus Environment

*Percent that strongly agree or agree with indicator
Bicyclist and Non-bicyclist Perceptions* that Factors Would Increase Likelihood of Bicycling

*Percent that strongly agree or agree with factor
Our university would be a more desirable place if more people bicycled to/from/around campus.
Conclusion

• We found that like other university communities, bicycling is an important share of the commuting to campus.
• Persons who bicycle to campus are significantly more likely to meet physical activity recommendations than non-bicyclists.
• Bicyclists face unfavorable environment and perceived threats to safety during their commute.
• Both bicyclists and non-bicyclists identify ways to make bicycle commuting more likely.
• People believe that bicycling may contribute to improved environmental quality at a college campus, regardless of current commute mode.
Mayor Kasim Reed on the future of Atlanta

“...make Atlanta the most bikeable, walkable, livable city in the Southeast.”

Source: Christopher Martin, beltline.org.
For additional information, contact us!

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Photo credit: gsubikes.com