GEORGIA DOT RESEARCH PROJECT 16-35

FINAL REPORT

SIDEWALK SURVEY IMPLEMENTATION FOR THE SOUTHEAST REGION

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16. Abstract: With funding from GDOT and STRIDE, the team deployed the Online Sidewalk Assessment Survey to gather input on local sidewalk repair and maintenance preferences across a variety of community types in the southeast. The team targeted four major cities in the Southeast United States, as well as four Georgia communities, and analyzed the results to assess region-wide similarities and differences. Post card survey invitations were mailed to 80,000 households throughout these targeted areas, including Gainesville, FL, Raleigh, NC, Starkville, MS, and Birmingham, AL, and four Georgia communities of Clarkston, Columbus, Douglasville, and Thomasville. This report summarizes the results of the data analysis and compares sidewalk preferences across cities in the STRIDE region. Research shows the public perceive the residential walking environment to be of lesser quality than in employment areas, the presence of sidewalks is correlated with reported walking activity, and prioritizing projects that address pedestrian safety near schools and bus stops has nearly universal support.

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Project Report (Final)

Sidewalk Survey Implementation for the Southeast Region

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Executive Summary

Even the most robust transportation networks depend on first and last segments that are traveled by foot, whether that is by walking to a car parked in a driveway or stepping off a bus onto a busy street corner to complete the last few hundred yards of a commute. As cities age and grow, sidewalk networks require maintenance and new connections. To create a successful transportation asset management program for pedestrian infrastructure, public agencies must develop an understanding of the community's preferences as a primary stakeholder group.

Cities across the country have become the target of litigation for failing to ensure that the walking environment meets minimum design standards promulgated under the authority of the Americans with Disabilities Act (ADA). Some litigation has resulted in very large settlements, such as a $1.4 billion Los Angeles settlement dedicating transportation funds to sidewalk repair. To help address indecision and inaction resulting in sidewalk repair backlogs, Georgia Institute of Technology researchers have developed the Sidewalk Priority Index, a prioritization and programming tool that utilizes sidewalk inventory and condition data coupled with public and stakeholder input to output a prioritized list of sidewalk improvements for a community.

The Georgia Department of Transportation and the Southeastern Transportation Research, Innovation, Development and Education (STRIDE) Center funded the deployment of an online public survey to gather stated preferences on the walking environment and funding priorities from community members in eight cities across the southeast. The survey asked community participants what types of sidewalk

improvements they believe will have the greatest impact on the walking environment in their community, and where to focus pedestrian infrastructure improvements.

For implementation, the project team developed a postcard mailing list totaling 80,000 single and multi-family housing units. Half of the postcards went to the STRIDE cities of Birmingham, AL, Gainesville, FL, Raleigh, NC, and Starkville, MS; the Georgia communities of Clarkston, Columbus, Douglasville, and Thomasville also received 40,000. The postcards were distributed within the two allotments based on city population, number of households and land area. Over a period of approximately six weeks, 1,069 community members responded in entirety to the robust, 72-question main survey.

Analysis of nearly 100,000 data points comprising the main survey complete responses identified a number of common themes across the cities with respect to public perceptions and preferences for the walking environment and pedestrian infrastructure funding. First, while the public expresses marginal satisfaction with the walking environment in general, community members from each city in this report tended to rate their employment center's walking environment higher than that of their home location. Second, respondents clearly disagree with the policy that requires property owners to be financially responsible for sidewalks adjacent to their property. Respondents agreed with or were neutral towards all other funding mechanisms. Finally, the walking activity of general population was found to be positively correlated with the presence of sidewalks around one's home, while the quality of sidewalks did not show a strong correlation with self-reported walking activity.

Acknowledgments

The authors of this report wish to thank the Georgia Department of Transportation and the Southeastern Transportation Research, Innovation, Development, and Education (STRIDE) Center for their support and assistance throughout this effort. The authors greatly appreciate the public officials in the participating communities for their coordination and partnership.

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1 Introduction

In 2016, Georgia Institute of Technology researchers developed and implemented an online survey in East Point, GA, a small city in the Atlanta metropolitan region, to assess community priorities and gather preference input for sidewalk infrastructure repair and maintenance prioritization. The survey asks each respondent to describe the walking environment near their home and around their work or school locations. Respondents are asked whether projects and sidewalk repairs should be prioritized to address safety, accessibility, mobility, and walkability concerns, and which general criteria are most important. The survey asks about how projects should be prioritized geographically (e.g., near schools, in low income areas, by political district, etc.) and how projects should be funded. Four optional surveys are also available, so that participants can help identify topics within each of the four prioritization criteria that they believe should be considered in project selection. Finally, the survey collects basic demographic information about the respondents for use in crosstab analyses.

With funding from GDOT and STRIDE, the team expanded the East Point survey to a variety of community types throughout the Southeast to analyze region-wide similarities and differences. The team targeted smaller Georgia communities, and additional larger communities throughout the STRIDE region. The project funded the distribution of promotional mailers to 80,000 households throughout several target areas in the southeast. The four Georgia communities of Clarkston, Columbus, Douglasville, and Thomasville received half of the mailers. The other half of the mailers were distributed in the STRIDE University communities of Gainesville, FL, Raleigh, NC, Starkville, MS,

and Birmingham, AL. More than 1,000 survey responses were received and analyzed in preparing this report.

The wealth of data collected and analyzed in this survey will be useful for the participating communities, agencies, and other researchers interested in better understanding public preferences for sidewalk improvements. In addition, the data will prove useful in the research team's future implementation of a sidewalk asset management tool. In analyzing the collected data, the research team found different perceptions of the walking environment across the cities surveyed, but nearly universal support for certain prioritization and funding mechanisms. The report that follows describes the survey's design and implementation, present analytical results and findings, and provides conclusions and suggestions for further research.

2 Background

Community stakeholders can become overwhelmed by a large backlog of sidewalk projects, especially in the absence of a physical sidewalk asset inventory. Given municipal fiscal constraints, implementation of improvements can also be constrained by indecision as to where to begin making improvements in the absence of a solid plan for project prioritization. Furthermore, a perception of inequity might be introduced if repair projects are undertaken in certain areas and not in others. Sidewalk planning is critical, especially in light of recent court rulings associated with compliance with Americans with Disabilities Act standards, such as the $1.4 billion settlement Los Angeles agreed to in 2015 (Lee, 2016). The sidewalk stated preference survey is designed to help decision makers understand how sidewalk repair and construction should be prioritized. In addition, the survey results can be useful to community leaders in gauging the general level of public interest in sidewalks and citizen mobility needs.

Georgia Institute of Technology researchers have been developing the Sidewalk Priority Index (SPI) since about 2011 (Frackelton, et al., 2013). A detailed background literature review that focuses on sidewalk assessment and prioritization can be found in Frackelton's master's thesis for her degree civil engineering and city planning (Frackelton, 2013). The SPI is a prioritization and programming tool that utilizes sidewalk quality data collected using Georgia Tech's Sidewalk Sentry and Sidewalk Scout assessment tools, coupled with public and stakeholder input, to develop a prioritized list of community sidewalk improvements. A key element in prioritizing sidewalk construction, repair, and enhancement projects is an understanding of the

preferences of the local community as a primary stakeholder group. Depending on community needs and opinions, sidewalk improvements can be targeted to address pedestrian safety issues (sidewalk safety), improve accessibility to destinations (sidewalk accessibility), enhance mobility for the public and especially for those with walking impairments (sidewalk mobility), and/or create a more comfortable and inviting walking environment (sidewalk walkability). The geographic distribution of projects and funding sources for various project types may also be important to stakeholders.

An accessible pedestrian environment is characterized by well-maintained sidewalks and curb ramps; crucial for ensuring an inviting and safe walking environment for pedestrians of all abilities. However, many communities struggle with balancing the needs for sidewalk improvements with other infrastructure improvements, especially those Cities with significant repair backlogs. Each of the four objectives outlined above (safety, accessibility, mobility, and walkability) enhance the walking environment, although many agencies struggle in deciding which objective(s) should take precedence when prioritizing sidewalk improvements.

By expanding the East Point survey throughout the Southeastern Transportation Research, Innovation, Development, and Education Center (STRIDE) region, the research team is able to evaluate preferences and priorities of respondents across many different types of metropolitan communities and geographies. The team is using information collected from 1,069 completed survey responses to better understand trends in preferences for community walking improvements throughout the United States.

3 Survey Design and Implementation

The first edition of the Community Sidewalk Preferences Online Public Interest Survey was developed by the research team in 2016 for implementation in East Point, GA. A slightly revised edition of the survey was created for this multi-city effort across the Southeast. In addition to minor modifications in question formatting and word choice, questions were added to the initial survey to help geographically identify participants and improve demographic analysis. The survey clearly defines terms as each is introduced in the survey questions and utilizes a variety of response styles to engage participants (multiple choice, keyed responses, slider bar figures, and multiple-answer check boxes. Questions that ask respondents for ratings all use a scale of one to ten. Except for the first question of the survey, which asks whether participants are over the age of 18, all questions include a "Prefer not to respond" option. Figure 1 and Figure 2 show two screenshots of questions from the Community Sidewalk Preferences Online Public Interest Survey. The survey was housed online at http://sidewalks.ce.gatech.edu/. A copy of the survey mechanism is provided in Appendix A.

Figure 1 shows the layout of the online survey. Each section is introduced with amplifying background information provided for subsequent subsections. The survey was intended to be instructional for clarity and understanding of those unfamiliar or unsure of certain topics or vocabulary pertaining to pedestrian infrastructure. The survey was designed to be engaging to participants and provide a variety of question styles to mitigate survey fatigue common with other robust surveys. Figure 2 shows the

interactive sliding-bar question style which allows participants to allocate a fixed amount of funding across various priorities.

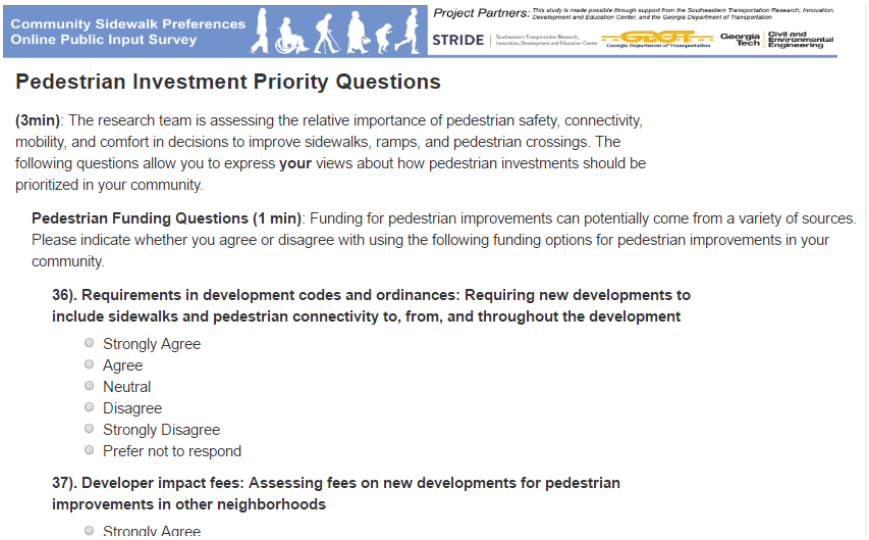


Figure 1: STRIDE Region Community Sidewalk Public Interest Survey

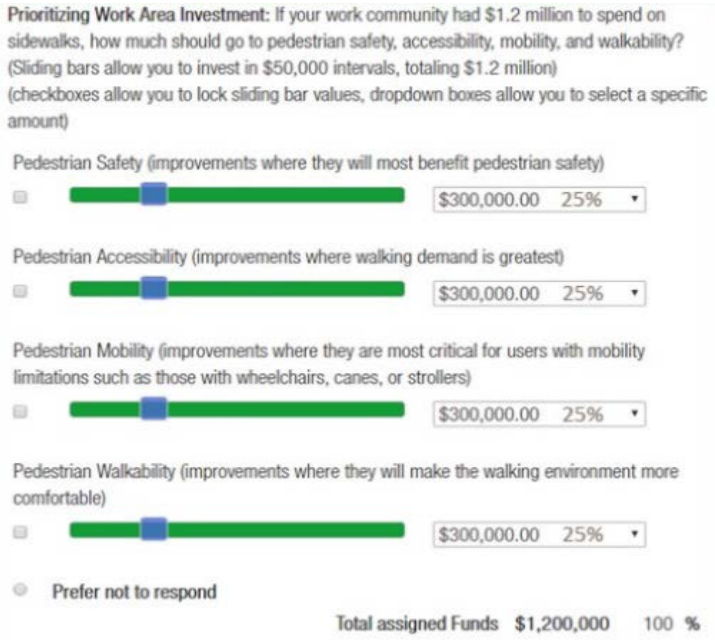


Figure 2: Example of Sliding-Bar Question for Prioritizing Investment

The online survey is divided into two stages. The first stage of the survey takes approximately 15 to 20 minutes to complete and collects several categories of information from participants. Categories include:

- Demographic and geographic identifiers
- Perceptions of current local walking environments
- Desires for improvements that focus on pedestrian safety, sidewalk connectivity to important destinations, physical sidewalk conditions for those with mobility limitations, and walking environment comfort
- Opinions about how funds for sidewalk improvements should be distributed geographically and/or politically
- Preferences for funding sources to pay for sidewalk projects

A survey is deemed "complete" when the participant completes the first stage of the survey. When stage one of the survey is complete, participants are presented with an optional second stage of the survey. In the second stage, participants can complete one to four separate four-minute surveys that ask for preferences about detailed design elements affecting pedestrian safety, mobility, accessibility, and walkability. The first topic presented in the optional surveys is a random draw from the four topics. The second part of the survey was made optional due to concern for surveyor fatigue. Participants can opt out of the survey at any time.

The STRIDE Region Community Sidewalk Preferences Online Public Interest Survey was implemented across eight cities in the southeastern United States. Birmingham, AL, Gainesville, FL, Raleigh, NC, and Starkville, MS, were chosen as seats of partner universities under the STRIDE University Transportation Center. A matching grant from the Georgia Department of Transportation funded survey deployment in four additional

communities in Georgia. Potential communities meeting population and geographic parameters were contacted to gauge their level of interest and potential use of analysis. In consultation with GDOT staff, Clarkston, Columbus, Douglasville, and Thomasville were selected to represent two geographically different Atlanta Metro communities, a medium sized city, and a smaller rural town.

The survey was advertised to the communities through a mailing distribution of 80,000 postcards targeting single and multi-family residential addresses. The STRIDE cities and Georgia cities each were allotted a total of 40,000 postcards. Between each subset of communities, the 40,000 postcards were dispersed based on population and density to achieve desired levels of participation. Table 1 presents a breakdown of postcard distribution, city population, city area, and participation levels.

Table 1: Distribution of Postcards and Participation of Cities

City	Population	City Area (mi^2)	Postcard Distribution	Participation	
				Responses	Response Rate
Birmingham, AL	212,461	146.1	10,000	45	0.5%
Clarkston, GA	7,791	1.1	3,287	112	3.4%
Columbus, GA	202,924	22.5	22,000	167	0.8%
Douglasville, GA	31,890	216.4	8,363	121	1.4%
Gainesville, FL	130,128	61.3	7,000	197	2.8%
Raleigh, NC	451,066	142.9	18,000	204	1.1%
Starkville, MS	25,366	25.5	5,000	139	2.8%
Thomasville, GA	18,718	15.0	6,350	83	1.3%
Total	1,080,344	NA	80,000	1,068	1.3%

Mailing lists for the eight cities were developed using parcel data and apartment-level addresses. For each community, the lists were limited to the city limits and then randomly sampled to obtain the desired number of parcels. A sample of the survey invitation postcard is shown in Figure 3.

Community stakeholders were encouraged to advertise the survey through social media and other communication outlets. The survey was accessible for all communities concurrently from March 2 to April 19, 2017 through a web based platform hosted on Georgia Tech servers. A total of 1,069 complete responses were recorded, yielding a response rate of 1.34%. An additional 770 partially complete surveys were also collected, but are not analyzed herein. A total of 79 respondents aborted the survey immediately after logging in. Analysis of responses will be presented in the following chapter.

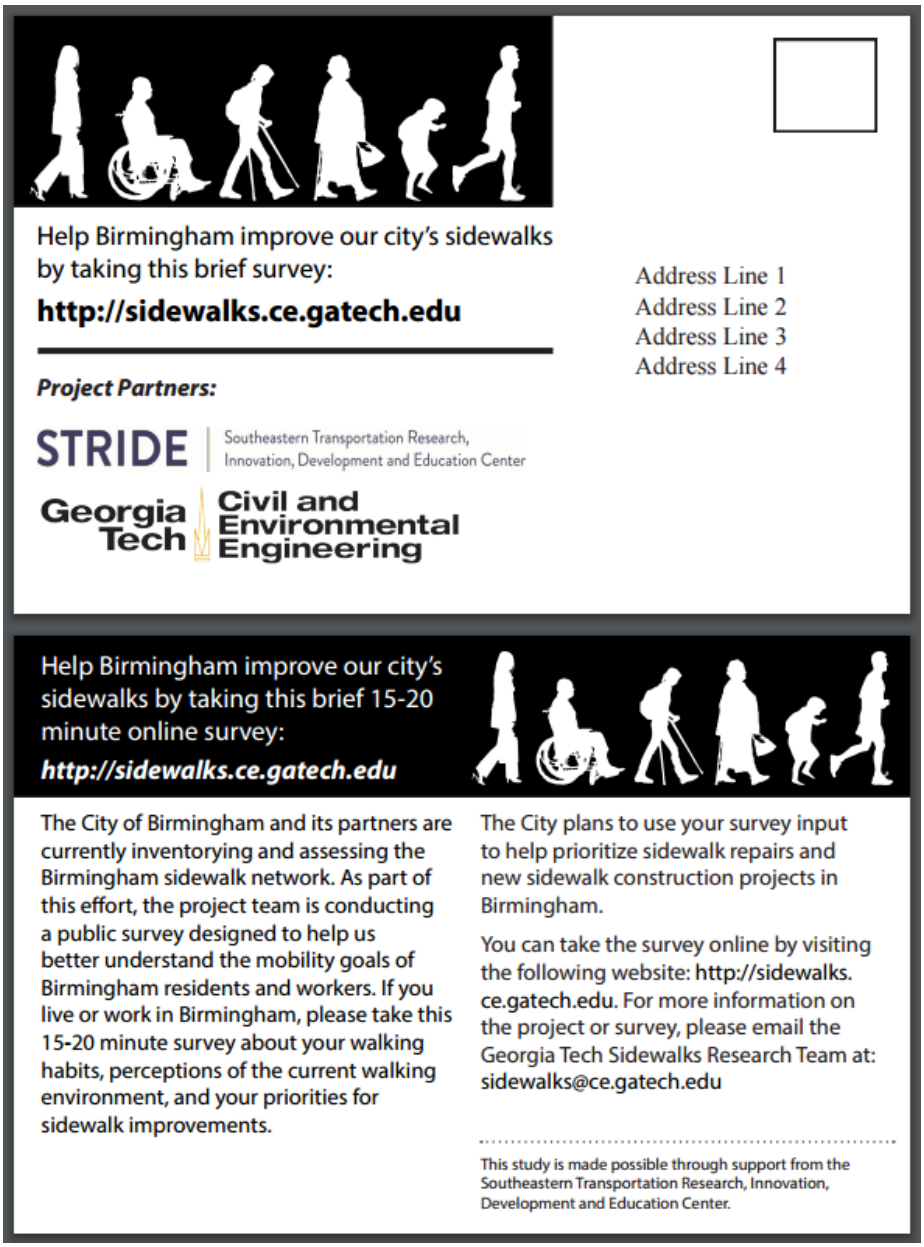


Figure 3. Post Card Survey Invitation

4 Data Analysis

This chapter presents an analysis of the survey responses collected by the research team. It includes respondent demographic characteristics; descriptions of walking habits and the walking environment; preferences about sidewalk funding sources, investment decision-making, and priority locations for investment; and criteria-based improvement strategies. The final section addresses responses from the optional surveys. For each set of descriptive statistics, the number of valid responses (n) is presented. A total of 1,069 surveys were completed. However, the 'prefer not to answer' responses for individual questions are removed in presenting graphic results (when appropriate). Hence, the n=number of valid responses varies in each graph. Figures depicting the response results for all survey questions are provided in Appendix B.

4.1 Demographics

The demographic questions were split into several sections of the survey. Questions designed to evoke a spirit of good citizenship, such as "For which city are you taking this survey?" appear at the beginning of the survey. Only one of the 1,069 respondents identified a city other than one of the eight target cities and all survey respondents provided a city name. Questions more likely to induce participants to opt-out of the survey, such as those regarding household income or race, are placed late in the survey. These questions are used to capture basic geographic and socioeconomic identifiers as well as shape subsequent analysis of responses. Table 2 summarizes the responses to the most common demographic questions asked in the Community Sidewalk Preferences

Online Public Interest Survey. Appendix C shows the demographic and Census data across the eight cities.

Table 2: Basic Demographics of all Survey Respondents

Category	Response	Percentage
Gender n=1045	Female	60.1%
	Male	39.9%
Age n=1049	19-25	2.9%
	26-35	16.5%
	36-45	20.9%
	46-55	19.9%
	56-65	22.8%
	66-75	14.4%
	75+	2.7%
Household Size n=1029	1	22.7%
	2	63.7%
	3+	13.6%
Children in Household n=1033	0	68.9%
	1	14.3%
	2	11.8%
	3+	4.9%
Home Ownership n=1052	Own/Buying	81.7%
	Rent	18.3%
Employment n=1051	Full-time	61.6%
	Part-time	7.7%
	Retired	18.6%
	Unemployed	1.4%
	Student	2.5%
	Other	8.2%

As seen in Table 2, women tended to respond more frequently than men. The three age groups between 36 and 65 represented the bulk of respondents. Median respondent

household size was two and nearly 70% of responses reported zero children present in the household. Home ownership was much higher than anticipated based upon Census data. Over 80% of respondents indicated home ownership, while the expected value for the cities was approximately 43% based on Census data. The expected value is the weighted average of Census data for the eight cities. Most respondents were employed full-time or retired, with only 1.4% considering themselves unemployed. Based on the percentage considered "in the labor force", respondents were only slightly more participatory at 69% actual vs. 61% expected Census value. The top two career fields were "Education, Training, and Library" and "Management" at 15.3% and 11.7% of respondents, respectively. Figure 4, below shows household income ranges.

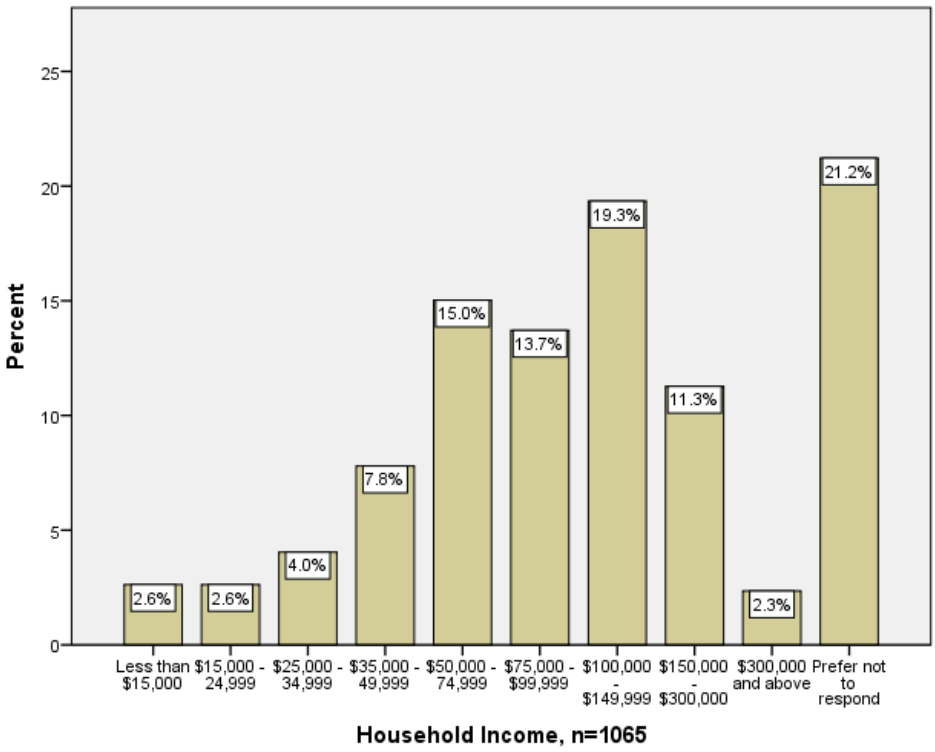


Figure 4: Household Income Ranges

For most demographic questions, the response rate was high (greater than 95%). As expected, however, some questions had lower response rates. For example, only 78.8% or respondents provided a household income range. From Census data, the expected median household income level was $39,403.42, which falls in the lower half of the range $35,000-49,999. Expected income is the weighted average of the Census reported median incomes across the eight cities. These high numbers correlate with home ownership, as mentioned above, and vehicle ownership. Over 65% of respondents indicated their household owned two or more motor vehicles.

Similar to the skewed income category, two other demographic characteristics of the survey participants deviated from expectation or showed surprising results. Over 72% of responses indicated "White" for race compared to the 43% expected by Census numbers and survey responses by city. Only 10% indicated "African-American," compared to 45% expected. These numbers are substantial deviations from Census-derived expectations. Also surprising was the high level of education attained by the respondents. Figure 5, on the next page, shows the results of those responding. The expected percentage for receiving a bachelor's degree or higher was only 31%. However, more than 81% of survey respondents indicated a bachelor's degree or higher with 47.2% claiming a graduate degree. A similar higher-than-expected education result was observed in the East Point survey. It may be a factor that the survey was fairly long and complex, or perhaps that a higher level of trust is placed by some individuals that the survey results will be used for a scholarly purpose.

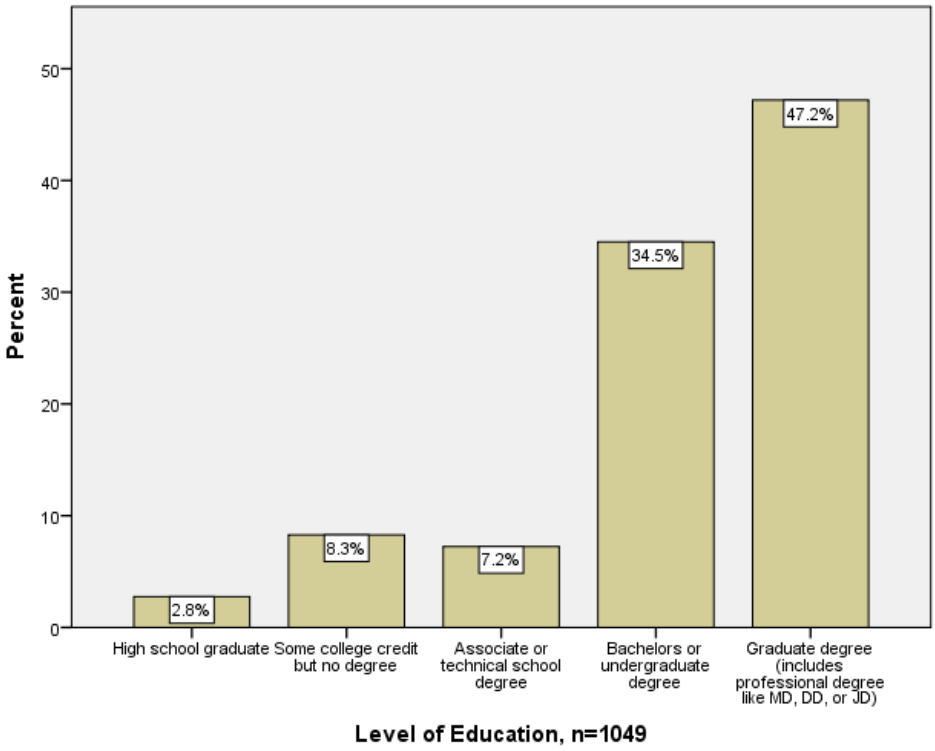


Figure 5: Level of Education Attained

From these variations between expectancies and results, several groups of people are underrepresented in the survey based on the Census demographics in the eight cities. Those with lower incomes or levels of education, household renters, and African-Americans did not respond at the rate expected based on Census demographics.

4.2 Walking Habits and the Walking Environment

The Community Sidewalk Preferences Online Public Interest Survey includes questions that help characterize both walking habits of respondents and their perception of the walking environment around their home and around their work or school locations. This section will present data regarding walking habits and frequencies, barriers to walking

including disabilities, and perceptions of the walking environment. The data are then used to analyze trends that are seen through cross tabulation of responses.

4.2.1 Walking Activity

This section of the survey was used to characterize respondents' activity in the walking environment. Participants were asked to state how often they walked in general and also to specific places. The section split focus into two locations: 1) home, and 2) work or school (respondent decides). The survey respondents indicated an overall high level of general walking activity. Over 70% consider themselves active or very active walkers. Figure 6 below shows the survey group's response.

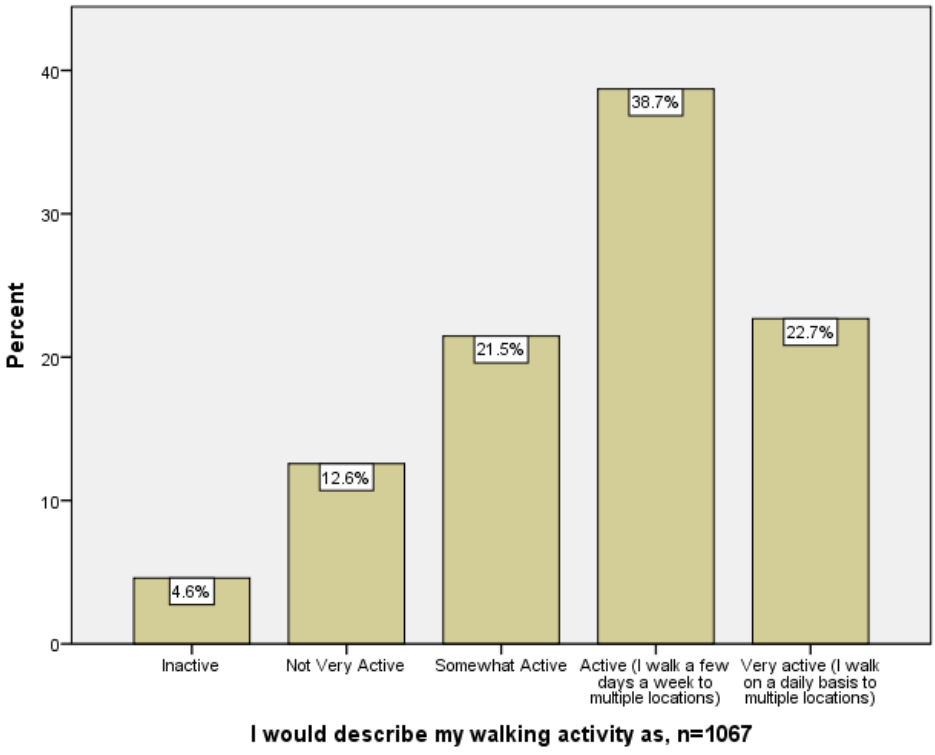


Figure 6: Survey Respondent Walking Activity

The active and very active categories involve walking to multiple locations per day. The fact that this large number of respondents indicated that they undertake some regular walking activity adds credibility to their responses to questions regarding the existing pedestrian environment.

A series of subsequent questions helped respondents state the frequency at which they walked from home to certain places, and the frequency at which they walked from work or school to certain places. These places included work, home, daycare, social activities, recreational activities, shopping, services, dining, transit, schools, and general walking for pleasure, to exercise, or to walk a pet. The least frequent place to walk was daycare, with less than 2% of respondents stating they ever walked there (however, it is reasonable to expect that only those households with children might choose to walk to day care). The only location over half of respondents indicated they walked to at least weekly was the general category (pleasure, exercise, or pet walking). The distribution is shown in on the next page in Figure 7.

Walking to social activities was the next highest walking frequency reported, but only about half of respondents indicated they ever walked from home for this reason. Figure 8 shows the frequency of walking from home to social activities. Other locations that had relatively higher levels of trip generation were for shopping and for dining, but both categories had more respondents indicating they never walked these locations or don't go to these locations at all compared to all walking frequencies combined. Walking to transit was also very low. Overall personal transit utilization was not asked in this survey.

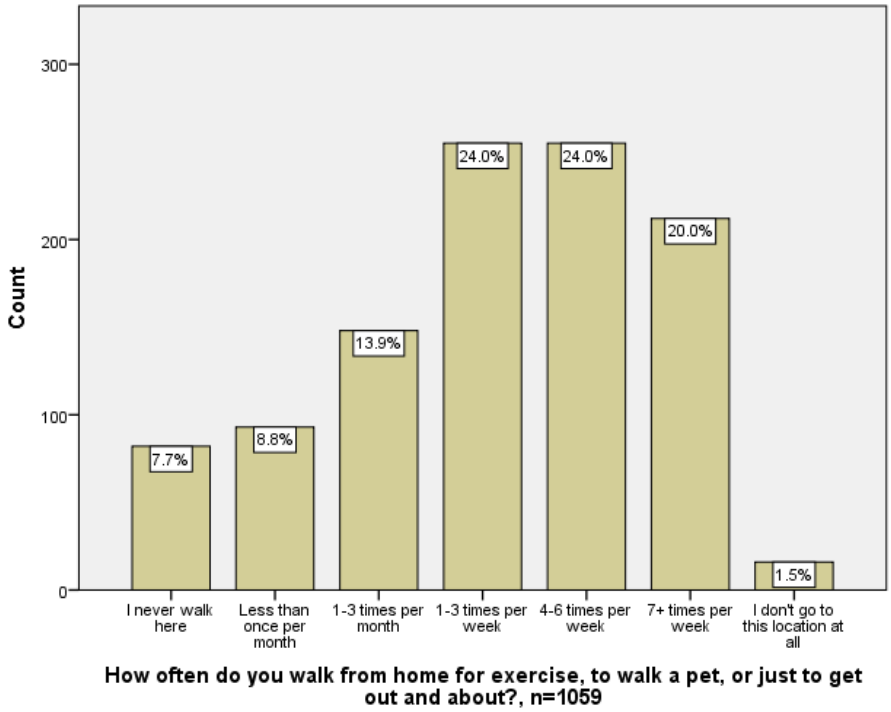


Figure 7: Frequency of Walking from Home to Social Activities

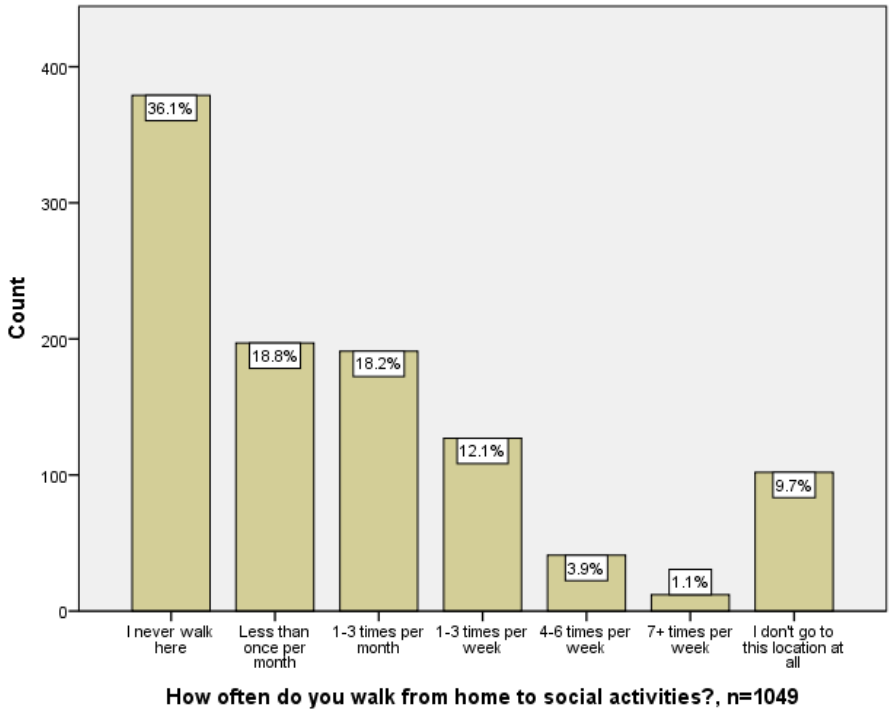


Figure 8: Frequency of Walking from Home to Social Activities

4.2.2 Barriers and Walking Ability

Barriers to walking can take many forms. Some individuals may have disabilities limiting their walking ability, some areas may be unsafe or uncomfortable to walk, and some areas may not be served by sidewalks at all. Approximately 15% of respondents indicated some disability that limited their walking ability. These disabilities could be physical, visual, cognitive or some other reason. Also in this group were those that required some sort of mobility device (less than 1% of total respondents). The walking activity of those with limitations to their walking ability is seen in Figure 9.

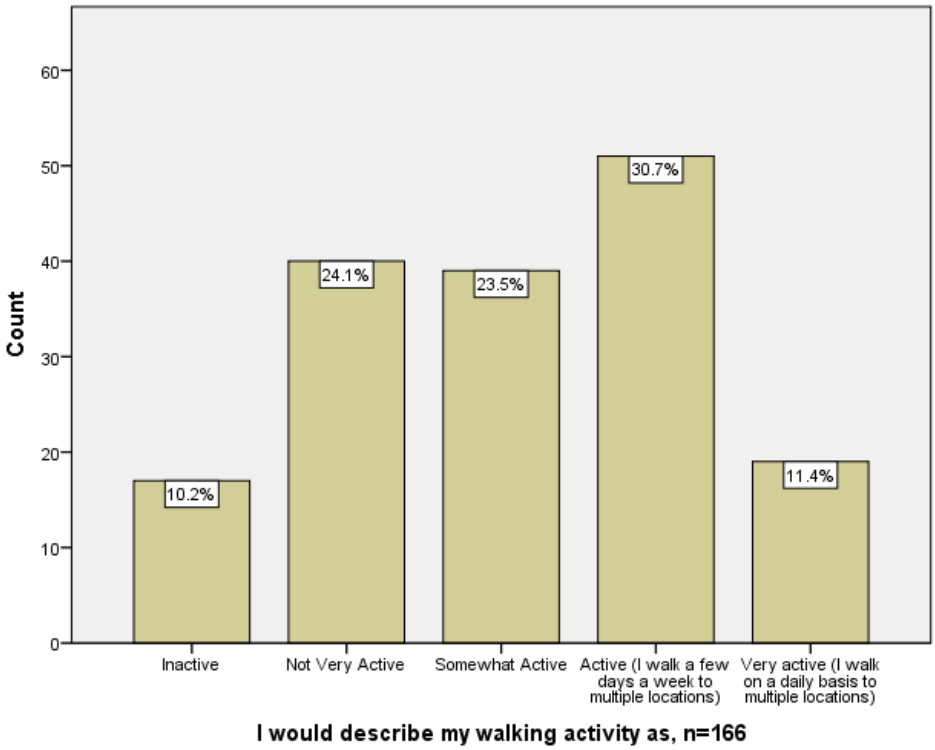


Figure 9: Walking Activity of Respondents with a Limited Walking Ability

Those with stated walking limitations still reported generally high levels of walking, with over 65% reporting their walking activity as somewhat active, active, or very active.

Further analysis of this subgroup will be conducted in later in the report. To assess specific walking barriers, the survey asked respondents to indicate if certain physical conditions existed limited their ability to walk. Figure 10 shows the percent at which respondents indicated a barrier existed in their home walking environment.

The most common barrier to walking, experienced by 41% of respondents, was simply that sidewalks did not exist. Additional discussion of how a lack of sidewalks can imped walking activity will be presented later in the report. Other reasons with high frequencies of response addressed missing (29%) or inadequate (32%) crosswalks. Only about 10% of respondents indicated that there are no places of interest within walking distance. Although the survey does not ask participants to categorize their home location as urban, suburban, or rural, since 92% of respondents indicated they live within their city limits this could be attributed to living in areas that have some mixed land use and shows promise for the pedestrian infrastructure network in these cities.

4.2.3 Perceptions of the Walking Environment

To gauge public perception of the sidewalk, survey participants were asked to describe the walking environment in their community at their home location, and around their work or school locations. Respondents were also asked about the physical presence of sidewalks in these locations. The responses for describing the walking environment quality for their home location, and their work or school locations are show in Figure 11. Overall, respondents indicate a higher walking environment quality around work or school locations.

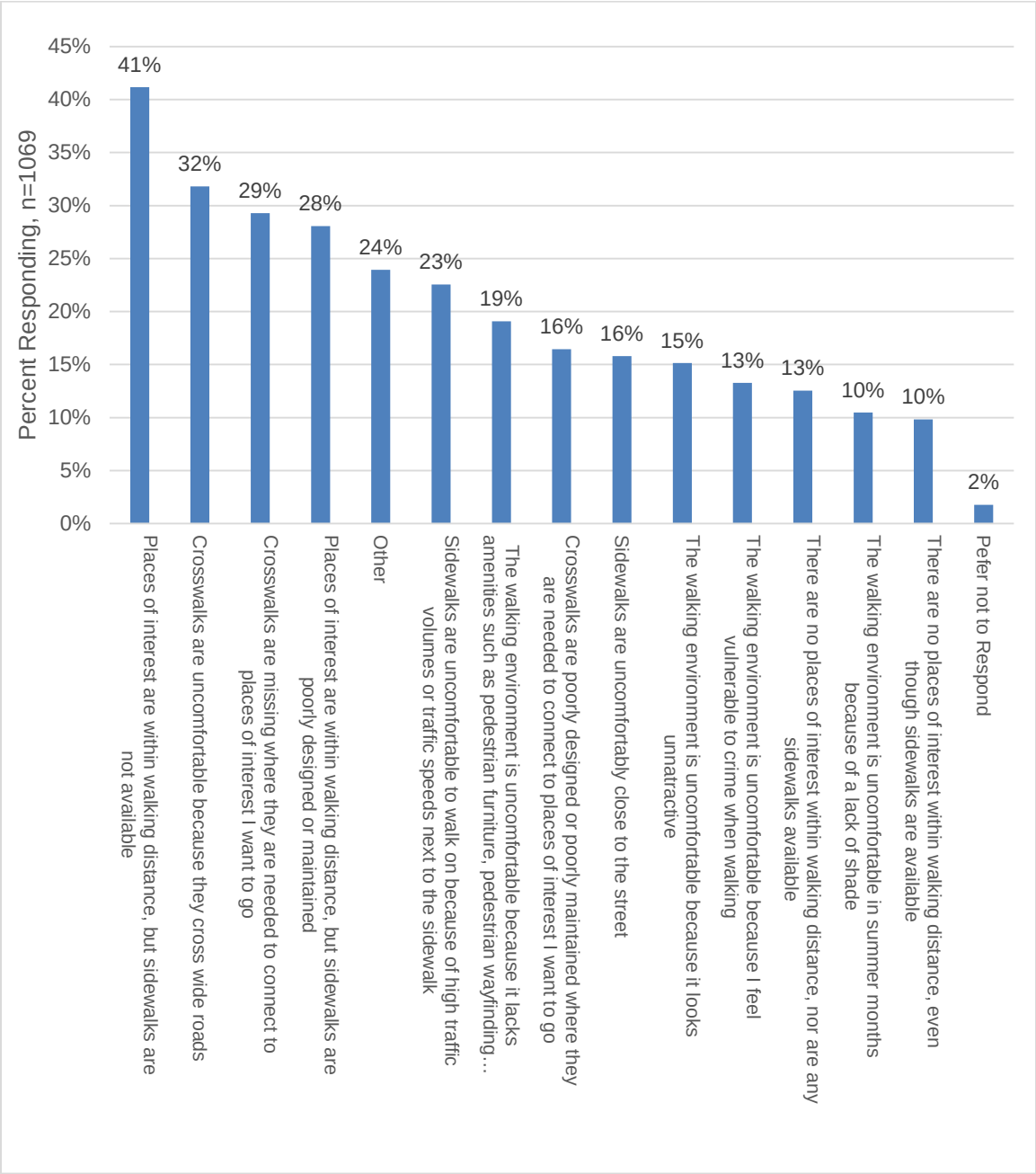


Figure 10: Neighborhood Barriers to Walking

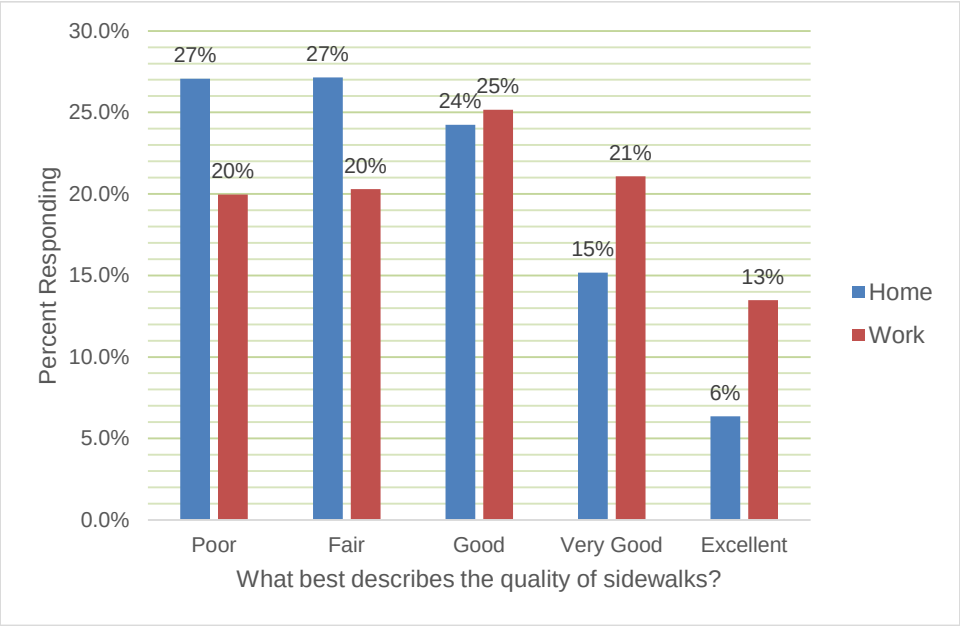


Figure 11: Walking Environment Quality at Home and at Work or School

More than half of respondents described their communities walking environment as poor or fair around their home location. Conversely, more than 60% of respondents favorably described the quality the pedestrian environment at work or school. A breakdown of a computed walking environment quality rating for each city is shown in Figure 12. Respondents in all cities appear to indicate a higher sidewalk quality around their work or school environments than around their home environment. Gainesville, FL and Raleigh, NC have the highest quality ratings of the cities included in the survey. The greatest disparity in quality between home and work or school is reported by Clarkston, GA and Starkville, MS respondents.

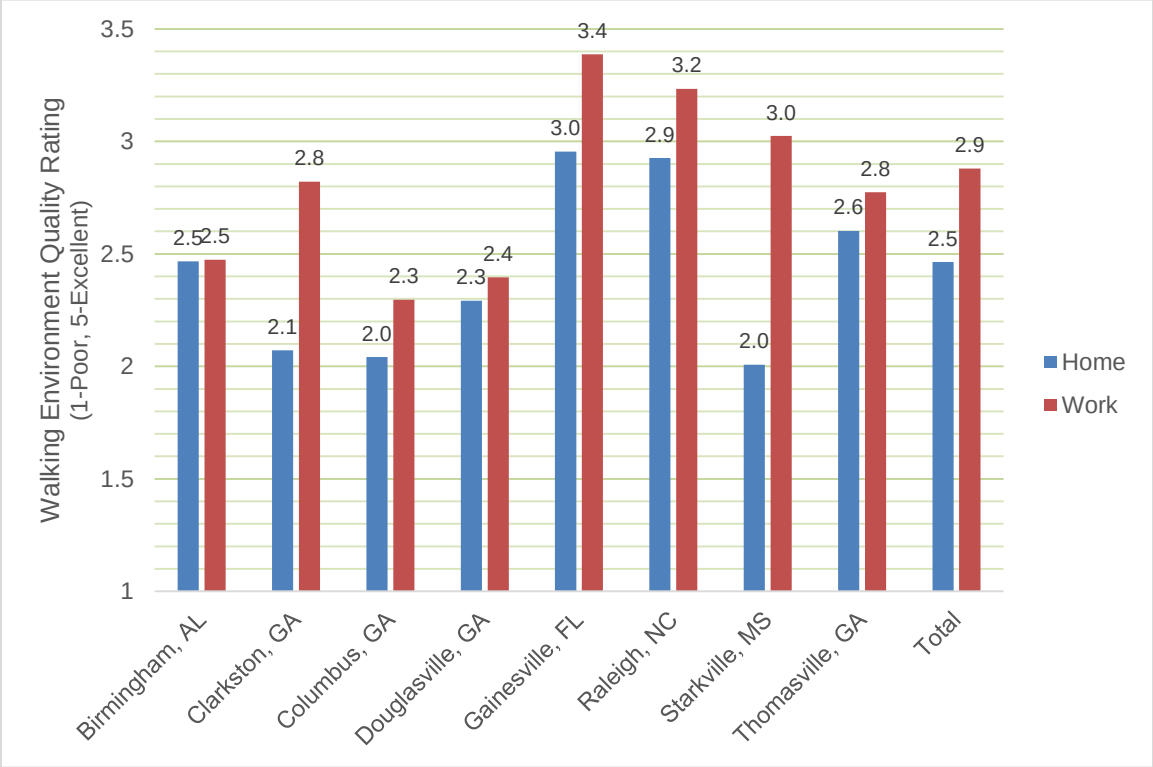


Figure 12: Walking Environment Quality Rating by City

Respondents indicating that an area has a poor or fair quality walking environment also generally indicate that there are no or few streets that have sidewalks. Differences in responses are seen between areas with high quality pedestrian environments and sidewalks on most or all streets. The presence of sidewalks clearly does not indicate a good quality walking environment. In work or school environments, over 50% of respondents indicated most or all streets have sidewalks, but only 35% indicated very good or excellent sidewalks. Figure 13 shows the computed sidewalk presence rating for the surveyed cities.

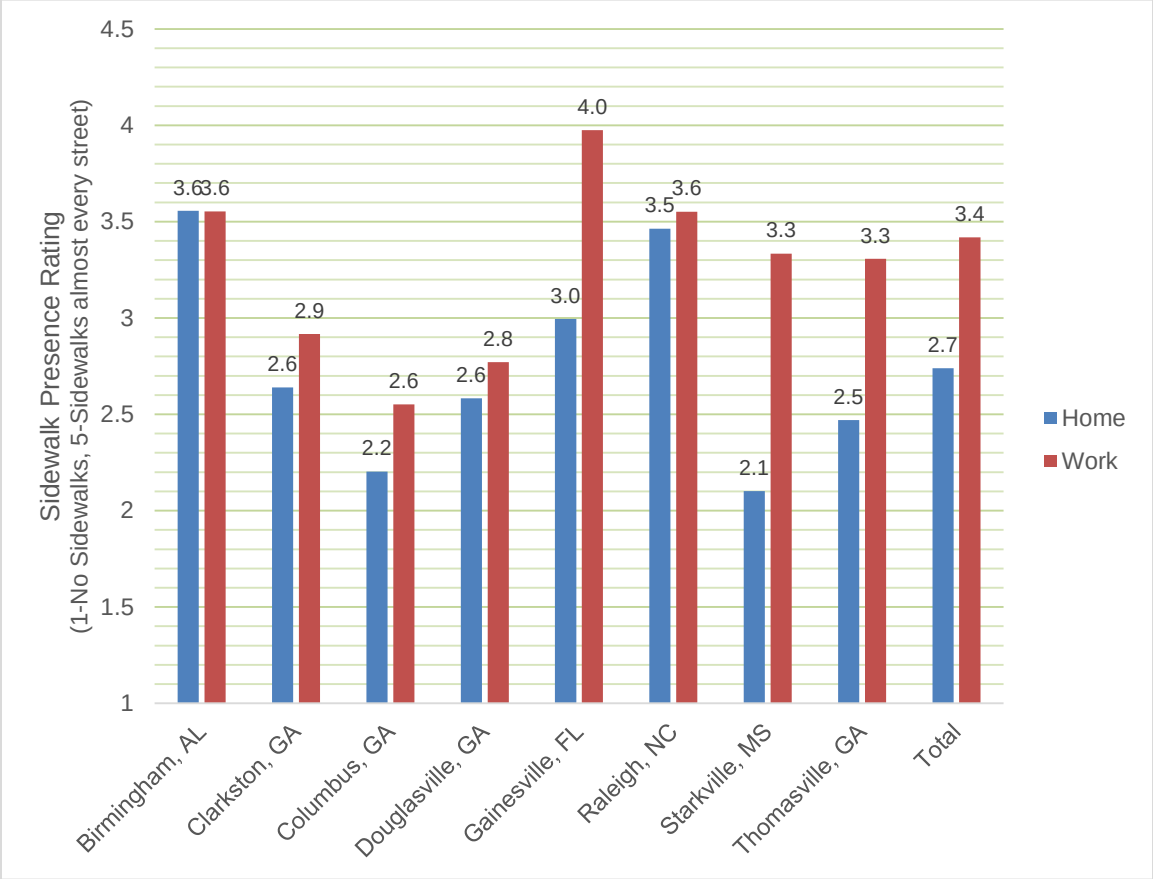


Figure 13: Sidewalk Presence Rating by City

The sidewalk presence and sidewalk condition graphs show similar trends. Some cities appear to have many sidewalks, but of poor quality. Some cities appear to have few sidewalks, but of good quality. For example, Birmingham responses indicate a solid presence of sidewalks, but the sidewalks appear to be in poor condition (Figure 14).

Figure 14: Sidewalk Presence and Walking Environment Quality Rating by City

4.2.4 Walking Habits, Barriers, and Perceptions Analysis

Cross tabulations were also created to better understand how walking activity may be correlated with sidewalk presence. The self-reported walking activity rating was compared with both the walking environment quality and sidewalk presence responses (Figure 15 and Figure 16). The analyses indicate that sidewalk presence may have a greater impact on walking activity than the self-reported quality of the walking environment.

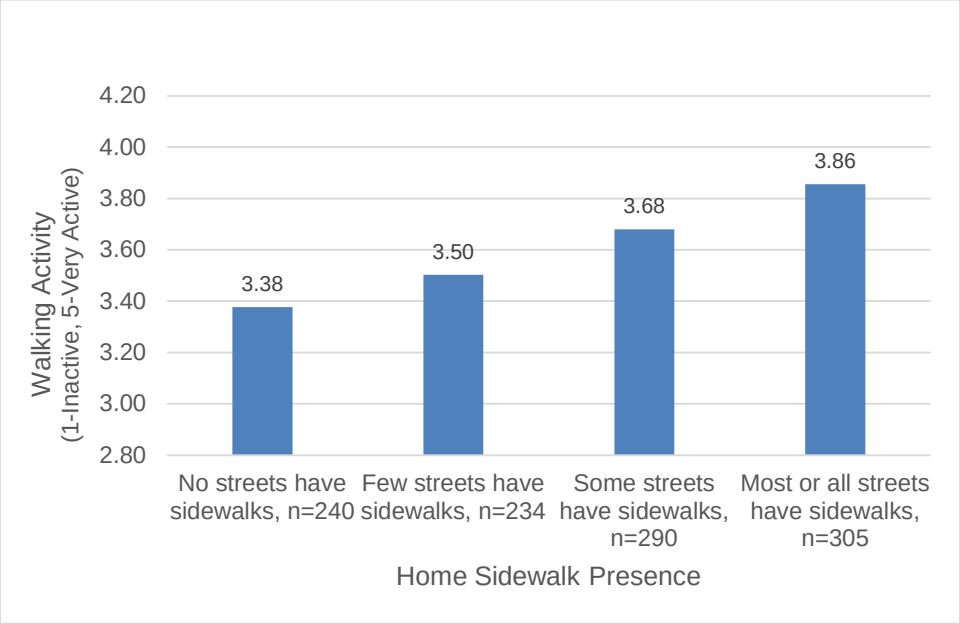


Figure 15: Walking Activity vs. Home Sidewalk Presence

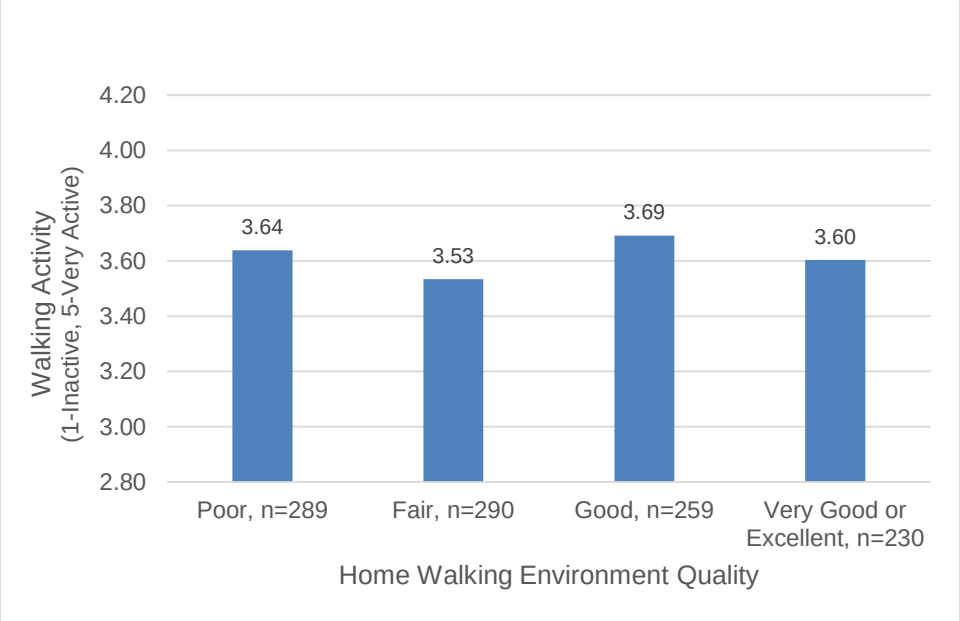


Figure 16: Walking Activity vs. Home Walking Environment Quality

Walking activity compared to walking environment quality is relatively consistent across each category. Sidewalk presence, however, is positively correlated with self-reported walking activity. This may be an important point for cities to understand in prioritizing sidewalk repair vs. new sidewalk installation. However, it is also important to consider impacts on those with walking ability limitations.

In comparing the results for individuals with walking ability limitations, the same cross table graphs are generated in Figure 17 and Figure 18. Sidewalk presence does not appear to correlate well with higher walking activity among those with walking ability limitations. Hence, the presence of sidewalks may not be the most important factor for those with mobility impairments. For persons with walking ability limitations, the quality of the walking environment may be a more important factor in walking activity. Furthermore, this may also be related to self-selection of home location choice by these individuals. Figure 18 compares the walking activity of respondents with walking ability limitations with their response for walking environment quality.

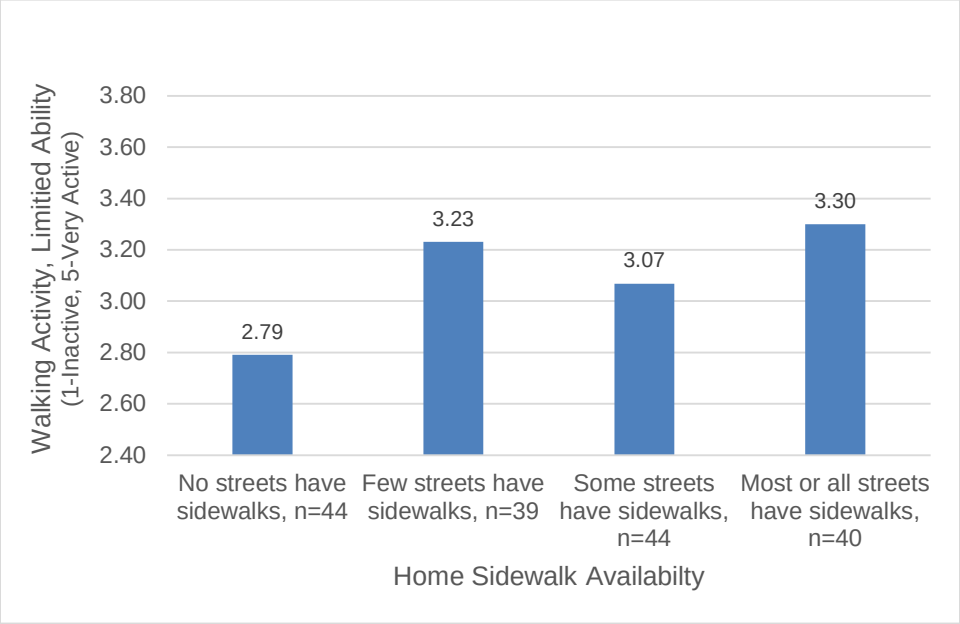


Figure 17: Walking Activity vs. Home Sidewalk Presence, Respondents with Limited Walking Ability

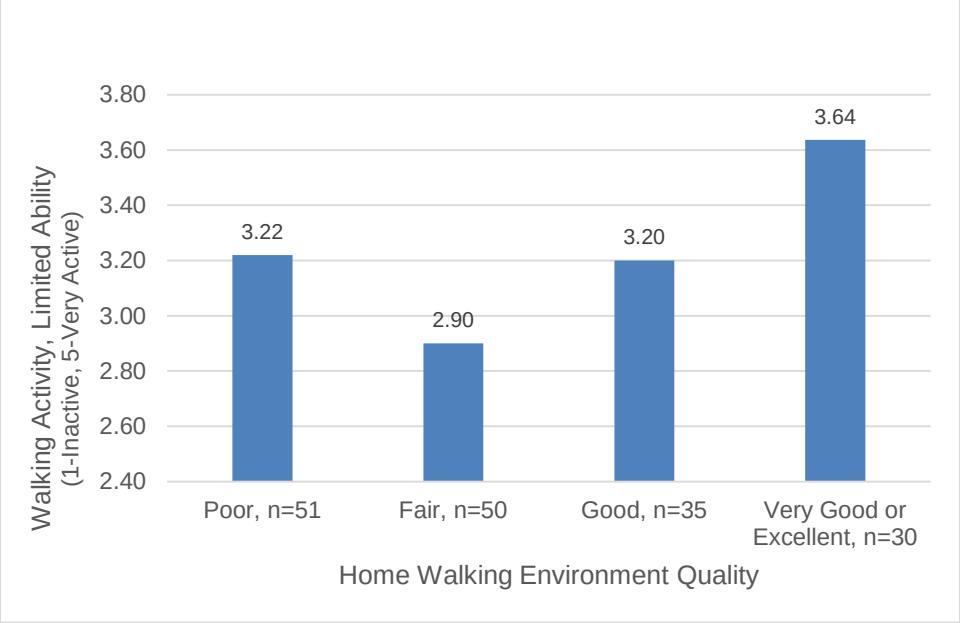


Figure 18: Walking Activity vs. Home Walking Environment Quality for Respondents with Limited Walking Ability

Sidewalks that are poorly maintained, not ADA accessible, or not well-connected across intersections present barriers to those with mobility impairments. Even if the sidewalk network physically exists nearby, the condition of the walking environment may determine whether a person with a limited walking ability attempts to walk. That is, poor sidewalk quality may deter walking nearly as significantly as having no sidewalk present. Because ADA design standard compliance is a more complicated topic, and the public is generally not acquainted with or able to readily judge compliance ADA design standards, ADA compliance were not directly addressed in the walking environment perception section of this survey. Additional analysis in this area with enhanced participation of the disability community appears warranted.

4.3 Preferences for Sidewalk Investment Prioritization, Funding Sources, and Allocation

Gathering community input on project prioritization and funding is important because, with limited budgets, lower priority projects may not be realized for a long time. Funding often comes, at least in part, from property taxes, so allowing for public input and transparency in funding allocation can help residents and workers participate in the public process and better understand how projects proceed toward implementation. A large part of the survey was devoted to investigating public preferences for pedestrian infrastructure investment. A variety of question types were used to elicit responses from participants including priority rating, statements of agreement, and sliding-bar numerical responses.

4.3.1 Public Priorities for Pedestrian Infrastructure Investments

The survey asked participants to rate their priorities for pedestrian infrastructure investments. With categories based on themes generated from previous questions in the survey, participants were asked to prioritize projects based on pedestrian safety, accessibility, mobility, and walkability. These are defined as follows:

- Pedestrian Safety: Safety investments focus on making improvements to sidewalks and pedestrian crossings to improve pedestrian safety. Investments are often focused in areas where pedestrian-involved crashes are observed.

- Pedestrian Accessibility: Accessibility investments focus on improving sidewalks and pedestrian crossings where walking demand is the greatest, such as areas where many people live, work, shop, and play.

- Pedestrian Mobility: Mobility investments focus on sidewalks and pedestrian crossing improvements where they are most critical for users with mobility limitations, such as adding ramps for wheelchair and stroller users and safeguards for pedestrians with visual impairments.

- Pedestrian Walkability: Walkability investments focus on Walkability investments focus on making sidewalks and pedestrian crossings more pleasant and comfortable for all users, such as widening the buffer between the sidewalk and the street, planting trees, adding lighting, etc.

In the first set of questions, participants were asked to rate the four investment categories on a scale of 1 to 10, with 1 being the lowest priority and 10 being the highest priority. Respondents had no limitations on marking multiple categories, meaning some respondents could and did mark all four as 10, or highest priority. As a result, all categories scored very highly, with safety scoring the highest, accessibility scoring the second highest, mobility the third highest, and walkability last with the average values of 9.1, 8.9, 8.6 and 8.2, respectively. Figure 19 on the next page shows the distribution of scores within each of the four sets of responses for pedestrian infrastructure investment priorities. Safety is the highest priority from those responding to the questions, but the shape of the graphs is very consistent. The value of all four categories is understandably high for all those who are concerned about the walking environment and prioritizing pedestrian infrastructure decisions.

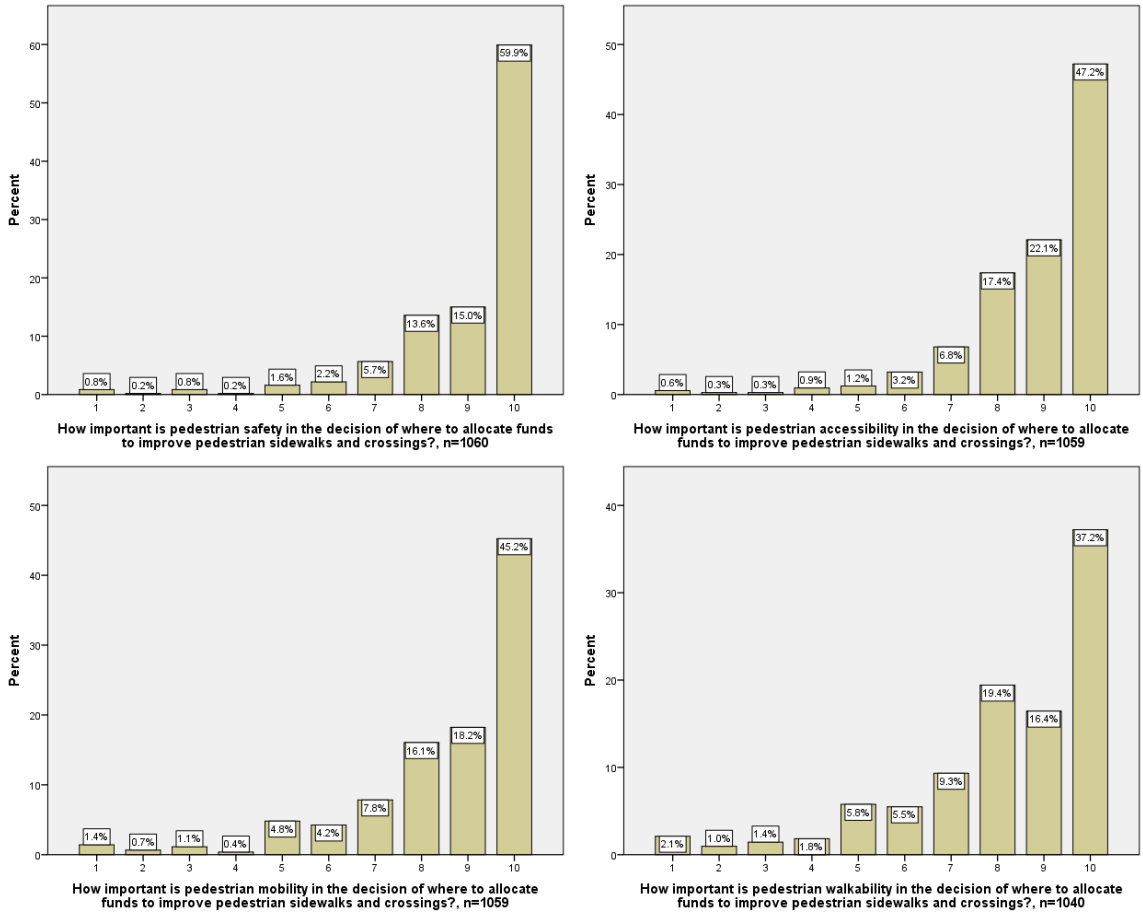


Figure 19: Results of Pedestrian Improvement Priority Questions

When controlled for those with walking ability limitations, the mobility weighting is almost as high as that for safety. In general, the ratings of those with limited walking ability did not differ substantially from the general population. Walkability was also rated as the lowest priority. However, 42% of respondents still indicated that walkability was a 10. The importance of the results from the priority ratings is that a combination of all four categories appears to be warranted in the pedestrian decision-making process for pedestrian infrastructure investment. All four are integral to a desirable and complete walking environment.

4.3.2 Preferences for Sidewalk Funding Sources

The survey asked participants their preferences for sidewalk improvement funding sources on a scale of 1-5, ranging from 1 indicating the participant strongly disagrees with the funding source, to 5 indicating they strongly agree with the funding source. Alternatives included developer fees, local taxes, placing the responsibility on adjacent property owners, special-purpose local-option sales taxes, gasoline taxes, grants, and tax districts. The options were compiled based on current practices in cities across the United States. Figure 20 shows response rates to different funding source options.

Survey participants generally responded favorably toward all funding options, except for requiring sidewalks to be the responsibility of adjacent property owners (65% disagree or strongly disagree). While most of the other options were skewed heavily toward "strongly agree", participants showed the strongest preferences for requiring developers to include sidewalk connectivity in new developments and applying for sidewalk grant funding. Opinions were mixed for establishing a tax allocation district, as it was the only category where most respondents indicated a neutral preference.

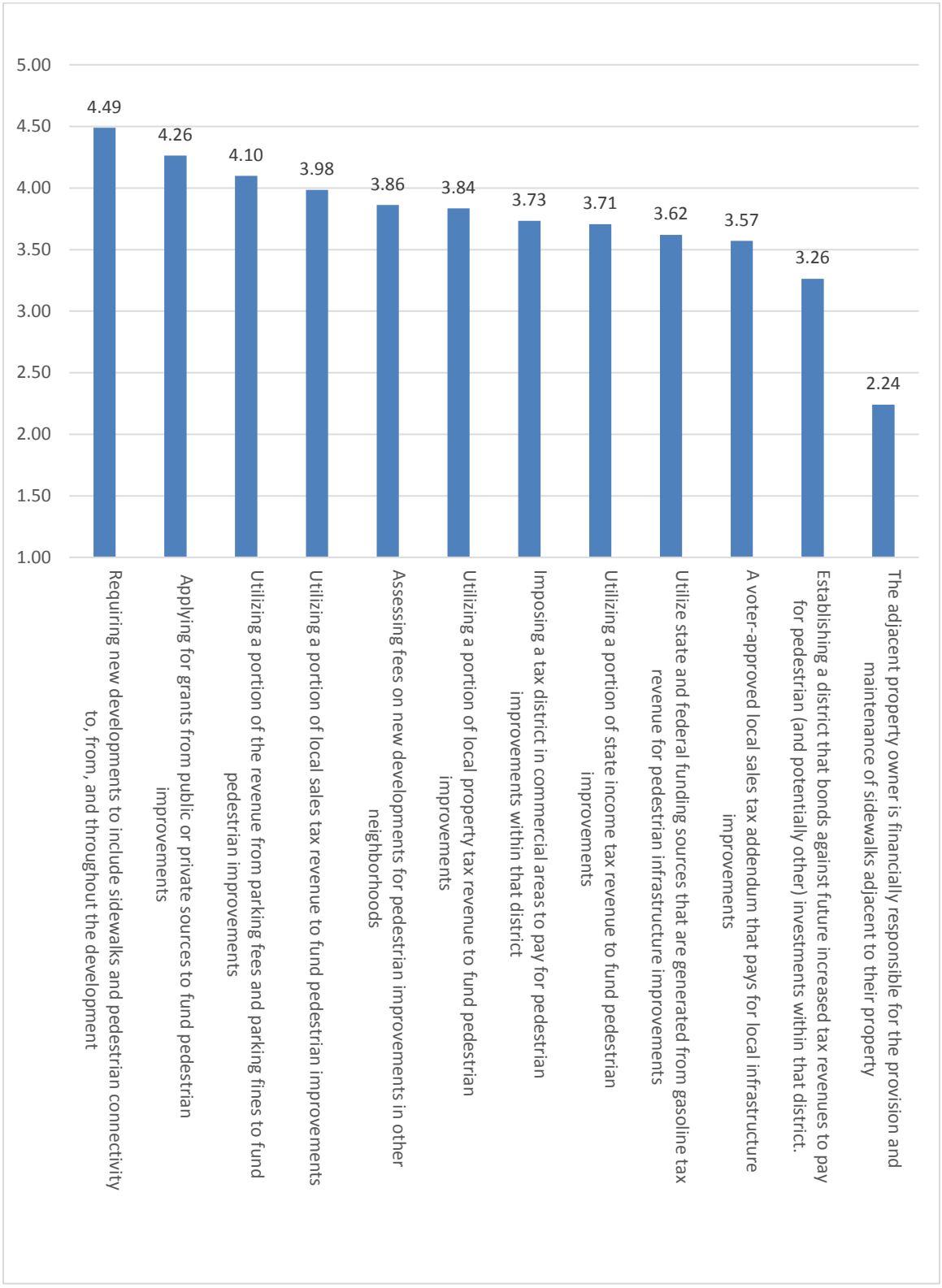
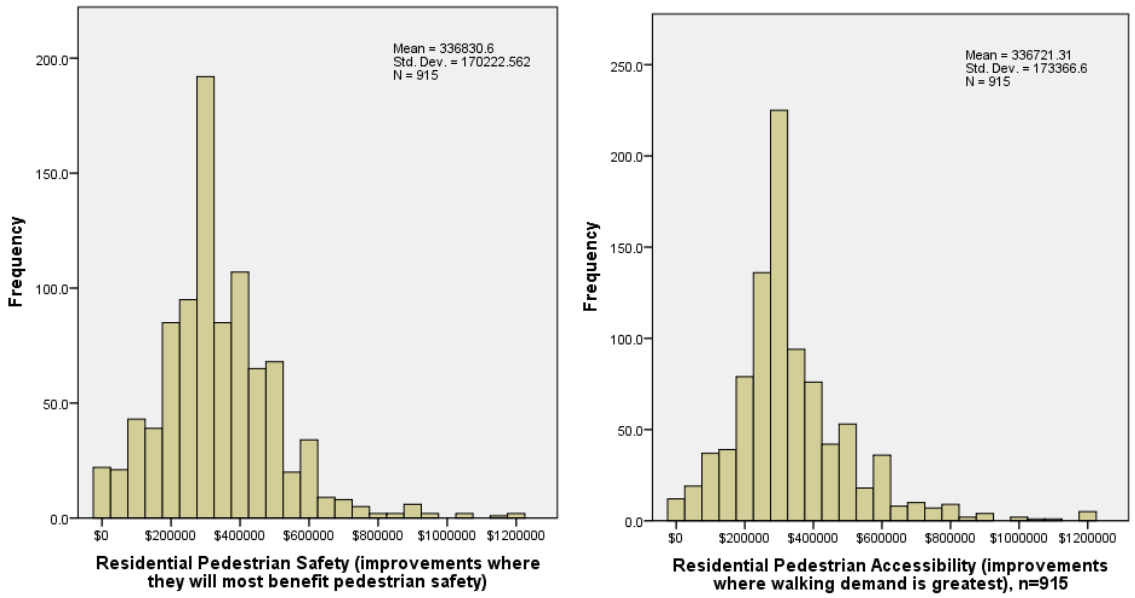


Figure 20: Sidewalk Funding Source Preferences

4.3.3 Preferences for Sidewalk Funding Allocation

To understand public preferences among the four investment priority areas when funding sources are limited and tradeoffs are present, the team asked participants to allocate funding to each area from a fixed total funding amount of $1.2 million. The survey asked participants to indicate priorities for both their place of residence and their place of work or school. The four graphs that make up Figure 21 below and on the next page show the results for place of residence funding allocation. Respondents that answered zero for all categories were removed.



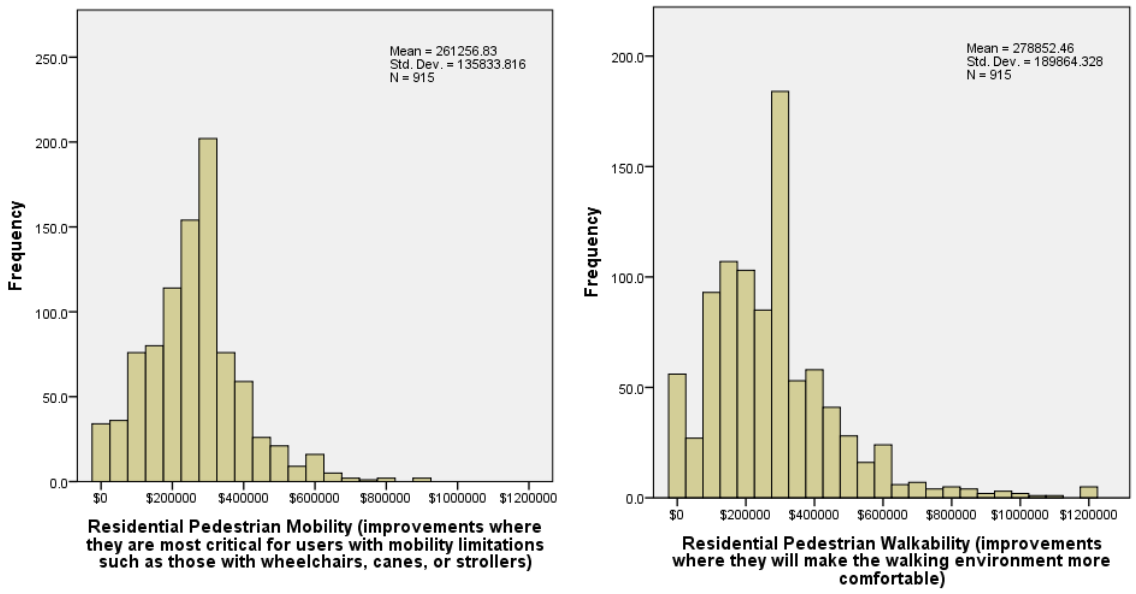
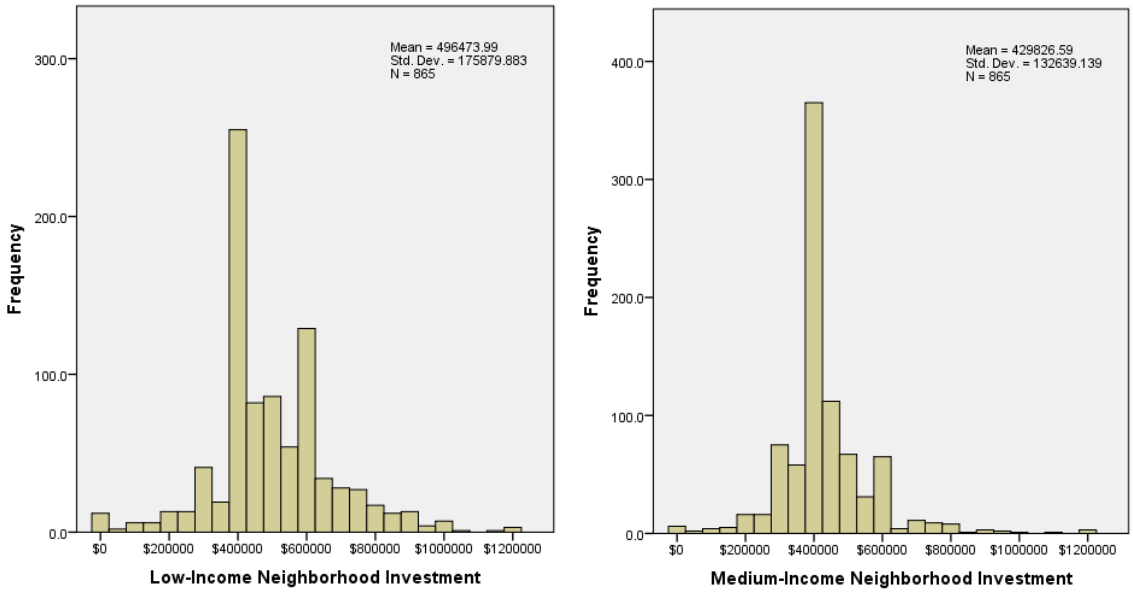


Figure 21: Results of Residential Area Pedestrian Funding Allocation Questions

In the case of the place of residence, survey participants had the highest average preference for improving pedestrian safety, closely followed by accessibility. Both categories had means of approximately $337,000. Allocations for walkability and mobility ranked third and fourth with means of approximately $279,000 and $261,000. Most respondents tended to weight each funding allocation category equally, at $300,000. Very few respondents chose to use over half of the total funding amount for any one category. The responses for work or school area funding allocation are rank exactly the same as residential. There is little difference in means or dispersion between the two sets of responses. The responses for funding allocation across pedestrian safety, accessibility, mobility, and walkability corroborate results for the infrastructure prioritization weighting section of the same categories. These results again indicate that using all four categories in funding prioritization decisions appears warranted.

In addition to infrastructure-based funding allocation, two sets of questions address geographic area based funding allocation. The first series of questions focus on neighborhood prioritization based on income level. Respondents were given the opportunity to allocate the same total funding amount as the previous section but between three neighborhood types. The survey identified low-income neighborhoods as the bottom 25% of household incomes, medium-income neighborhoods as the middle 25%-75% of household incomes, and high-income neighborhoods as the top 25% of household incomes. As in the previous section involving sliding-bar questions, respondents who allocated zero to each question were removed from the data set. The responses are shown in the three graphs that make up Figure 22.



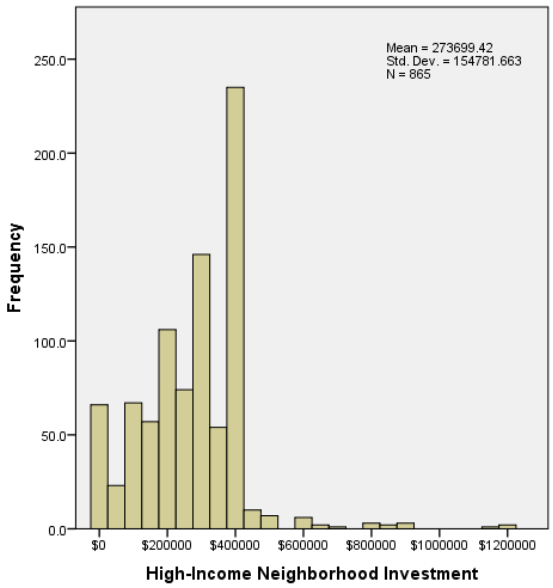


Figure 22: Results of Income-Level Geographic Funding Allocation Questions

Respondents mostly indicated that projects should be distributed equally throughout the city, but respondents had a slight preference for more funding going to low-income neighborhoods than medium-income neighborhoods, and more funding to medium-income neighborhoods than high-income neighborhoods. It is important to note that the mode of each graph indicated equal allocation at $400,000. Focusing purely on income-level of neighborhood could pose difficulties for an agency in allocating public funds.

The second set of questions asked respondents to rate potential criteria for location and criteria-based investments. Funding allocation proposals were presented to survey participants that included giving more money to neighborhoods with more residents, giving more money to neighborhoods with more households, allocating funds based on political districts such as city council districts or boroughs, providing more funds to business districts, providing more funds within walking distance of schools, bus stops, or

rail stations, or allocating more funds where more seniors live. For each of the eight questions, respondents were asked to rate each on a scale of 1, completely disagree, to 10, completely agree. The responses were averaged and are presented in Figure 23.

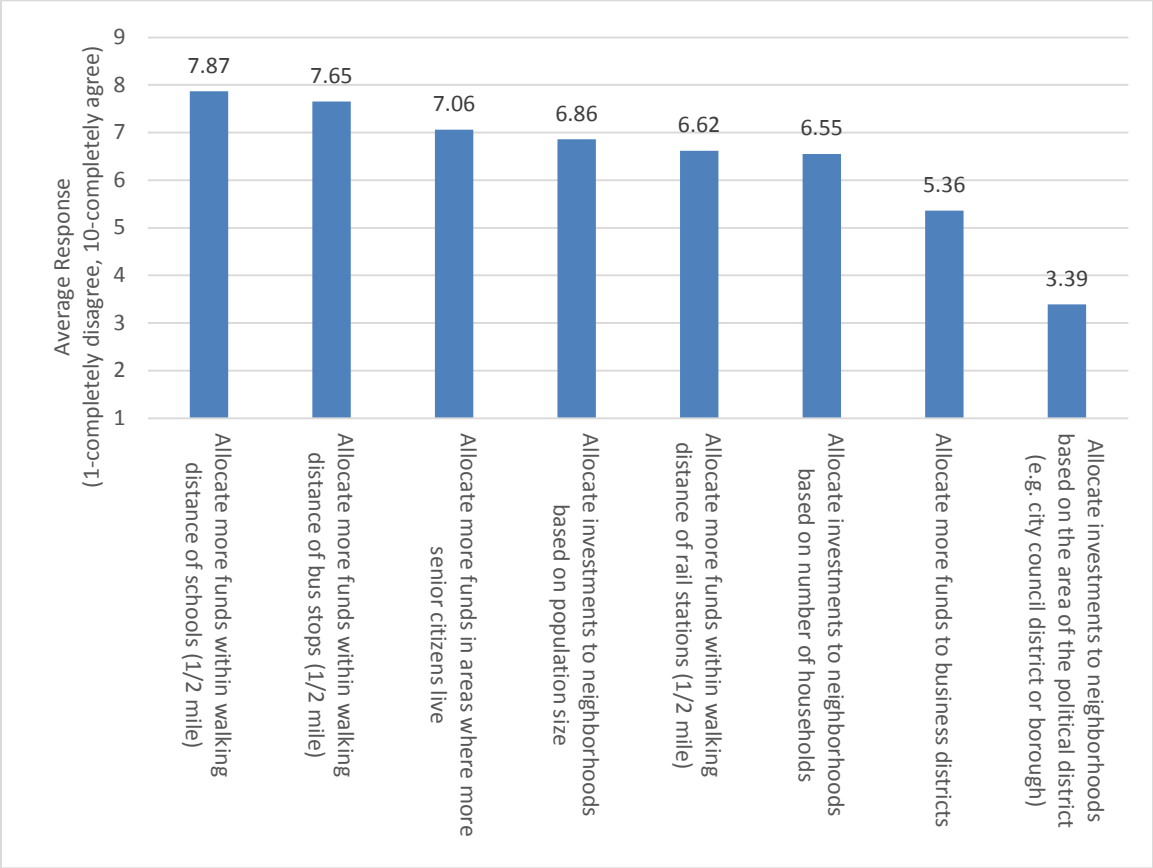


Figure 23: Results of Location and Criteria-Based Allocation Proposal Questions

Respondents strongly agreed that more funds should be invested in the immediate areas around schools, bus stops, and communities with a high number of senior citizens. Results indicate partial agreement that investments should be allocated to neighborhoods based on proximity to rail stations, population, and number of households. Responders mostly reported that funding for sidewalk improvements should not be prioritized to business districts or allocated by political district. These results show that respondents

tended to prefer allocation proposals that tended to benefit areas that seemed to need a better walking environment or criteria had some logic behind the way the money was allocated.

4.4 Optional Survey Responses

Following the main survey questions, the survey gave participants the choice of either exiting the survey, or continuing on to four additional question sets. These optional surveys asked participants detailed questions about what factors or priorities should be considered when assessing sidewalk improvements based on safety, accessibility, mobility, and walkability. If participants opted to take the optional surveys, the survey mechanism presented one of the surveys at random and continued in this manner until either the participant exited the survey or they completed all four additional surveys. The purpose of these surveys is to assess elements and factors that factors community members felt most contributed to pedestrian safety, accessibility, mobility, and walkability.

Each additional survey section consisted of a series of questions where respondents were asked to rate factors or priorities on a scale of one to ten. For analysis, each the average response for each question was computed. Between 216 and 227 participants participated in each of the optional surveys. The results indicate clear and interesting preferences for sidewalk improvement locations that could help in setting project priorities.

4.4.1 Optional Safety Survey Results

Among the 219 respondents that took the Optional Safety Survey, participants felt the most strongly about prioritizing safety improvements at locations where dangerous pedestrian and motorist behavior is observed, at established pedestrian crossings, and areas that have a history of pedestrian injuries and fatalities. Participants felt less strongly about prioritizing pedestrian safety improvements based on the roadway speeds, widths, or traffic volumes alone. Respondents indicated that marked crosswalk locations where vehicles don't stop for pedestrians are the most important locations for pedestrian safety improvements. They also indicated that generally intersections with broken or missing pedestrian signals, roadways with medium speeds, and places were people regularly jaywalk should receive higher priority for pedestrian safety improvements. The results of the optional safety survey are presented in Appendix D.

4.4.2 Optional Accessibility Survey Results

Among the 227 participants that took the Optional Accessibility Survey, participants indicated a preference for prioritizing pedestrian accessibility improvements where the public requests improvements. They indicated a strong preference for prioritizing accessibility improvements in denser areas with a mix of residential and commercial development than less dense areas with homogenous development types. Participants preferred completing long sidewalk network gaps over short and medium-length ones, and indicated a strong preference for improvements connecting to a variety of destinations, especially parks, but excluding industrial areas. The results of the optional accessibility survey are presented in Appendix E.

4.4.3 Optional Mobility Survey Results

Among the 216 participants that took the Optional Mobility Survey, participants indicated a preference for prioritizing pedestrian mobility improvements where obstructions are present, ramps are missing, or the physical condition of the sidewalk is a barrier. They also placed a high preference for improvements where sidewalks are under three feet in width. Participants didn't indicate as strong of a preference for areas with steep running slope or cross slopes. However, it is unlikely that many of the able-bodied respondents have attempted to use a wheelchair on a sidewalk with a steep cross slope. It would be interesting to survey the same participants after they participate in a wheelchair experience field activity. Locations that met ADA standards were identified as low priority. The results of the optional mobility survey are presented in Appendix F.

4.4.4 Optional Walkability Survey Results

Among the 216 participants that took the Optional Walkability Survey, participants indicated a strong preference for prioritizing pedestrian walkability improvements where the sidewalk has trip hazards (which is also a safety and mobility issue). Participants also indicated they felt fairly strongly about prioritizing walkability improvements along streets with moderate traffic volumes, no pedestrian-scaled lighting, and no pedestrian amenities such as benches, trash receptacles, and wayfinding. The average priority ratings in this section are notably lower than in the previous optional surveys. The results of the optional walkability survey are presented in Appendix G.

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5 Conclusions

The Community Sidewalk Preferences Online Public Interest Survey sought to gather data on two broad topics: perception of the walking environment and preferences for pedestrian infrastructure investments. The team wanted to assess what the public thinks about sidewalks in their community, how repairs should be prioritized, and how repairs should be financed. Over the period of six weeks, 1,067 community members of eight southeastern United States cities responded to 72 questions that gauged these areas of interest. The data collected can be used by public agencies to approach pedestrian infrastructure issues, seek public support funding mechanisms, and help prioritize incremental improvements.

Understanding the public's perception of the walking environment helps a public agency create a baseline condition of pedestrian infrastructure through the lens of community members. From analysis of the collected responses, sidewalk quality and availability is lacking more in residential than employment areas. Public agencies may want to enhance policies regarding sidewalks in residential areas. The higher scores in employment areas are most likely due to policies that target development and generate new or repaired sidewalks each time commercial parcels or the adjacent streets are redeveloped. Conversely, residential properties and their adjacent roadways typically do not experience reconstruction often and thus may not receive necessary sidewalk repairs or installations. Poor pedestrian infrastructure is more than an inconvenience, as it impacts mobility and accessibility. The data collected indicated that sidewalk presence around

home led to higher walking activity and thus access to positive benefits associated with walking.

A massive backlog of pedestrian infrastructure can cripple a city's will to begin improvements until funds are available to repair all deficiencies. To incrementally begin repairs, cities need to develop and finance an improvement plan that is acceptable to constituents. Survey responses show almost universally high level support for pedestrian infrastructure projects that address safety concerns near schools or bus stops, and even more so when requests for sidewalk connectivity are received from persons with impaired mobility. Data collected from this survey can help cities develop a blueprint for customizing their project prioritization methodology.

The most common funding mechanism for sidewalk repair and maintenance in the surveyed communities is to place the financial responsibility on the adjacent property owner. While cities may experience some degree of success with adjacent property owner financing mechanisms, survey respondents were overwhelmingly opposed to this funding mechanism. Given that all funding mechanisms presented to respondents in the survey (property taxes, bond issuance, etc.) ultimately require the public to pay for sidewalk repair and maintenance, public agencies should reconsider making adjacent property owners responsible for sidewalk infrastructure management. Understanding how community members perceive the walking environment and prefer to make investment decisions can generate a partnership between public agencies and their constituents that will build a better pedestrian transportation network.

6 Further Research

Even with this widespread and robust public outreach survey, a number of issues remain unaddressed with respect to sidewalk preferences:

- Several population subsets in the respondent pool were under-represented; most notably persons of color, persons with lower incomes, persons with lower levels of education, and apartment dwellers. Survey recruitment was based upon post card notification of residents by random address selection. Implementation of a standard random stratified travel diary survey recruitment approach would cost more, but should help ensure that these under-represented groups participate in proportion to population presence. Recruitment would consist of: 1) an initial post card notification; 2) large-format direct mail correspondence, paper survey with postage-paid return envelope, and Internet survey option; 3) direct telephone call reminder; 4) post card reminder; 5) and second large-format follow-up, A recalibrated outreach effort could also help support this recruitment effort and improve better representation of ADA-protected communities.

- Participation was facilitated through the Internet. An optional paper, mail-out/mail-back, format may enhance participation of some demographic groups.

- More discrete improvement preferences and specific examples of sidewalk improvements could be integrated as options in the survey to assist municipalities identify feature preferences desired by the community.

- Questions that ask respondents to choose between sidewalk improvements should yield useful results for city project prioritization. For example, respondents could choose between repairing a hazardous sidewalk, building a complementary sidewalk across the street from an existing one, or installing ramps at the intersection crosswalks. Simulating more specific decision-making processes, where options consist of similar investment cost, should help in the prioritization of pedestrian infrastructure features.

- In the process of implementing this survey, the research team discovered that cities are taking very different approaches cities to managing their pedestrian infrastructure. The research team believes a similar survey of public agencies could benefit communities across the country. The proposed survey of public officials would seek to identify the varying degrees of responsibility for pedestrian infrastructure management and identify best practices in sidewalk asset management. Paired with public perception of the walking environment, this survey of public officials could also be used to assess the effectiveness of the varied sidewalk management and funding approaches and the benefits and weaknesses of the approaches by city age, size, and level of urban development. Information from this survey could lead to programmatic and policy changes that help restructure sidewalk management to maximize cost efficiency and productivity.

- Given that most respondents did not identify sidewalk cross-slopes greater than 2% as a significant factor that limits mobility, it would be interesting to survey the

same participants before and after participating in a wheelchair experience field activity. Based upon classroom activities conducted at Georgia Tech, the team expects that once able-bodied individuals experience sidewalk defects as a wheelchair user, their prioritization criteria may significantly change.

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Appendix A: Survey Mechanism

Sidewalk Prioritization Survey Questions

Introduction

The survey is intended to help the team better understand public perceptions regarding the walking environment and priorities for pedestrian infrastructure. The survey input data will also be compared to the results of other communities across the nation. The main section of the survey consists of 5 sections and is estimated to take approximately 25 minutes. It asks questions on your background, walking habits, walking in your community, and personal priorities for sidewalk improvements in your community. Following the primary survey, survey takers will be presented with the option of answering four additional question sets that ask more in-depth information on sidewalk prioritization preferences. These sections take around 5 minutes each (20 minutes in total) to complete. All responses will remain completely confidential. We appreciate your participation and your dedication to improving the walking environment in your community!

Survey Stage I – Background Information and Walking Environment Perceptions (5 mins)

Initial Geographic Questions (1 min):

The following questions will ask you some basic background questions to understand basic information about where you live and work and your general walking habits.

- **What city are you taking this survey for?**
    - Birmingham, AL
    - Clarkston, GA
    - Columbus, GA
    - Douglasville, GA
    - Gainesville, FL
    - Raleigh, NC
    - Starkville, MS
    - Thomasville, GA
    - Other (specify)
    - Prefer not to respond
- **Do you live inside the city limits of the community you specified?**
    - Yes
    - No
    - I don't know
    - Prefer not to respond

- **Do you work inside the city limits of the community you specified?**
    - Yes
    - No
    - I don't know
    - Prefer not to respond
- **What is your home zip code?**
    - Numeric: Zip Code
    - Prefer not to respond
- **What is your work zip code? (leave blank if unemployed)**
  *Note: School zip code for full-time students
    - Numeric: Zip Code
    - I don't work
    - I don't know (Will include the option to enter text description of work location. e.g. cross-streets)
    - Prefer not to respond
- **I would describe my walking activity as**
    - Very active (I walk on a daily basis to multiple locations)
    - Active (I walk a few days a week to multiple locations)
    - Somewhat Active (I walk a few days a month to multiple locations)
    - Not Very Active (I walk when I have to)
    - Inactive (I do not walk much at all)
    - Prefer not to respond

Home Walking Environment Question Set (1 min):

The following questions will ask you about your perceptions of the current walking environment in your home community.

- **Do you have sidewalks serving your home location?**
    - Almost all streets have sidewalks
    - Most streets have sidewalks
    - Some streets have sidewalks
    - Few streets have sidewalks
    - No streets have sidewalks
    - Prefer not to respond
- **What best describes the quality of the walking environment for the community you live in?**
    - Excellent
    - Very good
    - Good
    - Fair
    - Poor
    - Prefer not to respond
- **Check all the statements from the following list that discourage you from walking as frequently as you would like around your home walking environment.**
    - Places of interest (parks, shops, restaurants, schools, work, transit stops, etc.) are within walking distance, but are not available
    - Places of interest are within walking distance, but sidewalks are poorly designed or maintained
    - There are no places of interest within walking distance, even though sidewalks are available
    - There are no places of interest within walking distance, nor are any sidewalks available
    - Crosswalks are missing where they are needed to connect to places of interest I want to go
    - Crosswalks are poorly designed or poorly maintained where they are needed to connect to places of interest I want to go
    - Sidewalks are uncomfortably close to the street
    - Sidewalks are uncomfortable to walk on because of high traffic volumes or traffic speeds next to the sidewalk
    - Crosswalks are uncomfortable because they cross wide roads
    - The walking environment is uncomfortable in summer months because of a lack of shade
    - The walking environment is uncomfortable because it looks unattractive

    - The walking environment is uncomfortable because it lacks amenities such as pedestrian furniture, pedestrian wayfinding signage, and/or bus shelters
    - The walking environment is uncomfortable because I feel vulnerable to crime when walking
    - Other, specify in box
    - Prefer not to respond
- **Please provide any comments that you feel are applicable to your home walking environment**

Work/School Walking Environment Question Set (1 min):

The following questions will ask you about your perceptions of the current walking environment in your work community (or school community if you are a student).

- **Do you have sidewalks serving your work location, or school location if you are a student?**
    - Almost all streets have sidewalks
    - Most streets have sidewalks
    - Some streets have sidewalks
    - Few streets have sidewalks
    - No streets have sidewalks
    - I neither work nor am I a student
    - Prefer not to respond
- **What best describes the quality of the sidewalks near your work, or school location if you are a student?**
    - Excellent
    - Very good
    - Good
    - Fair
    - Poor
    - I neither work nor am I a student
    - Prefer not to respond

- **Check all statements from the following list that discourage you from walking as frequently as you would like around your work walking environment (or school walking environment if you are a student)**
    - Places of interest (parks, shops, restaurants, schools, work, transit stops, etc.) are within walking distance, but are not available
    - Places of interest are within walking distance, but sidewalks are poorly designed or maintained
    - There are no places of interest within walking distance, even though sidewalks are available
    - There are no places of interest within walking distance, nor are any sidewalks available
    - Crosswalks are missing where they are needed to connect to places of interest I want to go
    - Crosswalks are poorly designed or poorly maintained where they are needed to connect to places of interest I want to go
    - Sidewalks are uncomfortably close to the street
    - Sidewalks are uncomfortable to walk on because of high traffic volumes or traffic speeds next to the sidewalk
    - Crosswalks are uncomfortable because they cross wide roads
    - The walking environment is uncomfortable in summer months because of a lack of shade
    - The walking environment is uncomfortable because it looks unattractive

    - The walking environment is uncomfortable because it lacks amenities such as pedestrian furniture, pedestrian wayfinding signage, and/or bus shelters
    - The walking environment is uncomfortable because I feel vulnerable to crime when walking
    - Other, specify in box
    - Prefer not to respond
- **Please provide any comments that you feel are applicable to your work walking environment, or school walking environment if you are a student**

Walking from Home and Work/School Question Set (2 min)

The following questions will ask you some questions to understand your general walking habits around your home and place of work or school.

<u>Walking from Home Questions Set</u>

- **How often do you walk from home to work, or school if you are a student?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home to a local school (if you are a student, this pertains to a different school than the one you are enrolled in)**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home to daycare?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home to social activities?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home to recreational activities?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home to shopping?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home for services (post office, haircut, doctor appointment, etc.)?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home for dining?**
  - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from home for exercise, to walk a pet, or just to get out and about?**

    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often to you walk from home to access transit?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)

Walking from Work Question Set

- **How often do you walk from work (or school if you are a student) to home?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to a local school? (if you are a student, this pertains to a different school than the one you are enrolled in)**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to daycare?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to social activities?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to recreational activities?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to shopping?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) for (post office, haircut, doctor appointment, etc.)?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student) to dining?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)
- **How often do you walk from work (or school if you are a student), for exercise, to walk a pet, or just to get out and about?**
    - Single Option (7+ times per week, 4-6 times per week, 1-3 times per week, 1-3 times per month, Less than once per month, never, I don't go to this location, Prefer not to respond)

Survey Stage II – Pedestrian Investment Priority Questions (3 mins)

The research team is assessing the relative importance of pedestrian safety, connectivity, mobility and comfort in decisions to improve sidewalks, ramps, and pedestrian crossings. The following questions allow you to express your views about how pedestrian investments should be prioritized in your community.

Pedestrian Funding Question

Funding for pedestrian improvements can potentially come from a variety of sources. Please indicate whether you agree or disagree with using the following funding options for making pedestrian improvements in your community.

(Selection options: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Prefer not to respond):

- **Requirements in development codes and ordinances:** Requiring new developments to include sidewalks and pedestrian connectivity to, from, and throughout the development
- **Developer impact fees:** Assessing fees on new development for pedestrian improvements in other neighborhoods
- **Parking fees:** Utilizing a portion of the revenue from parking fees and parking fines to fund pedestrian improvements
- **Local property taxes:** Utilizing a portion of local property tax revenue to fund pedestrian improvements
- **Local sales taxes:** Utilizing a portion of local sales tax revenue to fund pedestrian improvements
- **State Income taxes:** Utilizing a portion of state income tax revenue to fund pedestrian improvements
- **Individual property owner assessments:** The adjacent property owner is financially responsible for the provision and maintenance of sidewalks adjacent to their property
- **Special-purpose local-option sales tax (SPLOST):** A voter-approved local sales tax addendum that pays for local infrastructure improvements
- **Gas tax funding:** Utilize state and federal funding sources that are generated from gas tax revenue for pedestrian infrastructure improvements
- **Grant funding:** Applying for grants from public or private sources
- **Business Improvement District:** Imposing a tax district in commercial areas to pay for pedestrian improvements within that district
- **Tax Allocation Districts:** Establishing a district that bonds against future increased tax revenues to pay for pedestrian (and potentially other) investments within that district. This funding mechanism assumes that future tax revenues for the district will be higher as a result of present investments

Pedestrian Investment Priority Questions

The research team is assessing the relative importance of pedestrian safety, accessibility, mobility, and comfort in decisions to improve sidewalks, ramps, and pedestrian crossings. The following questions allow you to express their views about how pedestrian investments should be prioritized in your community.

Pedestrian Safety: Safety investments focus on making improvements to sidewalks and pedestrian crossings to improve pedestrian safety. Investments are often focused in areas where pedestrian-involved crashes are observed.

- **On a scale of 1 to 10 with 1 being lowest and 10 being highest, how important is pedestrian safety in the decision of where to allocate funds to improve pedestrian sidewalks and crossings?**
    - Single Value: 1,2, 3, 4, 5, 6, 7, 8, 9, 10, Prefer not to respond

Pedestrian Accessibility: Accessibility investments focus on improving sidewalks and pedestrian crossings where walking demand is the greatest, such as areas where many people live, work, shop, and play.

- **On a scale of 1 to 10 with 1 being lowest and 10 being highest, how important is pedestrian accessibility in the decision of where to allocate funds to improve pedestrian sidewalks and crossings?**
    - Single Value: 1,2, 3, 4, 5, 6, 7, 8, 9, 10, Prefer not to respond

Pedestrian Mobility: Mobility investments focus on sidewalks and pedestrian crossing improvements where they are most critical for users with mobility limitations, such as adding ramps for wheelchair and stroller users and safeguards for pedestrians with visual impairments.

- **On a scale of 1 to 10 with 1 being lowest and 10 being highest, how important is pedestrian mobility in the decision of where to allocate funds to improve pedestrian sidewalks and crossings?**
    - Single Value: 1,2, 3, 4, 5, 6, 7, 8, 9, 10, Prefer not to respond

Pedestrian Walkability: Walkability investments focus on making sidewalks and pedestrian crossings more pleasant and comfortable for all users, such as widening the buffer between the sidewalk and the street, planting trees, adding lighting, etc.

- **On a scale of 1 to 10 with 1 being lowest and 10 being highest, how important is pedestrian walkability in the decision of where to allocate funds to improve pedestrian sidewalks and crossings?**
    - Single Value: 1,2, 3, 4, 5, 6, 7, 8, 9, 10, Prefer not to respond

Pedestrian Investment Allocation Questions

- **Prioritizing Residential Area Investment: If your residential community had $1.2 million to spend on sidewalks, how much should go to pedestrian safety, accessibility, mobility, and walkability?**
    - Sliding bars allow you to invest in $50,000 intervals, totaling $1.2 million) (checkboxes allow you to lock sliding bar values, dropdown boxes allow you to select a specific amount)
        - Pedestrian Safety (improvements where they will most benefit pedestrian safety)
        - Pedestrian Accessibility (improvements where walking demand is greatest)
        - Pedestrian Mobility (improvements where they are most critical for users with mobility limitations such as those with wheelchairs, canes, or strollers)
        - Pedestrian Walkability (improvements where they will make the walking environment more comfortable)
        - Prefer not to respond
- **Do you have any additional comments about prioritizing sidewalks and pedestrian crossings in residential areas?**
- **Prioritizing Work Area Investment:** If your work community had $1.2 million to spend on sidewalks, how much should go to pedestrian safety, accessibility, mobility, and walkability?
    - Sliding bars allow you to invest in $50,000 intervals, totaling $1.2 million) (checkboxes allow you to lock sliding bar values, dropdown boxes allow you to select a specific amount)
        - Pedestrian Safety (improvements where they will most benefit pedestrian safety)
        - Pedestrian Accessibility (improvements where walking demand is greatest)
        - Pedestrian Mobility (improvements where they are most critical for users with mobility limitations such as those with wheelchairs, canes, or strollers)
        - Pedestrian Walkability (improvements where they will make the walking environment more comfortable)
        - Prefer not to respond
- **Do you have any additional comments about prioritizing sidewalks and pedestrian crossings in employment areas?**

Survey Stage III – Geographic Preferences (3 mins)

This section asks about how pedestrian facility improvement funds might be allocated into various geographic regions. The following questions allow you to express your views about how pedestrian investments should be allocated.

- **Assume that your jurisdiction has $1 million to spend on pedestrian improvements, please rate each funding proposal below on a scale of 1 (completely disagree) to 10 (completely agree)**
    - Allocate investments to neighborhoods based on population size, giving more money to neighborhoods with more residents
    - Allocate investments to neighborhoods based on number of households, giving more money to neighborhoods with more households
    - Allocate investments to neighborhoods based on the area of the political district (e.g. city council district or borough)
    - Allocate more funds to business districts
    - Allocate more funds within walking distance of schools (1/2 mile)
    - Allocate more funds within walking distance of bus stops (1/2 mile)
    - Allocate more funds within walking distance of rail stations (1/2 mile)
    - Allocate more funds in areas where more senior citizens live
    - Prefer not to respond
- **Assume that your region has $1.2 million to spend on pedestrian improvements, please indicate on the sliding bars (in $50,000 intervals) the percentage of the funds that should be dedicated to sidewalk improvements in the following areas.**
    - (checkboxes allow you to lock sliding bar values, dropdown boxes allow you to select a specific amount)
        - Low-income neighborhoods (bottom 25% by household income)
        - Medium-income neighborhoods (25%-75% by household income)
        - High-income neighborhoods (top 25% by household income)
        - Prefer not to respond
- **Do you have any additional comments about prioritizing sidewalks and pedestrian crossings by geographic area?**

Stage IV – In-depth demographic questions (4 mins)

The research team would like to know some basic background information about you to understand how well survey participants represent the community population. As a reminder, all responses submitted will remain confidential.

- **What best describes your gender?**
  - Male
  - Female
  - Other
  - Prefer not to respond
- **What is your age group?**
  - 18-25
  - 26-35
  - 36-45
  - 46-55
  - 56-65
  - 66-75
  - 76+
  - Prefer not to respond
- **How many motor vehicles does your household have access that are driven more than 3,000 miles per year?**
  - 1
  - 2
  - 3+
  - Prefer not to respond
- **How would you describe your current walking ability?**
  - I can walk and have no conditions that affect my walking ability
  - I can walk and have a physical condition that limits my walking ability
  - I can walk and have a vision condition that limits my walking ability
  - I can walk and have a cognitive condition that limits my walking ability
  - I can walk and my walking ability is limited for other reasons
  - I require a wheeled mobility device (e.g., wheelchair or scooter)
  - Prefer not to respond
- **How many adults 18 years old and older live in your household?**
  - 0
  - 1
  - 2
  - 3+
  - Prefer not to respond
- **How many children 17 years old and younger live in your household?**
  - 0
  - 1
  - 2
  - 3+
  - Prefer not to respond

- **Do you own or rent your home?**
    - Rent
    - Own/Buying
    - Other (Specify)
    - Don't know
    - Prefer not to respond

- **How long has your household been living at the current address?**
    - Less than 6 months
    - 6 months to 1 year
    - 1 – 2 years
    - 2 – 5 years
    - 5 – 10 years
    - More than 10 years
    - Prefer not to respond
- **What educational level have you completed?**
    - Not a high school graduate, 12th grade or less
    - High school graduate Some college credit but no degree
    - Associate or technical school degree
    - Bachelor's or undergraduate degree
    - Graduate degree (includes professional degree like MD, DD, or JD)
    - Prefer not to respond
- **What is your household income?**
    - Less than $15,000
    - $15,000 - 24,999
    - $25,000 - 34,999
    - $35,000 - 49,999
    - $50,000 - 74,999
    - $75,000 - $99,999
    - $100,000 - $149,999
    - $150,000 - $300,000
    - $300,000 and above
    - Don't know, n/a
    - Prefer not to respond
- **What best describes your race/ethnicity?**
    - White
    - African-American
    - Asian
    - Native American, Alaskan Native
    - Pacific Islander, Native Hawaiian
    - Hispanic, Mexican, Latino
    - Multi-racial
    - Other
    - Don't know
    - Prefer not to respond

- **What best describes your employment status? (check all that apply)**
  - Full-time employed
  - Part-time employed in one job
  - Part time employed in a second job
  - Volunteer (unpaid part time job)
  - Retired
  - Homemaker
  - Unemployed and looking for work
  - Unemployed, but not seeking employment
  - Student (part-time or full-time)
  - Other, specify in box below
  - Don't know
  - Prefer not to respond
- **What best describes your job classification? (check all that apply)**
  - Management
  - Business and financial
  - Computer and mathematical
  - Architecture and engineering
  - Life, physical, and social science
  - Community and social services
  - Legal
  - Education, training, and library
  - Arts, design, entertainment, sports, and media
  - Healthcare practitioners and technical specialists
  - Healthcare support
  - Protective service
  - Preparation and serving related
  - Building and grounds cleaning and maintenance
  - Personal care and service
  - Sales and related
  - Office and administrative support
  - Farming, fishing, and forestry
  - Other, specify in box below
  - Don't know
  - Prefer not to respond

Stage V – Optional In-Depth Accessibility

**This section of the survey will be optional for public participants. Public participants will be asked if they would like to answer additional questions that will assist researchers in determining public preferences for safety, connectivity, mobility, and walkability. There are a total of four question sets, selected at random without repeat, that take around 5 minutes each to complete (a total of 20 minutes to complete all four). At the end of each additional question set, public participants have the option of answering another question set until all four sets have been completed, or continuing on to stage VI at the end of each set. Expert survey participants will be required to answer all four sections.*
Thank you for your participation in the follow-up survey section. Your responses will be helpful in guiding pedestrian infrastructure improvements in your community. There are four optional in-depth question sets on respondent perceptions of pedestrian safety, connectivity, mobility, and walkability. Each of these take approximately five minutes to complete. The team would appreciate your input on one or multiple of these question sets if you are willing to answer them. You can stop answering questions and quit the survey at any time. All answers will continue to remain confidential.

Accessibility-based pedestrian improvement selection factors (5 min)

Accessibility investments focus on improving sidewalks and pedestrian crossings where walking demand is the greatest, such as areas where many people live, work, shop, and play. The researchers would like to obtain your opinions how pedestrian investments should be evaluated in terms of accessibility based on factors that are commonly used as metrics for pedestrian connectivity.

- **On a scale of 1 to 10 with 1 being least important and 10 being most important, how important is each of the following factors in selecting sites for accessibility-based pedestrian improvements?**

  Absence of sidewalks

  - Absence of sidewalks connecting to shopping districts
  - Absence of sidewalks connecting to services
  - Absence of sidewalks connecting to job centers
  - Absence of sidewalks connecting to residential areas
  - Absence of sidewalks connecting to industrial areas
  - Absence of sidewalks connecting to schools or daycares
  - Absence of sidewalks connecting to transit stops
  - Absence of sidewalks connecting to parks and other public amenities
  - Prefer not to respond

  Sidewalks needing repair

  - Sidewalks needing repair connecting to shopping districts
  - Sidewalks needing repair connecting to services

- o Sidewalks needing repair connecting to job centers
- o Sidewalks needing repair connecting to residential areas
- o Sidewalks needing repair connecting to industrial areas
- o Sidewalks needing repair connecting to schools or daycares
- o Sidewalks needing repair connecting to transit stops
- o Sidewalks needing repair connecting to parks and other public amenities
- o Prefer not to respond

Residential Density

- o Areas with primarily single-family homes
- o Areas with a mix of single-family homes and multi-family housing
- o Areas with mostly multi-family housing
- o Prefer not to respond

Commercial Density

- o Areas with mostly standalone office/retail buildings
- o Areas with an even mix of standalone and connected office/retail buildings of mixed heights
- o Areas with mostly connected office/retail buildings 2 stories or more
- o Prefer not to respond

Mix of land uses

- o Primarily residential areas with little or no commercial development (retail and jobs)
- o Primarily residential areas with some commercial development
- o Areas that have an even mix of residential and commercial development
- o Areas that are primarily commercial with some residential development
- o Areas that are mostly commercial with little or no residential development
- o Prefer not to respond

Sidewalk gaps

- o Short gaps in the sidewalk network: 500 feet or less segments that would bridge two sidewalk sections
- o Moderate gaps in the sidewalk network: 500 feet to ¼ mi segments that would bridge two sidewalk sections
- o Long gaps in the sidewalk network: over ¼ mi segments that would bridge two sidewalk sections
- o Prefer not to respond

Sidewalk requests

- Locations where the public requests new sidewalk connections
- Locations where individuals with disabilities request new sidewalk connections
- Locations where the public requests sidewalk maintenance
- Locations where individuals with disabilities request sidewalk maintenance
- Prefer not to respond

- **Do you have any other comments about connectivity-based pedestrian improvement selection factors?**

Mobility-based pedestrian improvement selection factors (4 min)

Mobility investments focus on sidewalks and pedestrian crossing improvements where they are most critical for users with mobility limitations, such as adding ramps for wheelchair and stroller users and safeguards for pedestrians with visual impairments. The researchers would like to obtain your opinions how pedestrian investments should be evaluated in terms of mobility based on factors that are commonly used as metrics for pedestrian mobility.

- **From the options presented below, indicate which locations you feel should receive the highest priority when selecting sites for safety-based pedestrian improvements. Rank the options on a scale of 1 to 10 with 1 indicating the lowest priority, and 10 indicating the highest priority.**

Sidewalk width

Image A *Image B* *Image C* *Image D*

- o Locations where the sidewalk is less than 3 feet in width (example: image A)
- o Locations where the sidewalk is 3 to 3.9 feet in width (example: image B)
- o Locations where the sidewalk is 4 to 4.9 feet in width (example: image C)
- o Locations where the sidewalk is 5 feet or more in width (example: image D)
- o Prefer not to respond

Sidewalk running slope (see image for example)

Example of sidewalk running slope

- o Sidewalk running slope is flat or slight (less than 5% slope)
- o Sidewalk running slope is moderate (from 5%-8.33% slope)
- o Sidewalk running slope is steep (over 8.33% slope)
- o Prefer not to respond

Sidewalk cross slope (see image for example)

Example of moderate or steep sidewalk cross slope

- o Sidewalk cross-slope is flat or slight (2% cross slope or less)
- o Sidewalk cross-slope is moderate or steep (over 2% cross slope)
- o Prefer not to respond

Sidewalk surface (see image for example)

Example of sidewalk cracks and gaps

- o Smooth surface with undetectable surface cracks or gaps
- o Detectible surface cracks or gaps, but less than ½ inch wide
- o Detectible surface cracks or gaps, ½ inch wide or wider
- o Prefer not to respond

Sidewalk obstructions (see images for examples)

Example of vertical sidewalk obstruction

Example of horizontal sidewalk obstruction

- o No obstructions in the pedestrian path of travel
- o Presence of horizontal or vertical obstructions in path of travel, but a 3' clear path is still present
- o Presence of horizontal or vertical obstructions in path of travel, but a 3' clear path is not present
- o Prefer not to respond

Sidewalk uplift (see images for examples)

¼ to ½ inch change in sidewalk level

Over ½ inch change in sidewalk level

- o All changes sidewalk level are less than ¼ inch
- o ¼ to ½ inch abrupt change in sidewalk level
- o over ½ inch abrupt change in sidewalk level
- o Prefer not to respond

Curb ramps (see images for examples)

Ramp Present, meets ADA Standards

Ramp Present, doesn't meet ADA Standards

- Presence of a curb ramp that meets ADA standards
- Presence of a curb ramp that doesn't meet ADA standards
- Absence of a curb ramp
- Prefer not to respond

- **Do you have any other comments about mobility-based pedestrian improvement selection factors?**

Safety-based pedestrian improvement selection factors (5 min)

Safety investments focus on making improvements to sidewalks and pedestrian crossings to improve pedestrian safety. The researchers would like to obtain your opinions how pedestrian investments should be evaluated in terms of safety based on factors that are commonly used as metrics for pedestrian safety.

- **On a scale of 1 to 10 with 1 being least important and 10 being most important, how important is each factor in selecting sites for safety-based pedestrian improvements?**

  Pedestrian injury and fatality locations

  - Locations where pedestrians were injured in the last three years
  - Locations where children were injured in the last three years
  - Locations where seniors were injured in the last three years
  - Locations where pedestrians were killed in the last three years
  - Locations where children were killed in the last three years
  - Locations where seniors were killed in the last three years
  - Prefer not to respond

  Roadway traffic volumes (number of cars)

  - Low-volume neighborhood streets
  - Streets with moderate traffic volumes such as those connecting several neighborhoods
  - Streets with high traffic volumes such as those leading to interstate highways
  - Prefer not to respond

  Number of roadway lanes in both directions

  - Roadways 2 lanes or less
  - 3 lane roadways
  - 4 lane roadways
  - 5 lane roadways
  - 6+ lane roadways
  - Prefer not to respond

  Roadway speeds

  - Roadways with average speeds below 25 MPH
  - Roadways with average speeds of 25-34 MPH
  - Roadways with speeds of 35-44 MPH
  - Roadways with average speeds at or above 45 MPH
  - Prefer not to respond

Roadway crossings

- Locations where crosswalks are missing
- Locations were regular jaywalking is observed
- Prefer not to respond

Pedestrian roadway crossings at intersections with traffic signals

- Crossing locations at intersections where both crosswalk and pedestrian 'walk/don't walk' signals are missing
- Crossing locations at intersections where crosswalks are present, but pedestrian 'walk/don't walk' signals are missing or don't work
- Crossing locations at intersections where pedestrian 'walk/don't walk' signals are present and working, but crosswalks are missing or worn away

Pedestrian roadway crossings between intersections with traffic signals or stop signs (mid-block pedestrian crossings)

- Locations without a marked crosswalk where people regularly jaywalk
- Locations with a marked crosswalk where cars don't stop for pedestrians trying to cross
- Locations with a marked crosswalk where pedestrians can't find a large enough gap in traffic to cross safely

- **Do you have any other comments about safety-based pedestrian improvement selection factors?**

Walkability-based pedestrian improvement selection factors (5 min)

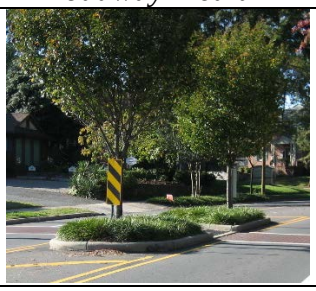
Walkability investments focus on making sidewalks and pedestrian crossings more pleasant and comfortable for all users, such as widening the buffer between the sidewalk and the street, planting trees, adding lighting, etc. The researchers would like to obtain your opinions how pedestrian investments should be evaluated in terms of walkability based on factors that are commonly used as metrics for pedestrian walkability.

- **From the options presented below, indicate which locations you feel should receive the highest priority when selecting site for walkability-based pedestrian improvements. Rank the options on a scale of 1 to 10 with 1 indicating the lowest priority, and 10 indicating the highest priority.**

  Sidewalk buffer (a spatial or physical separation from motor vehicle traffic)

  - o A sidewalk with no sidewalk buffer
  - o A sidewalk with no landscaped buffer, but separated from motor vehicle traffic by bike lanes, paved shoulder, and/or curb-side parking
  - o A sidewalk separated from motor vehicle traffic by a landscaped buffer between the sidewalk and road only
  - o A sidewalk separated from motor vehicle traffic by both a landscaped buffer and bike lanes, paved shoulder, and/or curb-side parking
  - o Prefer not to respond

  Presence of street trees (see images for examples)

Trees in the Sidewalk Buffer	*Trees in the Roadway Median*	*Trees Next to Sidewalk Opposite the Roadway*
		

(img: Gilman. E, 2015)

  - o A sidewalk with no street trees
  - o A sidewalk with existing street trees planted in the sidewalk buffer
  - o A sidewalk with existing street trees planted in the roadway median
  - o A sidewalk with existing street trees planted next to the sidewalk opposite the roadway
  - o A sidewalk with existing street trees planted in multiple locations along the street
  - o Prefer not to respond

Presence of street lighting

- o A sidewalk with no existing lighting
- o A sidewalk with existing street lighting for vehicles
- o A sidewalk with existing pedestrian-scale lighting along the sidewalk
- o A sidewalk with both existing vehicle and pedestrian-scale street lighting
- o Prefer not to respond

Presence of pedestrian amenities (ex: street furniture, pedestrian wayfinding signage, landscaped planting beds, etc.)

- o A sidewalk with no pedestrian amenities
- o A sidewalk with existing street furniture
- o A sidewalk with existing pedestrian wayfinding signage
- o A sidewalk with existing landscaped planting beds
- o A sidewalk with a combination of existing street furniture, wayfinding signage, and landscaped planting beds
- o Prefer not to respond

Traffic calming measures to reduce vehicle speeds (see images for examples)

Curb Extensions/ Bulb-outs	*Speed Humps/ Speed Tables*	*Lane narrowing (white lines added)*	*Road diet/ Lane reduction*

(img: FHWA)

- o A street with no existing traffic calming
- o A street where speed limits have been reduced
- o A street with existing curb extensions/bulb-outs
- o A street with existing speed humps/tables
- o A street where lanes have been narrowed
- o A street where a road diet/lane reduction has been implemented
- o A street with two or more of the above traffic calming measures implemented
- o Prefer not to respond

Traffic volume of adjacent street effect on pedestrian comfort

- o A street with lower traffic volumes such as neighborhood streets
- o A street with moderate traffic volumes such as roadways with multiple lanes in either direction connecting several neighborhoods
- o A street with high traffic volumes such as those with multiple lanes in either direction connecting to interstate highways
- o Prefer not to respond

Sidewalk surface condition effect on pedestrian comfort

- o A sidewalk with no surface trip hazards
- o A sidewalk with minor surface trip hazards
- o A sidewalk with major surface trip hazards
- o Prefer not to respond

Walking environment effect on pedestrian comfort

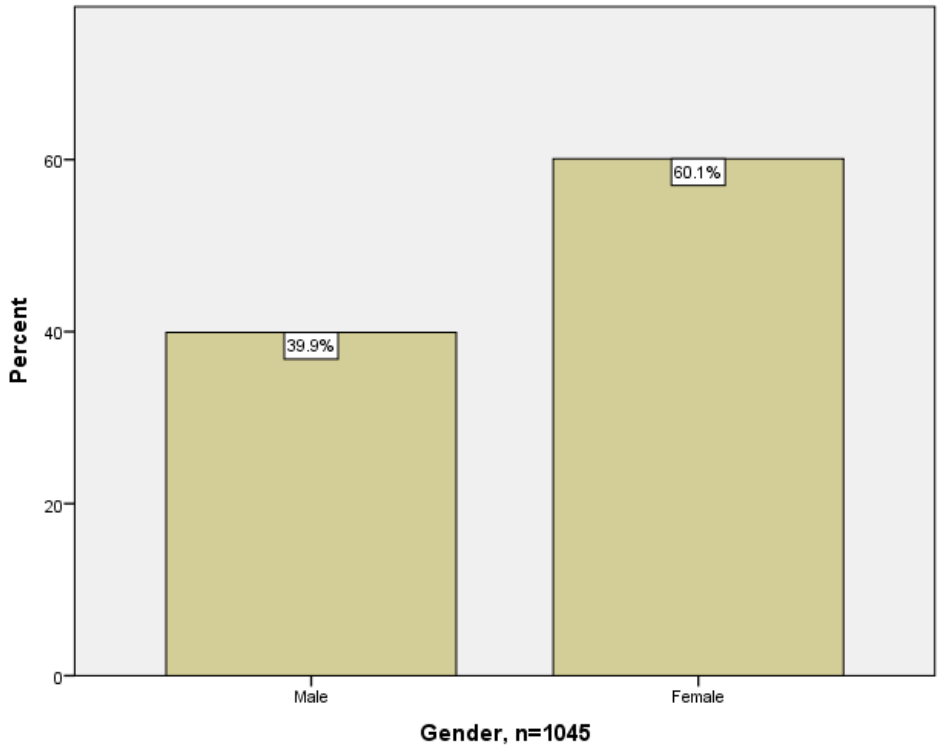
- o A walking environment with the presence of graffiti
- o A walking environment with the presence of litter
- o A walking environment with the sidewalk next to or through a construction site
- o A walking environment where surrounding buildings are abandoned or poorly kept
- o A walking environment where surrounding land is vacant or poorly kept
- o A walking environment with perceived hiding spaces due to vegetation, structures, or lack of lighting
- o A walking environment with an absence of other people walking
- o A walking environment with two or more of these factors present
- o Prefer not to respond

Do you have any other comments about walkability-based pedestrian improvement selection factors?

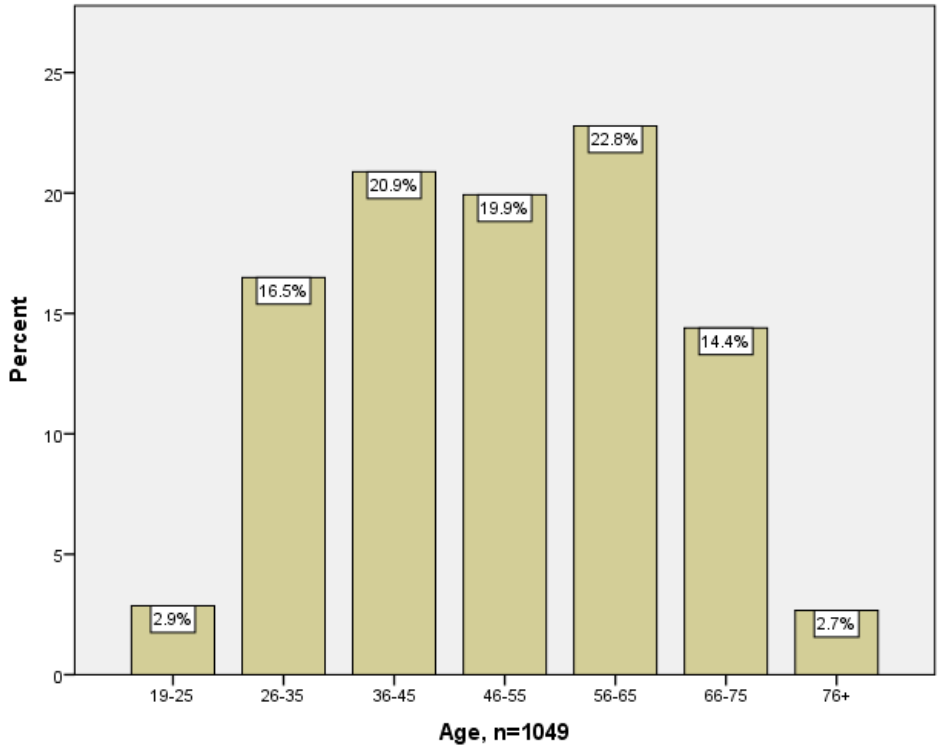
Appendix B: Response Results for each Survey Question

Demographics

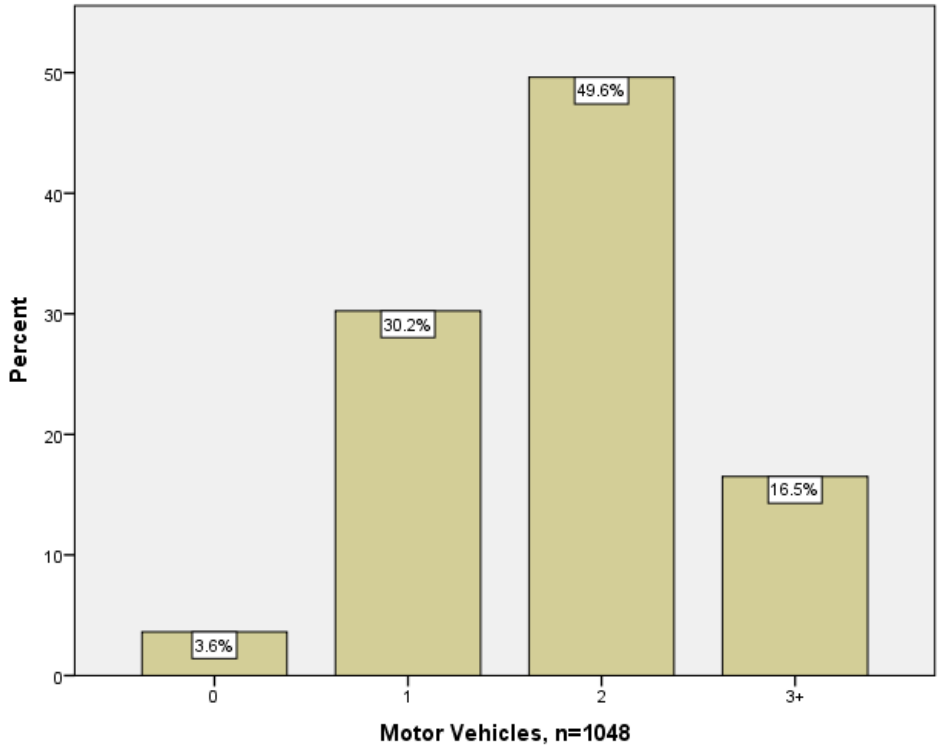
Gender



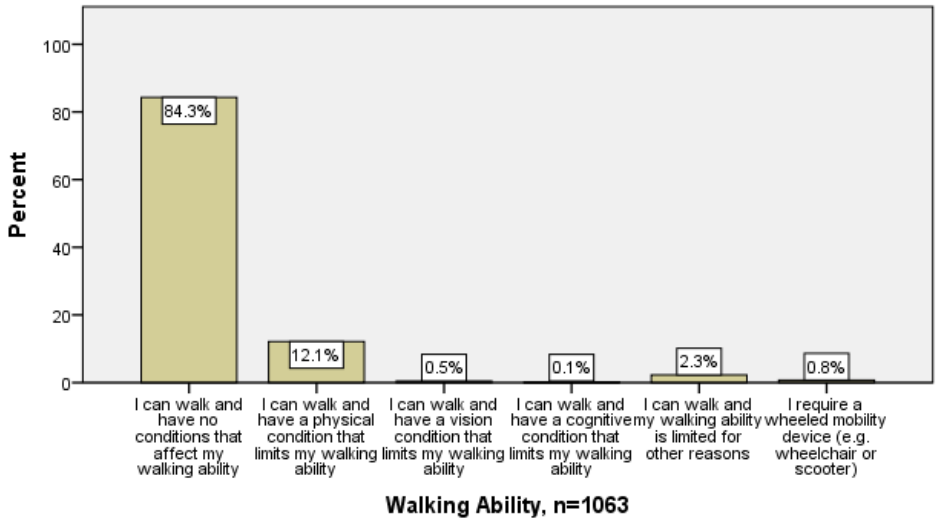
Age



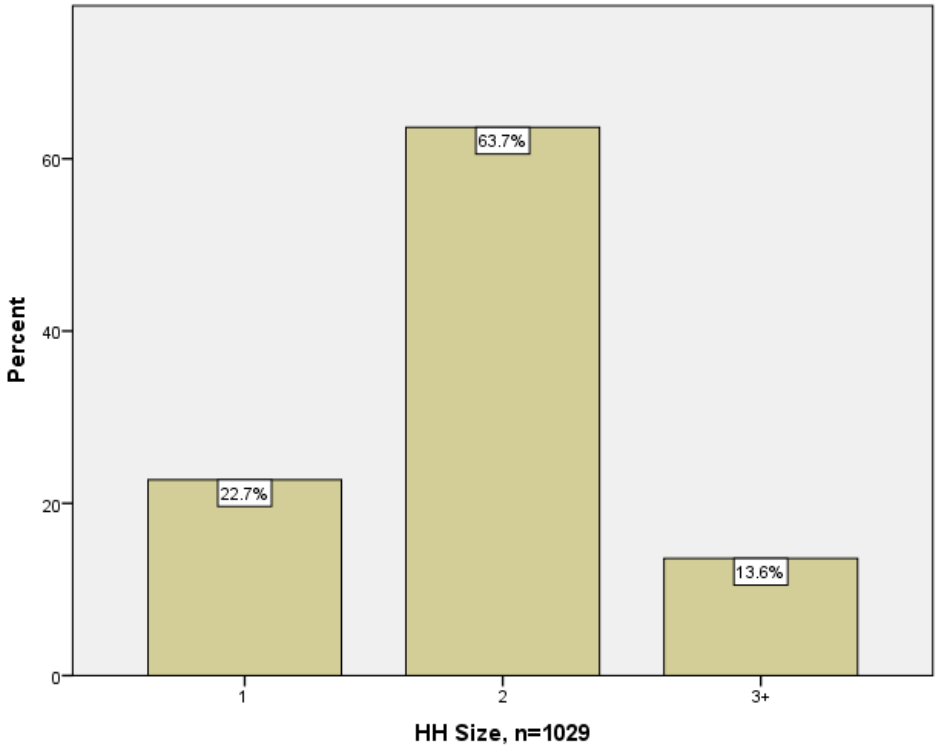
Motor Vehicles



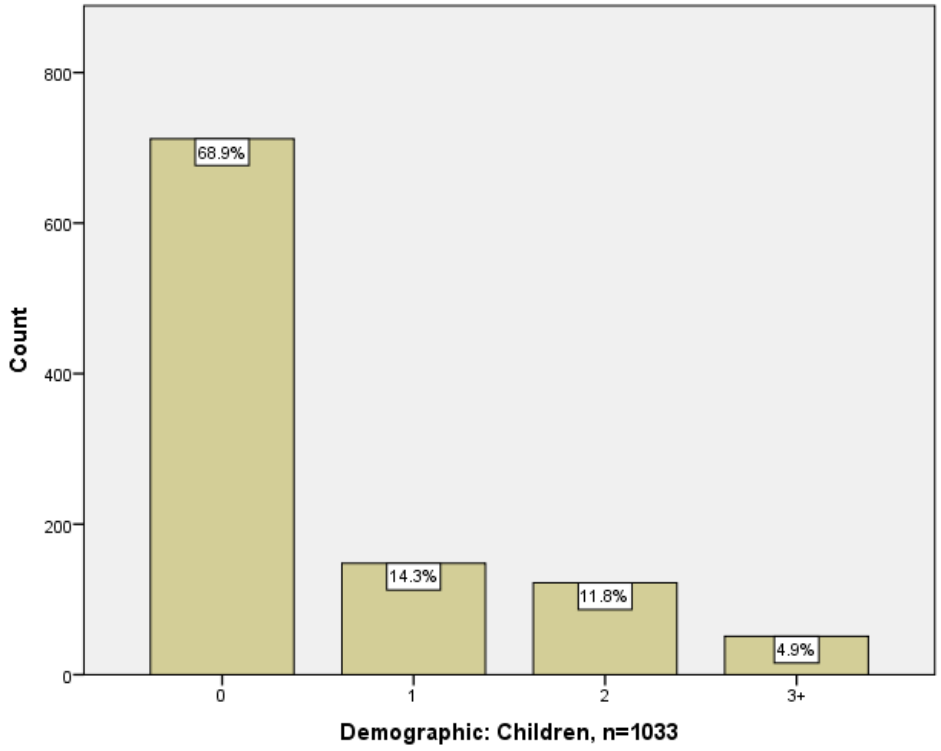
Walking Ability



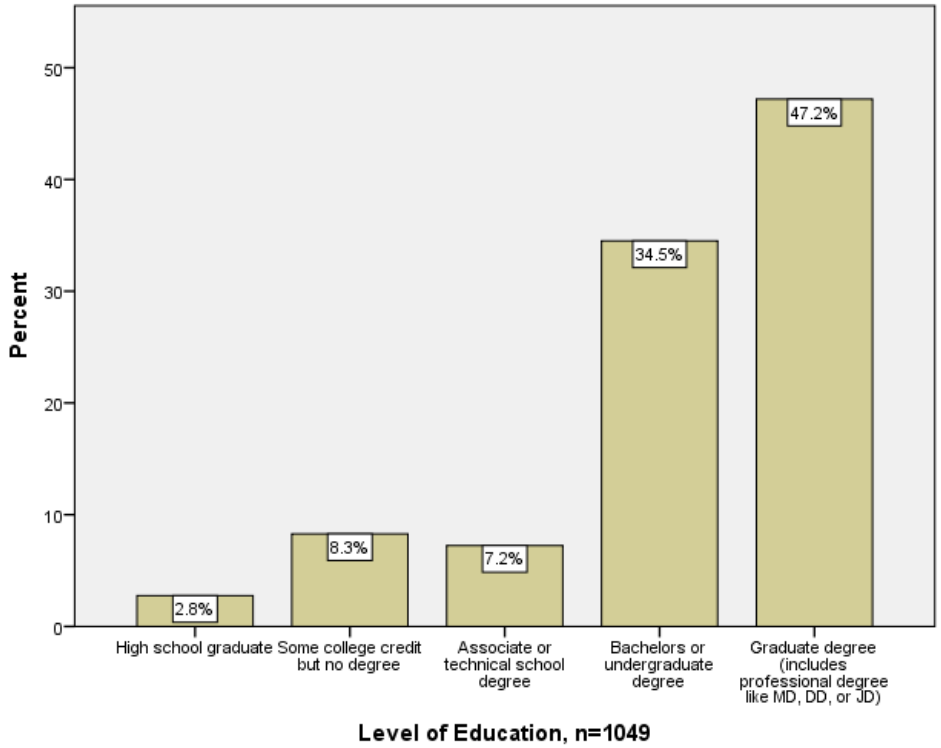
Household Size



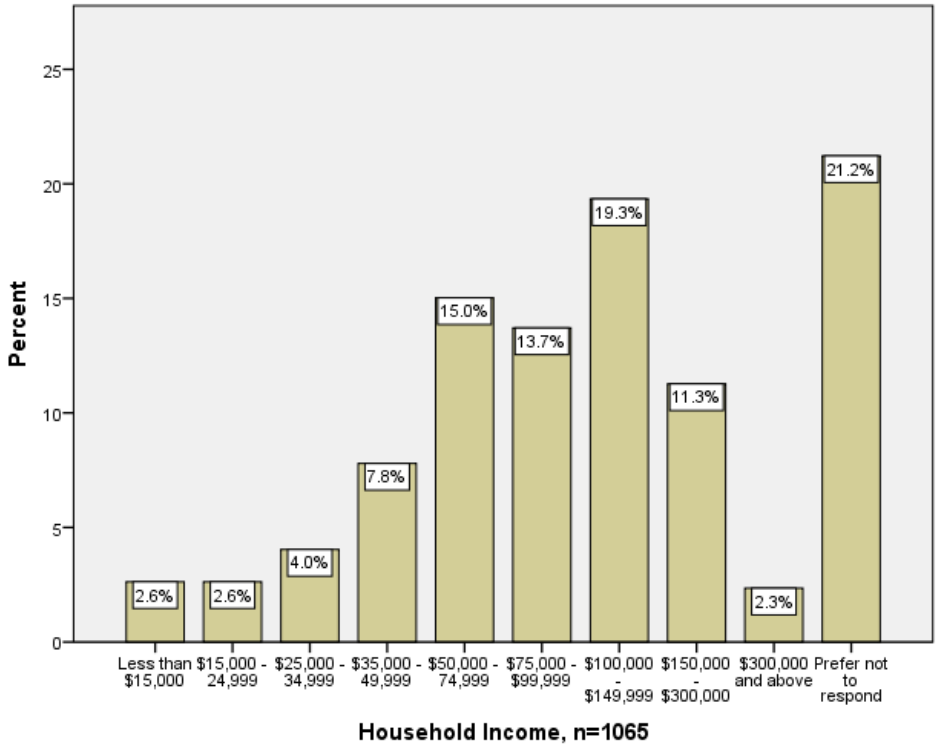
Children

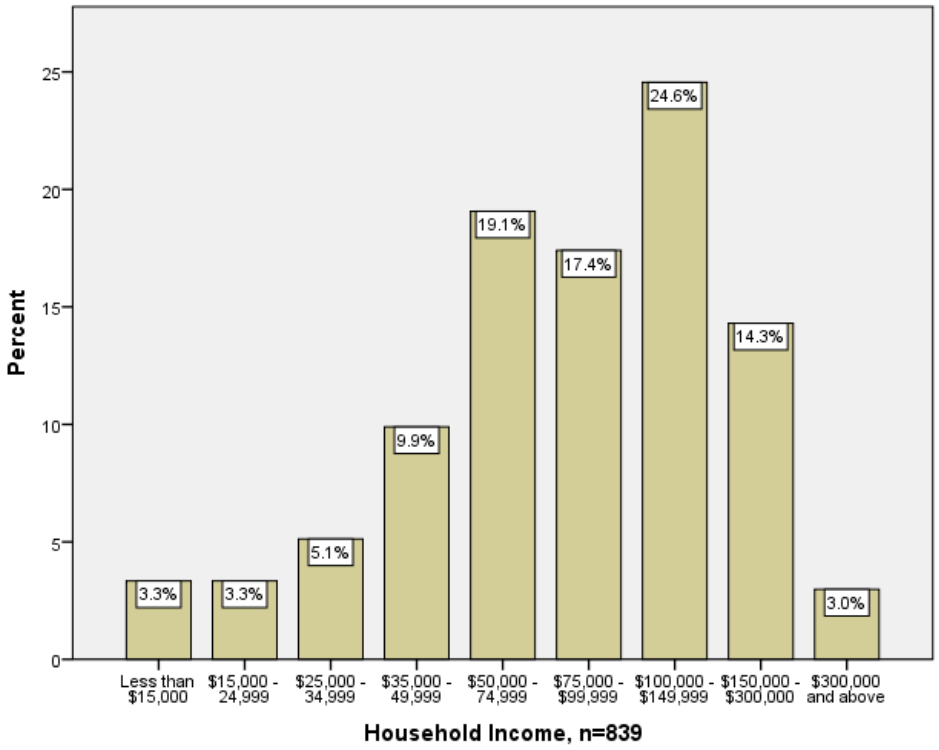


Education

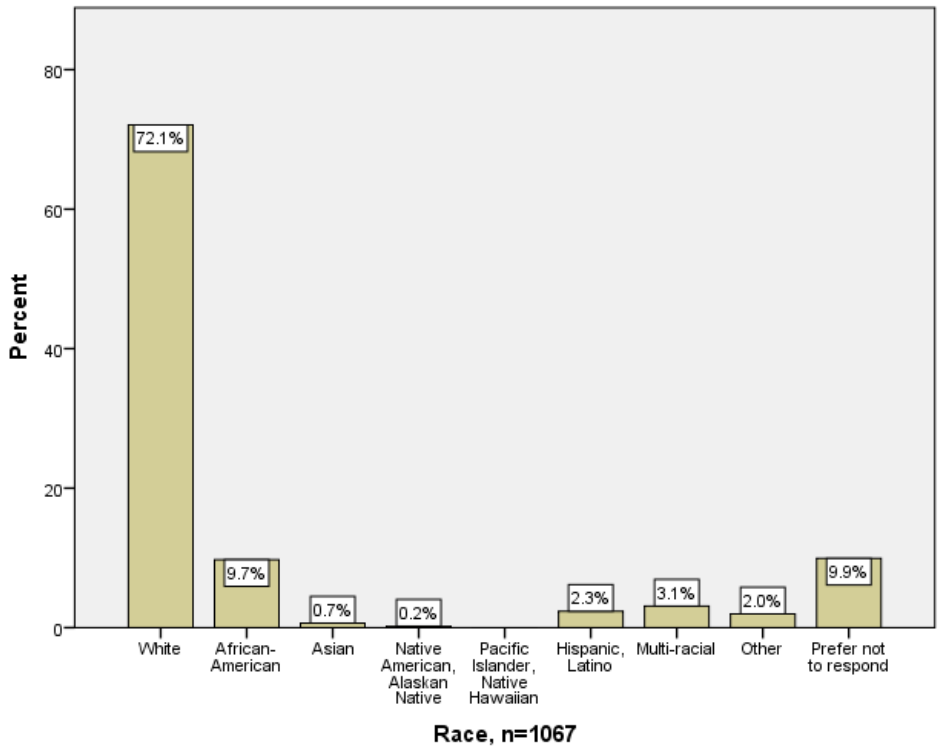


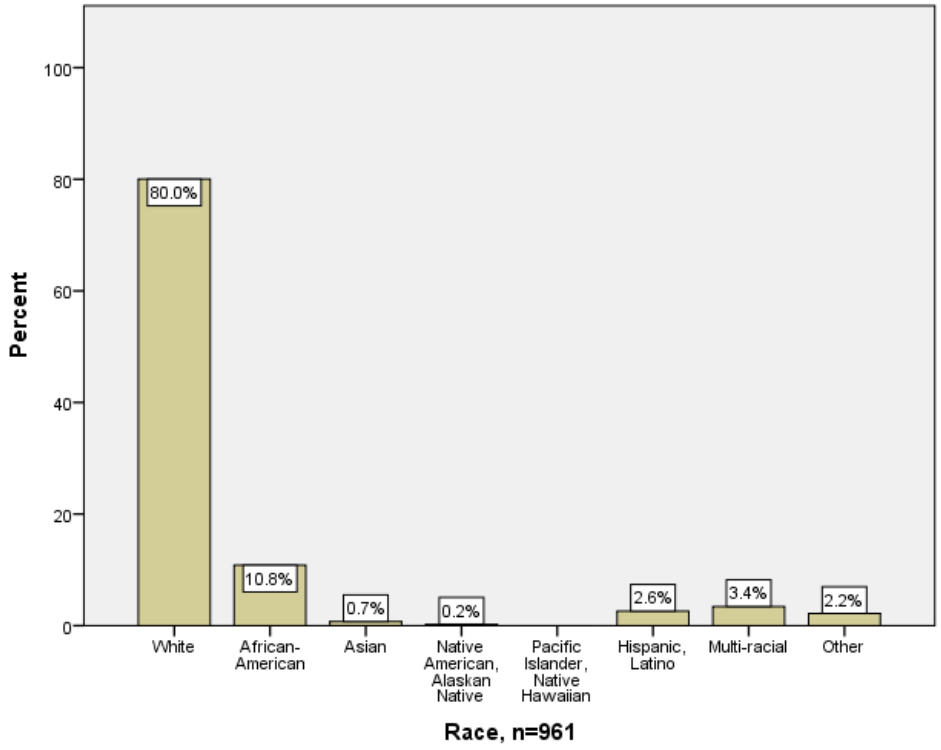
Income


Percent
25
20
15
10
5
0
2.6%
2.6%
4.0%
7.8%
15.0%
13.7%
19.3%
11.3%
2.3%
21.2%
Less than $15,000
$15,000 - 24,999
$25,000 - 34,999
$35,000 - 49,999
$50,000 - 74,999
$75,000 - $99,999
$100,000 - $149,999
$150,000 - $300,000
$300,000 and above
Prefer not to respond
Household Income, n=1065

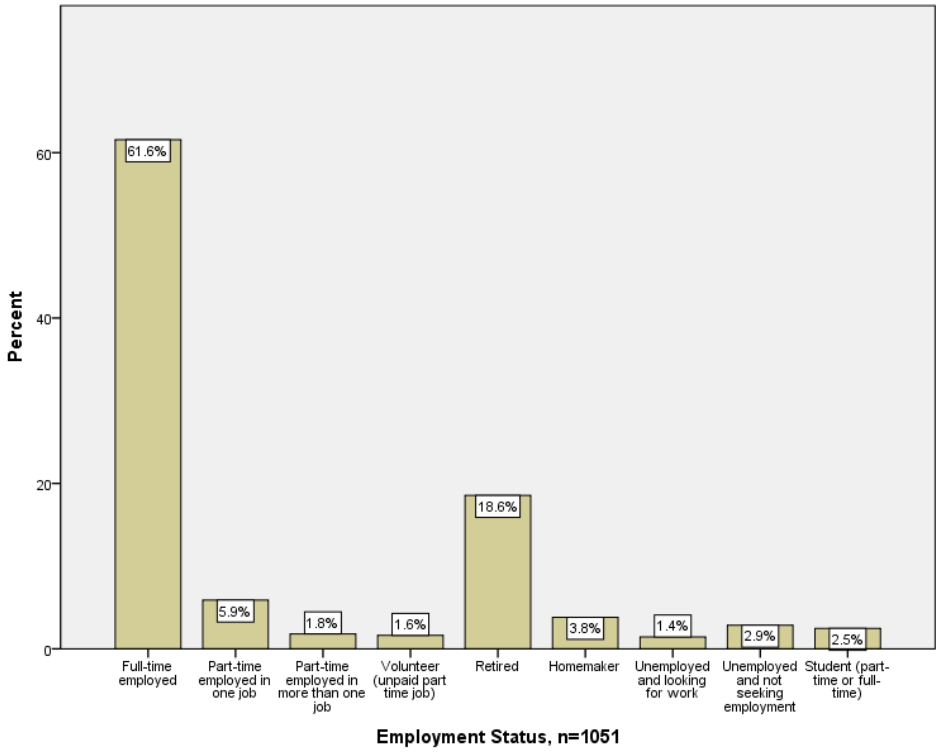

Percent
25
20
15
10
5
0
3.3%
3.3%
5.1%
9.9%
19.1%
17.4%
24.6%
14.3%
3.0%
Less than $15,000
$15,000 - 24,999
$25,000 - 34,999
$35,000 - 49,999
$50,000 - 74,999
$75,000 - $99,999
$100,000 - $149,999
$150,000 - $300,000
$300,000 and above
Household Income, n=839

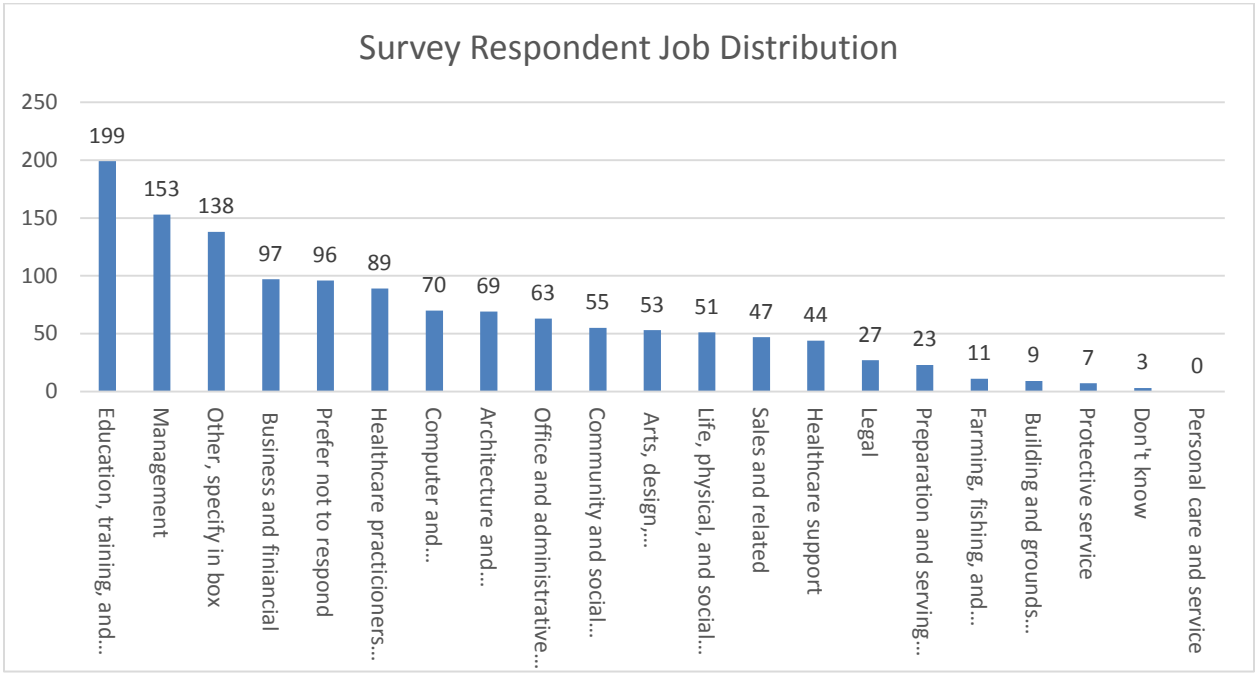
Race


Percent
80
60
40
20
0
72.1%
9.7%
0.7%
0.2%
2.3%
3.1%
2.0%
9.9%
White
African-American
Asian
Native American, Alaskan Native
Pacific Islander, Native Hawaiian
Hispanic, Latino
Multi-racial
Other
Prefer not to respond
Race, n=1067

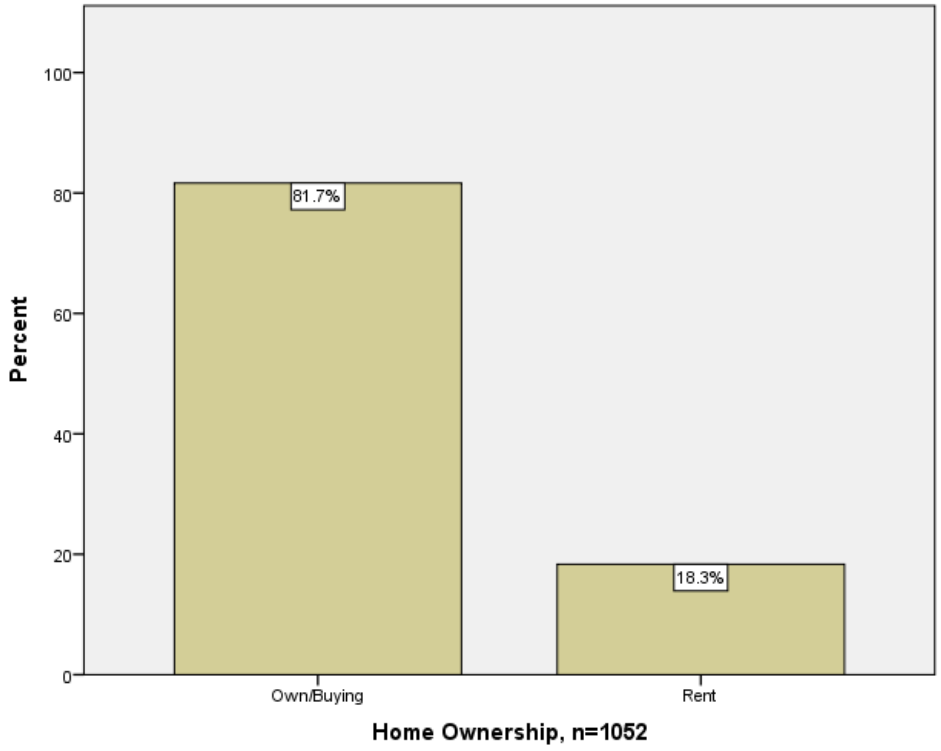

Percent
100
80
60
40
20
0
80.0%
10.8%
0.7%
0.2%
2.6%
3.4%
2.2%
White
African-American
Asian
Native American, Alaskan Native
Pacific Islander, Native Hawaiian
Hispanic, Latino
Multi-racial
Other
Race, n=961

Employment

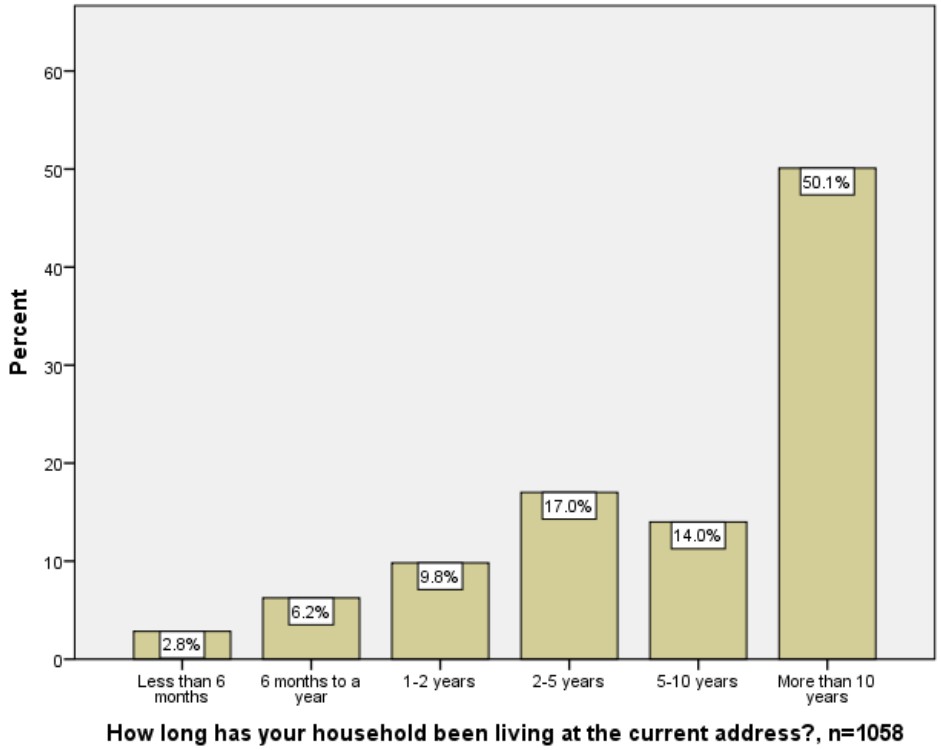

Percent
60
40
20
0
61.6%
5.9%
1.8%
1.6%
18.6%
3.8%
1.4%
2.9%
2.5%
Full-time employed
Part-time employed in one job
Part-time employed in more than one job
Volunteer (unpaid part time job)
Retired
Homemaker
Unemployed and looking for work
Unemployed and not seeking employment
Student (part-time or full-time)
Employment Status, n=1051


Survey Respondent Job Distribution
250
200
150
100
50
0
199
153
138
97
96
89
70
69
63
55
53
51
47
44
27
23
11
9
7
3
0
Education, training, and...
Management
Other, specify in box
Business and finiancial
Prefer not to respond
Healthcare practicioners...
Computer and...
Architecture and...
Office and administrative...
Community and social...
Arts, design,...
Life, physical, and social...
Sales and related
Healthcare support
Legal
Preparation and serving...
Farming, fishing, and...
Building and grounds...
Protective service
Don't know
Personal care and service

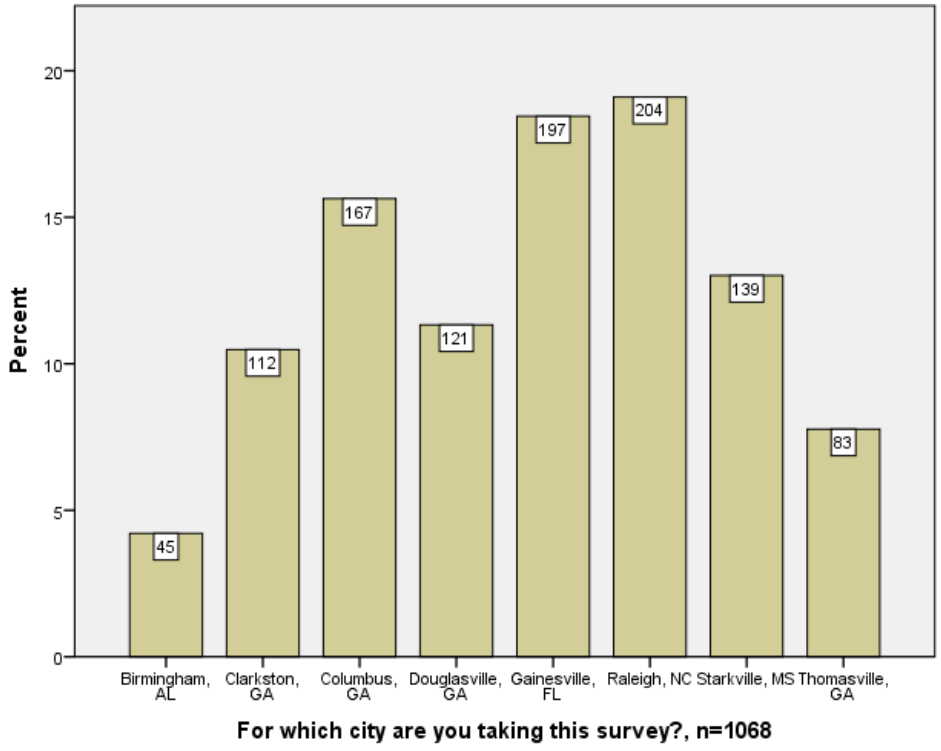
Home Ownership



Household Longevity

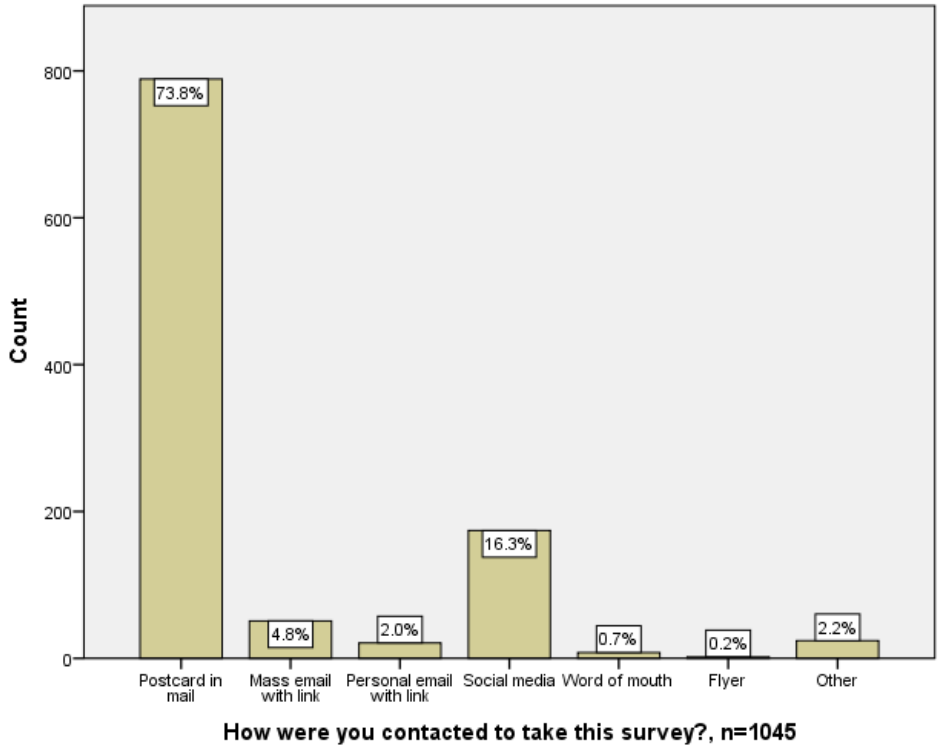


City



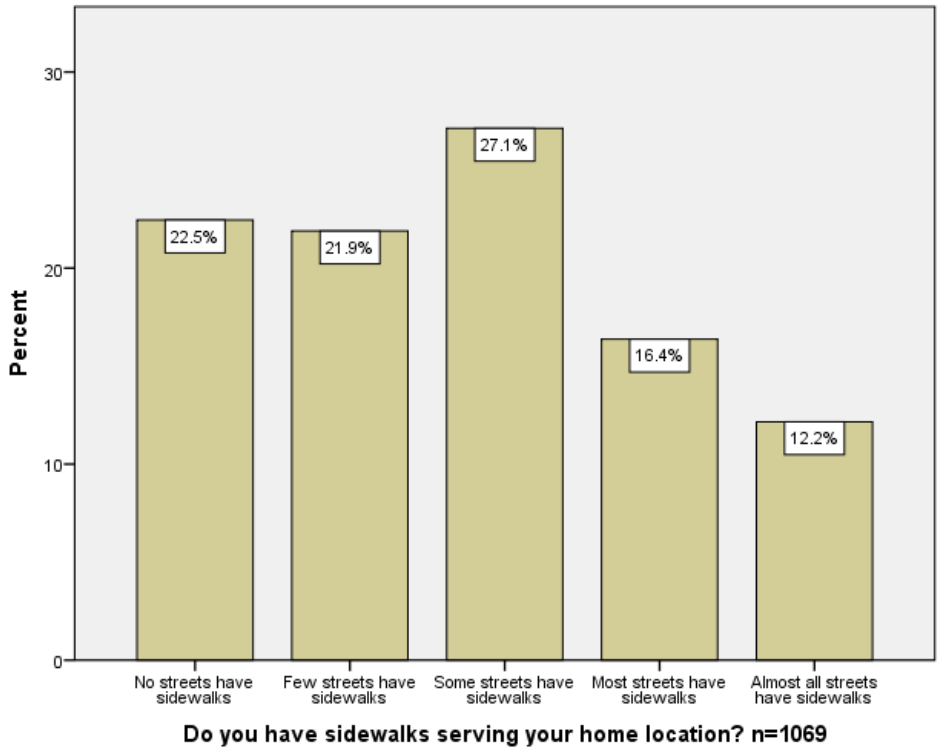
City Limits

Contact Method

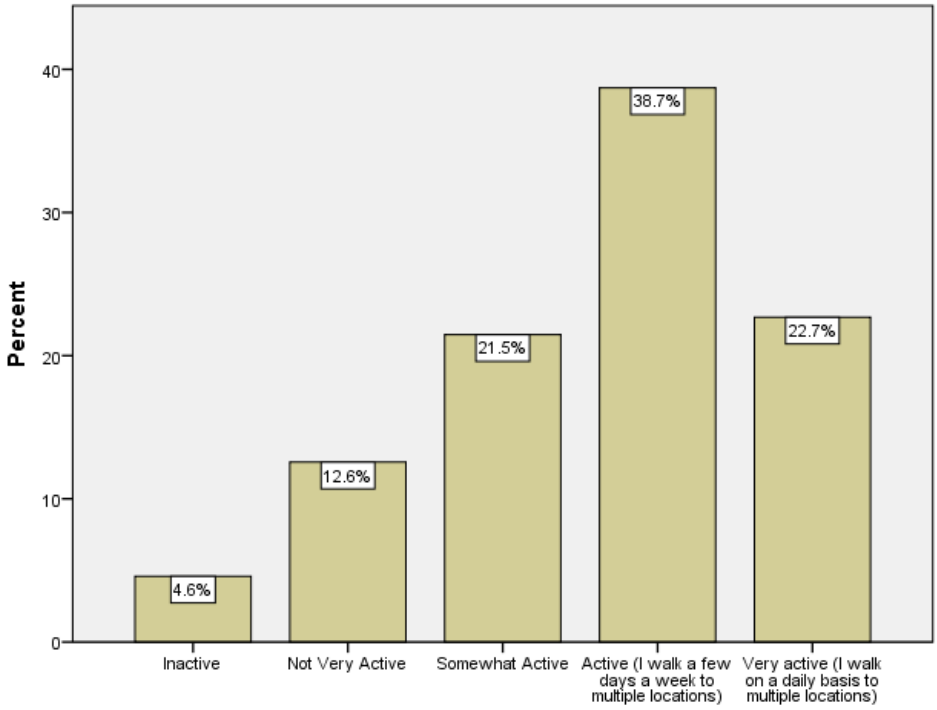


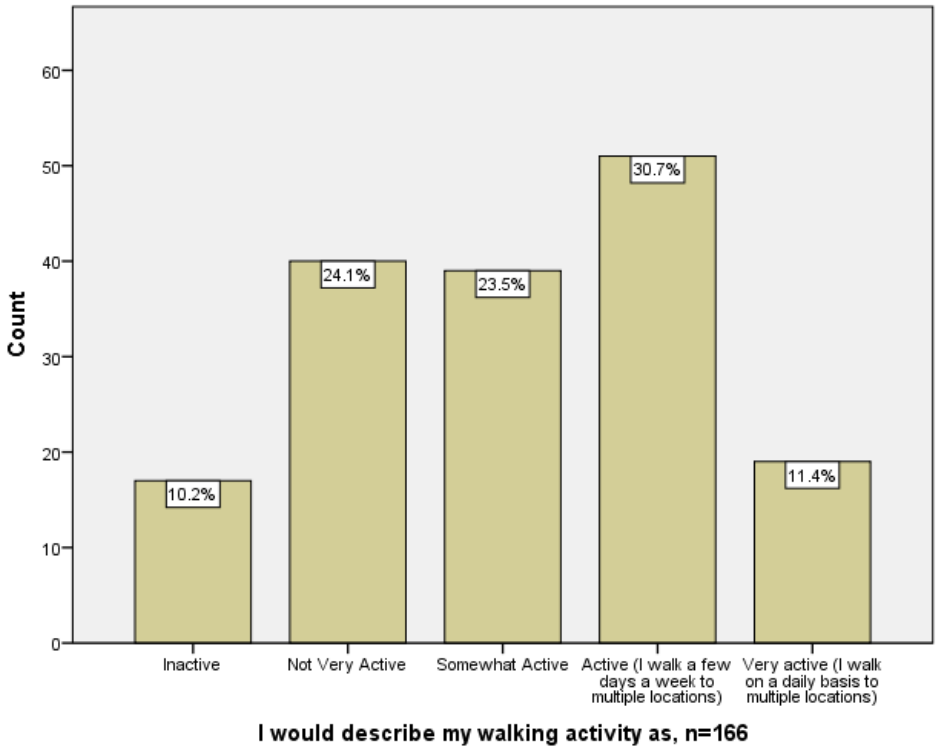
Walking

Sidewalks at home

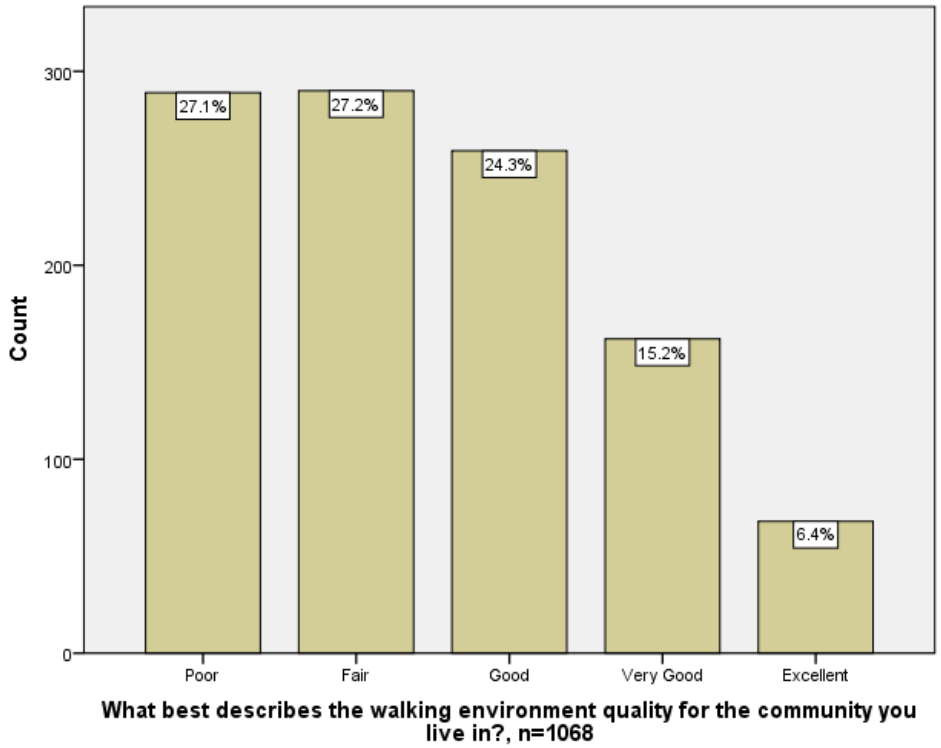


Walking Activity

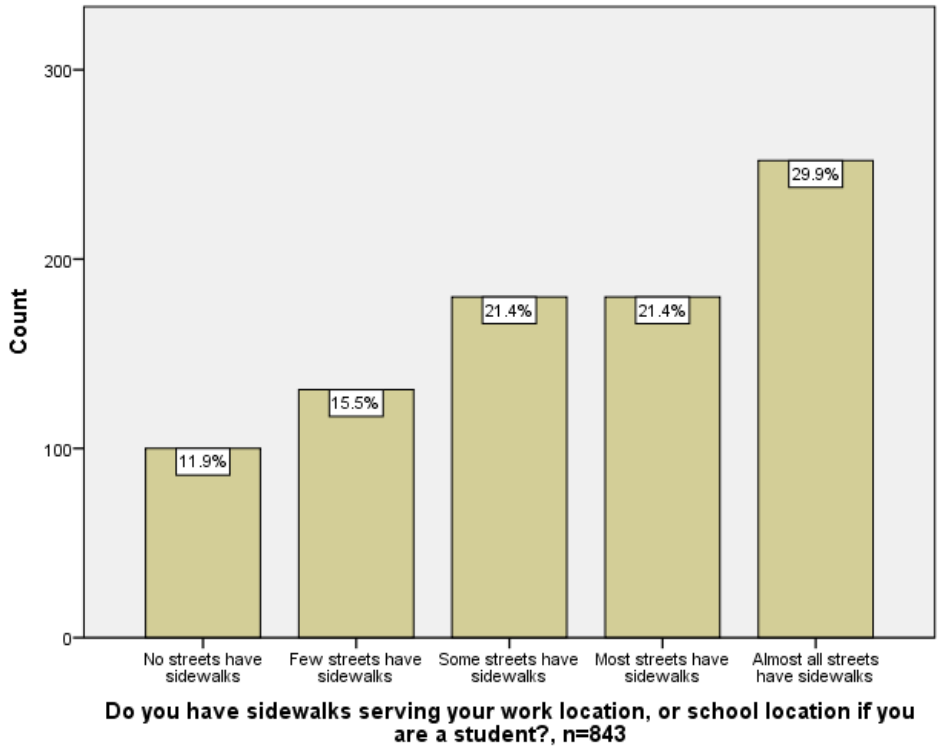




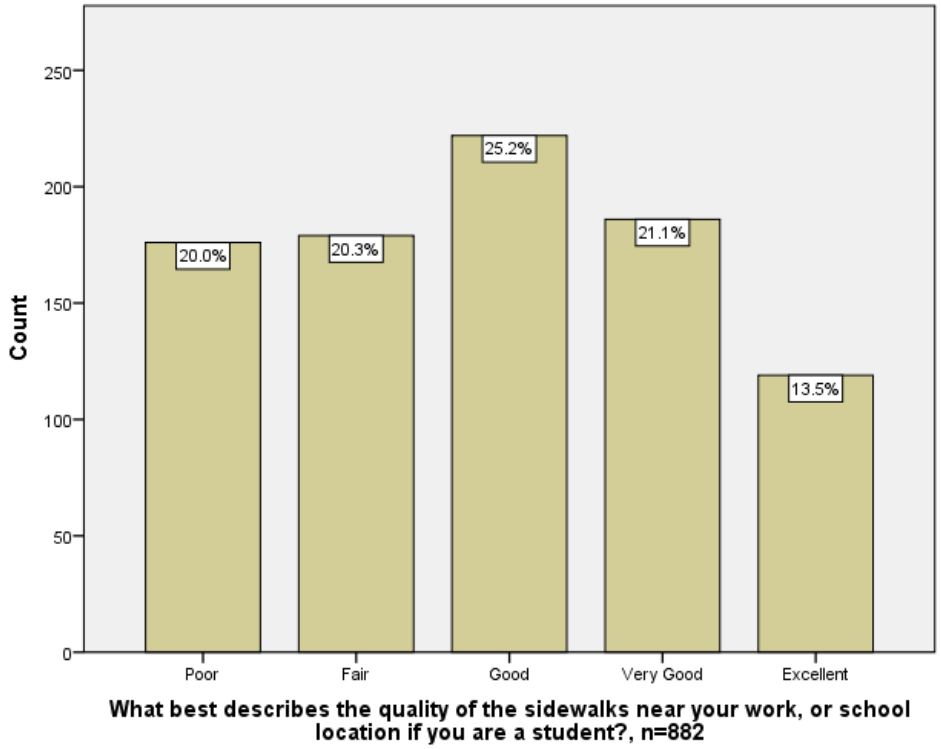
Home Walking Environment



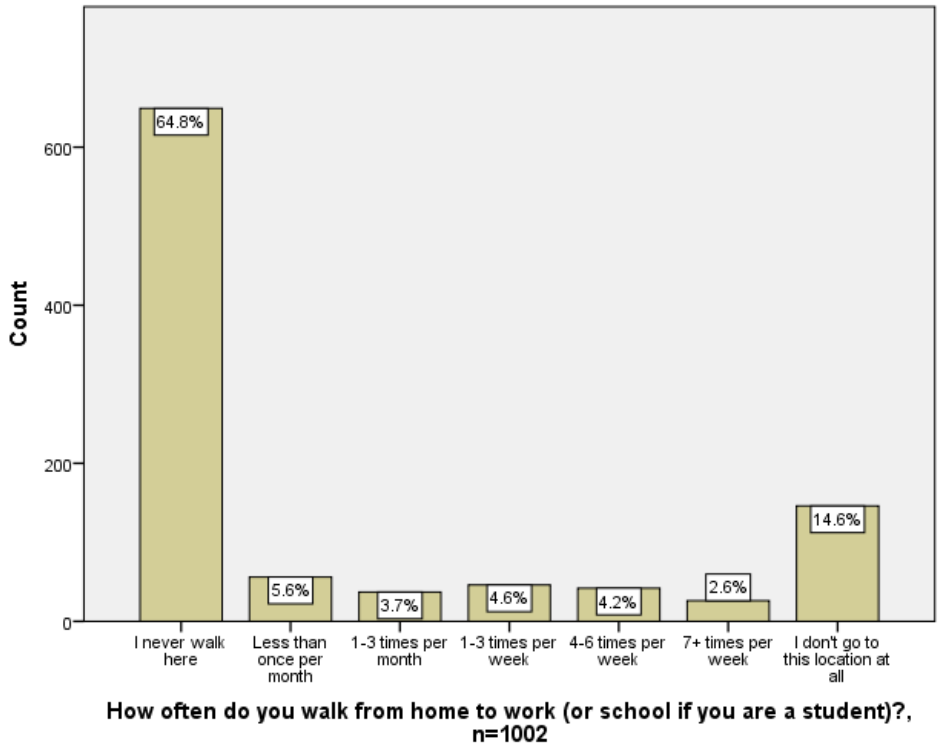
Work Walking Environment



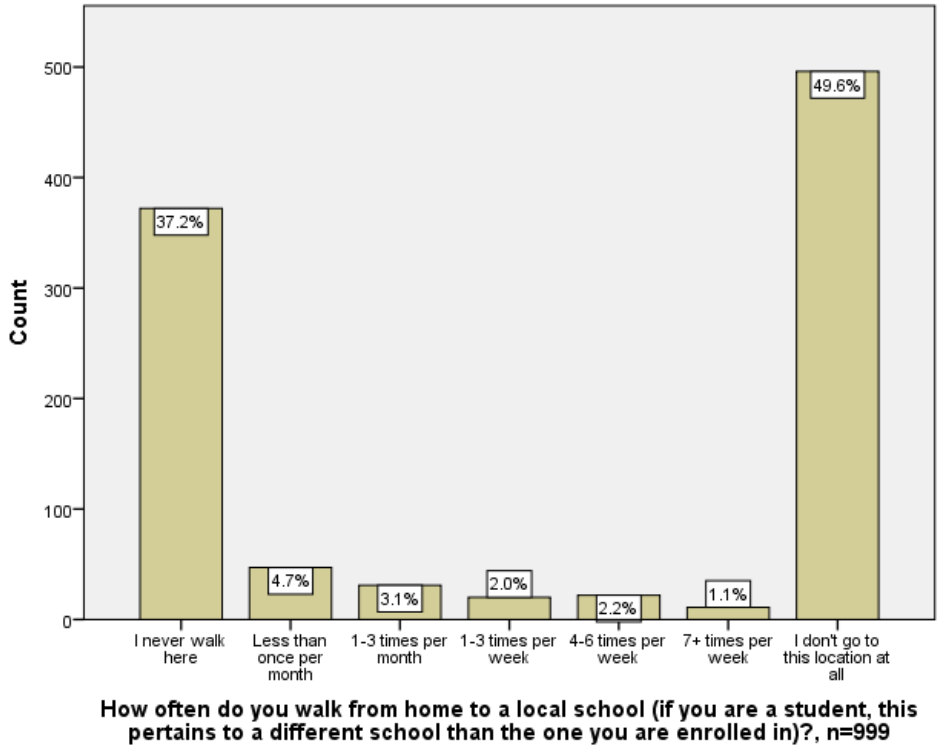
Work Sidewalks



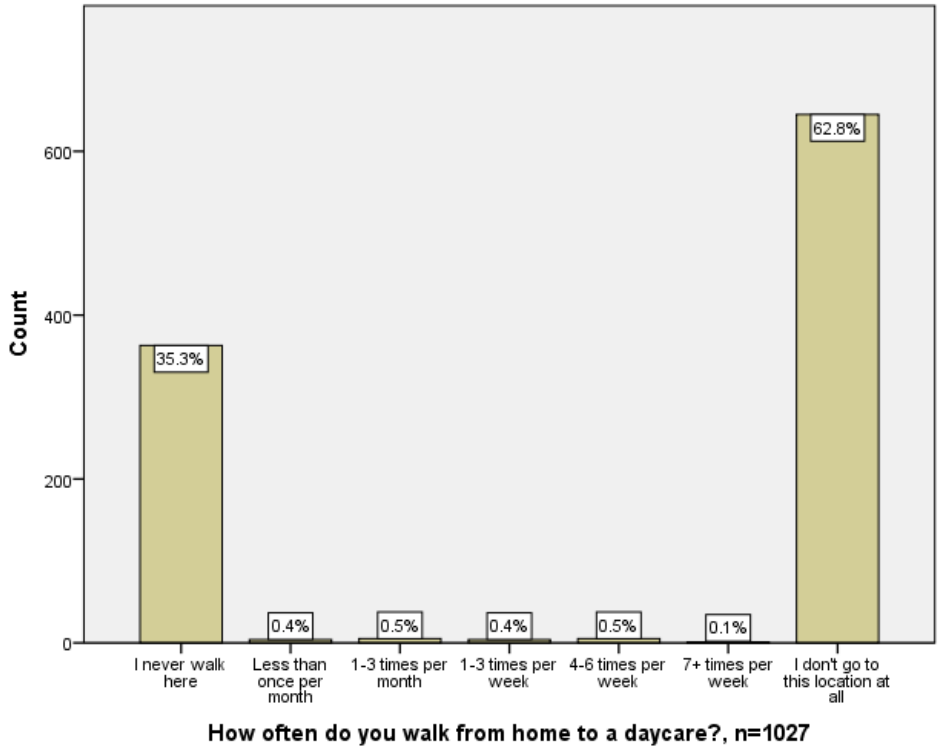
Walking Frequency
Home to Work



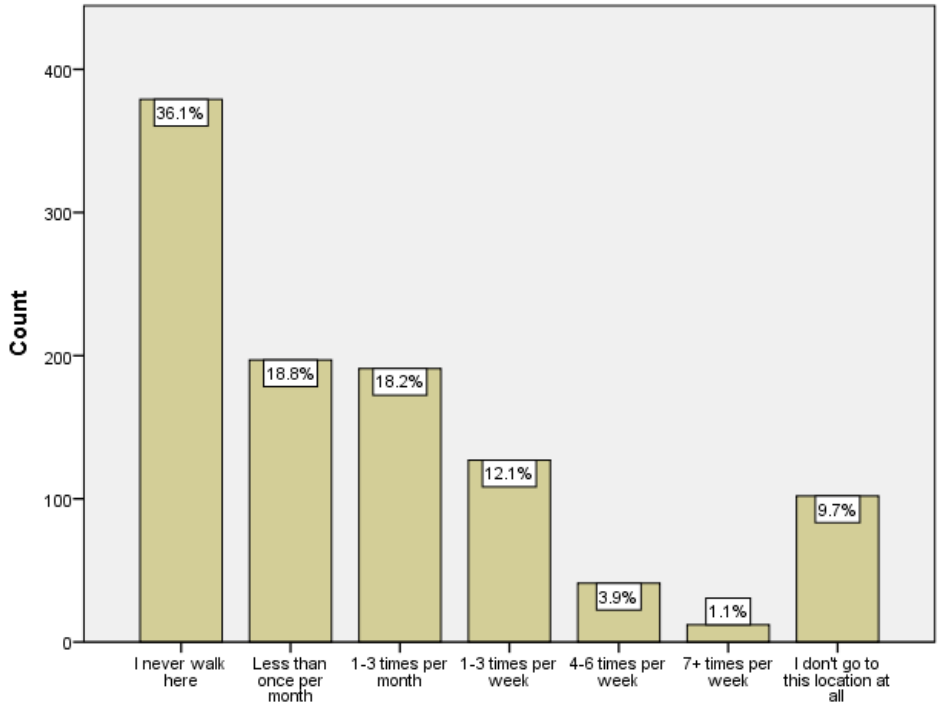
Home to a local school



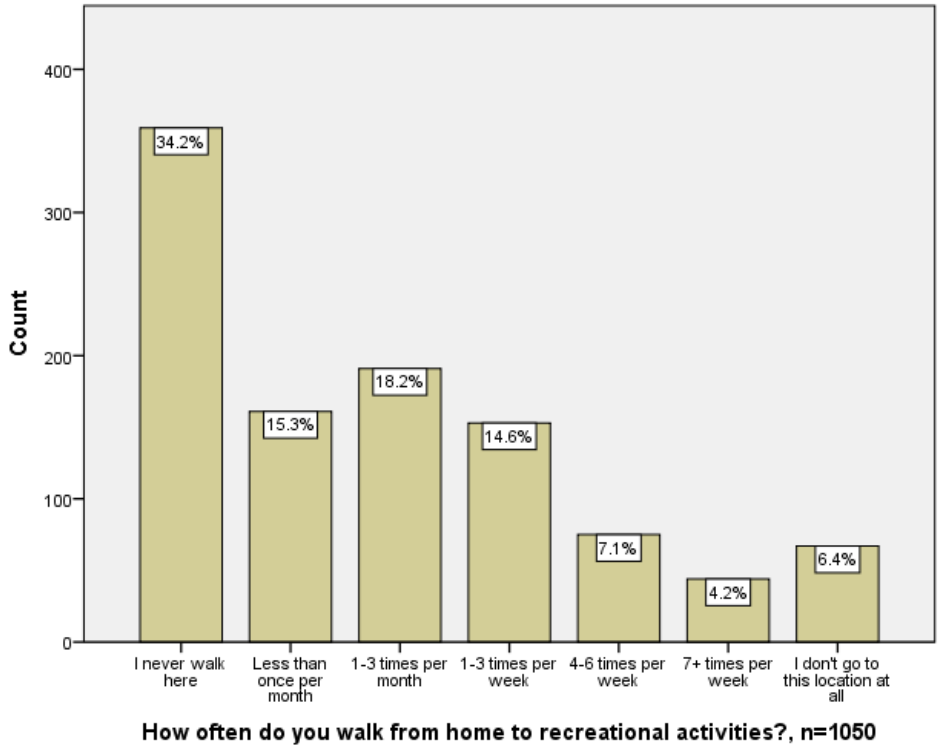
Home to Daycare



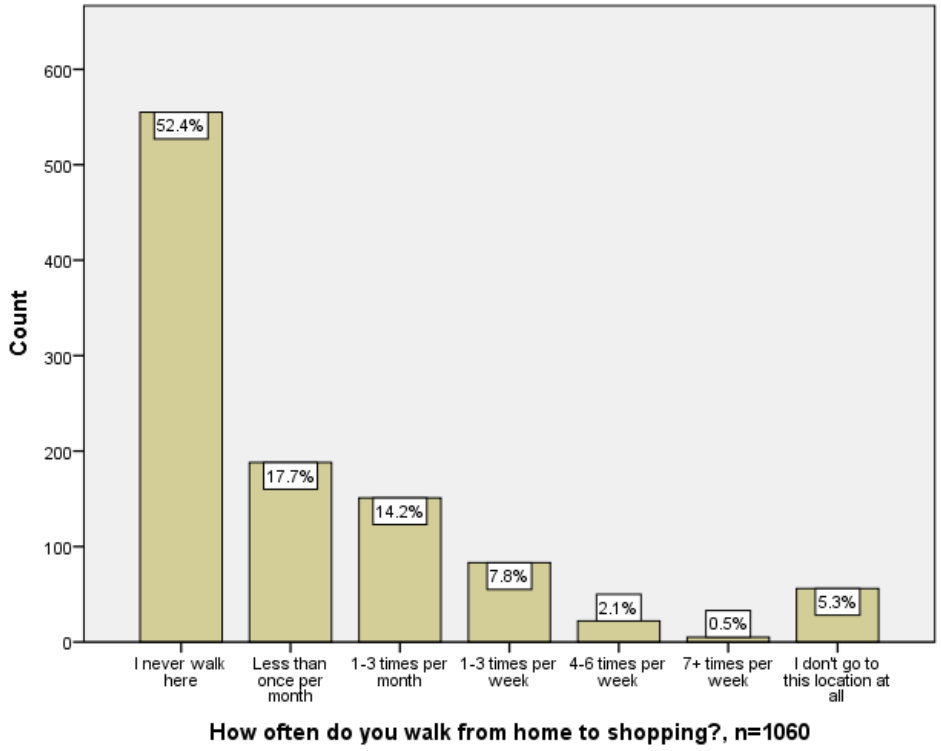
Home to Social



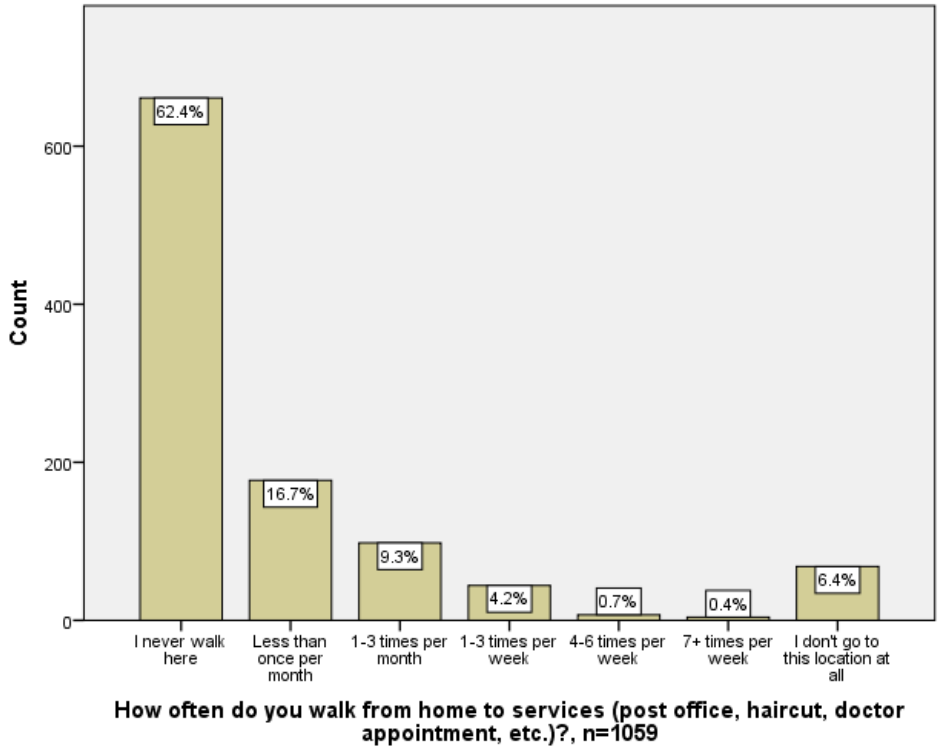
Home to Rec



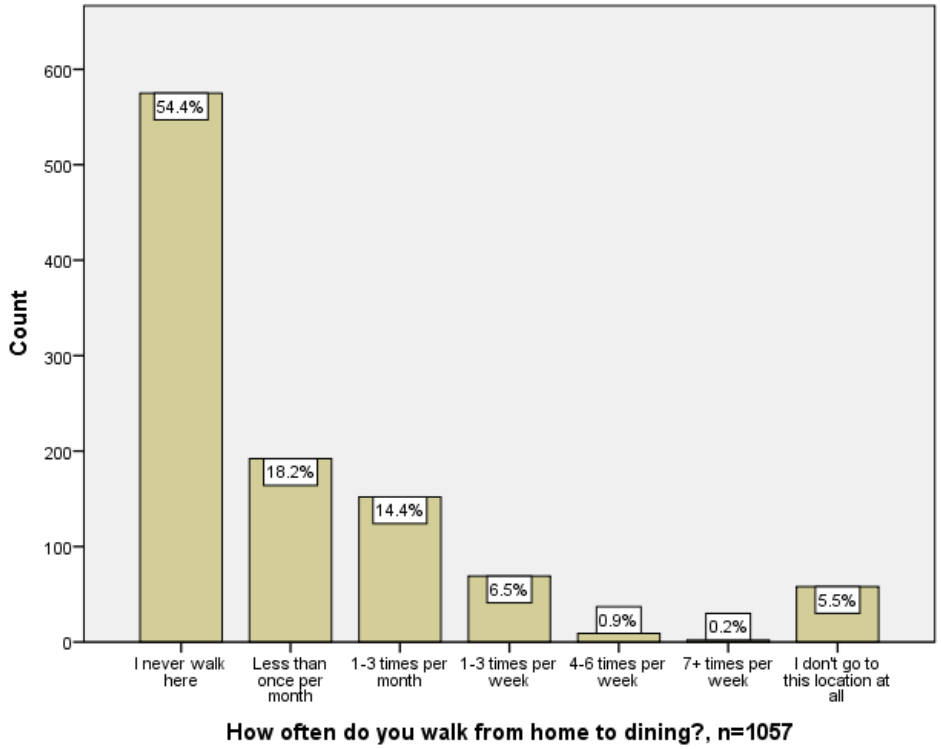
Home to Shopping



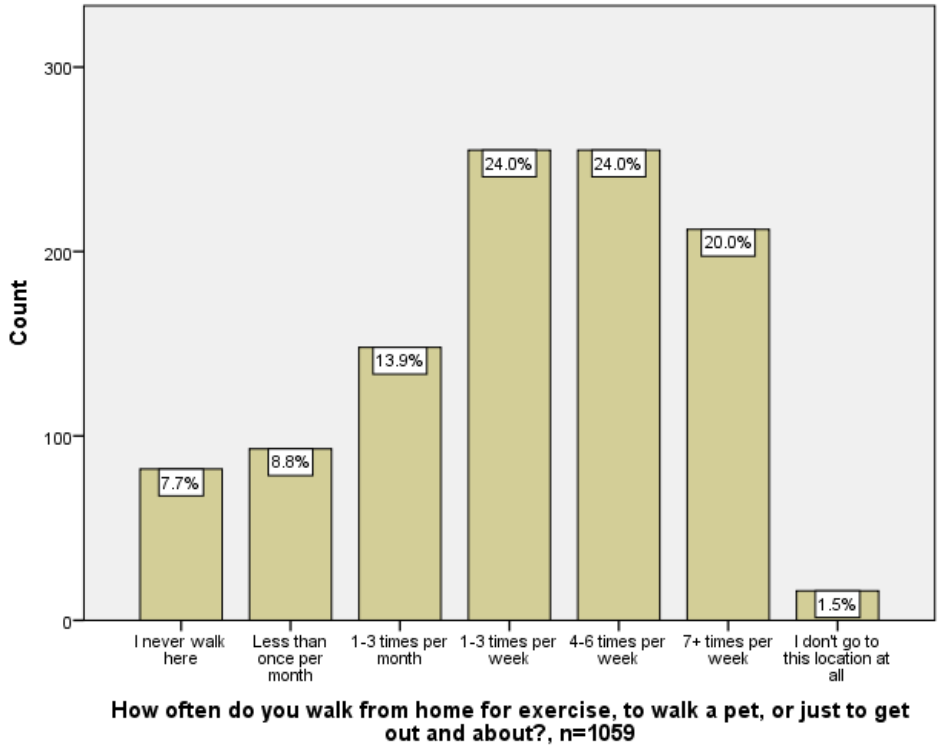
Home to Services



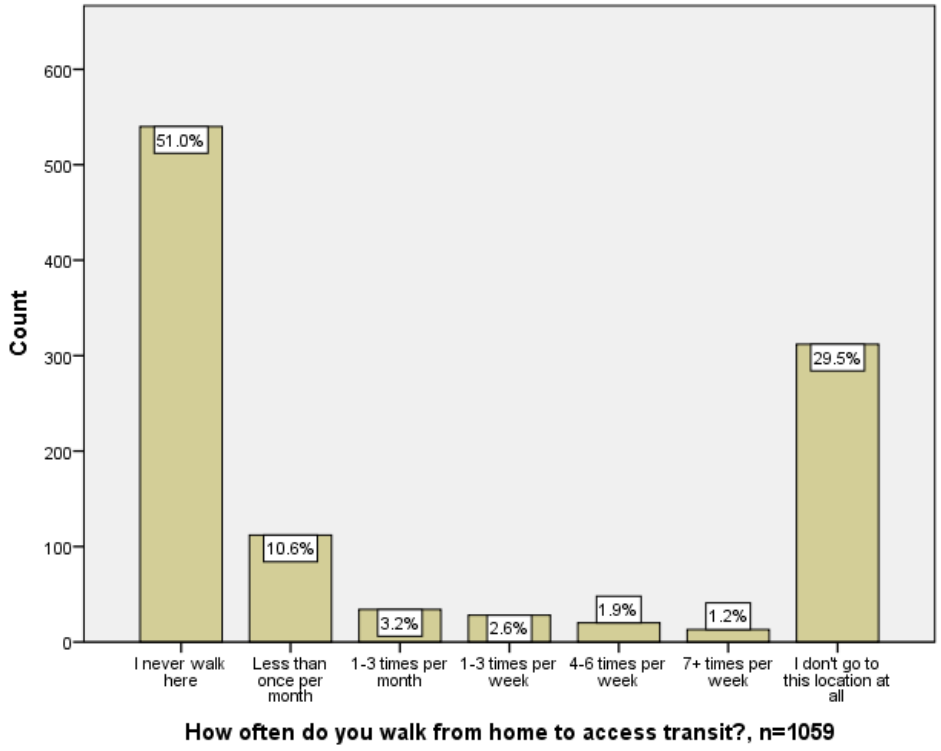
Home to Dining



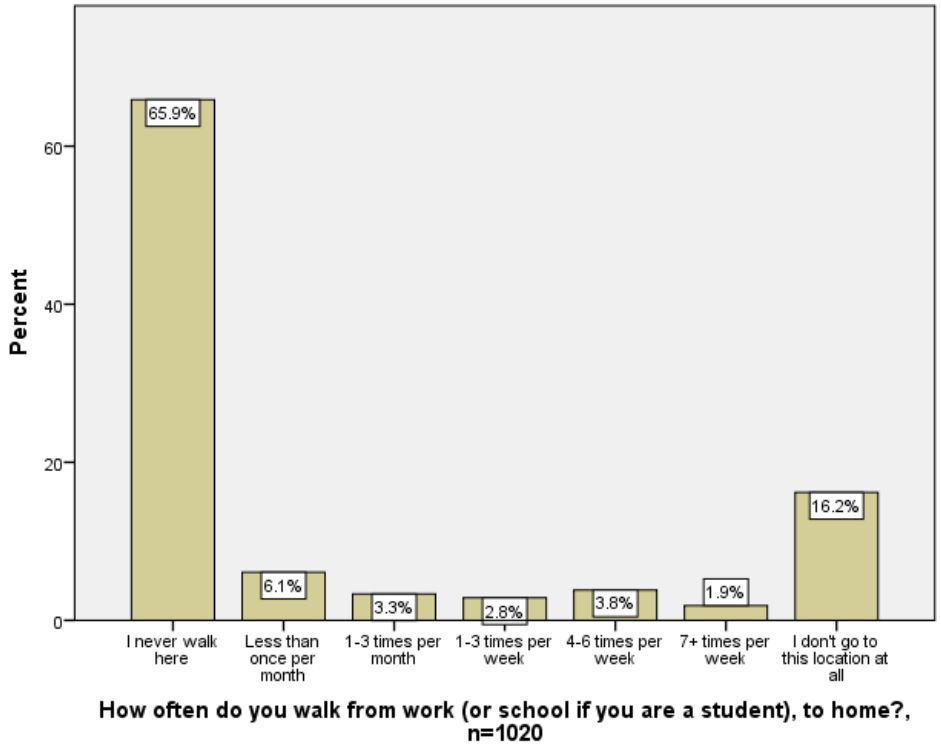
Home for out and about



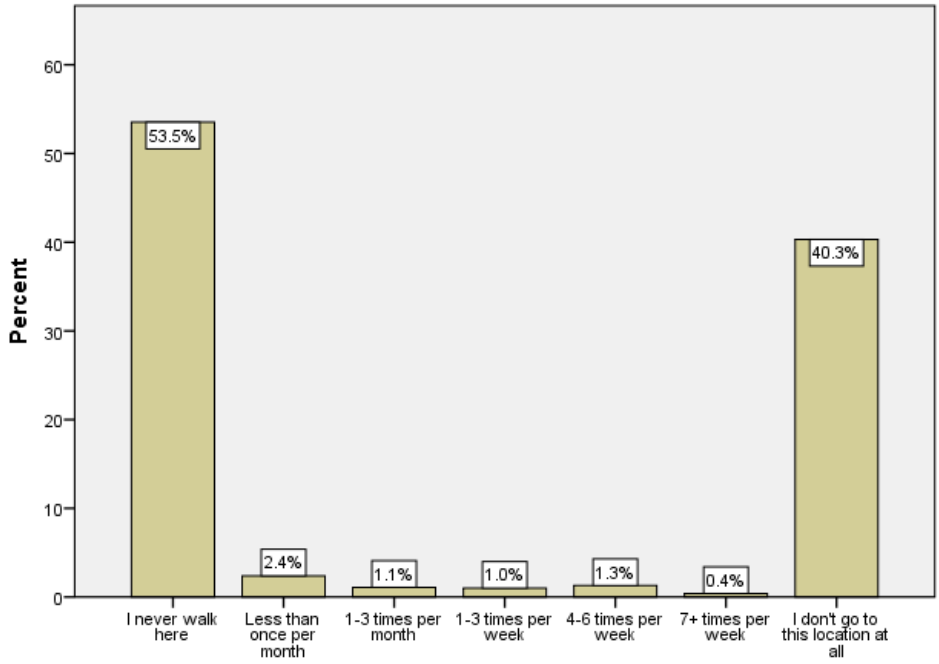
Home to Transit



Work to Home

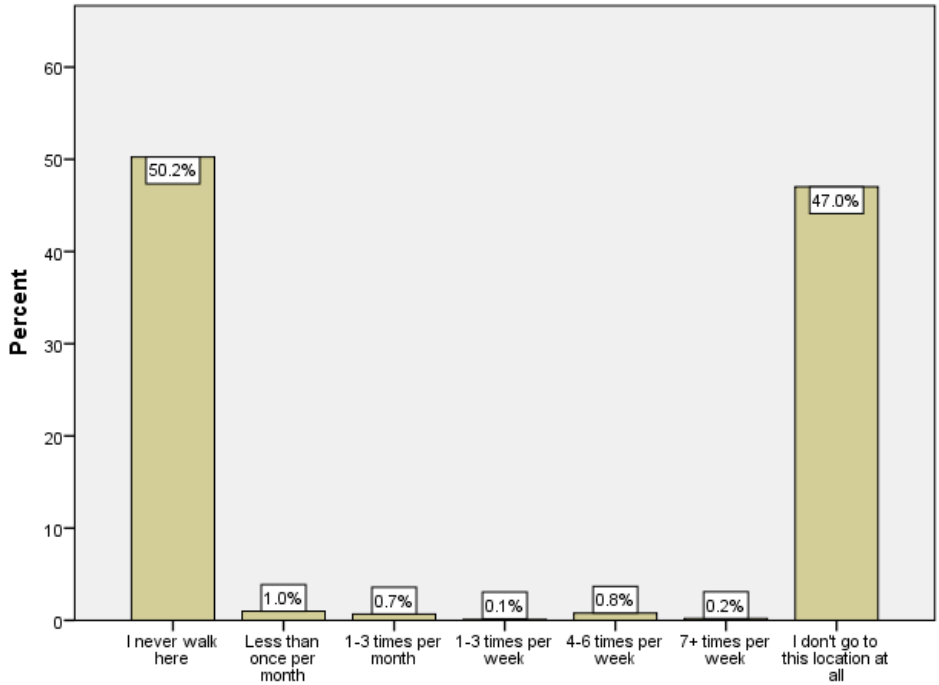


Work to a local school



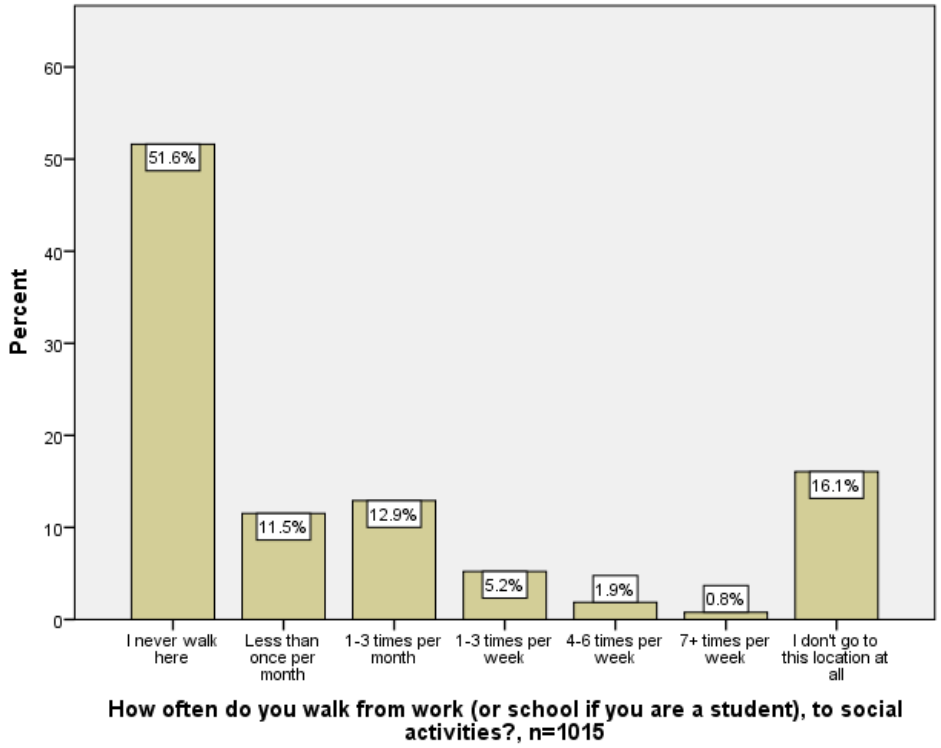
How often do you walk from work (or school if you are a student), to a local school? (if you are a student, the destination school is a different school than the one you are enrolled in), n=1007

Work to daycare

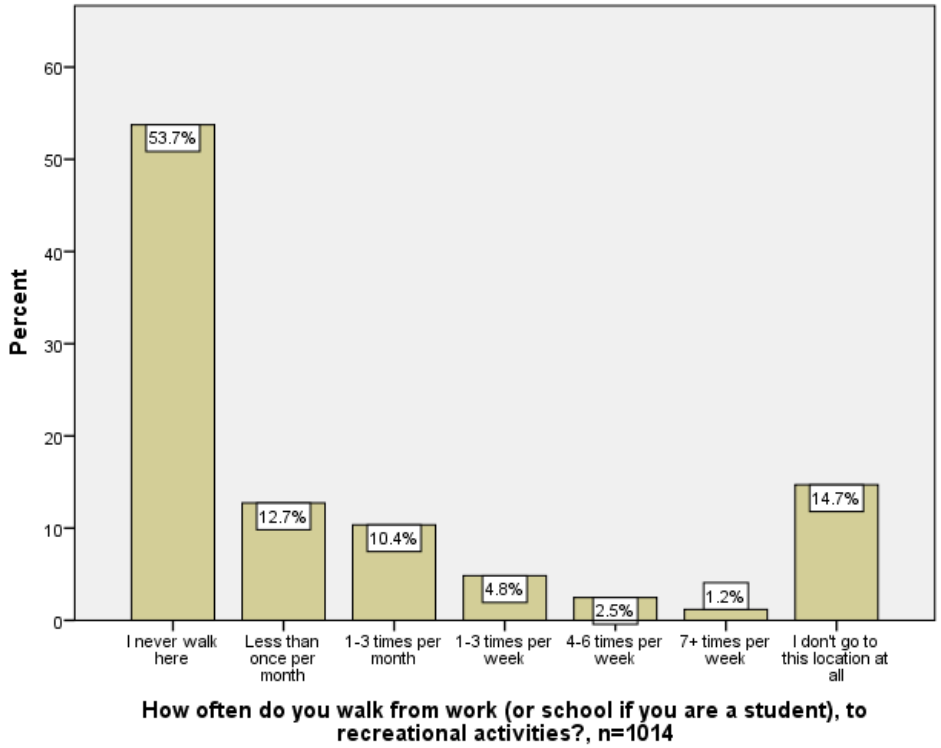


How often do you walk from work (or school if you are a student), to daycare?, n=1021

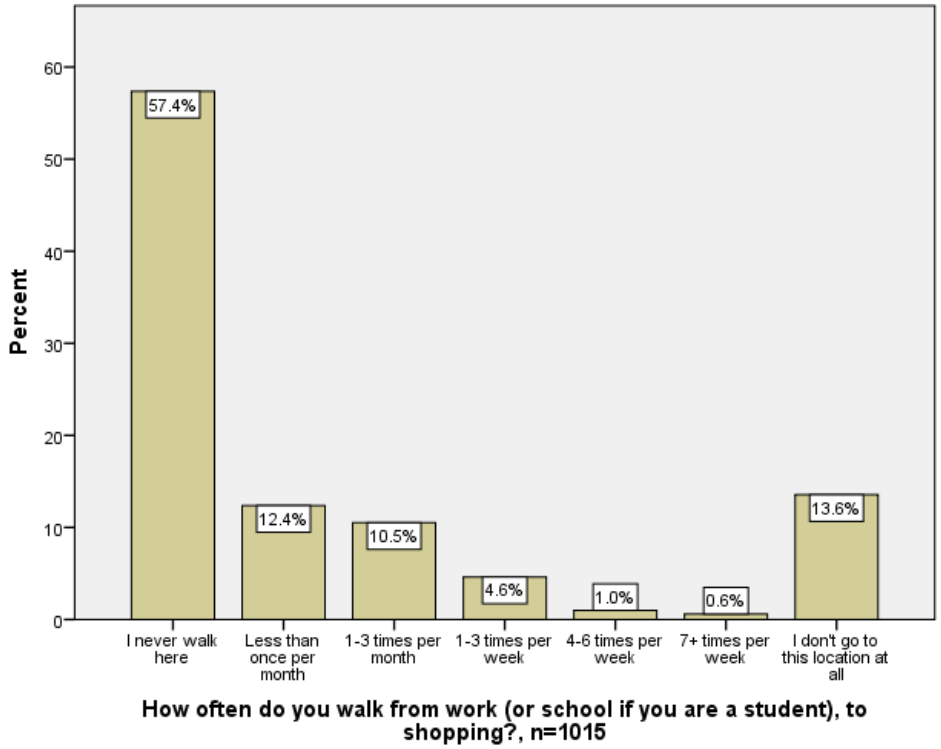
Work to social activities



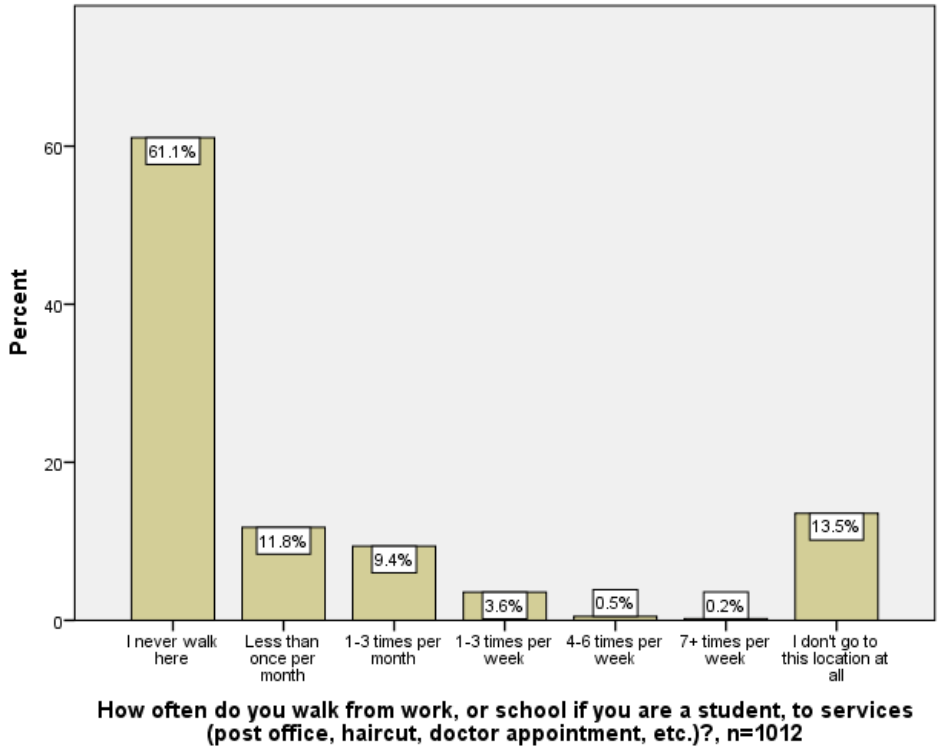
Work to Rec



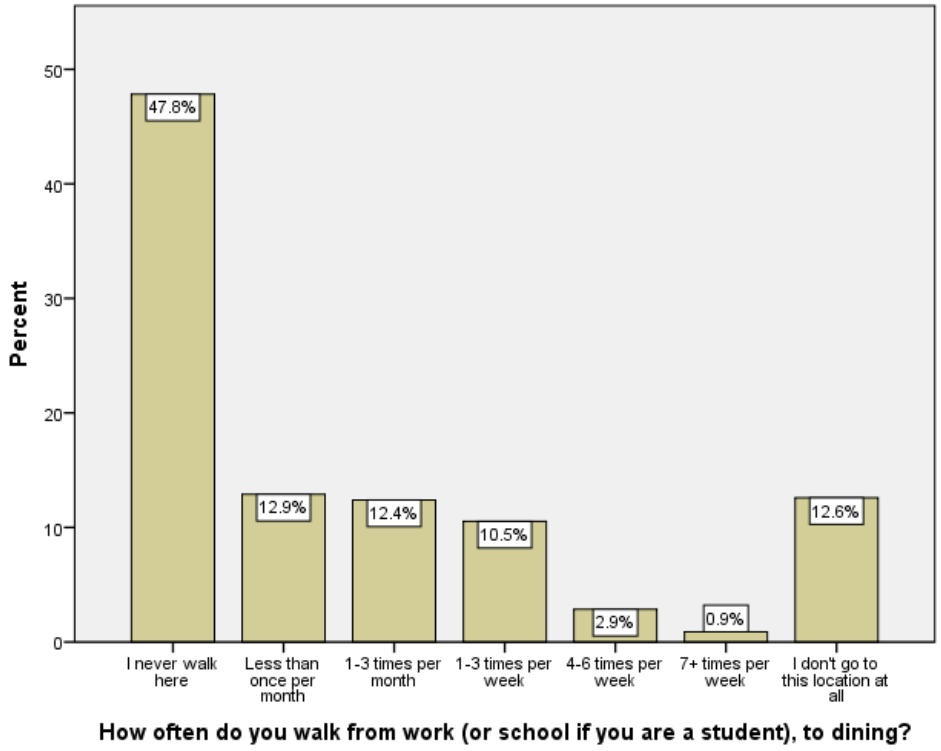
Work to shopping



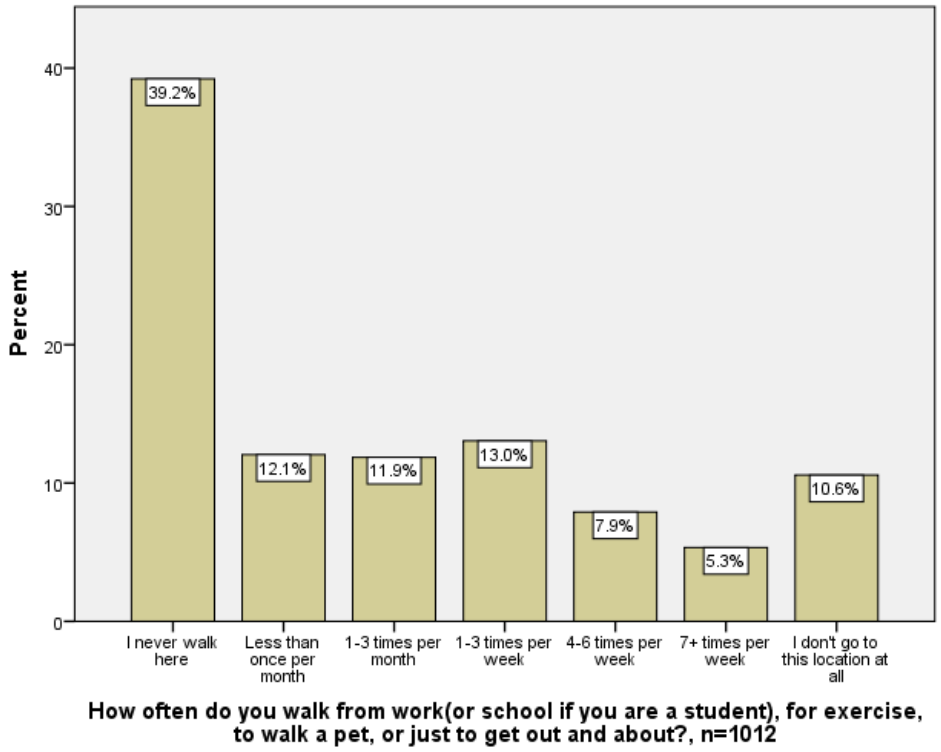
Work to services



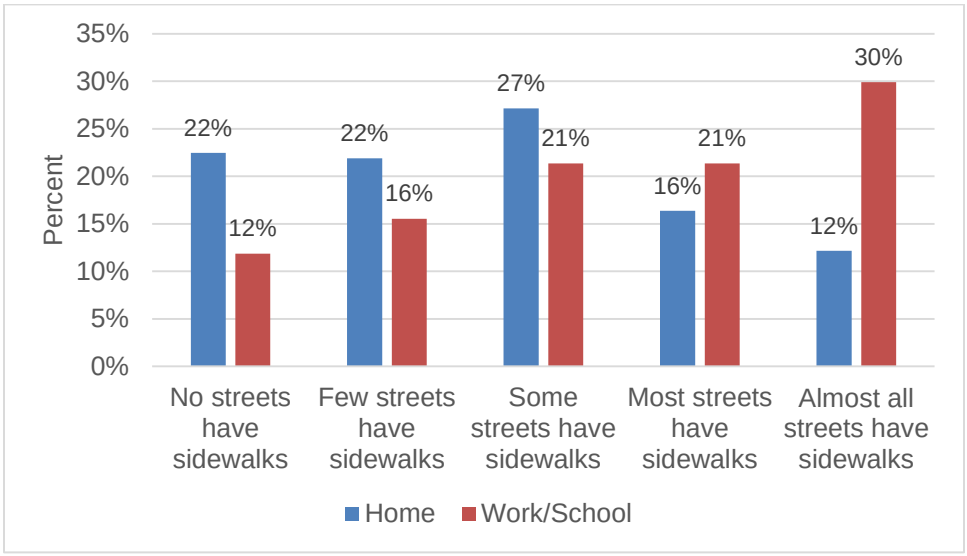
Work to dining

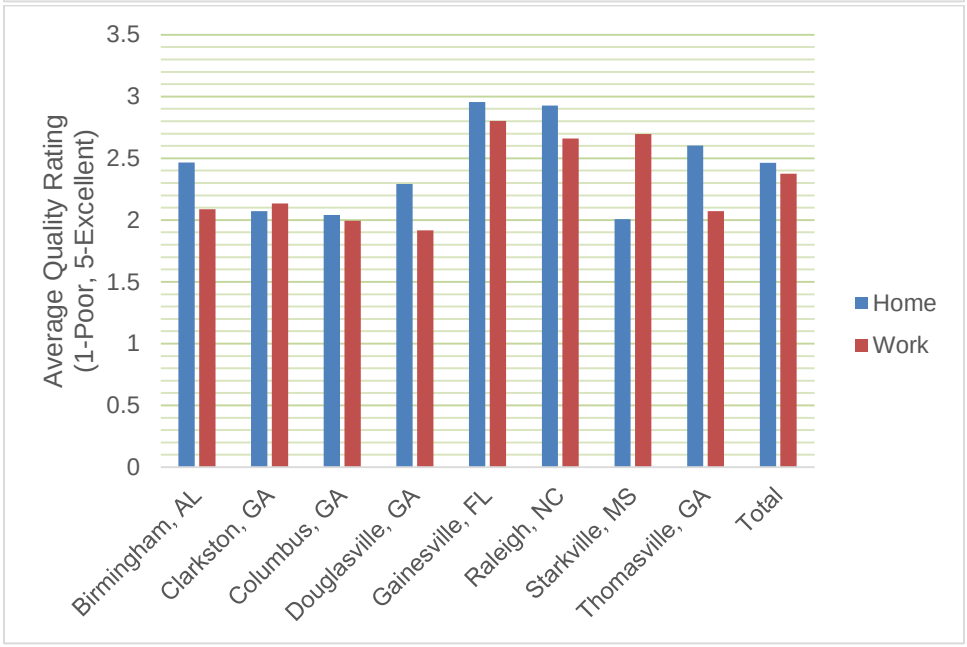


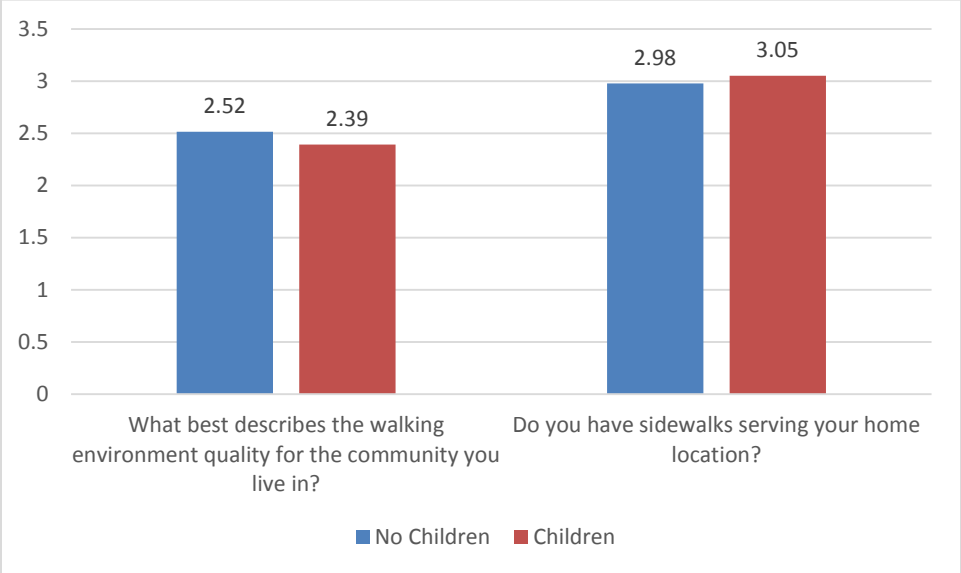
Work for out and about



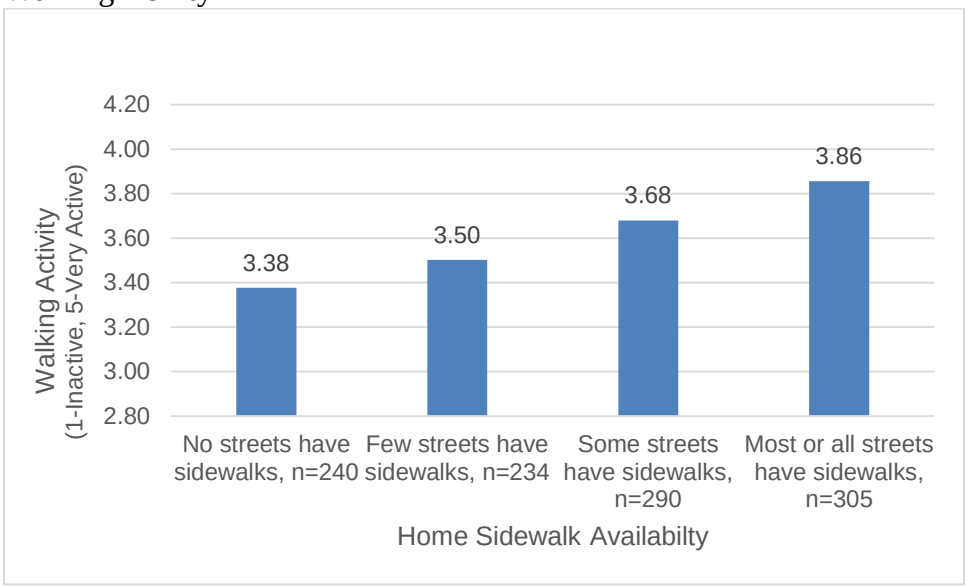
Cross Tabs

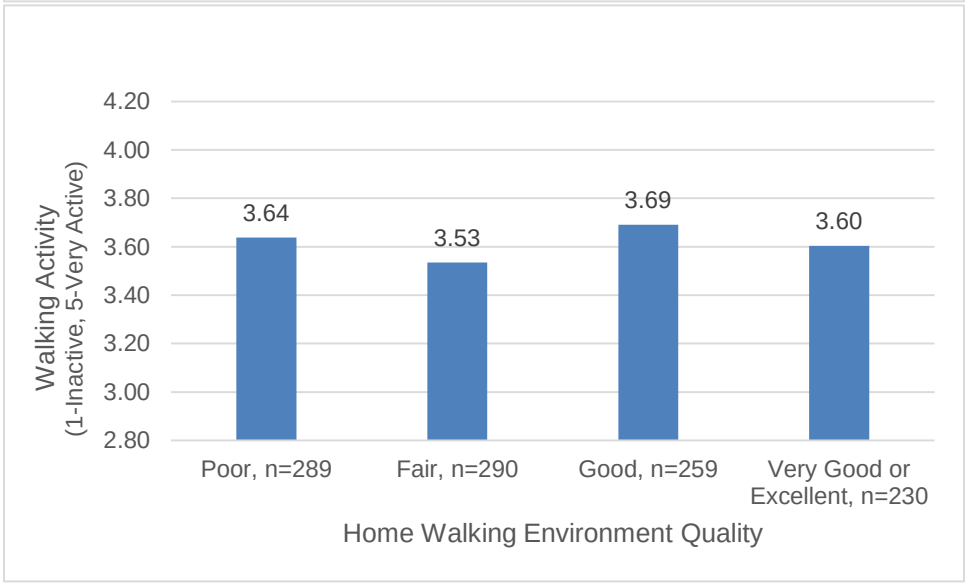

35%
30%
25%
20%
15%
10%
5%
0%
Percent
22%
12%
22%
16%
27%
21%
16%
21%
12%
30%
No streets have sidewalks
Few streets have sidewalks
Some streets have sidewalks
Most streets have sidewalks
Almost all streets have sidewalks
Home
Work/School


3.5
3
2.5
2
1.5
1
0.5
0
Average Quality Rating (1-Poor, 5-Excellent)
Birmingham, AL
Clarkston, GA
Columbus, GA
Douglasville, GA
Gainesville, FL
Raleigh, NC
Starkville, MS
Thomasville, GA
Total
Home
Work

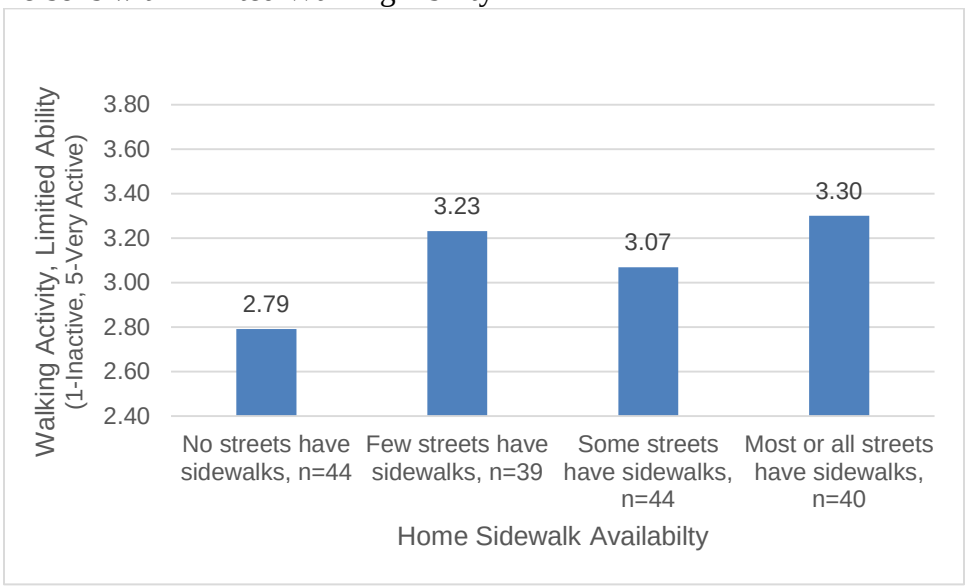

3.5
3
2.5
2
1.5
1
0.5
0
2.52
2.39
2.98
3.05
What best describes the walking environment quality for the community you live in?
Do you have sidewalks serving your home location?
No Children
Children

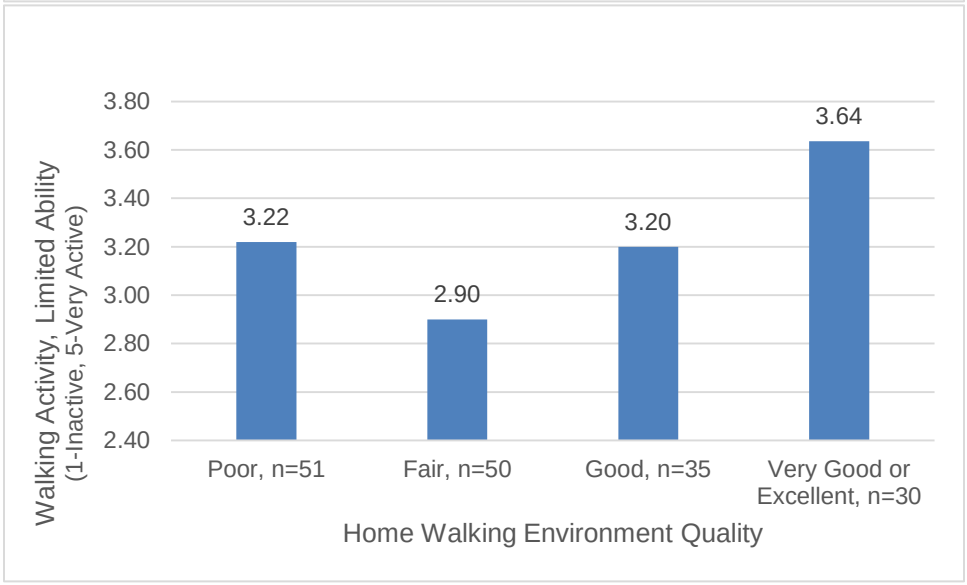
Walking Ability



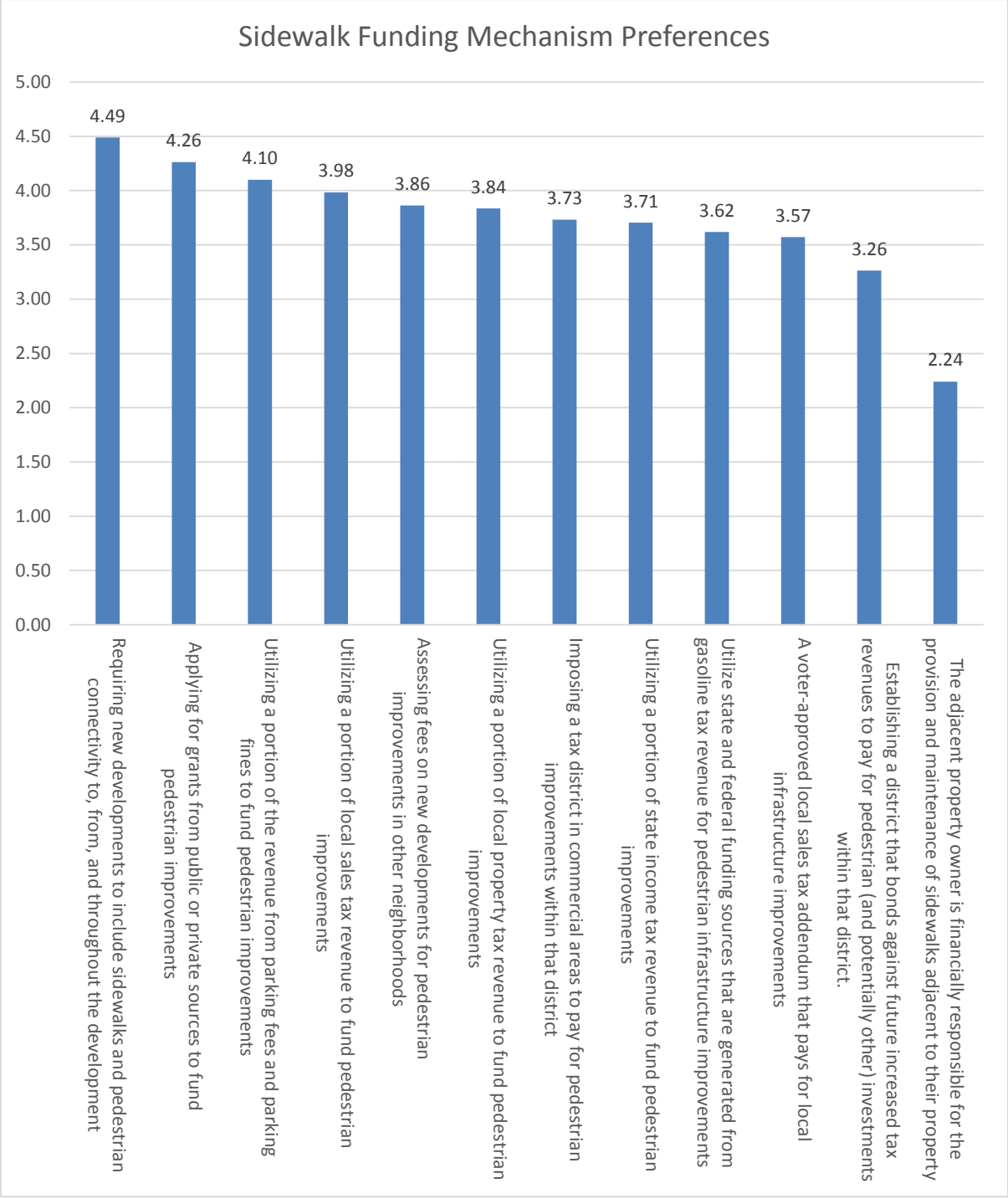


Persons with Limited Walking Ability

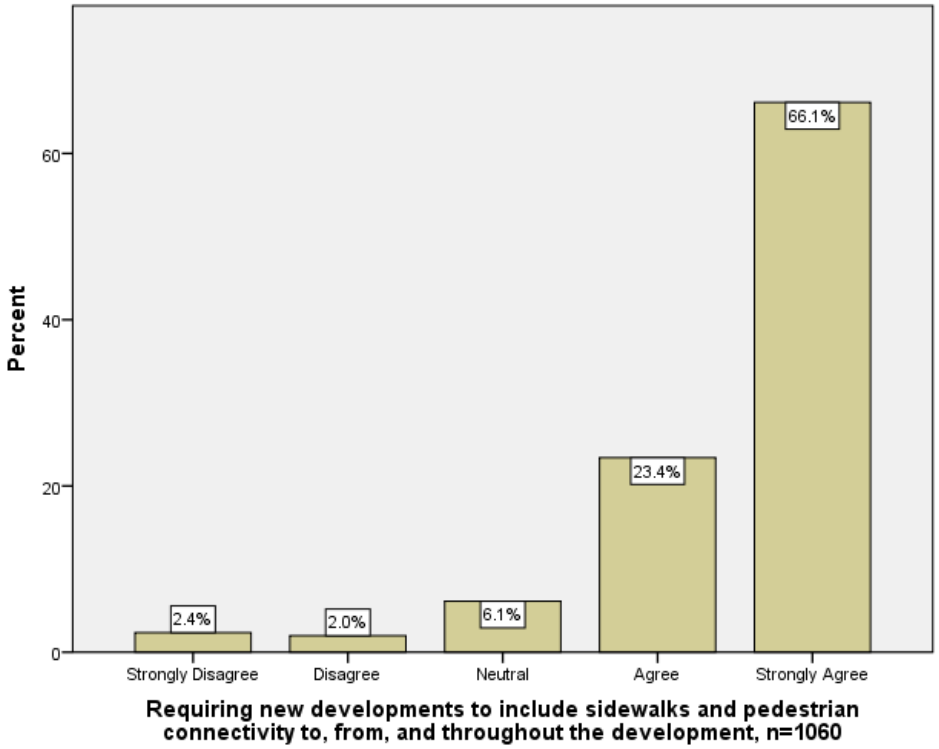




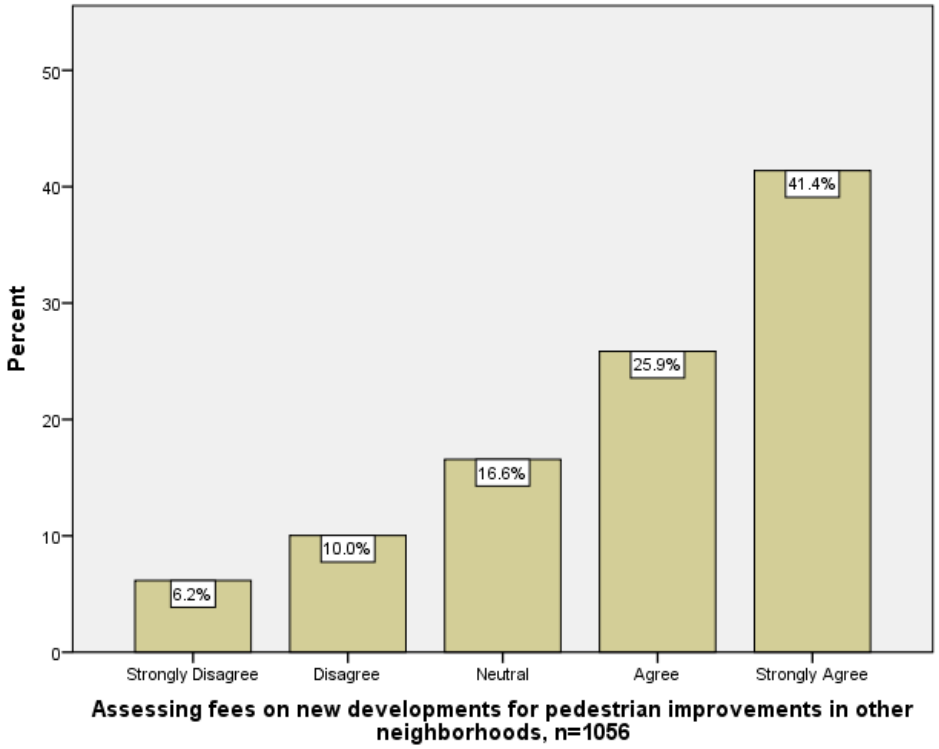
Funding


Sidewalk Funding Mechanism Preferences
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
4.49
4.26
4.10
3.98
3.86
3.84
3.73
3.71
3.62
3.57
3.26
2.24
Requiring new developments to include sidewalks and pedestrian connectivity to, from, and throughout the development
Applying for grants from public or private sources to fund pedestrian improvements
Utilizing a portion of the revenue from parking fees and parking fines to fund pedestrian improvements
Utilizing a portion of local sales tax revenue to fund pedestrian improvements
Assessing fees on new developments for pedestrian improvements in other neighborhoods
Utilizing a portion of local property tax revenue to fund pedestrian improvements
Imposing a tax district in commercial areas to pay for pedestrian improvements within that district
Utilizing a portion of state income tax revenue to fund pedestrian improvements
Utilize state and federal funding sources that are generated from gasoline tax revenue for pedestrian infrastructure improvements
A voter-approved local sales tax addendum that pays for local infrastructure improvements
Establishing a district that bonds against future increased tax revenues to pay for pedestrian (and potentially other) investments within that district.
The adjacent property owner is financially responsible for the provision and maintenance of sidewalks adjacent to their property

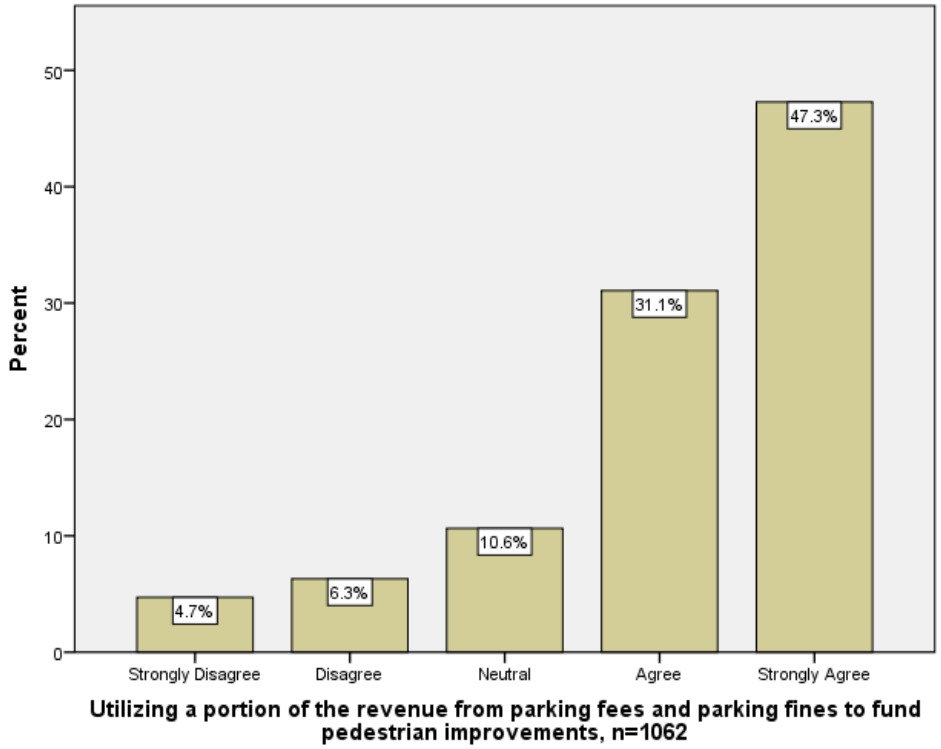
New developments



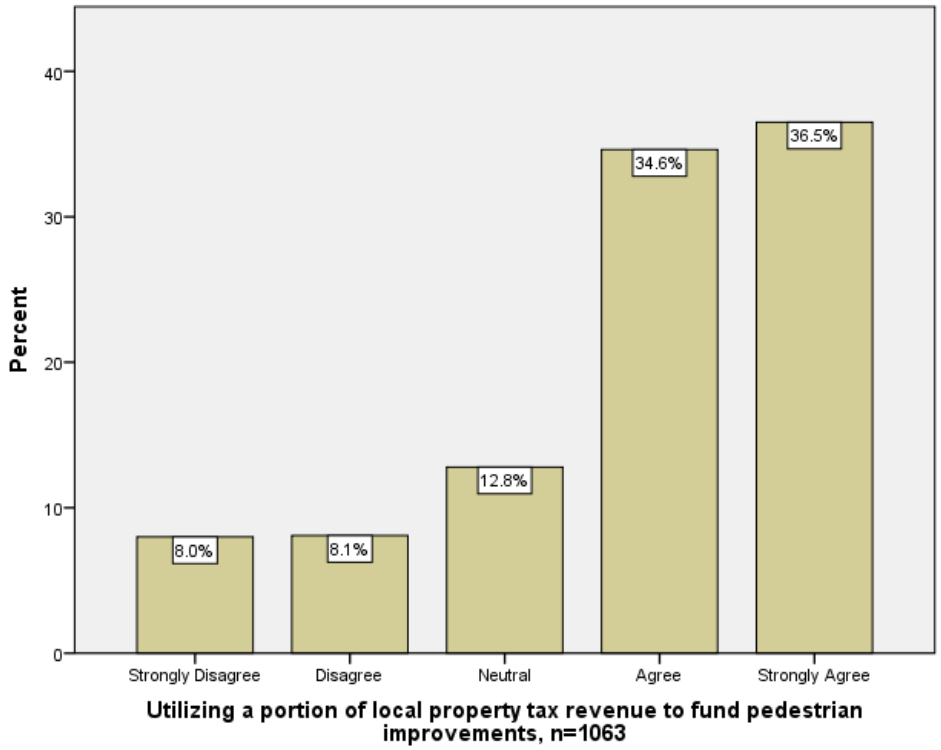
Impact Fees



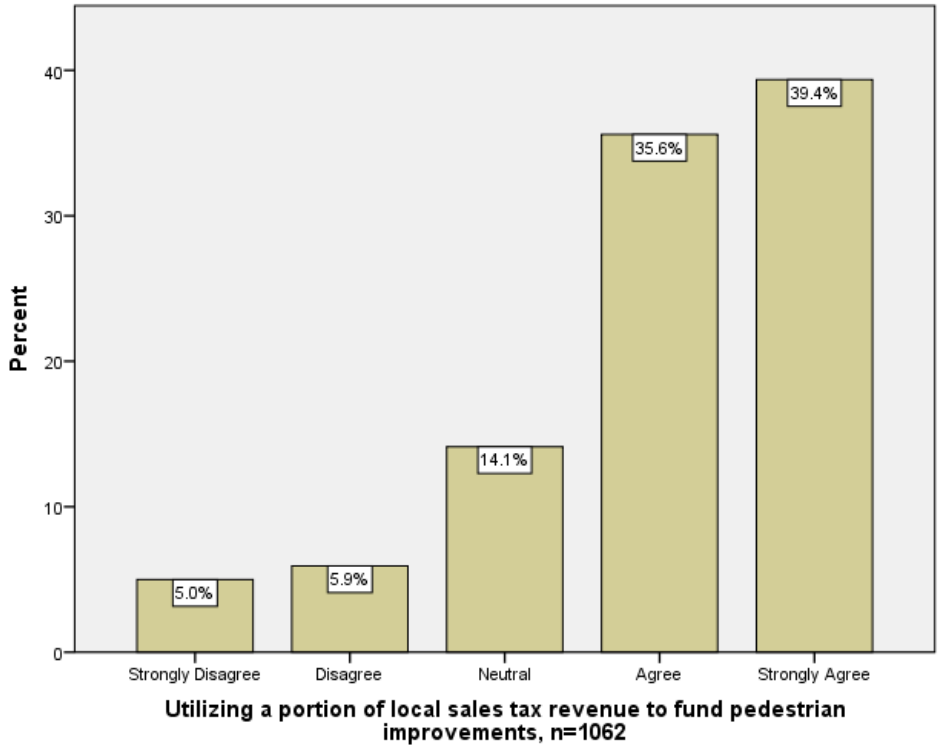
Parking Fees



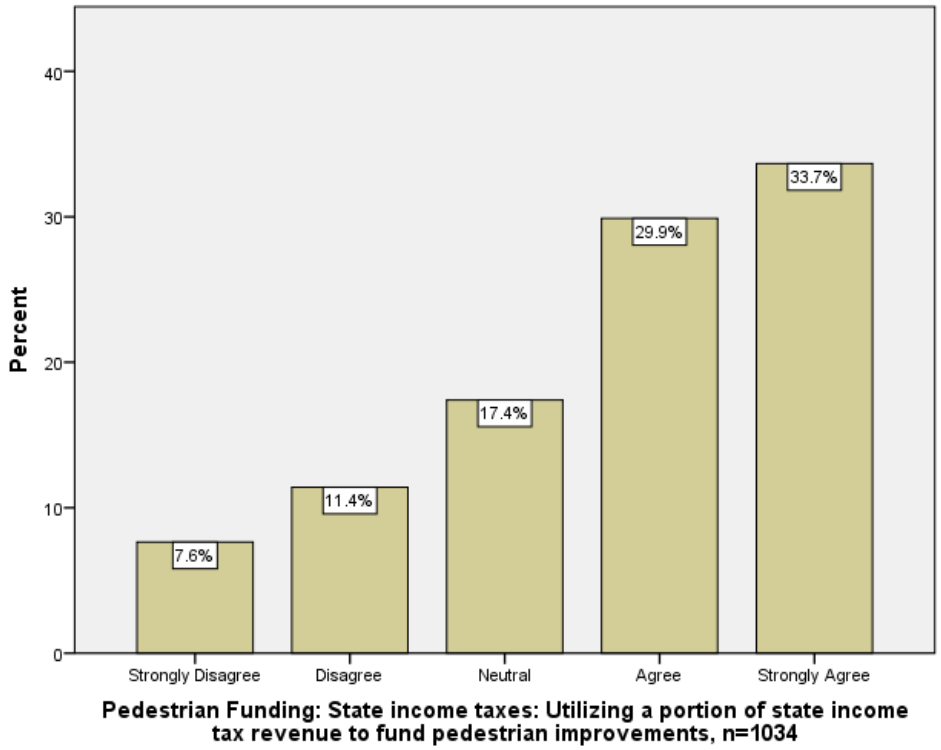
Local property tax



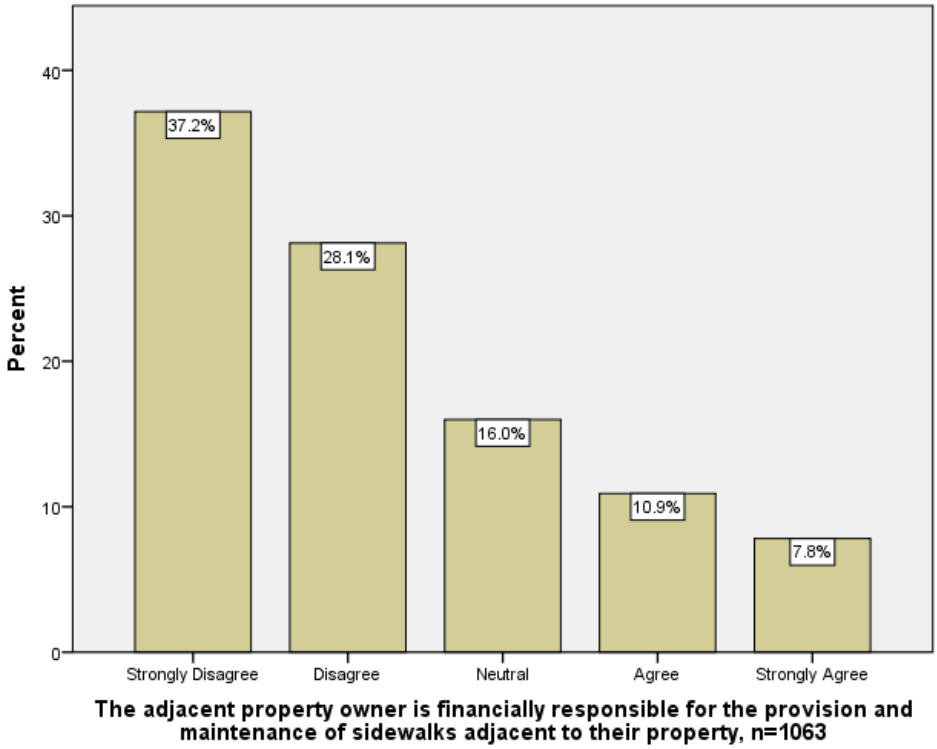
Local Sales Tax



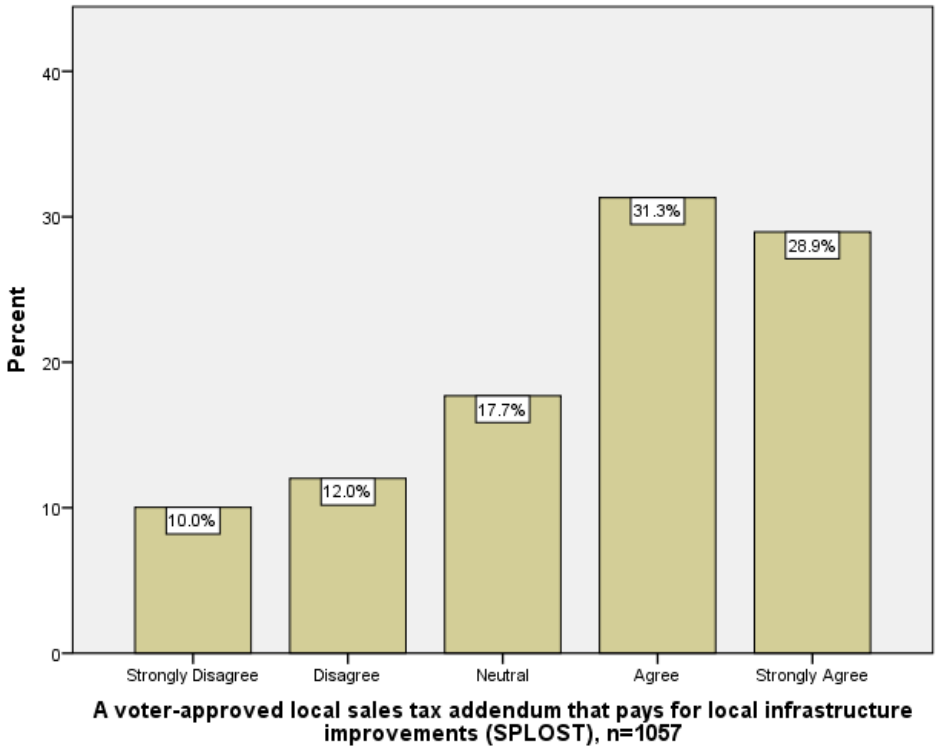
State income tax



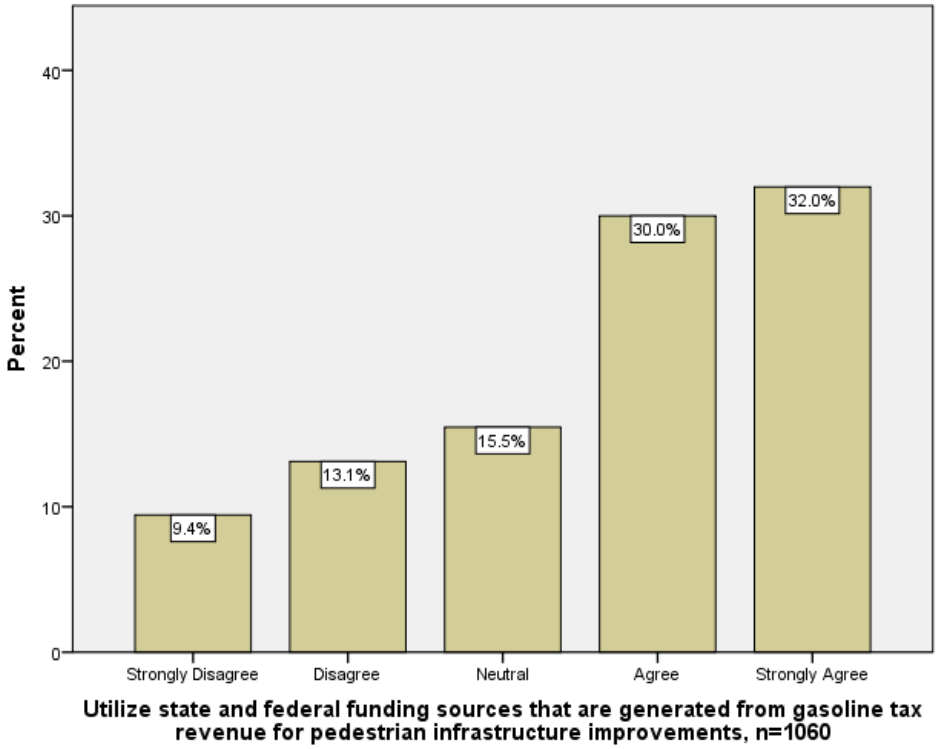
Individual property owner assessments



SPLOST

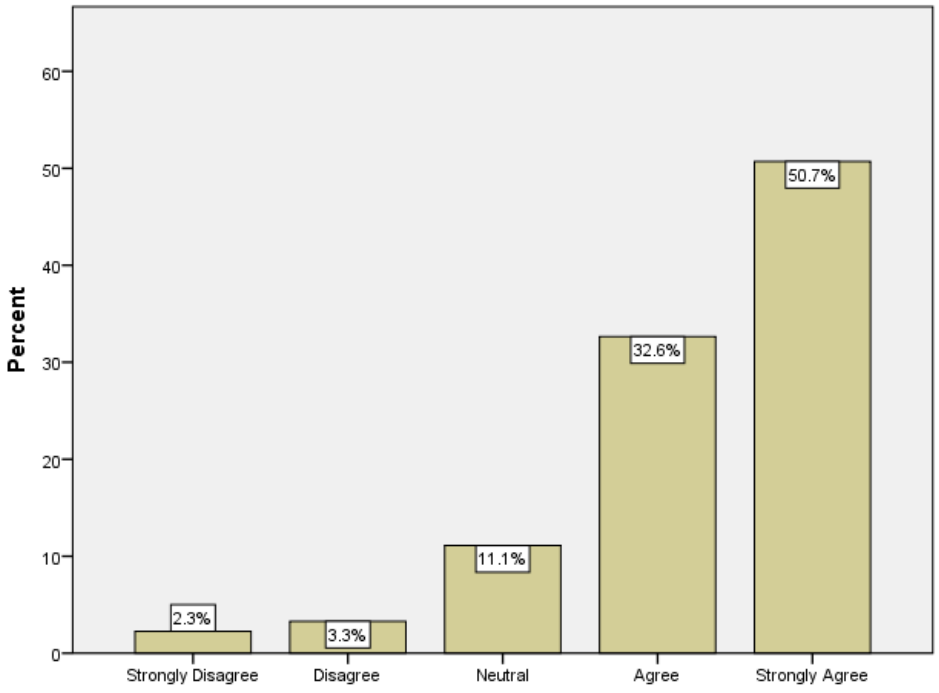


Gas Tax



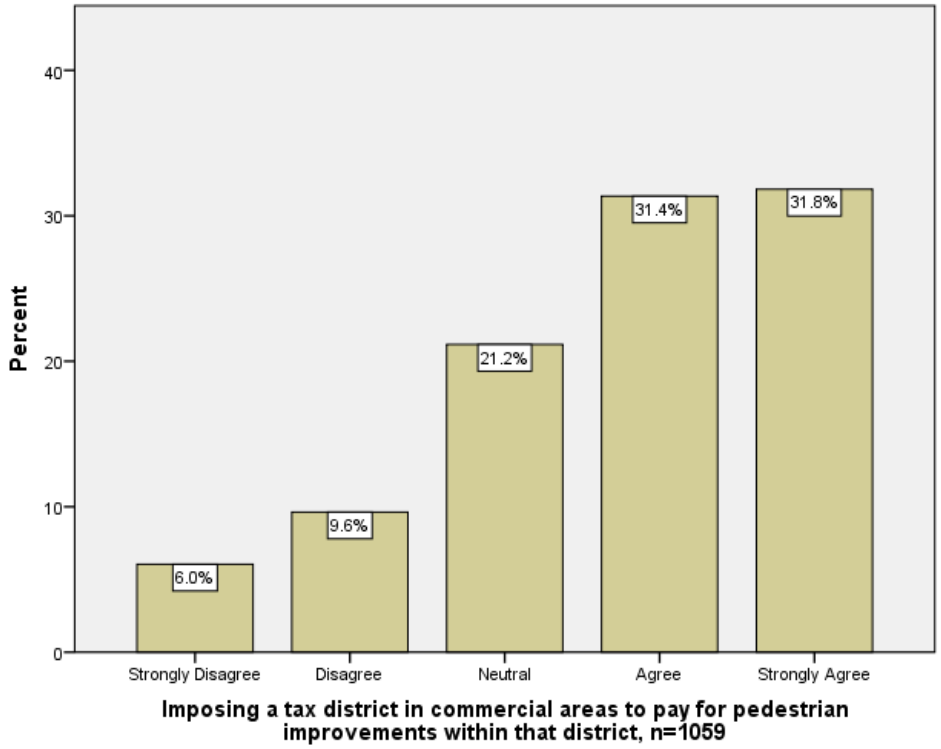
Utilize state and federal funding sources that are generated from gasoline tax revenue for pedestrian infrastructure improvements, n=1060

Grants

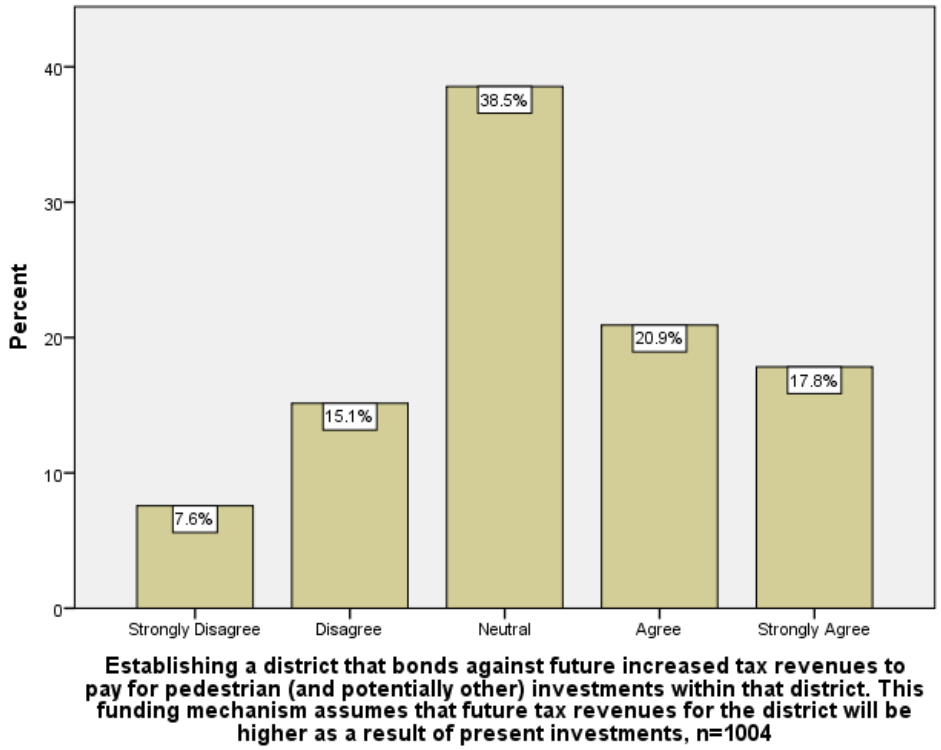


Pedestrian Funding: Grant funding: Applying for grants from public or private sources to fund pedestrian improvements, n=1063

Business Improvement tax district

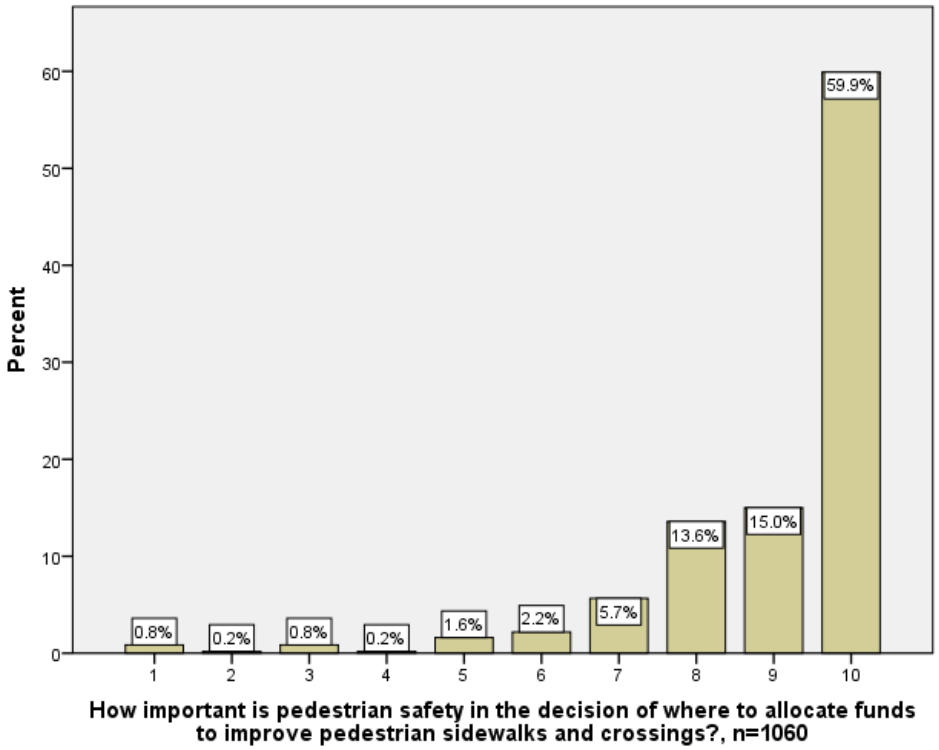


Tax Allocation District

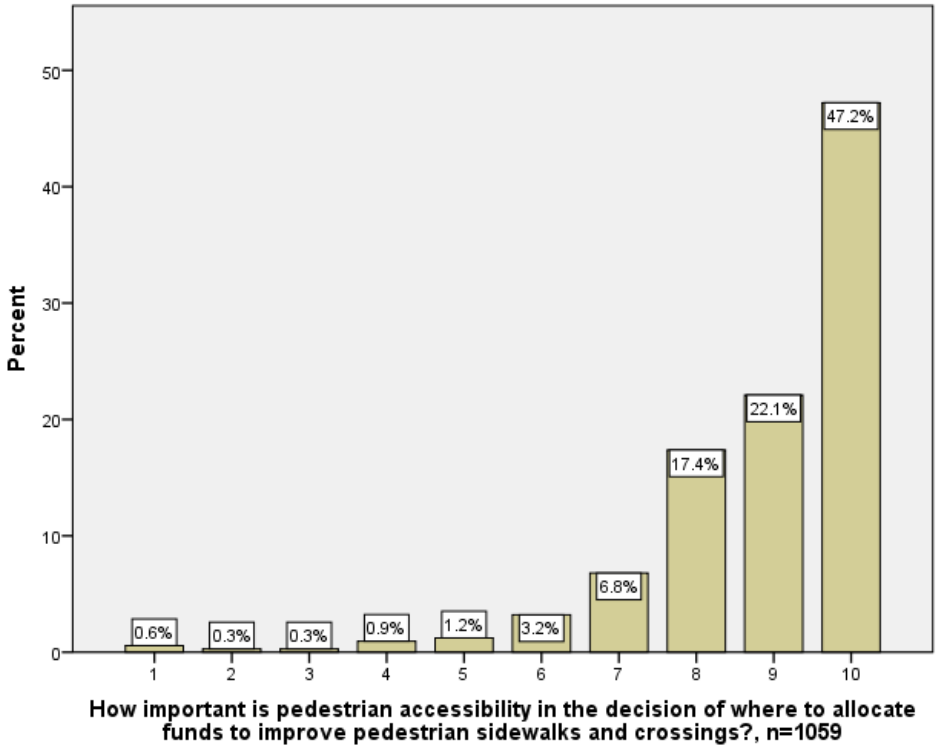


Funding Allocation

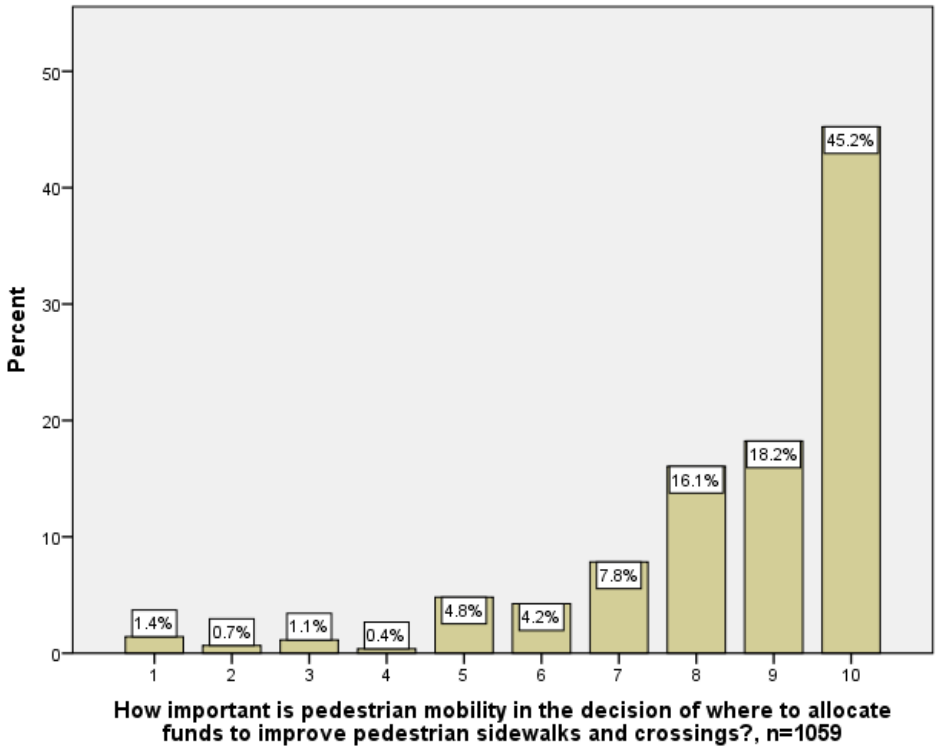
Ped Safety



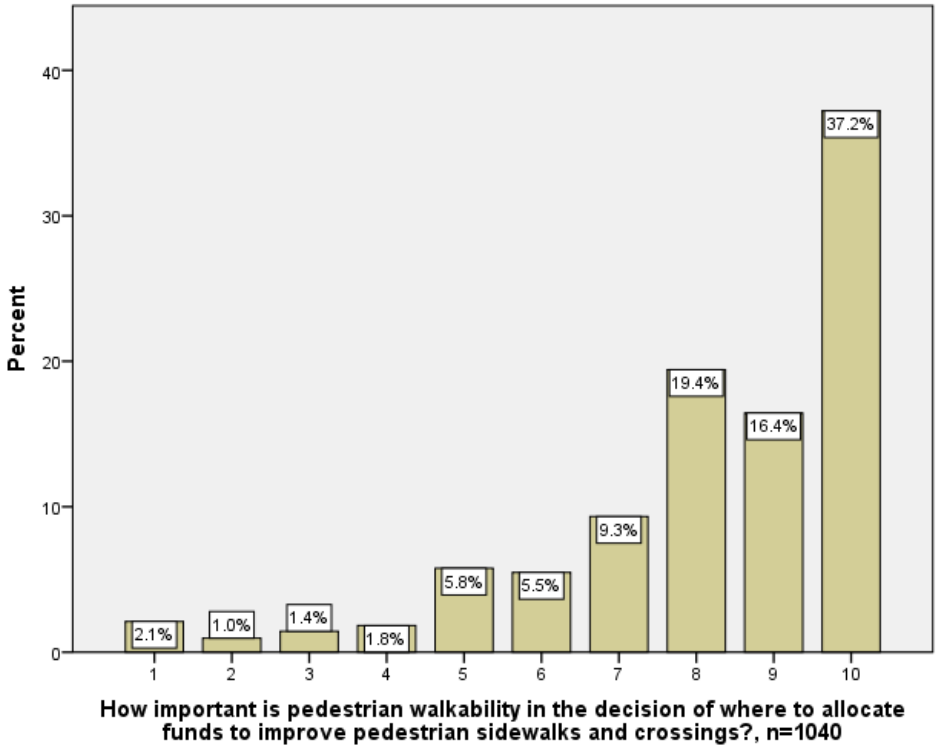
Accessibility



Mobility

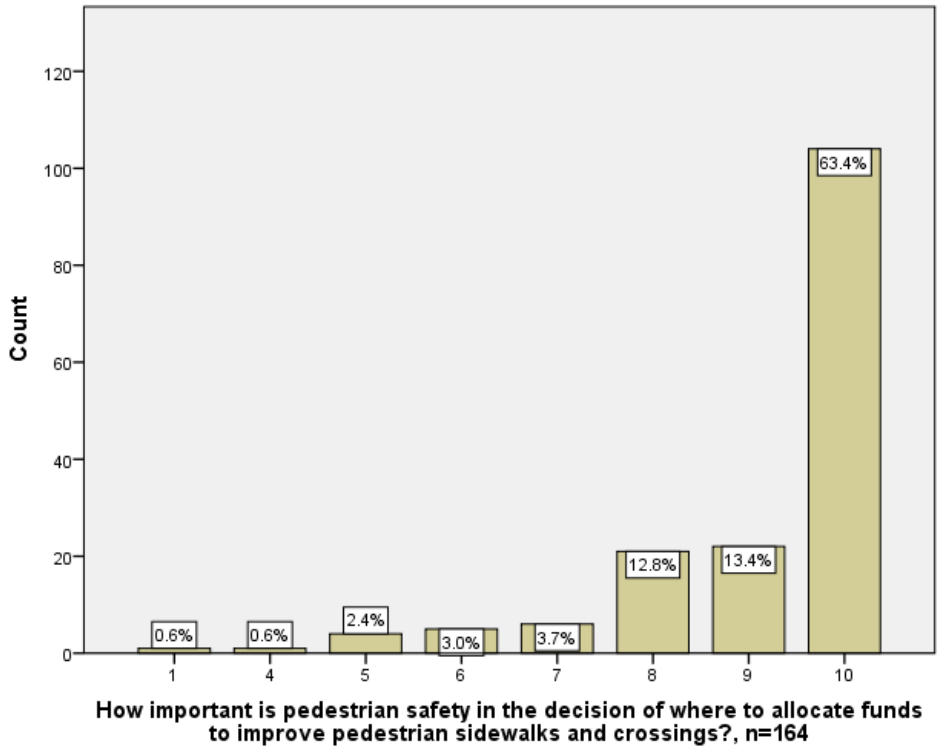


Walkability

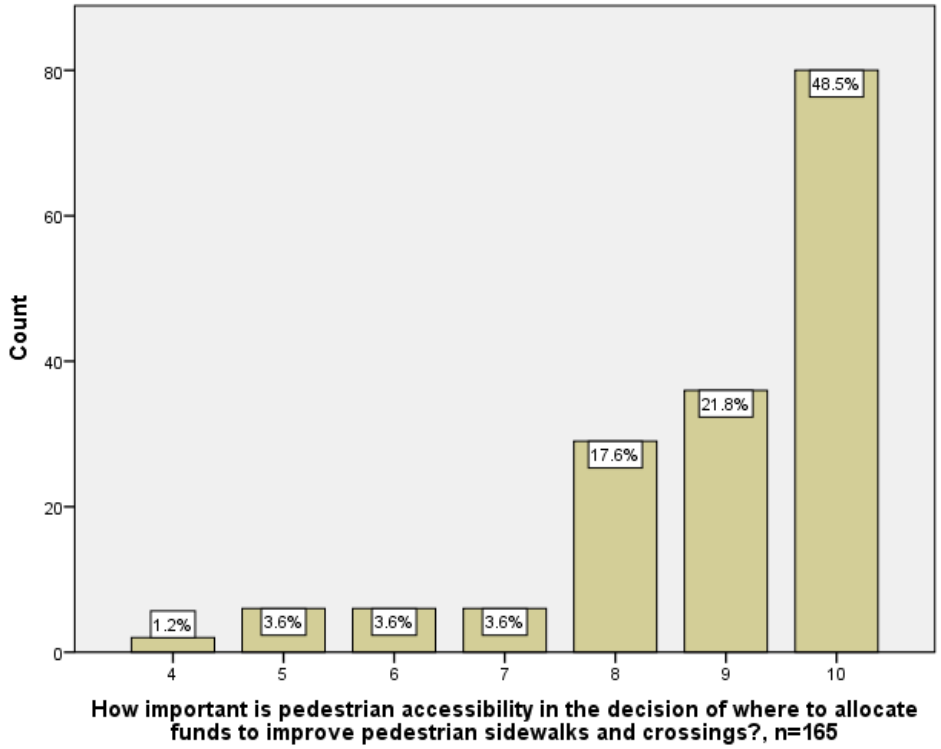


Funding Allocation for Disabled

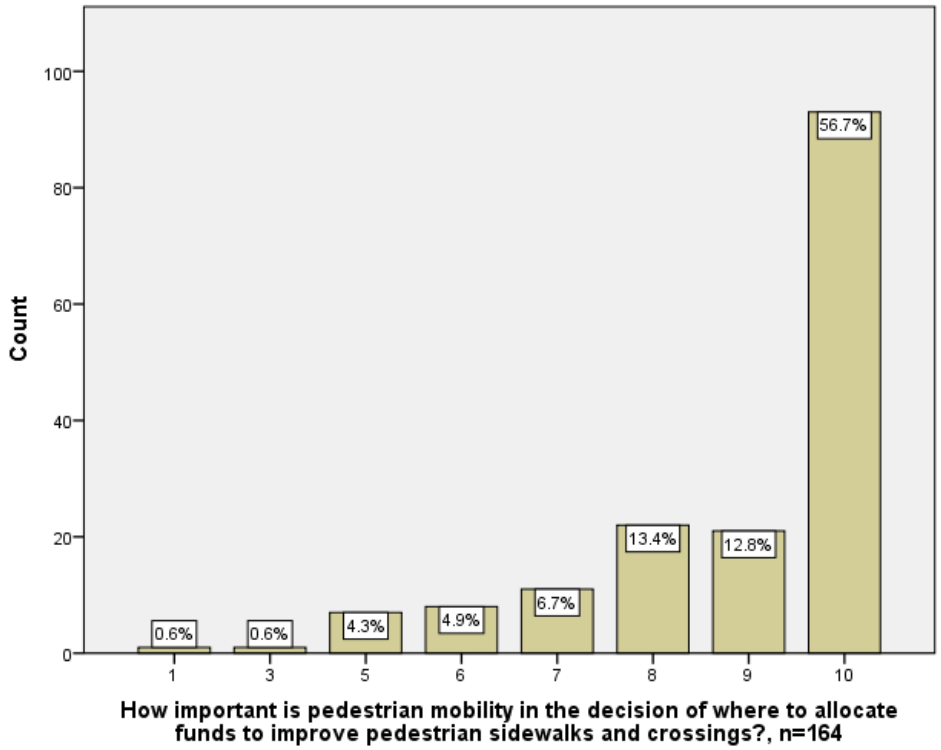
Ped Safety



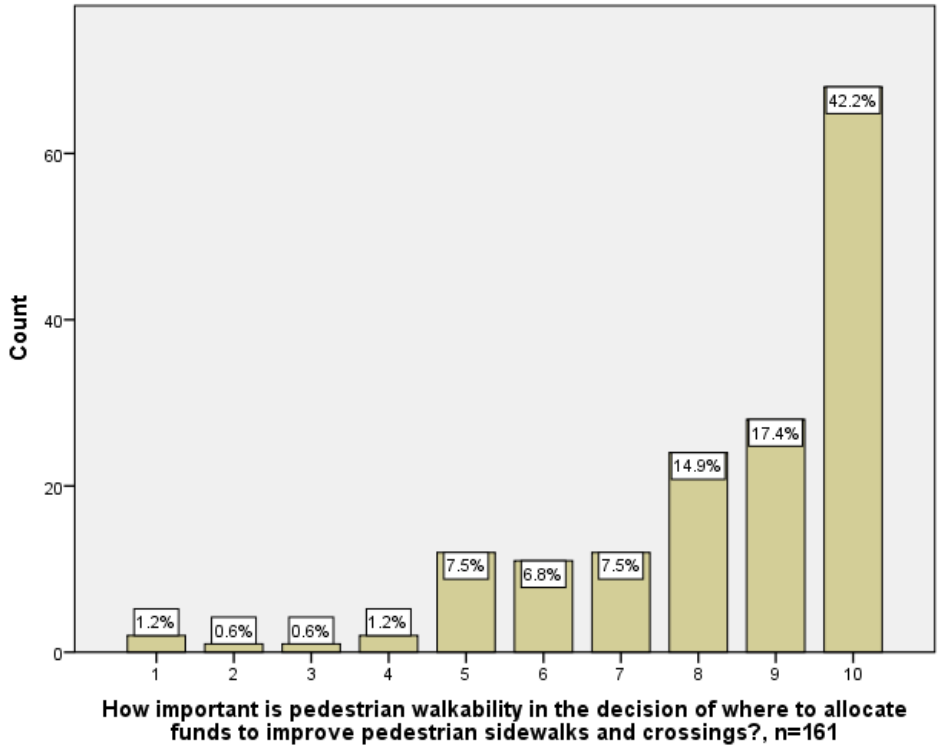
Accessibility



Mobility

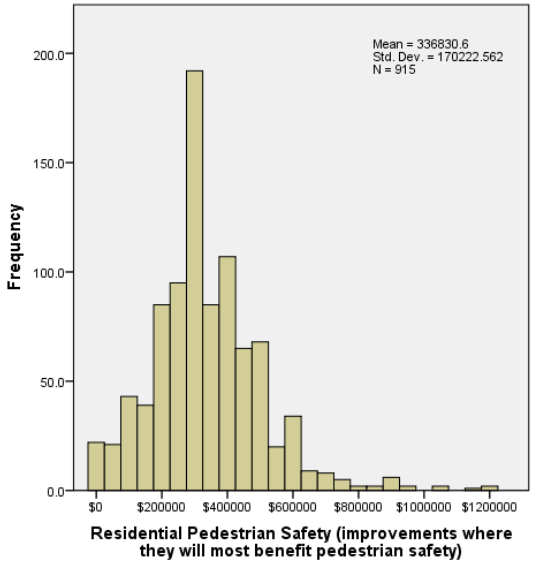


Walkability



Slider Bar

Ped Safety



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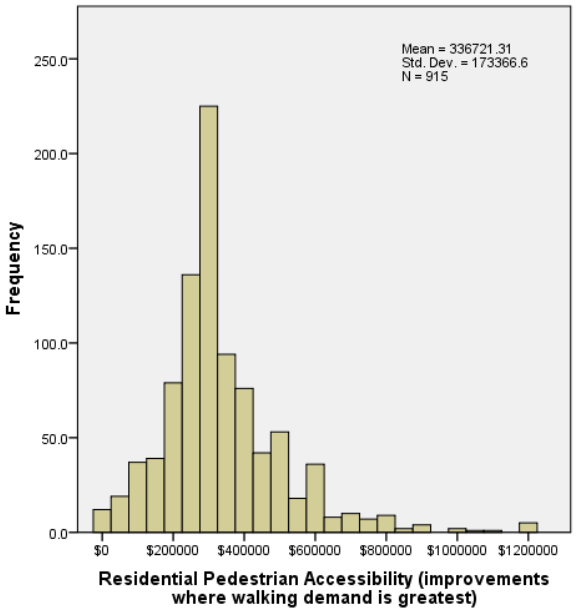
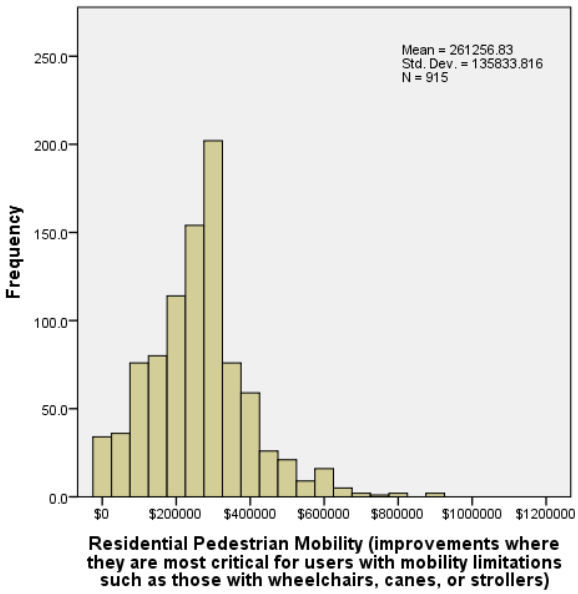
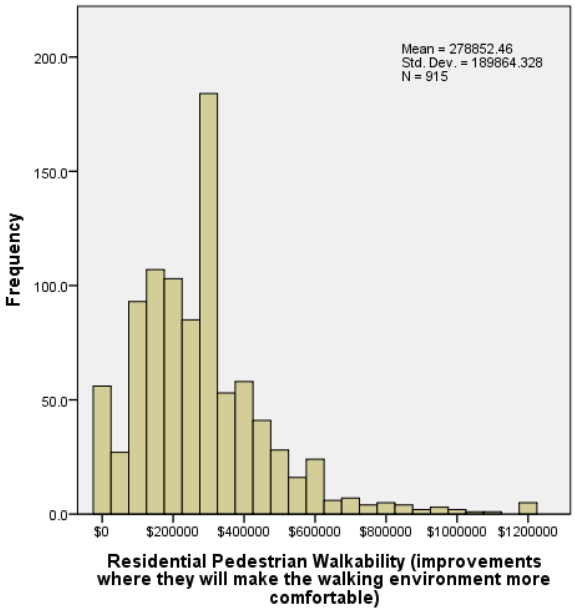


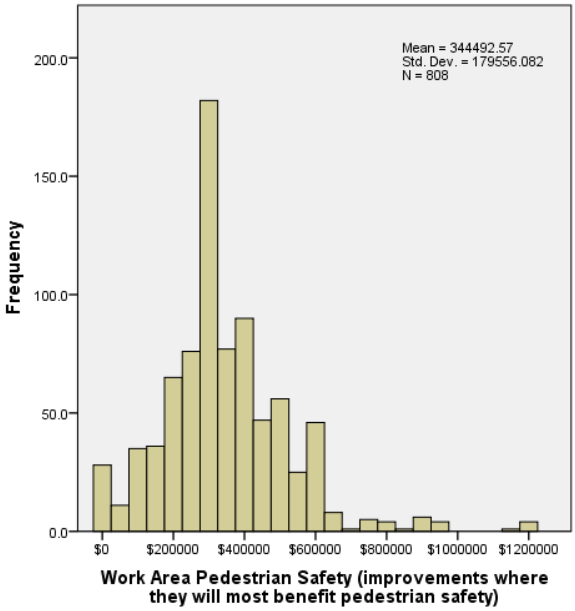
Mobility



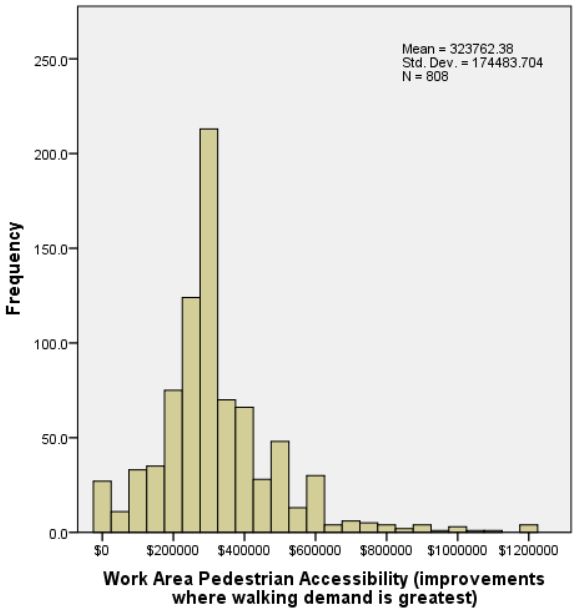
Walkability



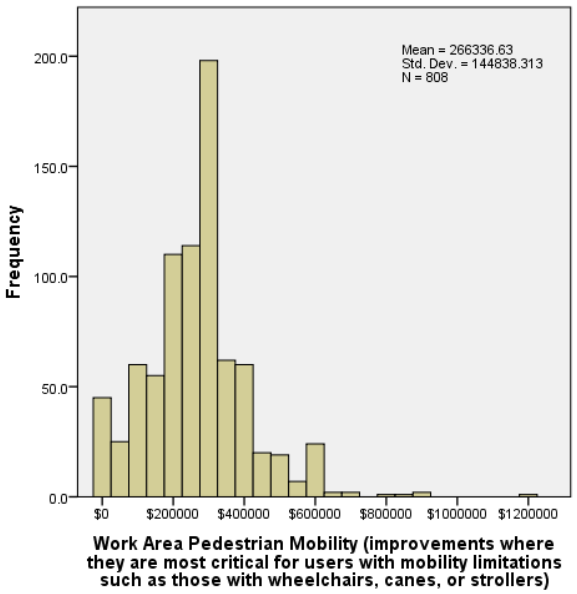
Work Safety



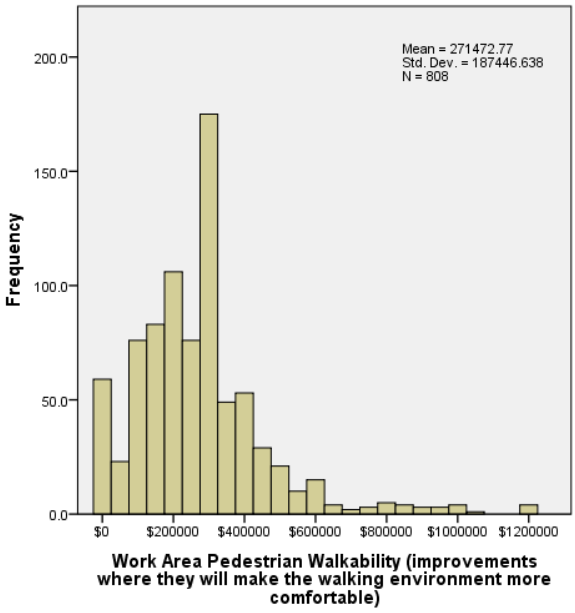
Work Accessibility



Work Mobility

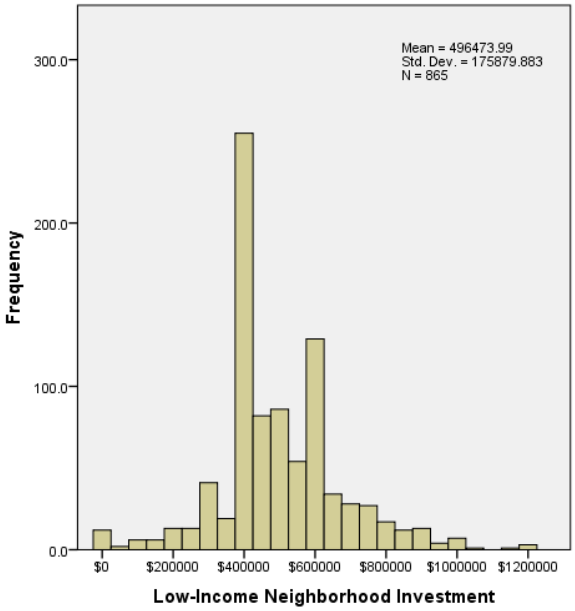


Work Walkability

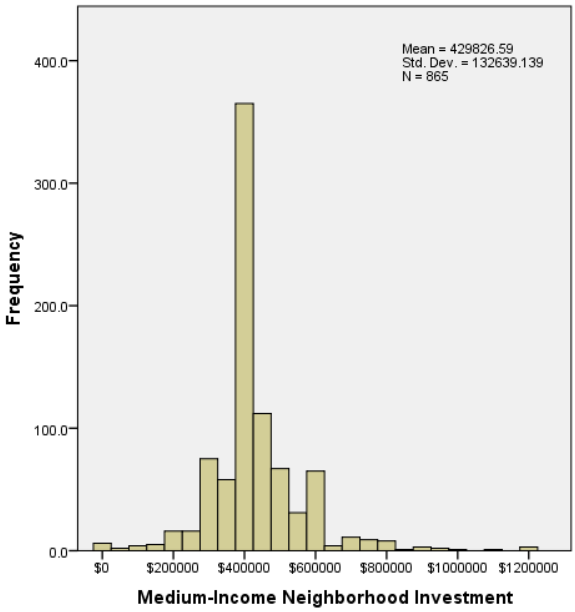


Geographic

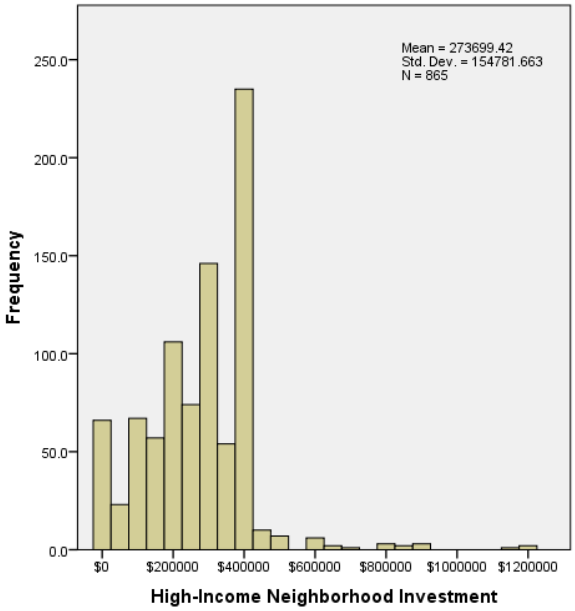
Low Income



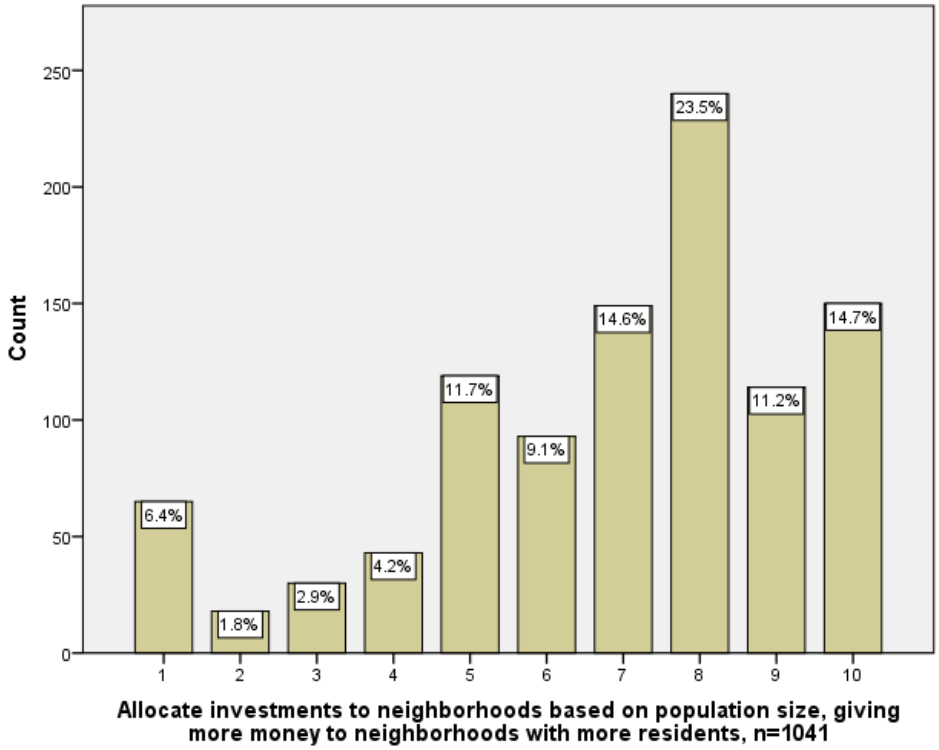
Medium Income



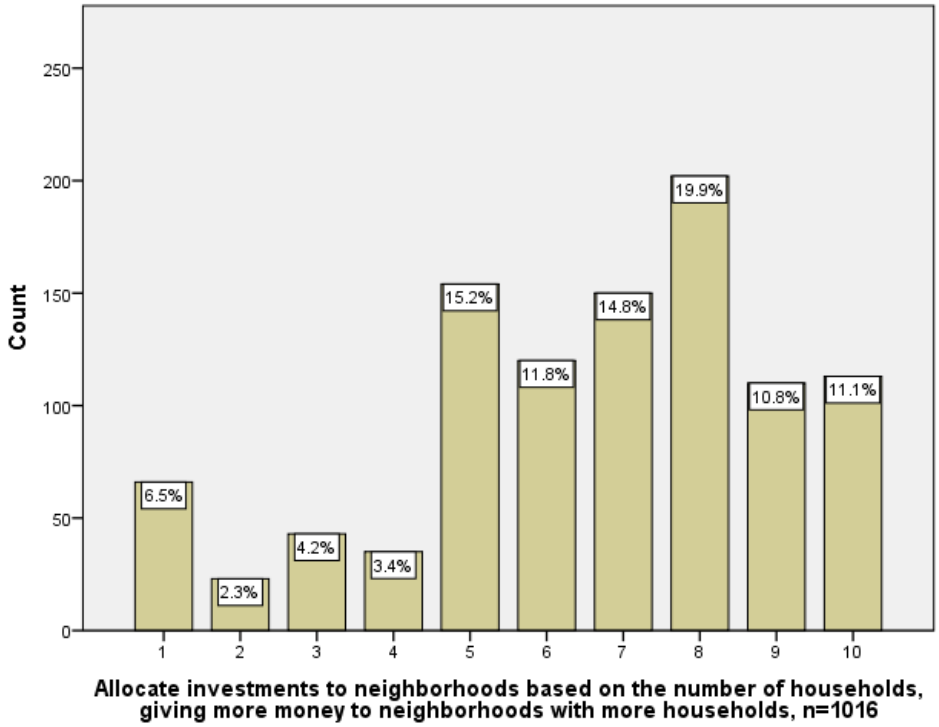
High Income



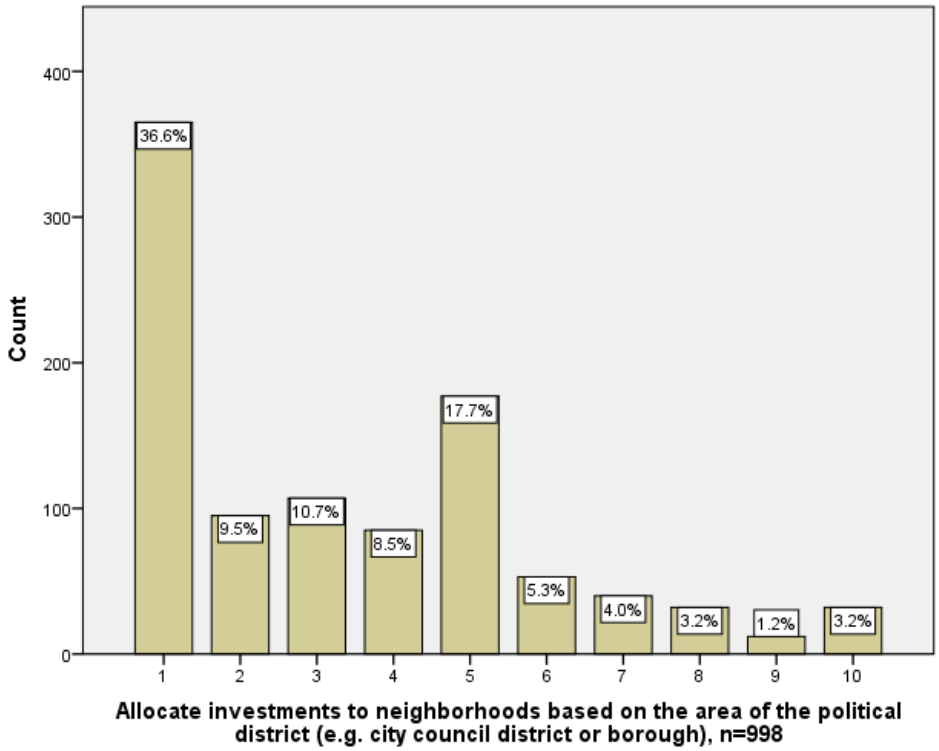
Population Size



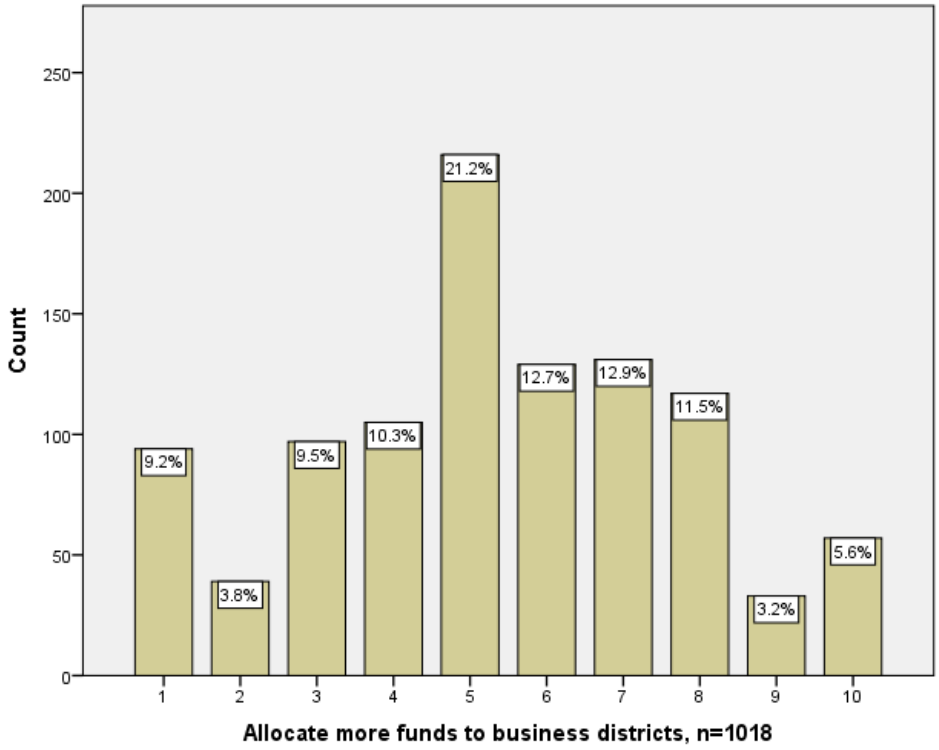
Households



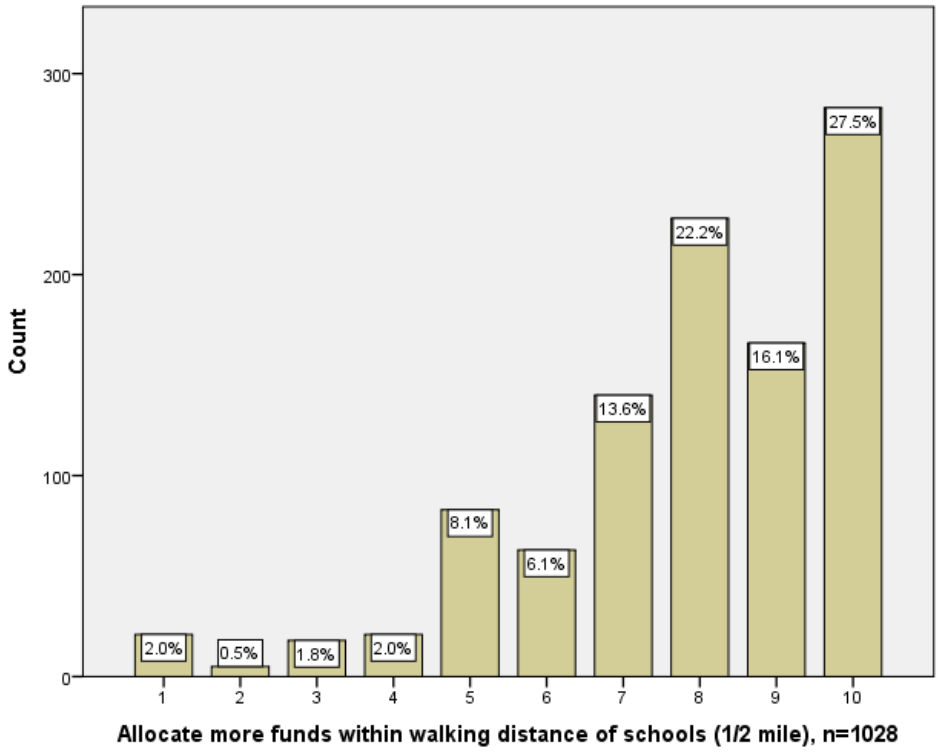
Political District



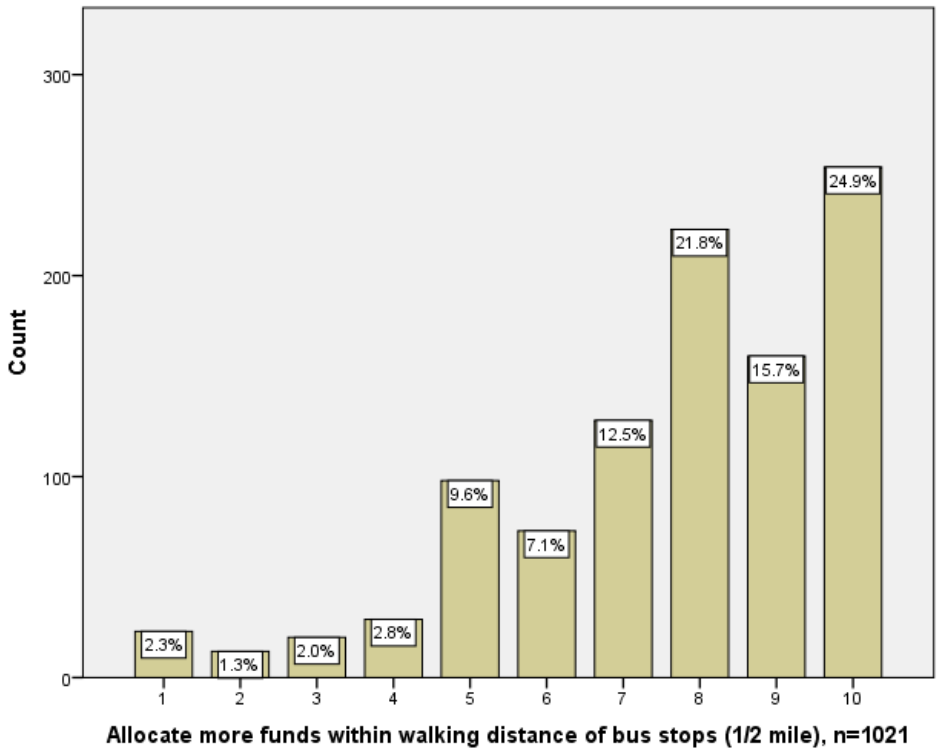
Business District



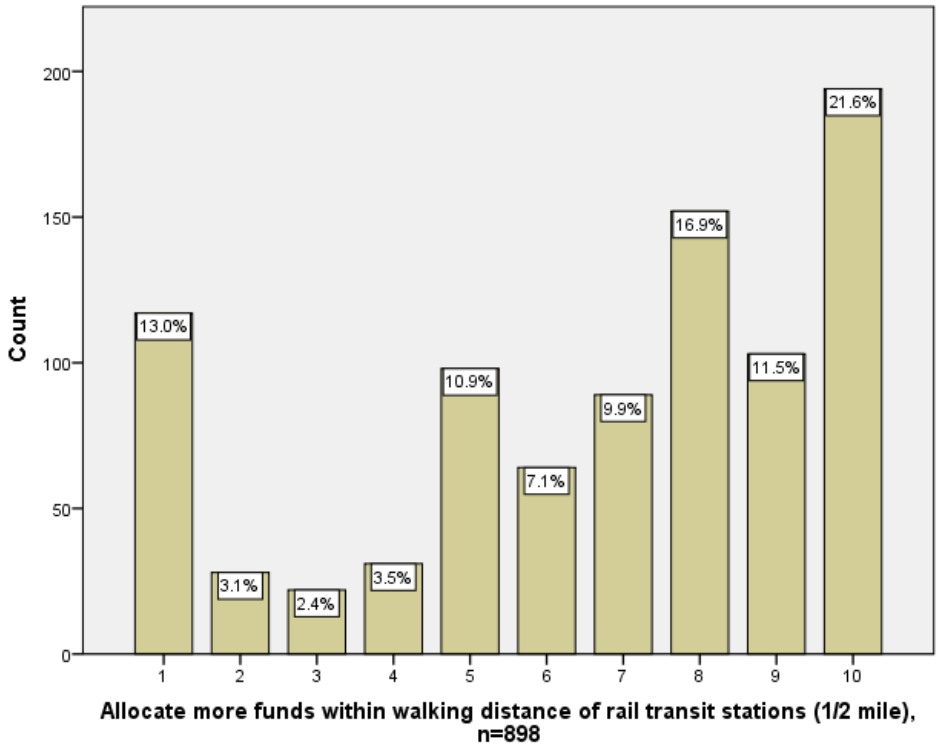
Schools



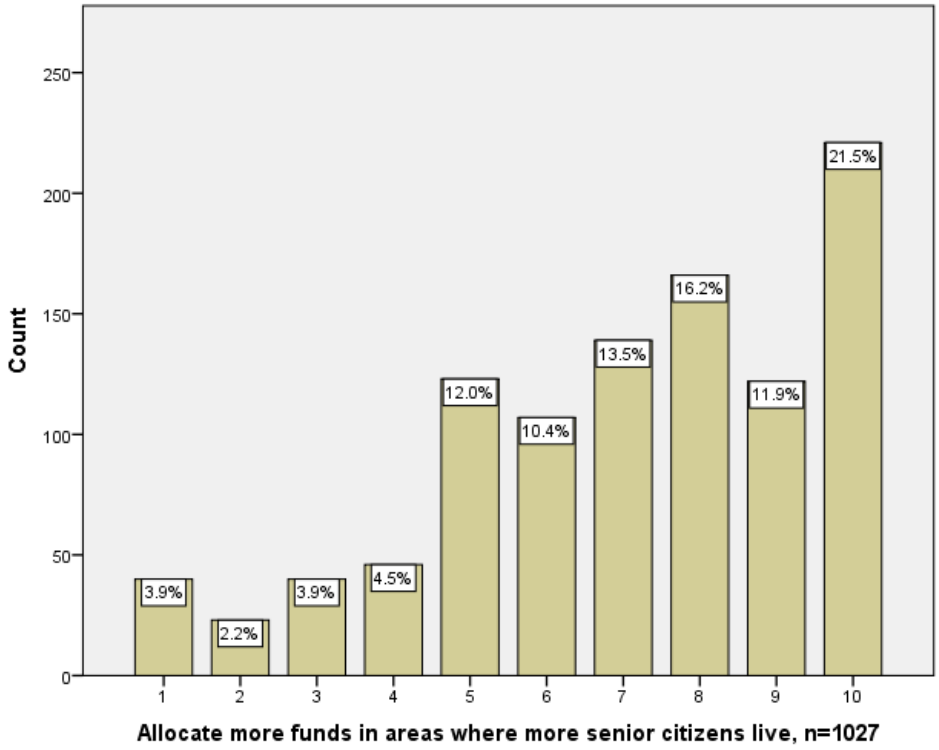
Bus Stops



Rail Transit



Senior Citizens



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Appendix C: Census Data for the Eight Surveyed Cities

Demographic	Birmingham	Gainesville	Raleigh	Starkville	Clarkston	Columbus	Douglasville	Thomasville
Population estimates base, April 1, 2010, (V2015)	212,204	124,486	404,001	23,909	12,215	200,579	32,897	18,742
Population, percent change - April 1, 2010 (estimates base) to July 1, 2015, (V2015)	0.10%	4.50%	11.60%	6.10%	5.10%	5.30%	6.30%	1.00%
Persons under 18 years, percent, April 1, 2010	21.50%	13.40%	23.10%	18.80%	28.80%	25.60%	28.30%	25.90%
Persons 65 years and over, percent, April 1, 2010	12.40%	8.30%	8.20%	9.40%	4.00%	11.60%	6.80%	15.50%
Female persons, percent, April 1, 2010	53.20%	51.60%	51.70%	50.50%	50.70%	52.10%	53.20%	54.40%
White alone, percent, April 1, 2010	22.30%	64.90%	57.50%	59.60%	13.60%	46.30%	36.00%	43.00%
Black or African American alone, percent,	73.40%	23.00%	29.30%	34.60%	58.40%	45.50%	55.90%	53.80%
Asian alone, percent, April 1, 2010	1.00%	6.90%	4.30%	3.70%	21.60%	2.20%	1.80%	0.80%
Hispanic or Latino, percent, April 1, 2010	3.60%	10.00%	11.40%	1.80%	2.80%	6.40%	7.20%	2.30%
White alone, not Hispanic or Latino, percent, April 1, 2010	21.10%	57.80%	53.30%	58.50%	13.10%	43.70%	33.40%	41.90%
Foreign born persons, percent, 2010-	3.40%	11.70%	13.30%	4.80%	53.50%	5.50%	8.00%	2.10%
Housing units, April 1, 2010	108,981	57,576	176,124	11,767	2,883	82,690	13,163	8,534
Owner-occupied housing unit rate, 2010-2014	48.50%	38.00%	53.20%	41.60%	22.40%	50.80%	47.30%	48.50%
Median value of owner-occupied housing units, 2010-2014	$86,100	$145,700	$205,200	$157,400	$98,200	$134,200	$139,500	130,400
Median gross rent, 2010-2014	$728	$851	$914	$690	$854	$826	$925	$686
Households, 2010-2014	88,817	47,420	166,316	9,845	2,264	72,556	11,597	7,535
Persons per household, 2010-2014	2.29	2.35	2.42	2.35	3.4	2.58	2.64	2.41
Living in same house 1 year ago, percent of persons age 1 year+, 2010-2014	78.80%	65.90%	78.90%	74.10%	69.30%	75.50%	77.50%	82.50%
Language other than English spoken at home, percent of persons age 5 years+, 2010-2014	5.00%	15.50%	17.40%	6.70%	59.20%	9.50%	10.40%	3.30%
High school graduate or higher, percent of persons age 25 years+, 2010-2014	83.90%	91.20%	90.70%	88.30%	63.00%	85.50%	89.60%	80.70%
Bachelor's degree or higher, percent of persons age 25 years+, 2010-2014	23.10%	42.60%	47.60%	47.60%	16.30%	23.70%	27.90%	21.20%
With a disability, under age 65 years, percent, 2010-2014	12.80%	6.90%	5.40%	7.80%	6.60%	14.50%	7.10%	13.00%
In civilian labor force, total, percent of population age 16 years+, 2010-2014	59.00%	56.60%	70.70%	60.00%	63.40%	56.50%	65.30%	53.50%
In civilian labor force, female, percent of population age 16 years+, 2010-2014	56.70%	55.90%	66.10%	55.40%	57.50%	57.40%	63.90%	51.90%
Mean travel time to work (minutes), workers age 16 years+, 2010-2014	21.6	16.3	21.9	19.1	33.6	19.1	31.6	17.3
dollars), 2010-2014	$31,217	$32,108	$54,581	$31,357	$33,151	$41,362	$47,563	$31,240
Per capita income in past 12 months (in 2014 dollars), 2010-2014	$19,640	$19,615	$31,169	$22,787	$12,382	$23,209	$23,244	$18,542
Persons in poverty, percent	31.00%	35.80%	16.30%	33.60%	43.90%	20.20%	18.60%	32.40%
Population per square mile, 2010	1,453.00	2,028.40	2,826.30	936.4	6,955.80	877.5	1,378.20	1,231.20
Land area in square miles, 2010	146.07	61.31	142.9	25.51	1.09	216.38	22.46	14.96

Source: https://www.census.gov/quickfacts/table/

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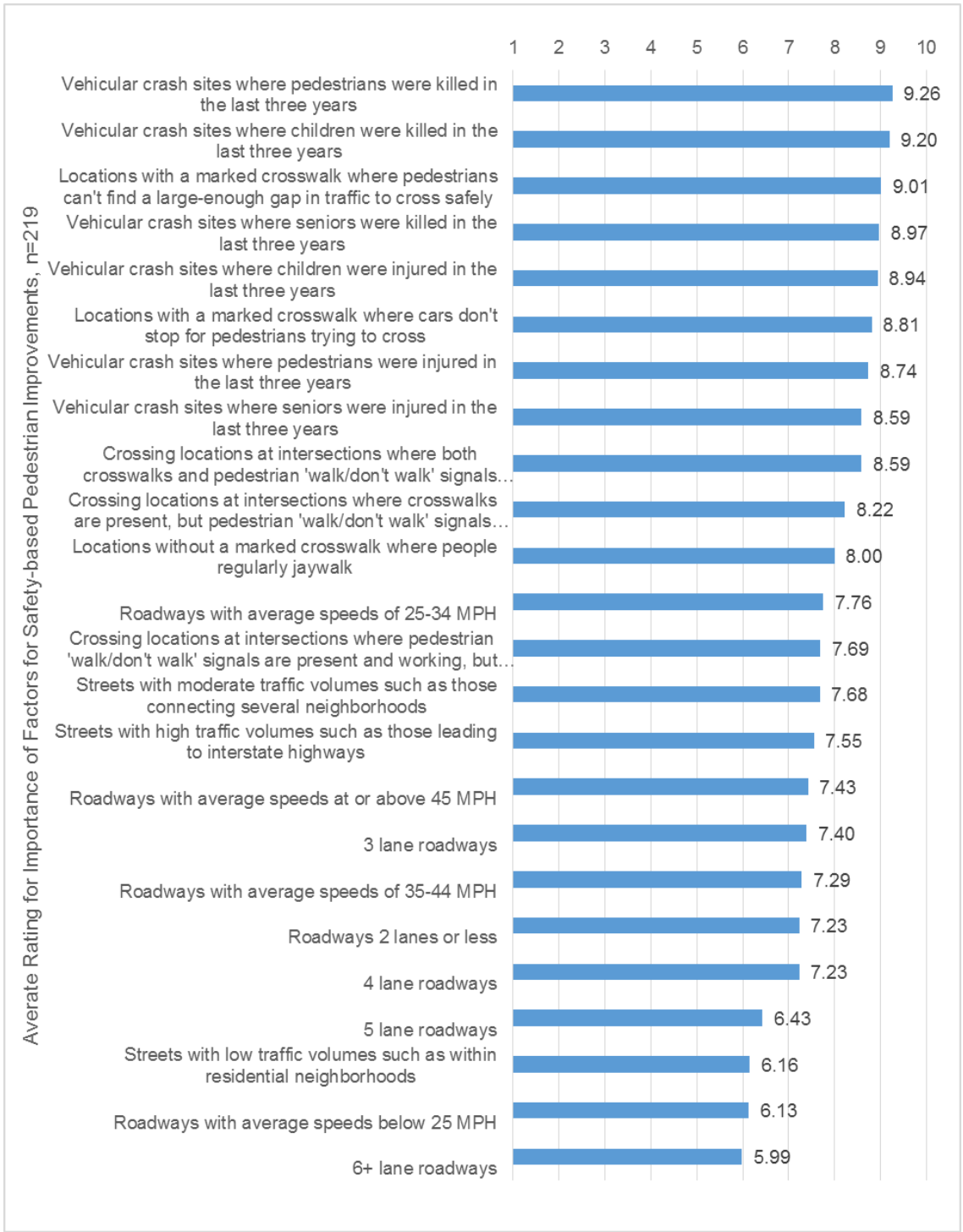
Appendix D: Results of the Optional Safety Survey



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Appendix E: Results of the Optional Accessibility Survey

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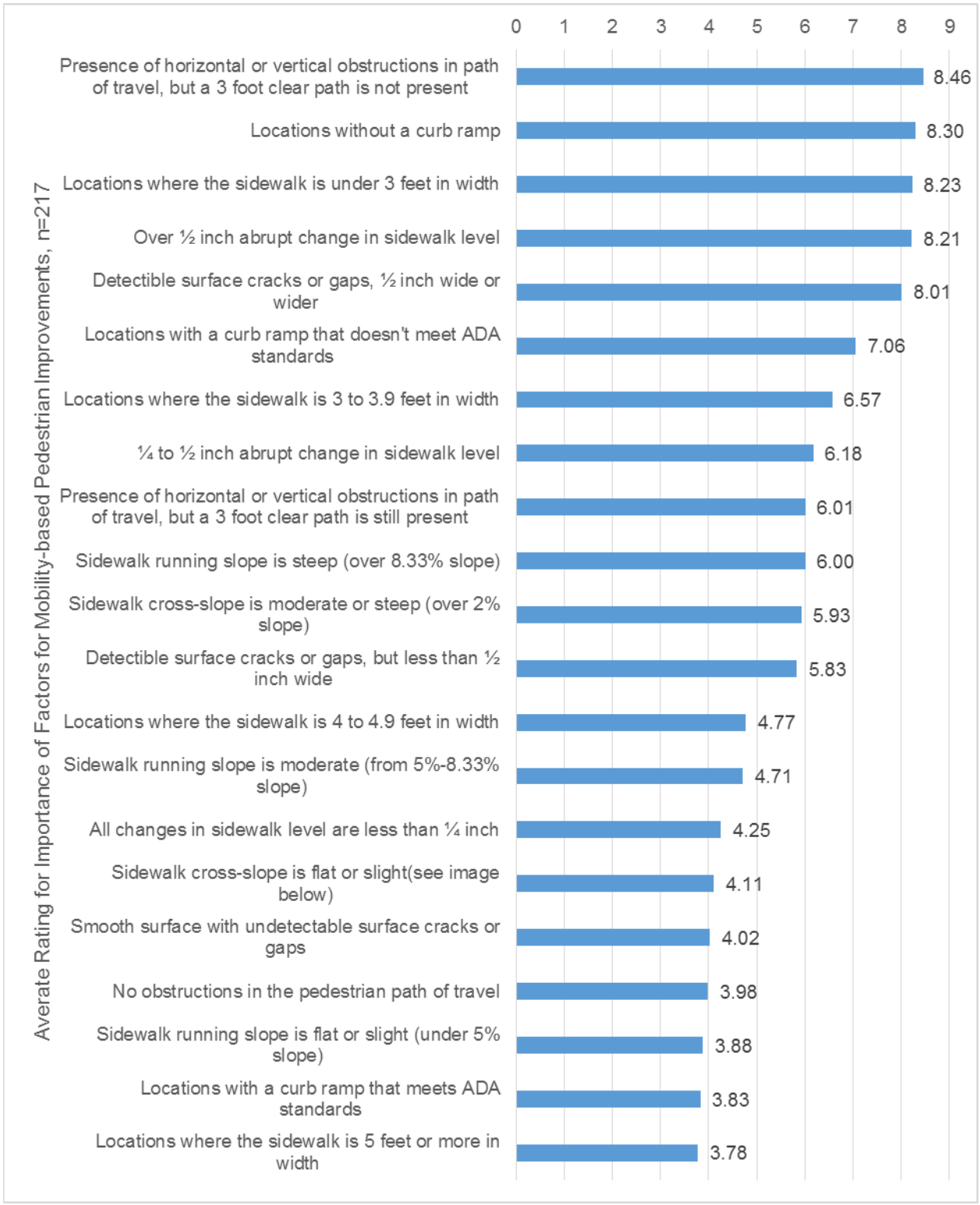
Appendix F: Results of the Optional Mobility Survey



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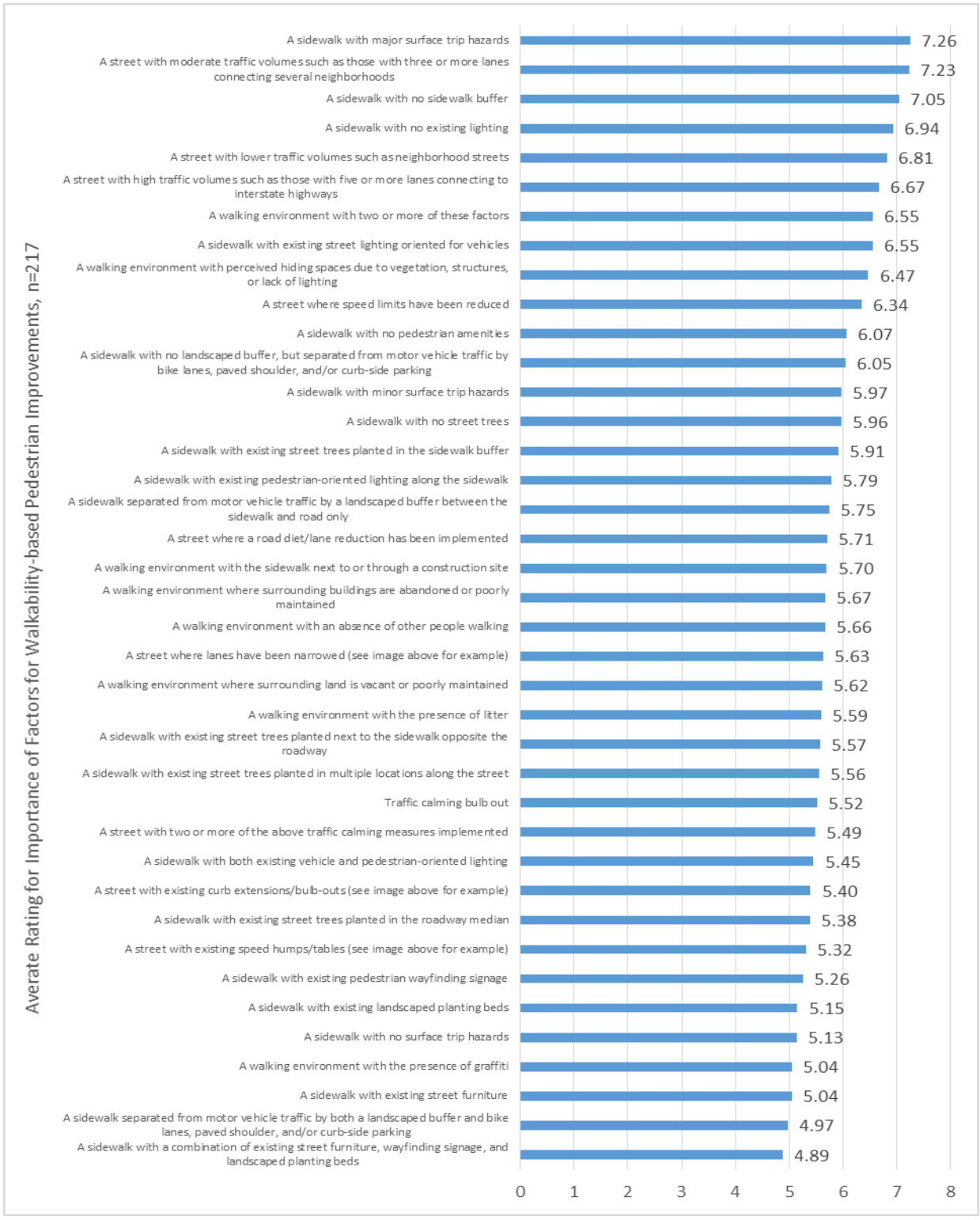
Appendix G: Results of the Optional Walkability Survey