Maryland Department of Natural Resources State Parks Survey Toplines

All Parks

Principal Investigator: Dr. Shanna Pearson-Merkowitz

Research Associates:

Survey Analysis: Kasey Vangelov (PhD '26)

Survey Implementation: Noor Tofailli (MPP '24)

Survey Design and Field Test: Hannah Chan, Danielle Rockman & Ela Dhankhar (BA '23)

Field Dates: October 21, and 29, 2023

Number of Respondents:

Total	Southern Region	Western Region	Eastern Region	Central Region
447	30	155	76	186

Number of Survey Collectors: 44 (40 undergraduate students, 1 master's student, 2 PhD students, 1 professor)

Parks in which the survey was collected: 14 (Seneca Creek State Park, Gunpowder Falls (Jerusalem Mill and Hammerman Areas), Sandy Point State Park, Patapsco Valley State Park(Avalon and Hilton Areas), Tuckahoe State Park, Cunningham Falls State Park, Wye Island Natural Resources Management Area, Bohemia River State Park, Assateague State Park, Point Lookout State Park, Rocky Gap State Park, Janes Island State Park, Greenbrier State Park, Franklin Point State Park)

Funding and Partnership: This poll was funded by the Saul I Stern Research Lab and The Partnership for Action Learning in Sustainability (PALS) in partnership with the Maryland Department of Natural Resources.

Acknowledgements: Many thanks to the Department of Natural Resources for their partnership on this project, specifically the many hours spent by Kate Vogel and Sara Coleman on this project, Mary Owens for identifying target parks and helping us gain permission for students to survey in each parks, and providing a letter for the students to carry with them for identification and permission, all the park managers who gave permission for students to survey, advice about best survey locations, and in one case, a free camping permit for the students so they could stay overnight; the PALS team for their financial and administrative support, particularly Kim Fisher, for all of the time she spent supporting this project, including driving a student team and buying all the snacks, Jennifer Littlefield, Director of Undergraduate Studies in the School of Public Policy for her guidance and support for the project; the Research Associates who made this project possible, and finally all the students of PLCY 306 who spent their Saturday in the parks!

Methodology in Brief: The survey was first designed in PLCY400 "Senior Capstone". In this course University of Maryland public policy students use social science analysis skills to work in teams on problems and issues presented by outside clients. In this course, three students (Hannah Chan, Danielle Rockman

& Ela Dhankhar (BA '23)) worked under the supervision and direction of Professor Pearson-Merkowitz to design a survey to investigate park goer knowledge of, concern about, and experiences with climate change and MD state parks for their client: The Maryland Department of Natural Resources (DNR). The topics included on the survey were determined through interviews with the client to understand their need for information. Questions were then designed to match the clients needs based on existing questions on high quality surveys such as those from the Pew Research Center or other major research center surveys on climate change and parks, and a review of the academic literature for surveys conducted with park goers and surveys addressing public opinion and climate change. After an initial draft was complete, the survey was revised based on best practices in survey design. The draft was then shared and workshopped with the DNR to ensure it successfully addressed their needs. The survey was revised based on the DNR feedback, revisions were made, and then the final survey was approved by the DNR. The survey design team then repeated the process with a proposal for how to implement the survey. Once the implementation design was approved by the DNR, the survey was field tested in three regional parks with permission from the park managers. The three parks in which the initial survey was conducted included: **Lake Artemesia** a 38-acre lake in Berwyn Heights, MD, in Prince George's County, **Wheaton Regional Park**, a 536-acre public park comprising various recreational facilities and activity areas in Montgomery County, **Carroll Creek Linear Park**, a manmade waterway that runs through the middle of Downtown Frederick, MD. During the field test, participants were offered a small token of appreciation for filling out the survey (a granola bar or bag of chips). The survey collection team collected 57 survey responses, after each of which the survey team interviewed the respondent about their feedback and experience taking the survey. This data and the experience of the survey team were analyzed to produce suggested changes to the survey and survey implementation design in a final report to the Department of Natural Resources.

Based on the recommendations generated from the field test, during the summer of 2023, Professor Pearson-Merkowitz revised the survey and designed an implementation plan to conduct with the students in PLCY 306 Policy Analysis in Action, a course designed to teach students about ethical public policy research and give them field experience conducting applied social science research. The revised survey was finalized with the feedback and engagement of the DNR. A PhD Research Associate then created the final formatting of the survey for implementation. The final survey was translated into Spanish by a Spanish speaking PhD student and then edited and finalized by a native Spanish Speaking faculty member.

During the fall of 2023, Professor Pearson-Merkowitz worked with the DNR to select parks for survey selection. The goal was to maximize the diversity of the sample of respondents across several aspects. The DNR wanted to ensure they had surveys collected from parks across the state in the different regions. They also wanted to ensure parks were included that would allow for responses from park goers with differences in backgrounds and identities such as differences in education, income, race, and ethnicity. As a result, the parks were selected based on these factors while also accounting for distance from UMD. Students were only able to go to places where they could drive to the park, survey, and drive back home within a reasonable day, limiting the survey to parks within 2 and a half hours. One student group requested to go further and the DNR arranged free camping at the park for those two students.

The project was approved by University of Maryland's Institutional Review Board (IRB number: [2100541-2]). All surveyors were trained and certified in research ethics and attained CITI certification (Research, Ethics, Compliance, and Safety Training). All surveyors were also trained in in person survey collection best practices and fully trained on the protocols of the survey collection procedures.

Each survey team consisted of 2 surveyors. These included the 39 students in the class, three PhD students, one undergraduate student not in the class, and Professor Pearson-Merkowitz. In a few cases, two teams were assigned to one park and then stationed at two different locations. As a result, each park had between 2 and 4 people collecting surveys. Students were also given materials on and engaged in extensive discussions about safety and liability prior to conducting the survey. (Survey training materials available upon request). Spanish speaking surveyors were assigned to the parks most likely to have Spanish respondents but all students had Spanish surveys as part of their packet.

The survey was collected on paper using a clipboard and pen, and consisted of a one-page, two-sided survey that included 23 questions. Survey respondents were informed about the survey, its risks, and the length of the survey before being asked for verbal consent. After completing the survey, respondents were offered a

bag of chips or a granola bar or other snacks in appreciation of their time. PALs provided the snacks for the survey respondents.

To ensure all students had the means and financial resources to participate in the survey, surveyors were paired with surveyors who had cars, then several the PALs employees, DNR employees, PhD students were recruited to drive for the remaining students who did not have a personal car or a car they were willing to use. Professor Pearson-Merkowitz also drove a team of students. Drivers received reimbursement for mileage and gas. Students who drove over 1 hour away were also offered reimbursement for their lunch. These funds were provided by PALS. A research associate was on call if there were problems throughout the day. The RA also kept track of if the surveyors had reached their park and logged when they left and successfully got back home.

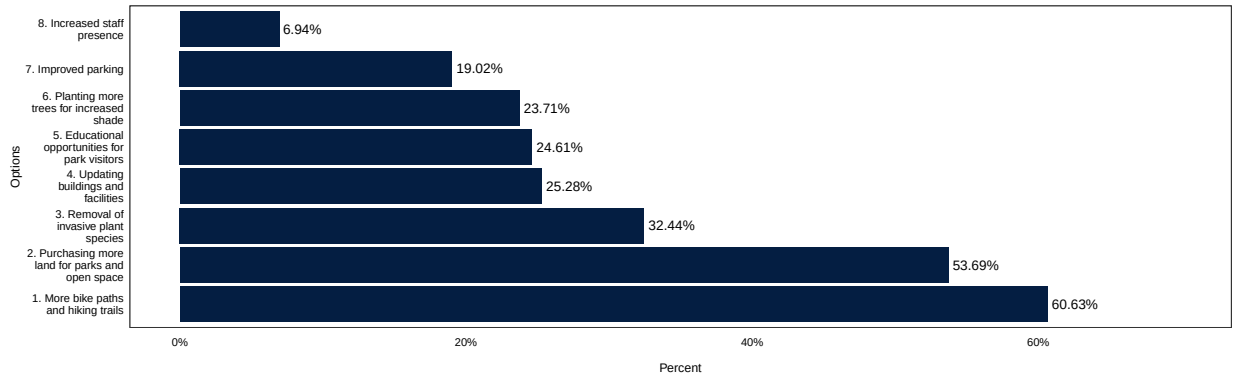
Surveys were then entered into Qualtrics for analysis by a Research Associate Noor Tofalli (MPP '24), and cross-tabulations prepared by Research Associate Kasey Vangelov (PhD '26). Funding for the analysis was provided by the Saul I. Stern Professorship.

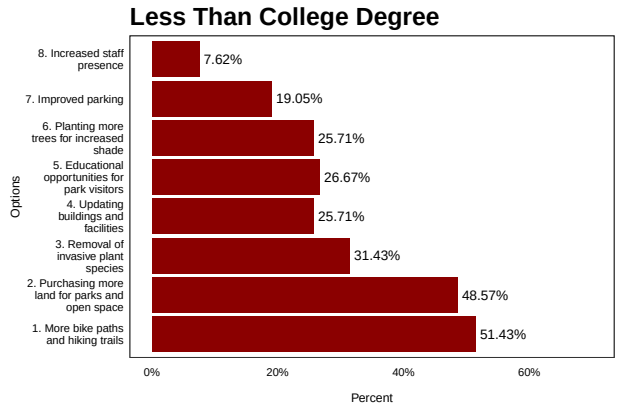
Students in PLCY 306 also completed reflection papers and discussed as a class their experience and how to related to their coursework on survey design and implementation.

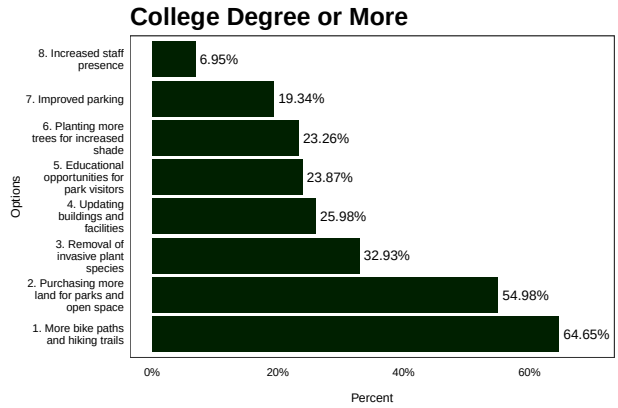
For each question, cross-tabulations have been provided for all responses and then responses by college education status for the full sample of parks and for parks by region. These were the summaries chosen by the DNR for presentation based on limitations of the data such as relatively small samples in some parks, or small variation on specific questions, etc.

If there is something you do not see here, but wish you did, please contact Saul I. Stern Professor of Civic Engagement Shanna Pearson-Merkowitz (spearson@umd.edu).

[Q1] Which of the following investment opportunities would you like to see the Department of Natural Resources fund in Maryland State Parks. Please mark up to three investment opportunities you feel are your top priority.

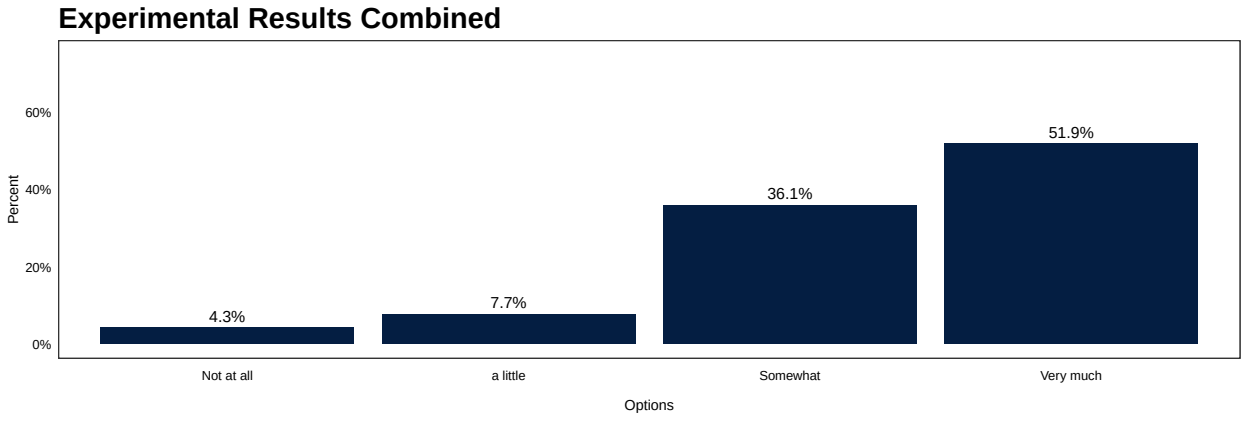


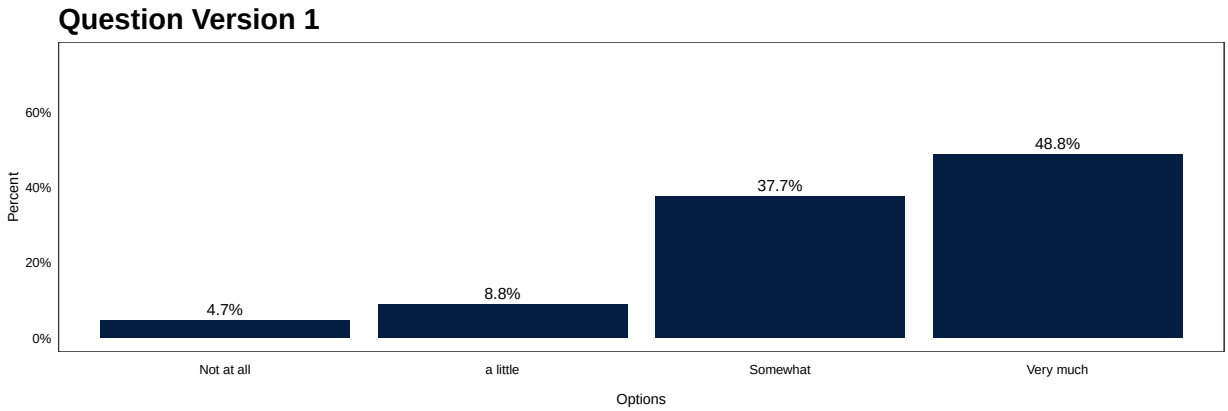


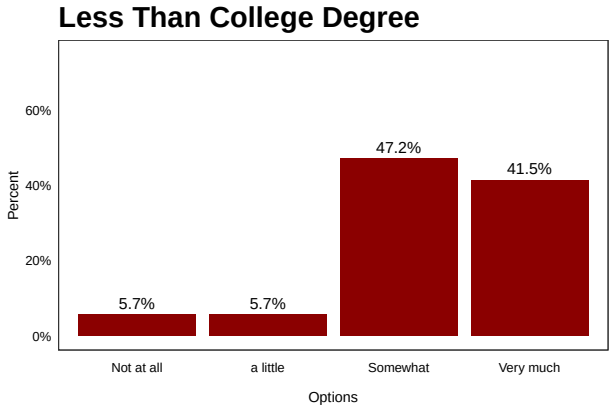


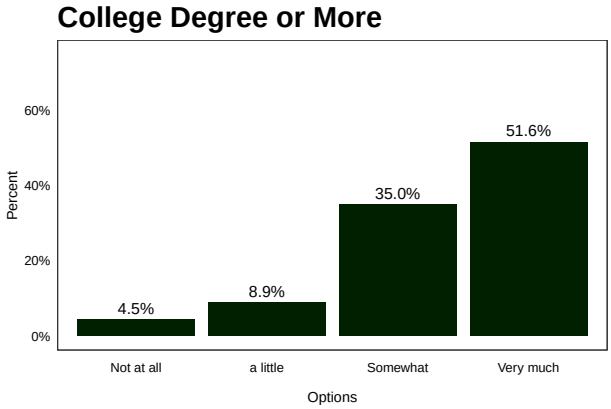
[Q2 Version 1] Imagine your local government was considering a program to help homeowners upgrade their homes to make the property less likely to be damaged by floods, intense heat, or storms. The program will provide residents of your town with a contractor to perform the upgrade at no cost to the homeowner. How much would you support a program like this in your community?

[Q2 Version 2] Imagine your local government was considering a program to help homeowners upgrade their homes to make the property less likely to be damaged by floods, intense heat, or storms. The program will provide participating residents with a state income tax credit equal to the cost of the upgrade when they file their state income tax return. How much would you support a program like this in your community?

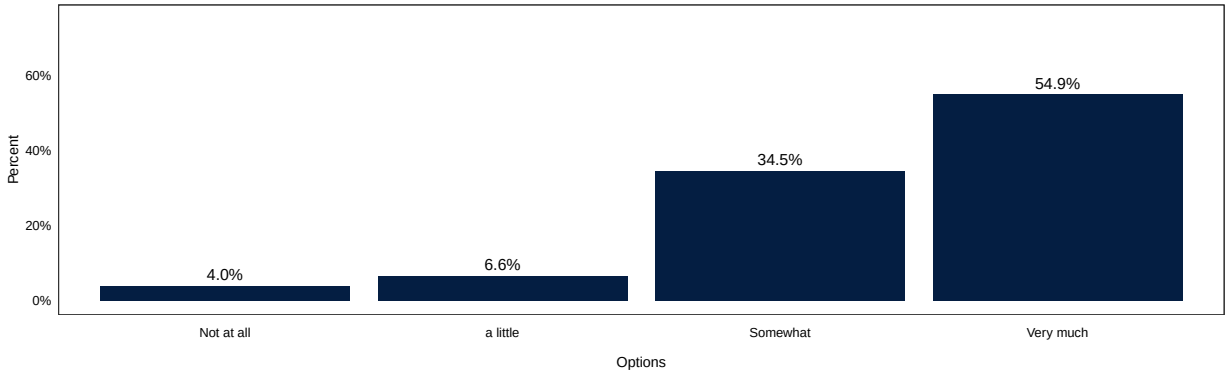




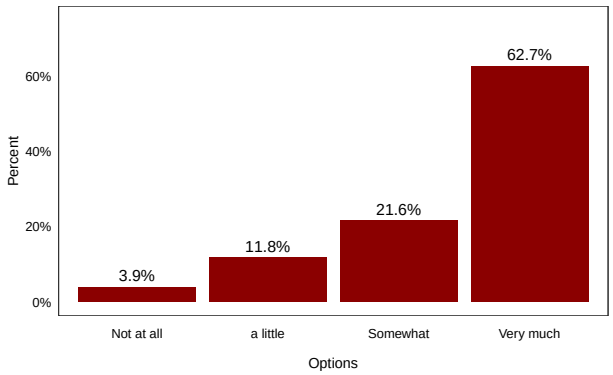




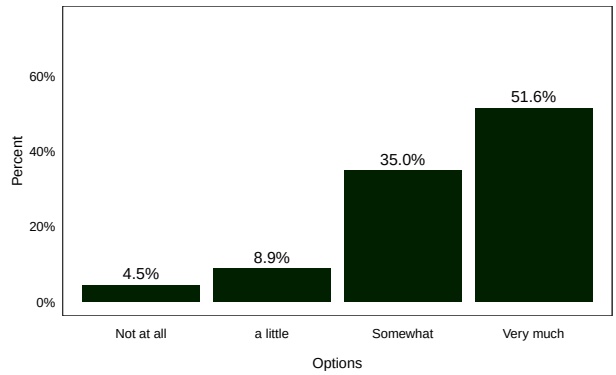
Question Version 2



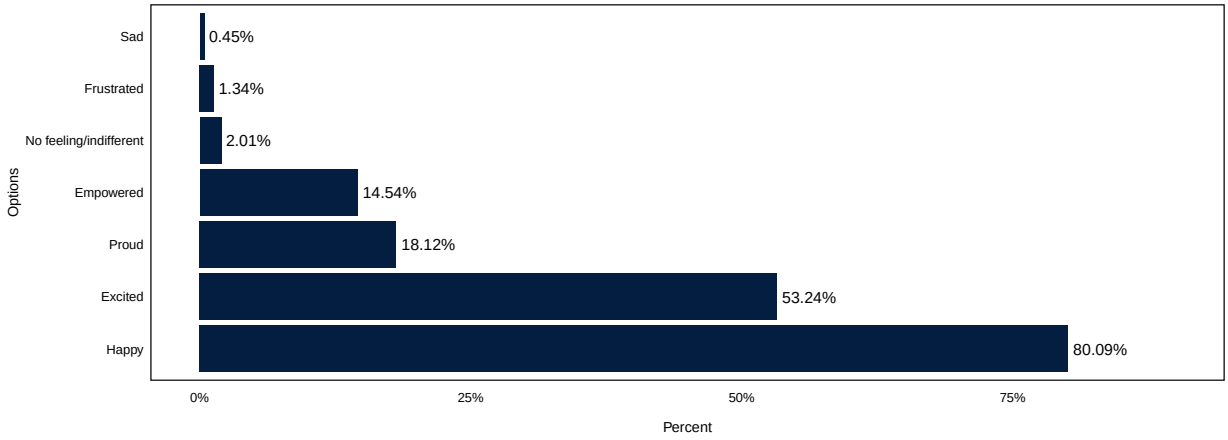
Less Than College Degree

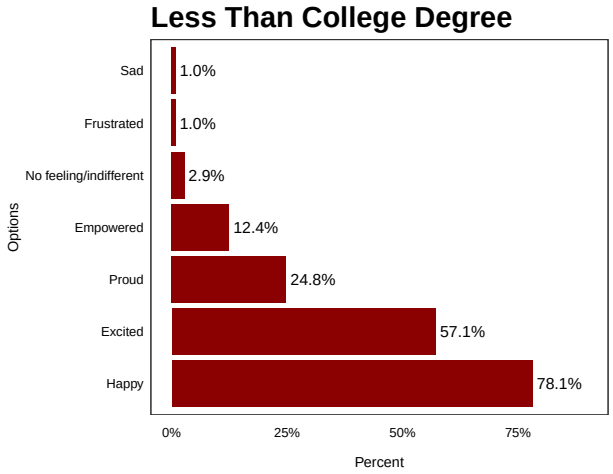


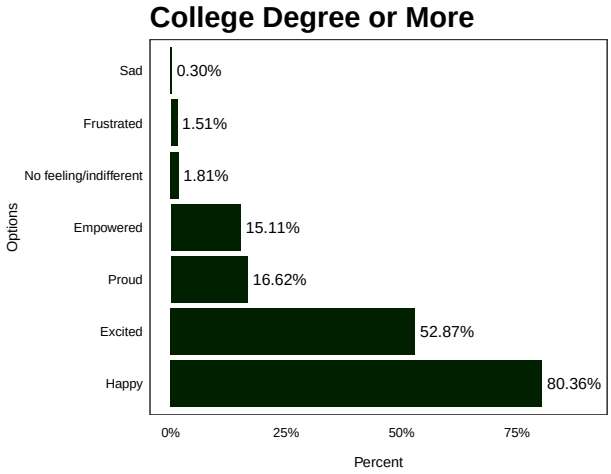
College Degree or More



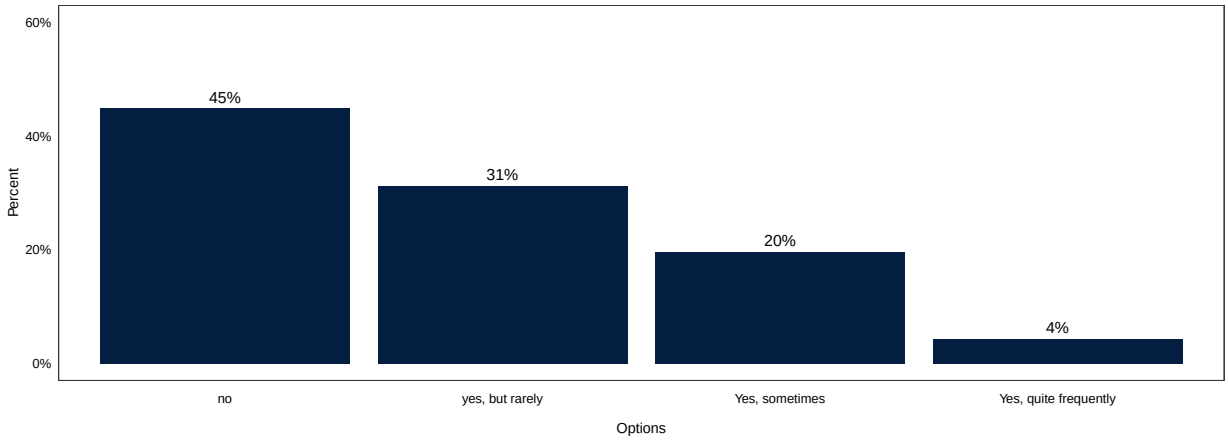
[Q3] When you come to this park, how does it make you feel? (choose all that apply)

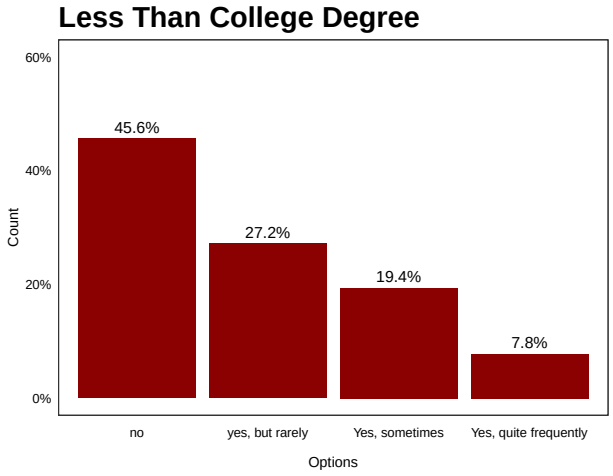


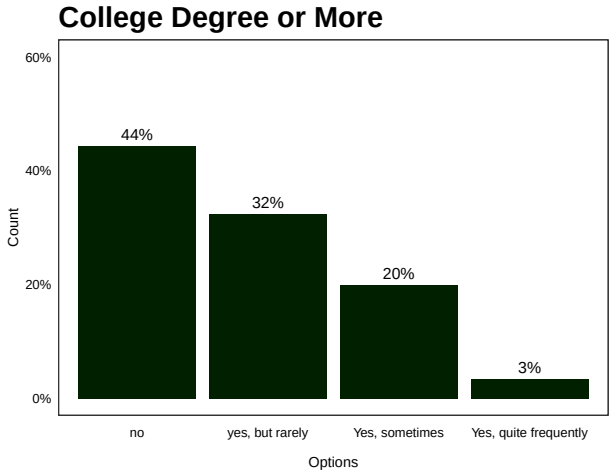




[Q4] Have severe weather events, like extreme heat, flooding, or major storms impacted your trips to Maryland parks?

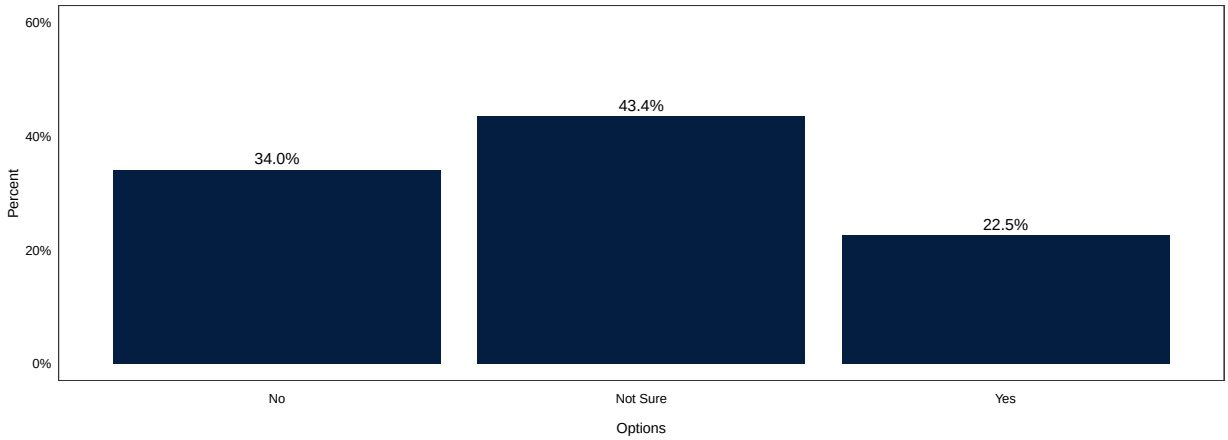


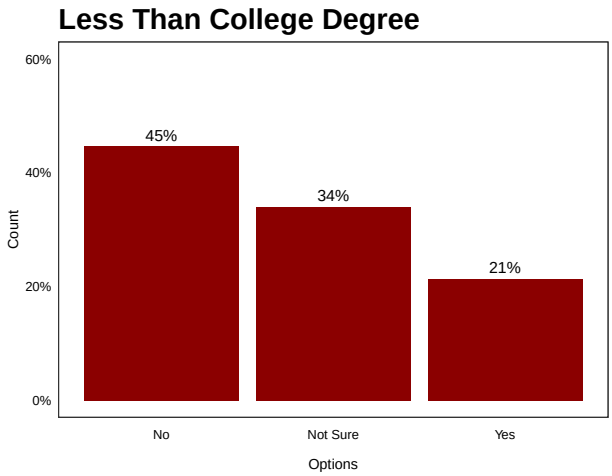


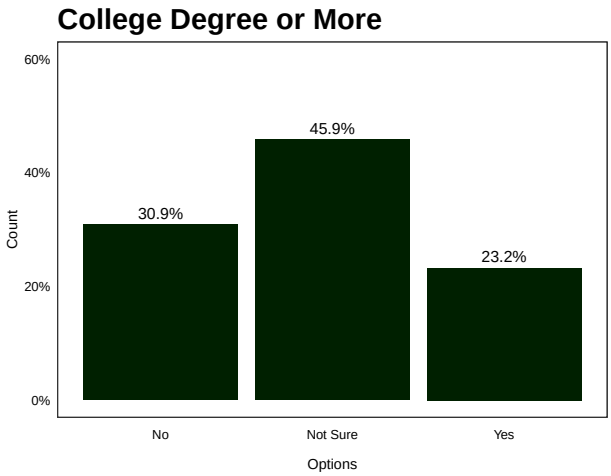


[Q5] In your experience, have you noticed this park being affected by any of the following?

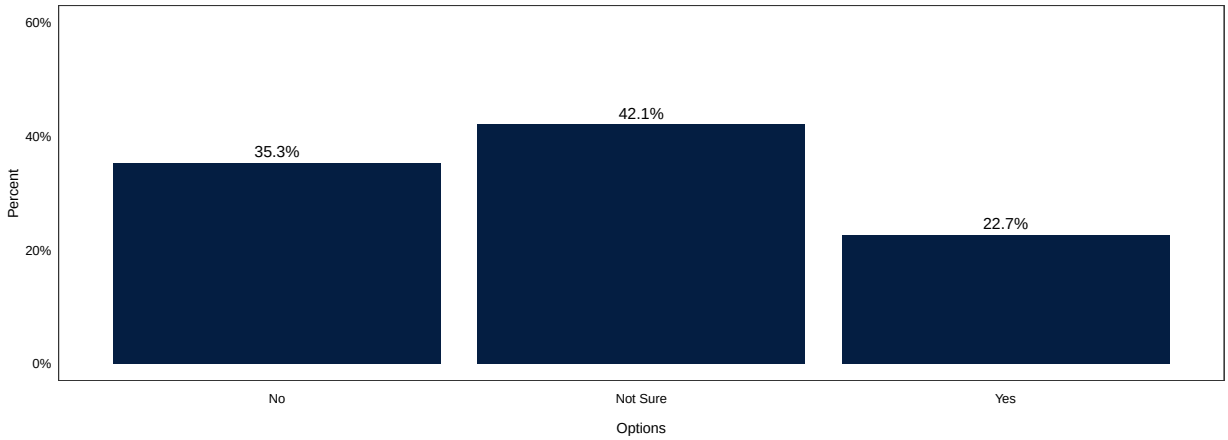
Warming Temperatures

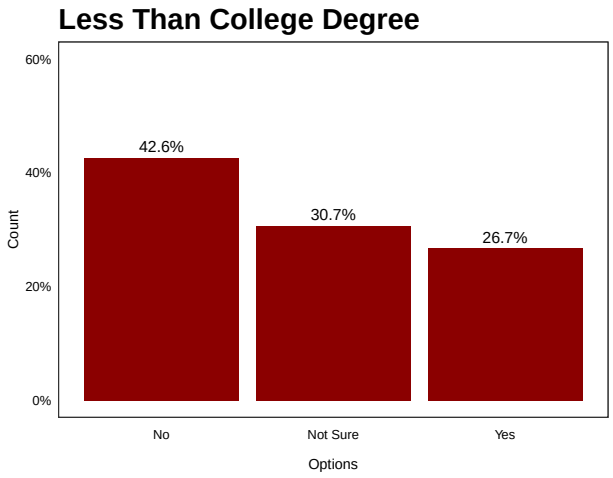


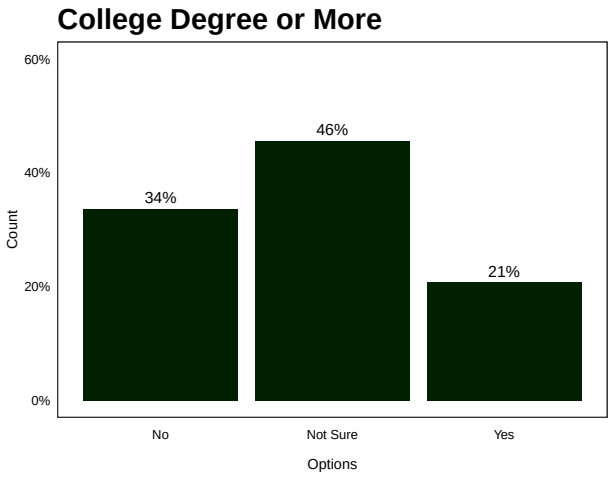




Flooding


60%
40%
20%
0%
Percent
35.3%
42.1%
22.7%
No
Not Sure
Yes
Options


Less Than College Degree
60%
40%
20%
0%
Count
42.6%
30.7%
26.7%
No
Not Sure
Yes
Options


College Degree or More
60%
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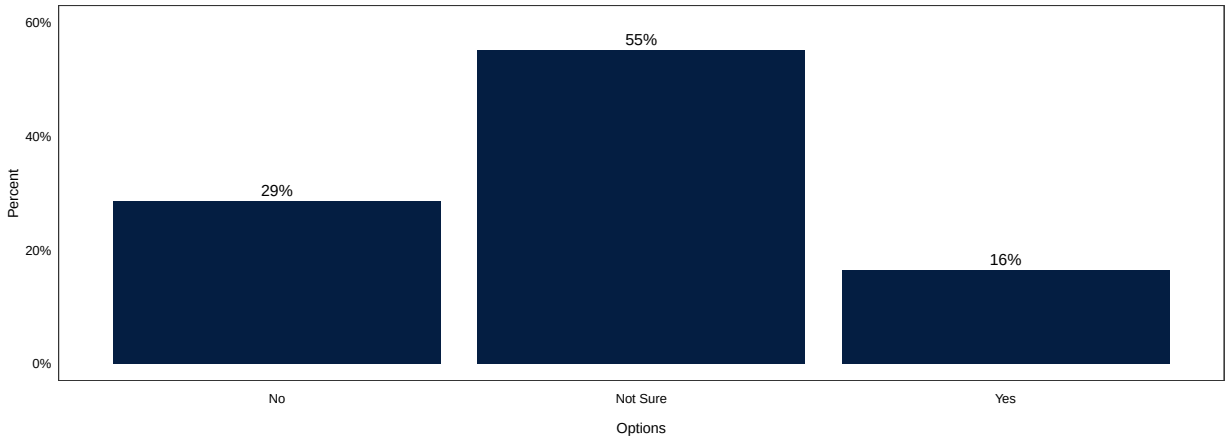
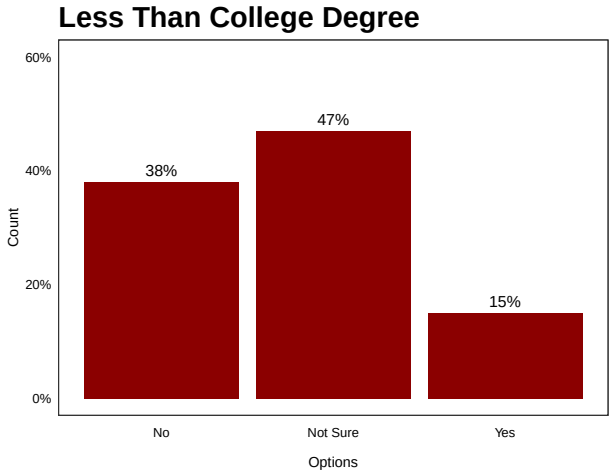
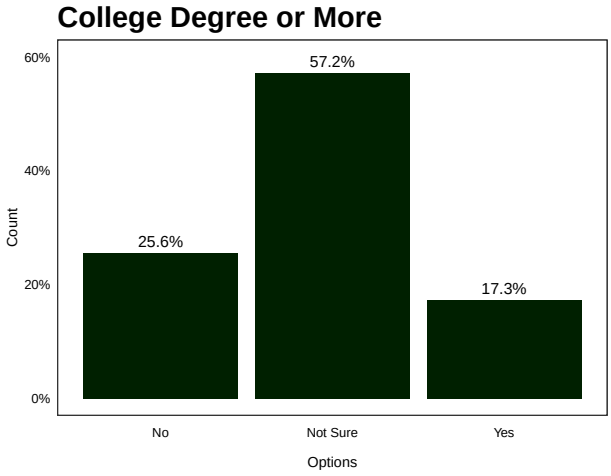
21%
No
Not Sure
Yes
Options

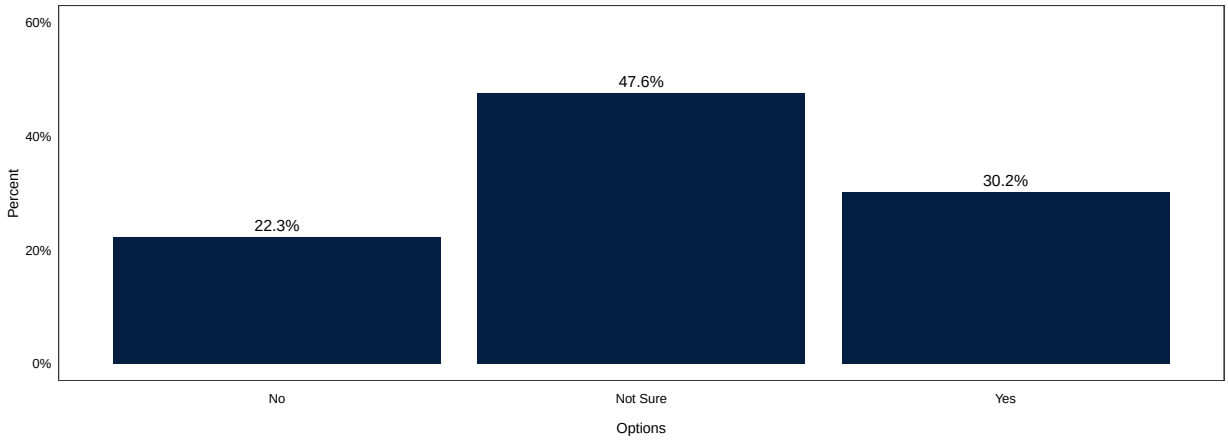
Earlier plant bloom cycles

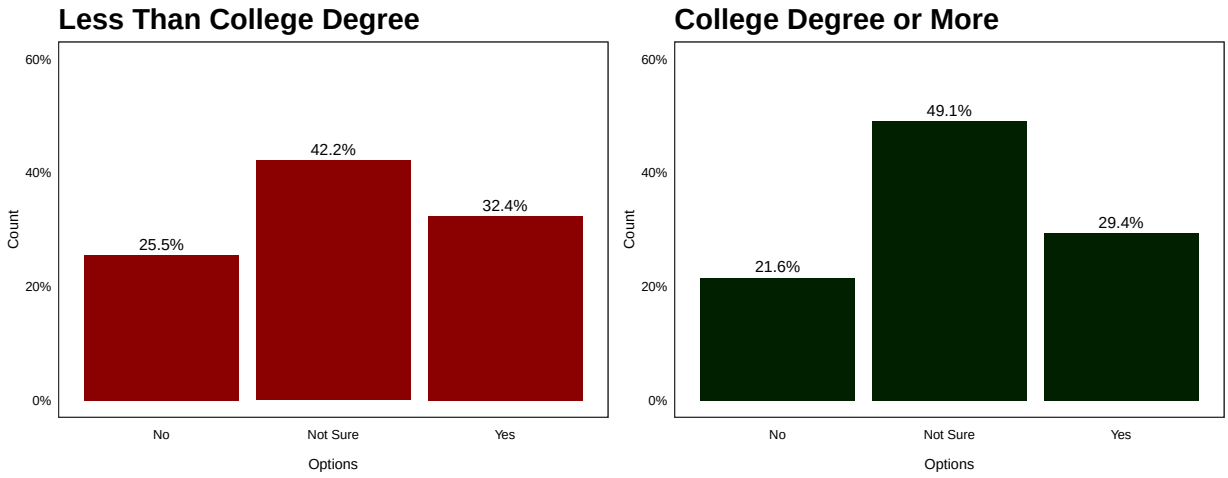






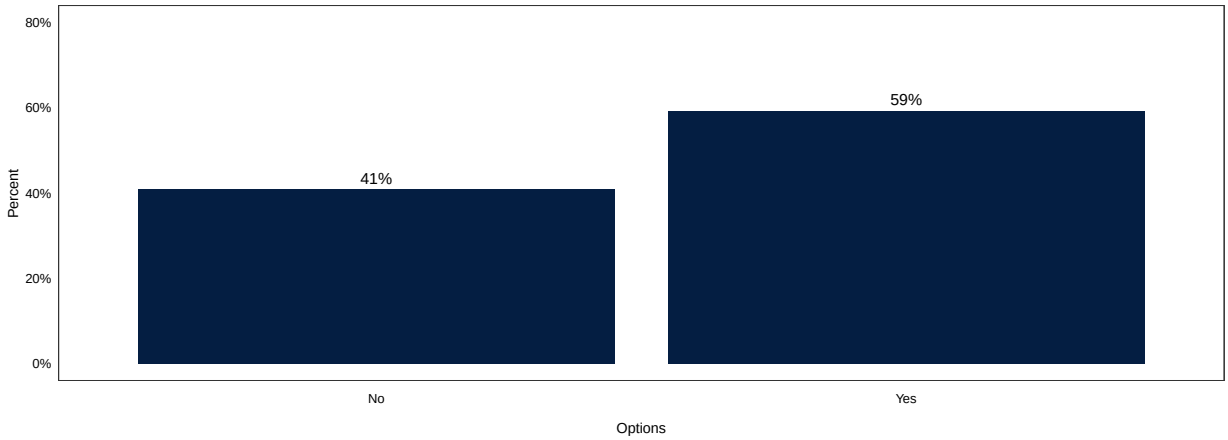
Inasive species

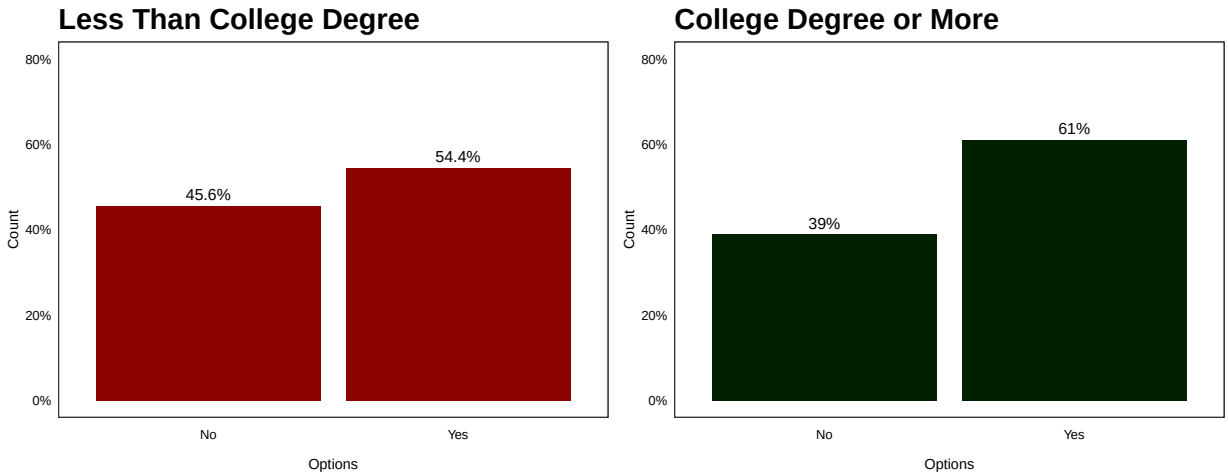




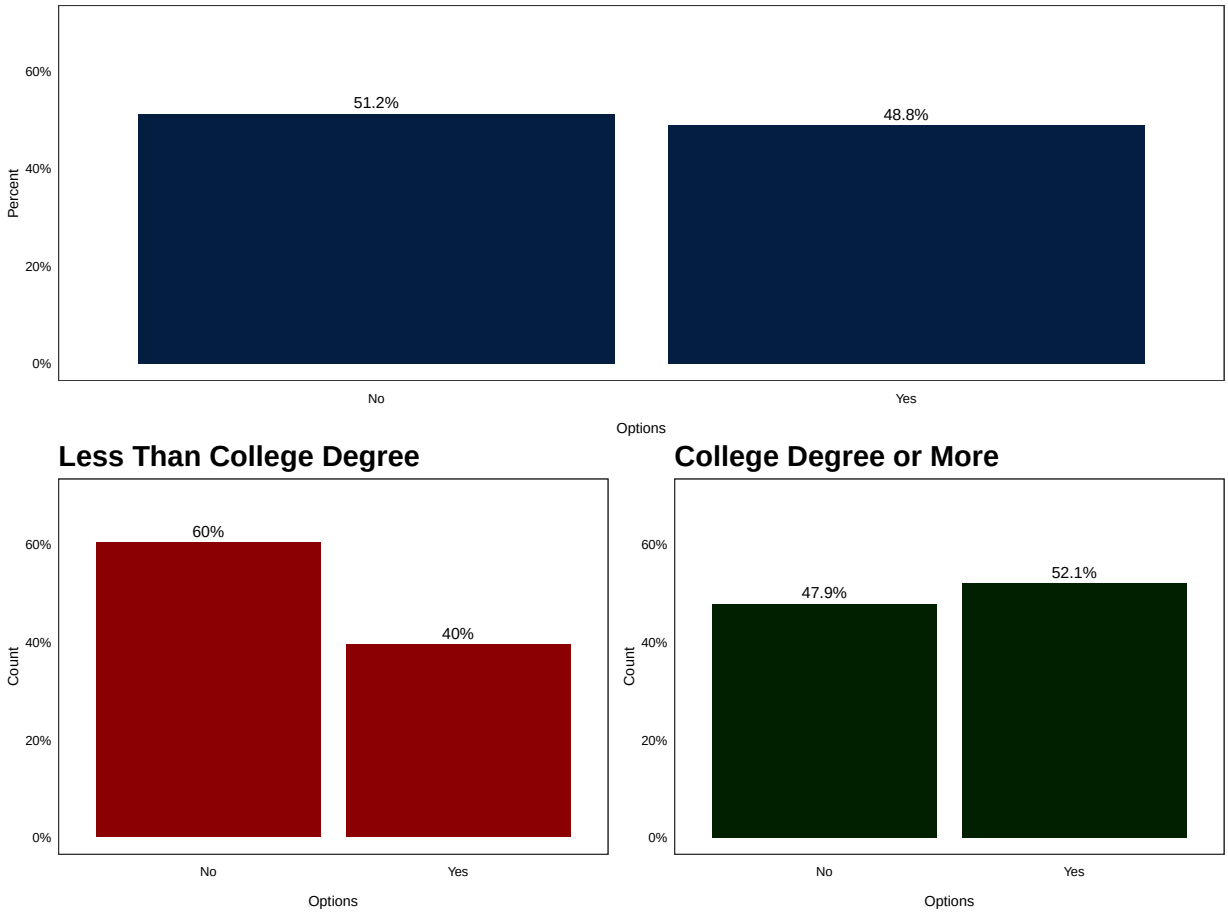
[Q6] Would you be interested in participating in any of the following activities in the parks?

Environmental educational programs

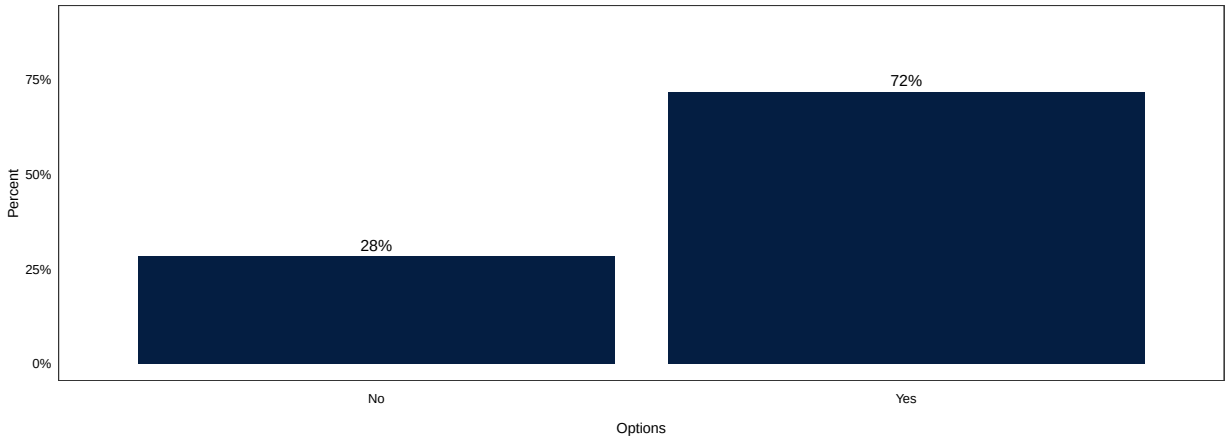


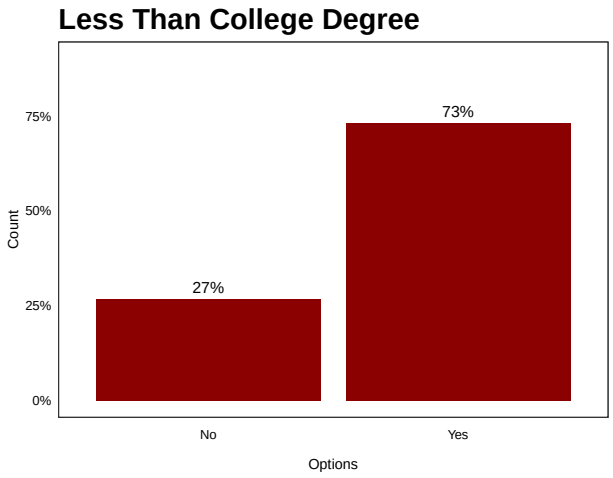


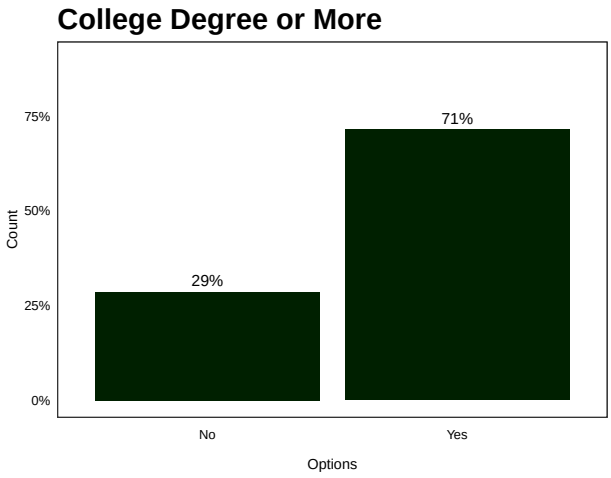
Climate change educational programs



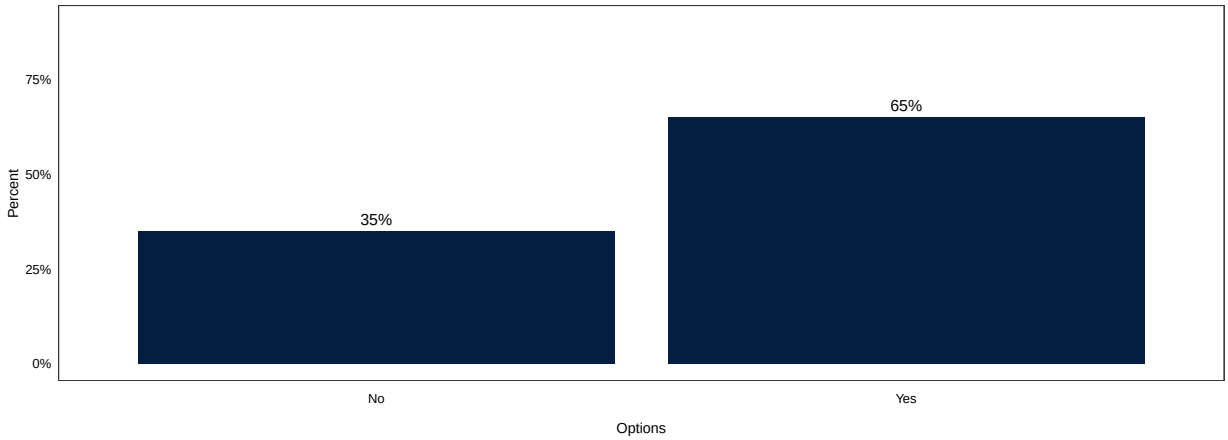
Park clean-ups

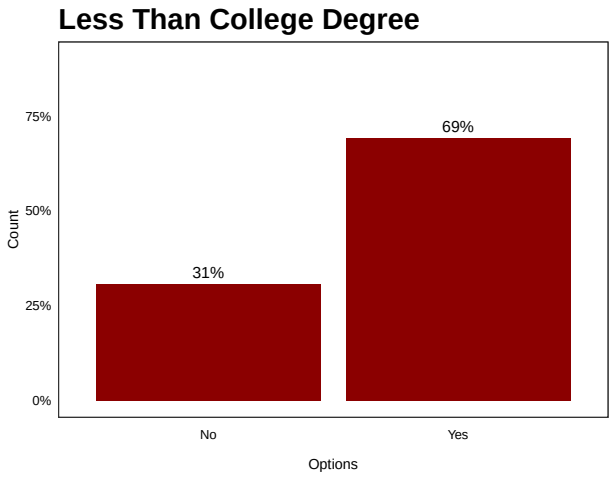


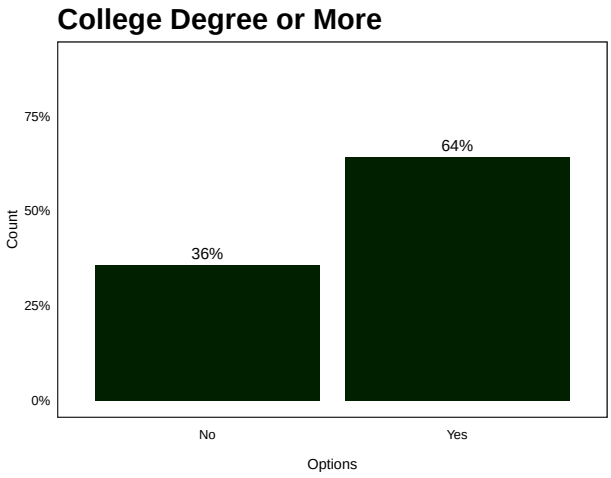




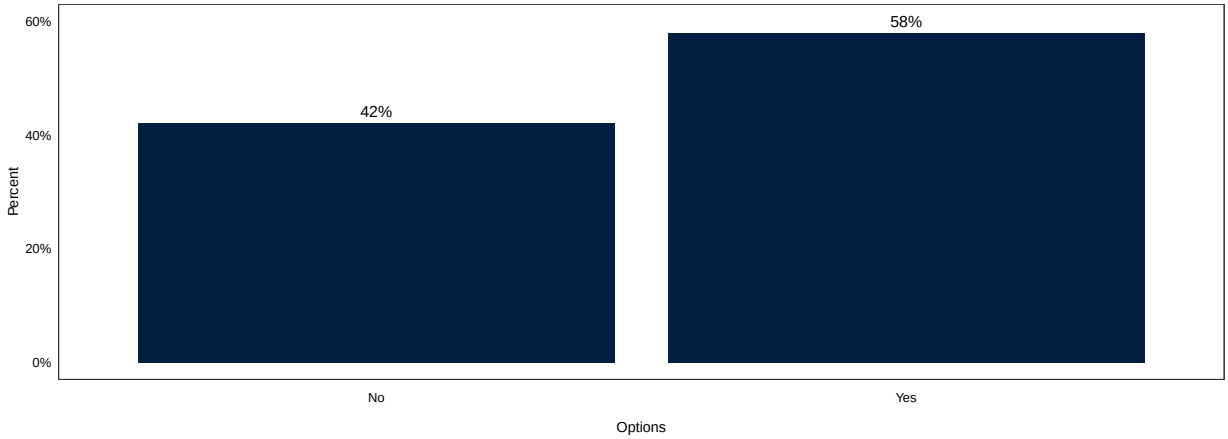
Other volunteer opportunities

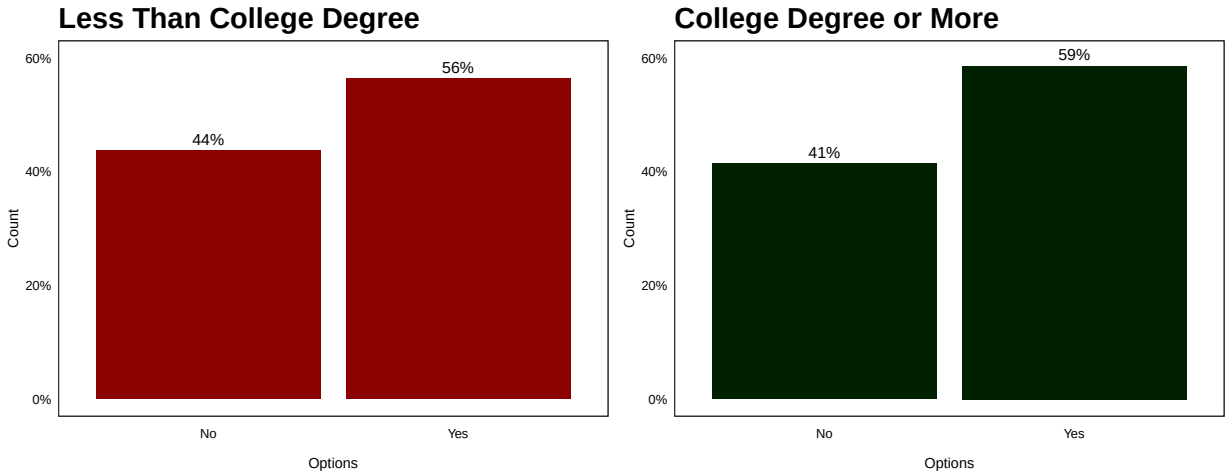




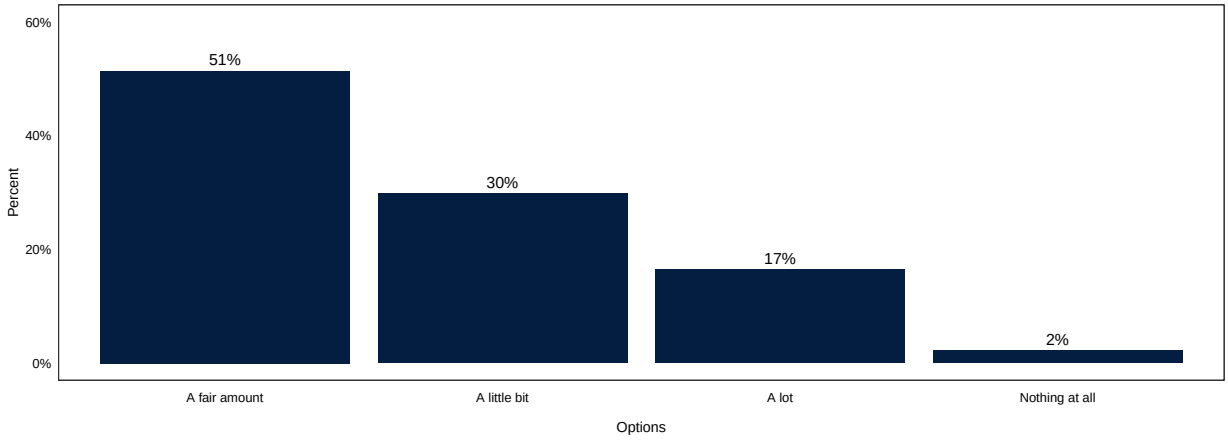


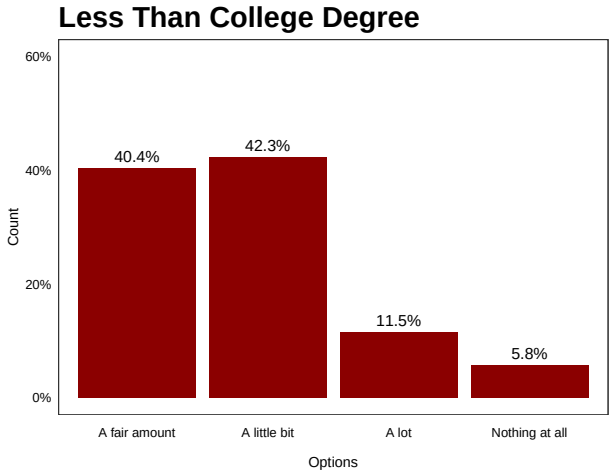
Environment-related social events

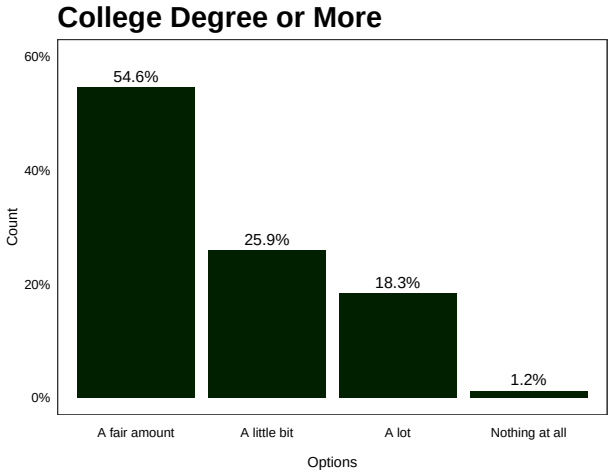




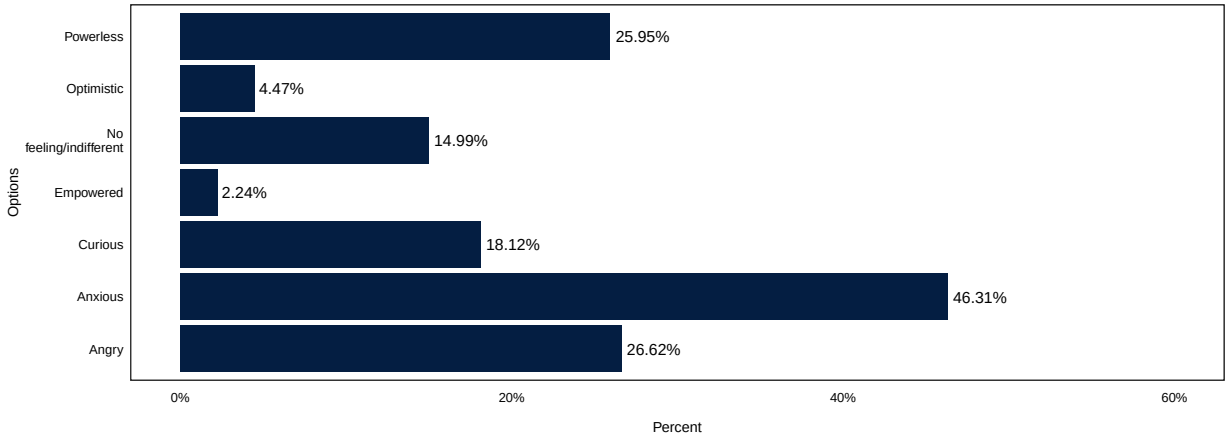
[Q7] How much would you say you know about climate change?

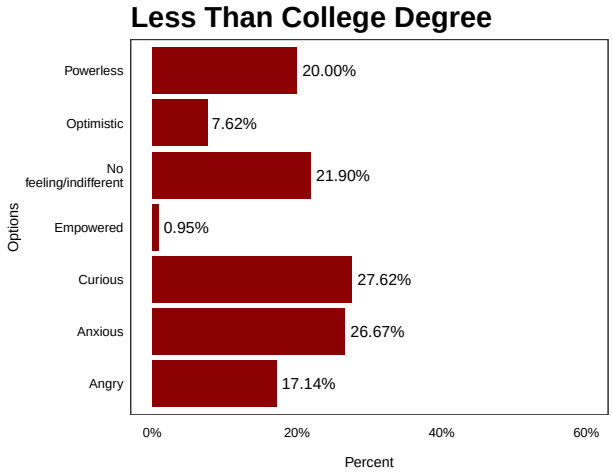


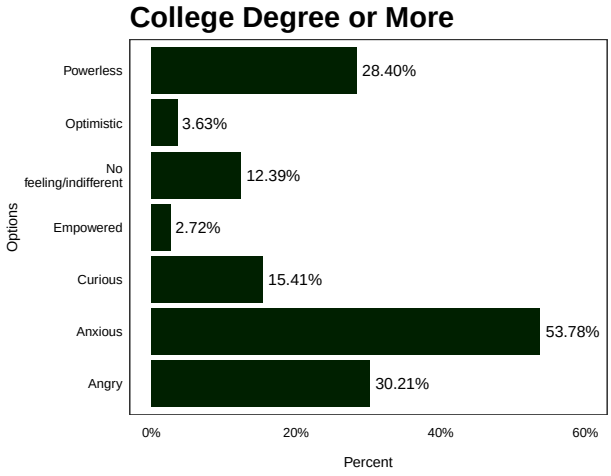




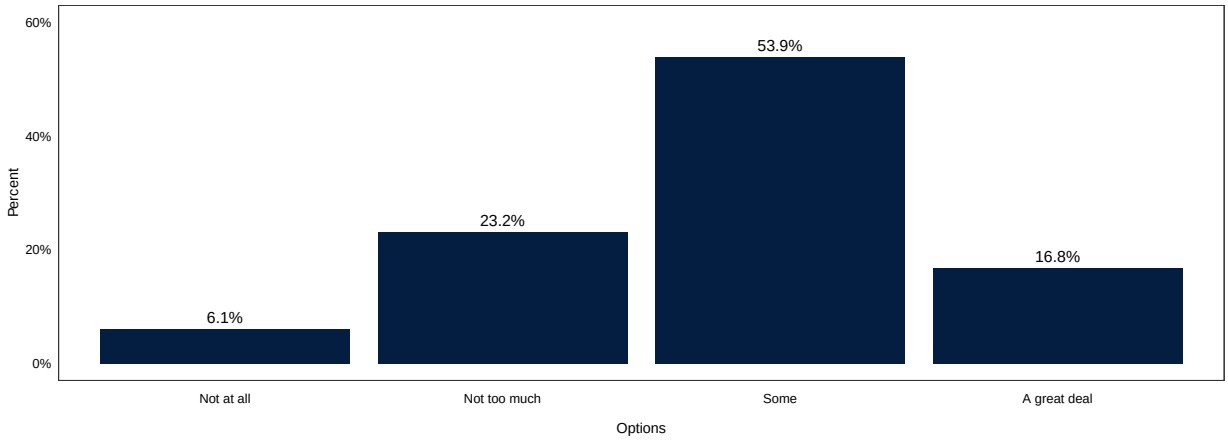
[Q8] When you hear about climate change, how does it generally make you feel?

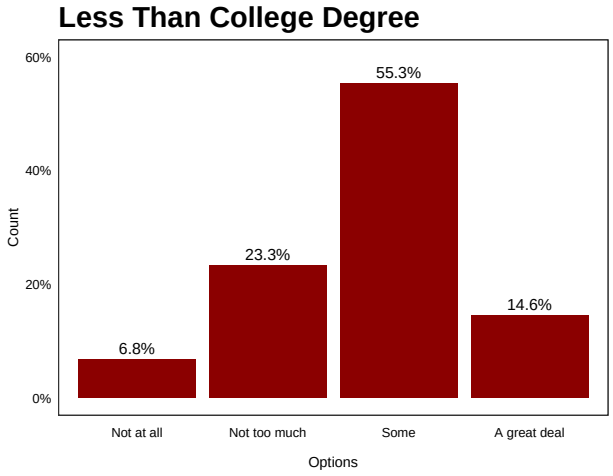


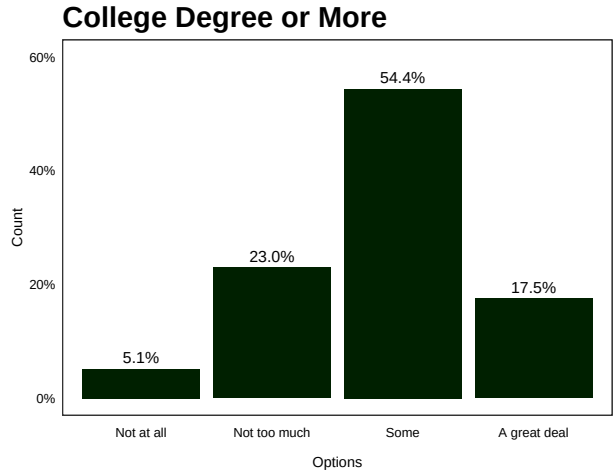




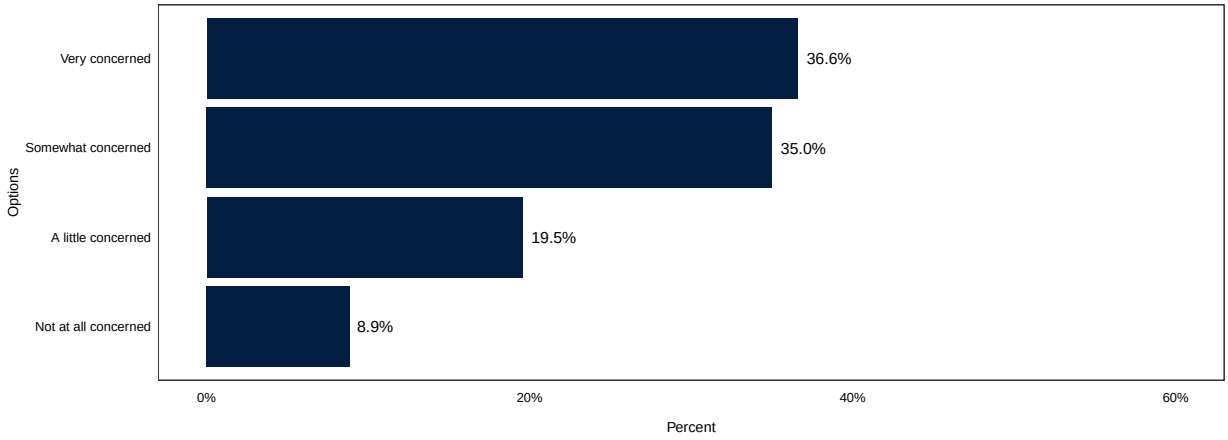
[Q9] How much do you think your individual actions and behavior contributes to climate change?

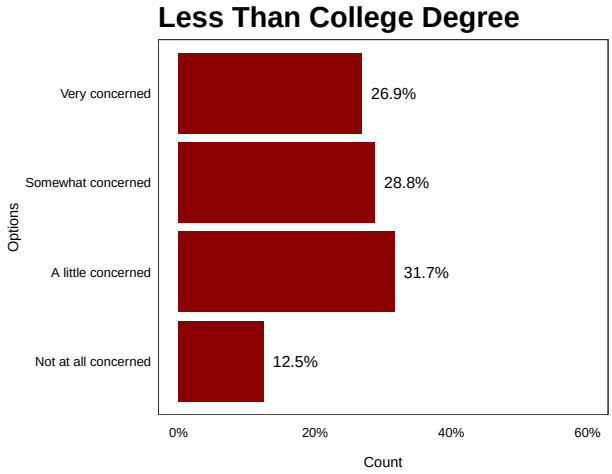


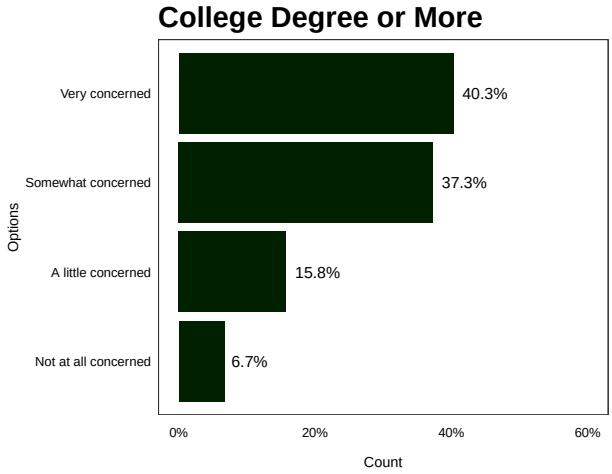




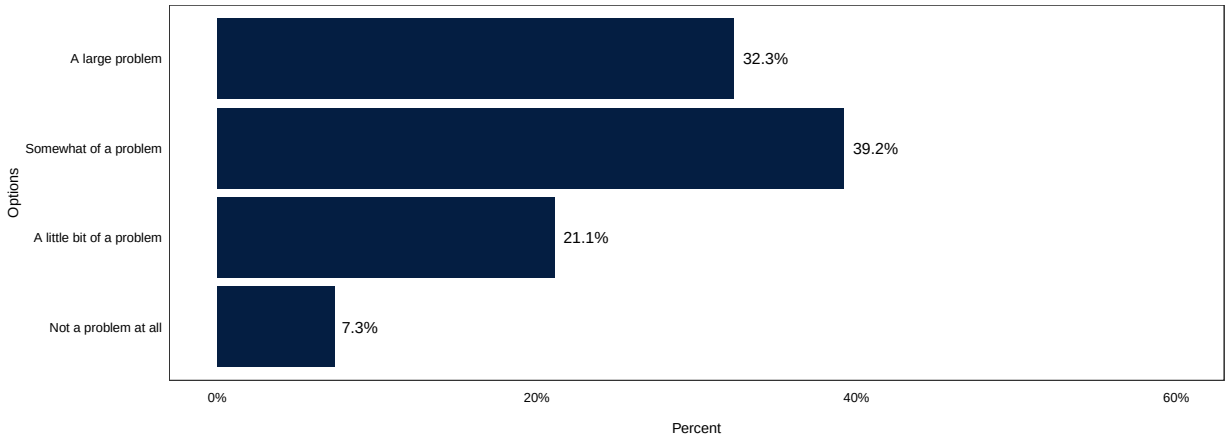
[Q10] How concerned are you that climate change will affect you personally?

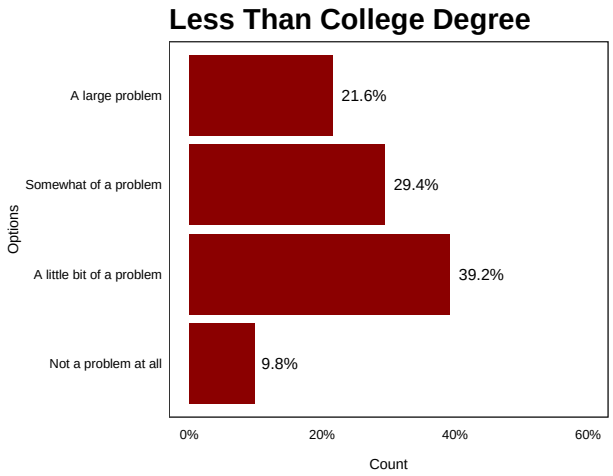


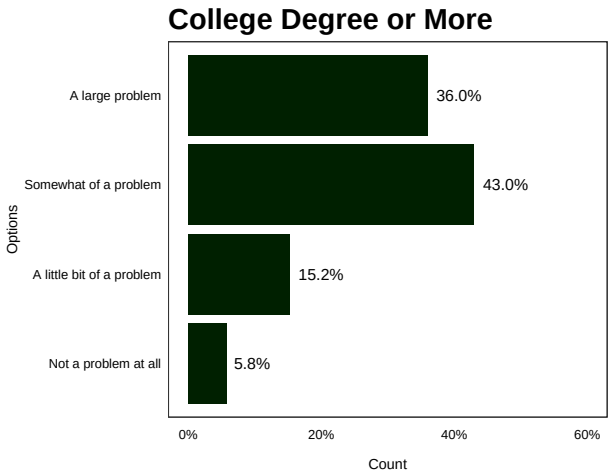




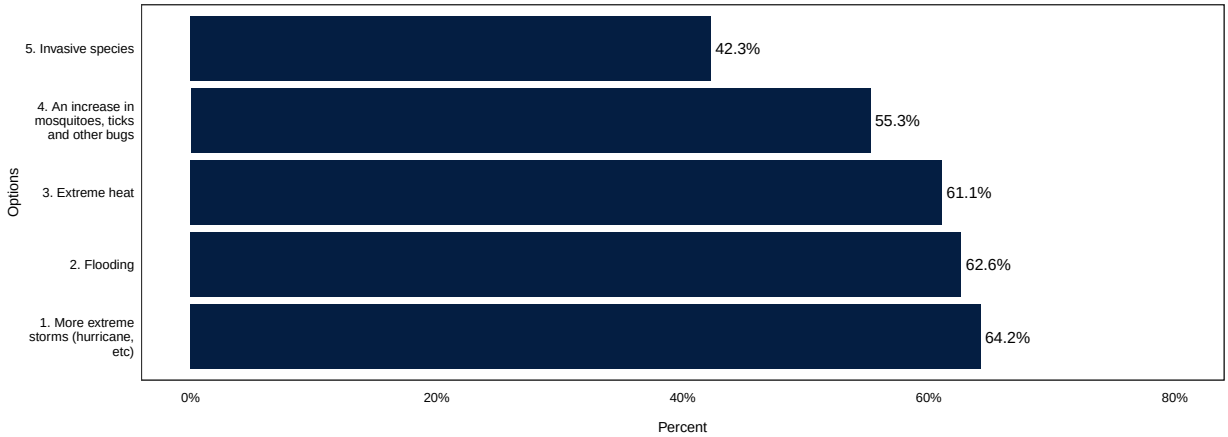
[Q11] In your opinion, how much of a problem is climate change to people who live in Maryland?

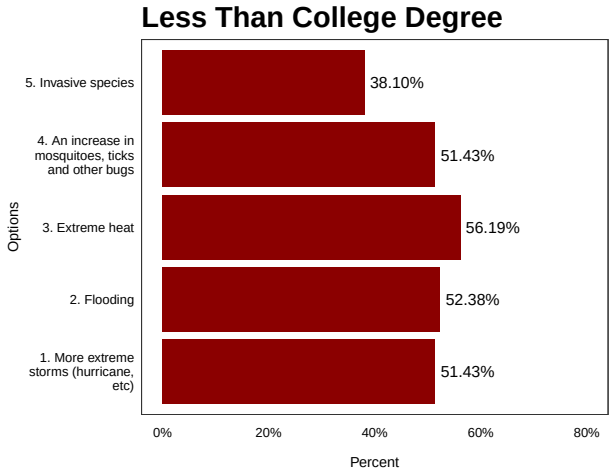


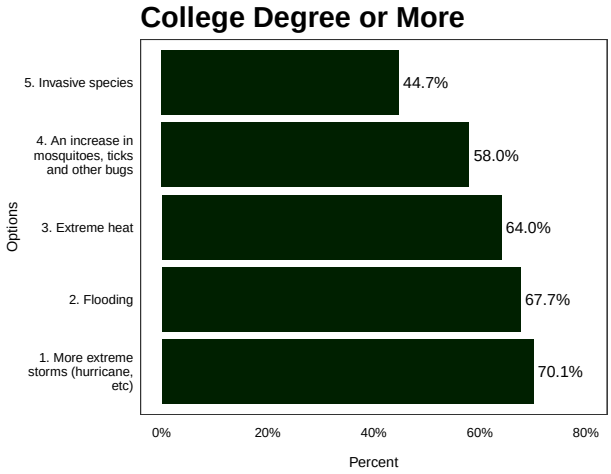




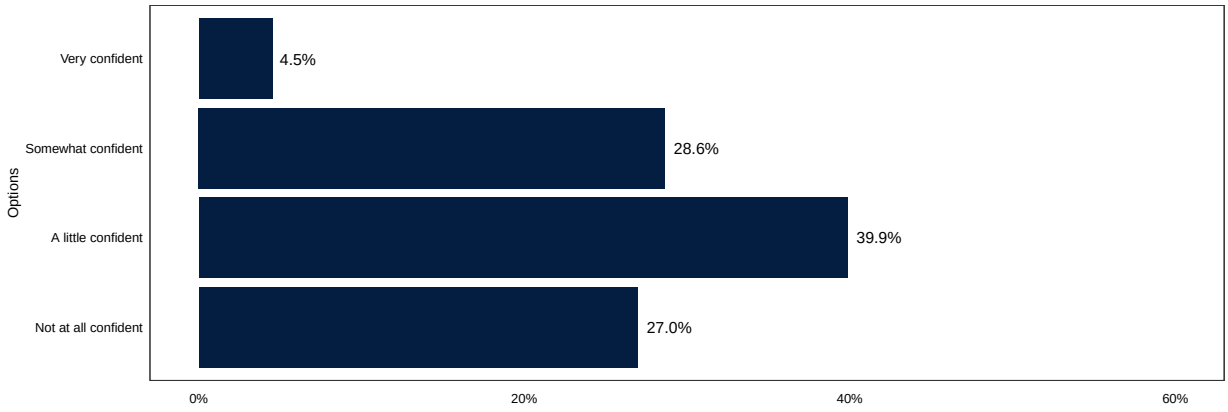
[Q12] Do you think any of the following will be an issue in Maryland as a result of climate change? (choose all that you think apply)

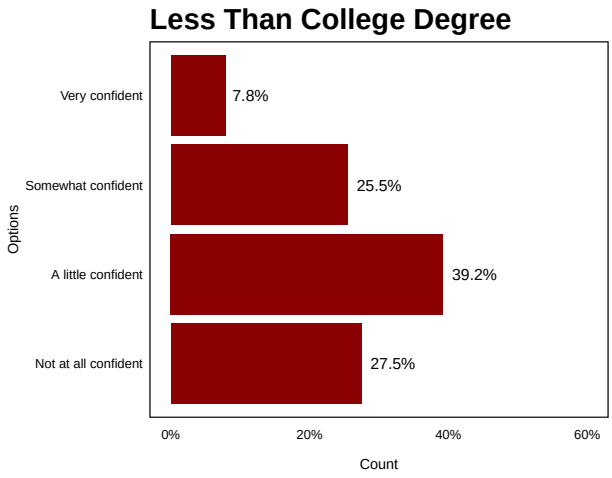


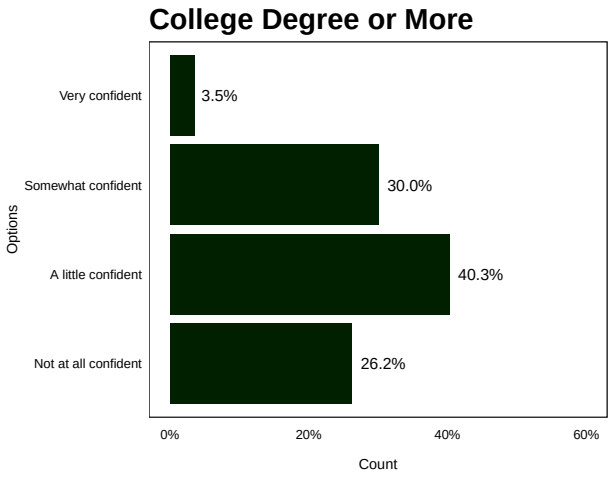




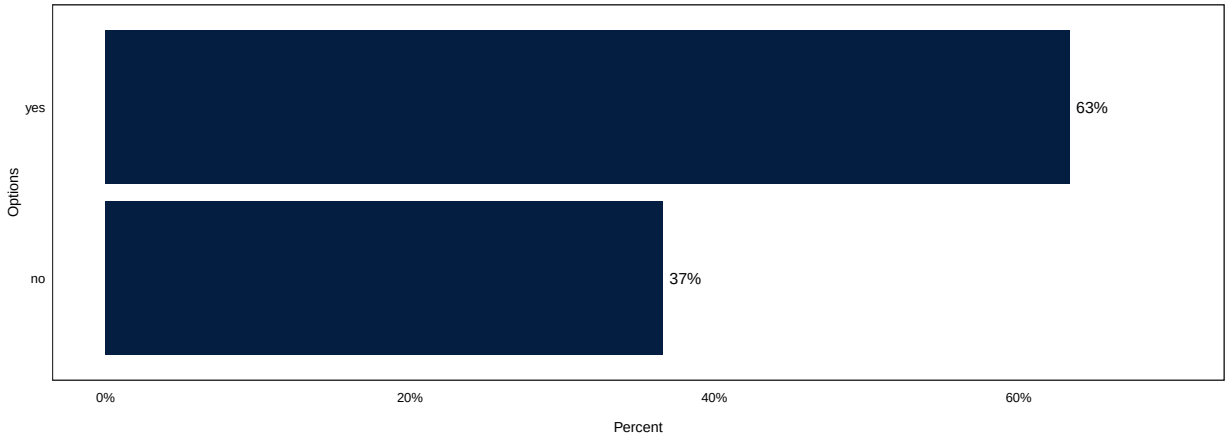
[Q13] How confident are you in the Maryland State government's ability to combat climate change?

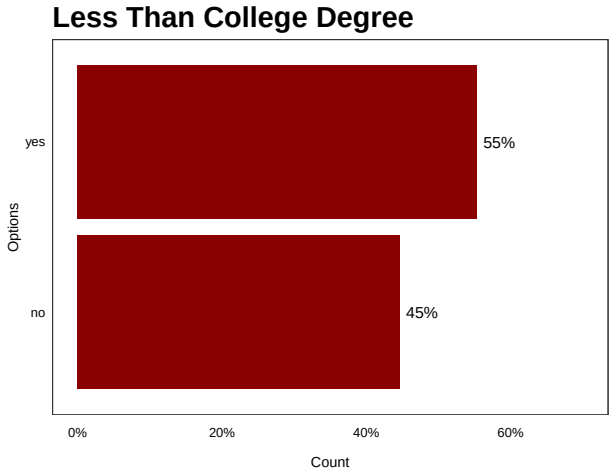


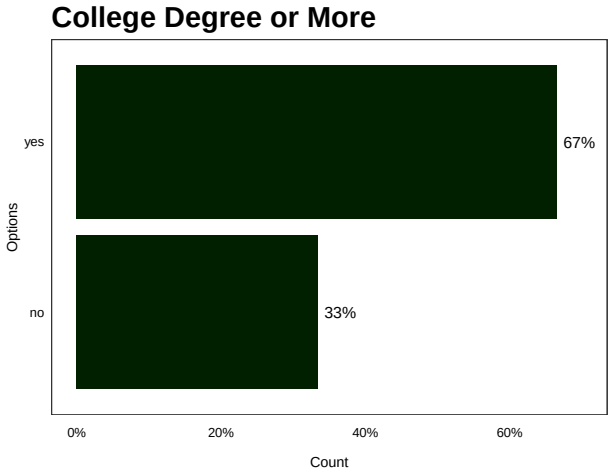




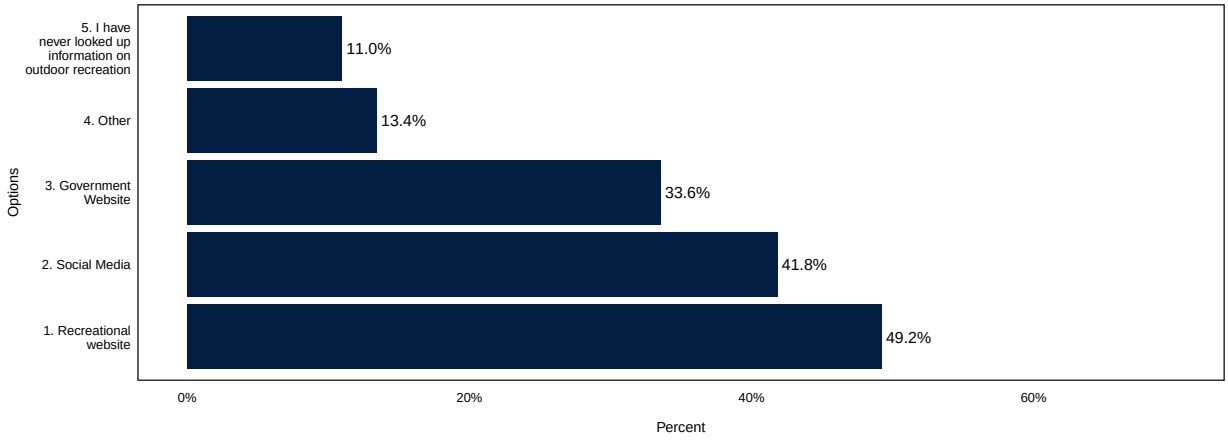
[Q14] Are you interested in learning more about climate change?

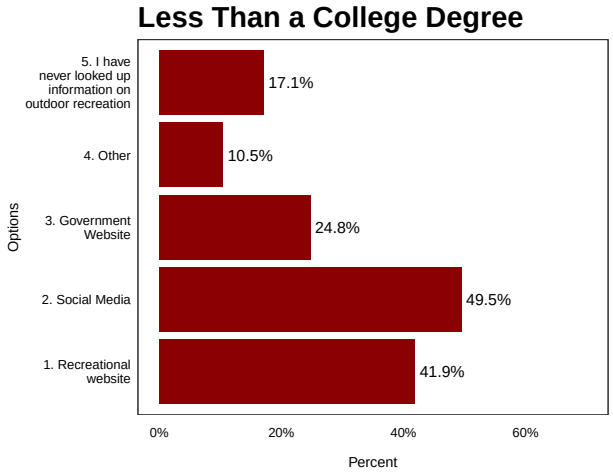


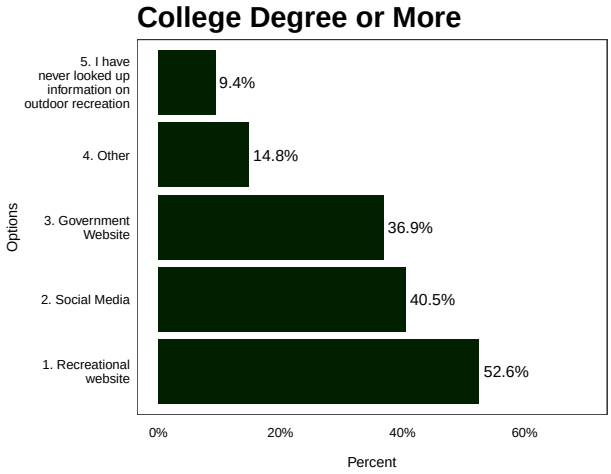




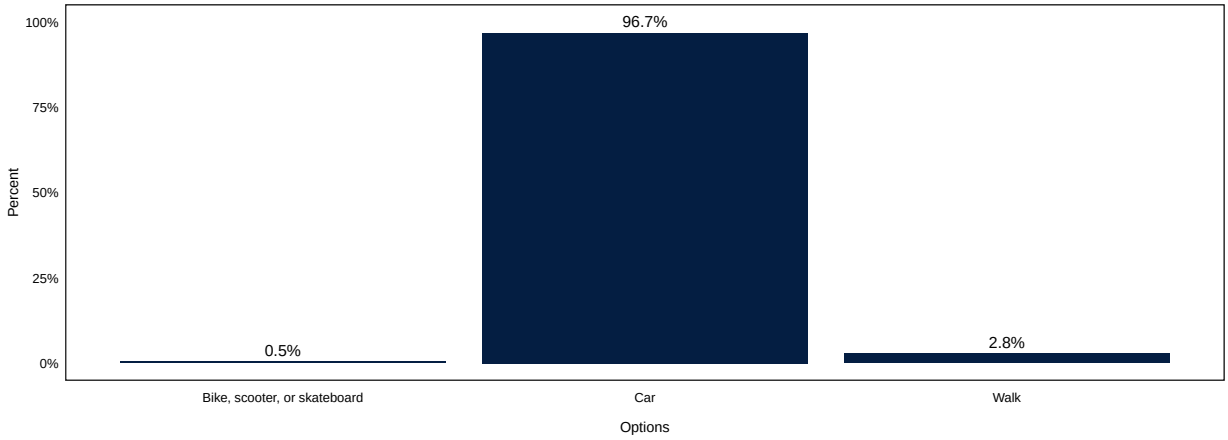
[Q15] Where do you get information about outdoor recreation in Maryland?

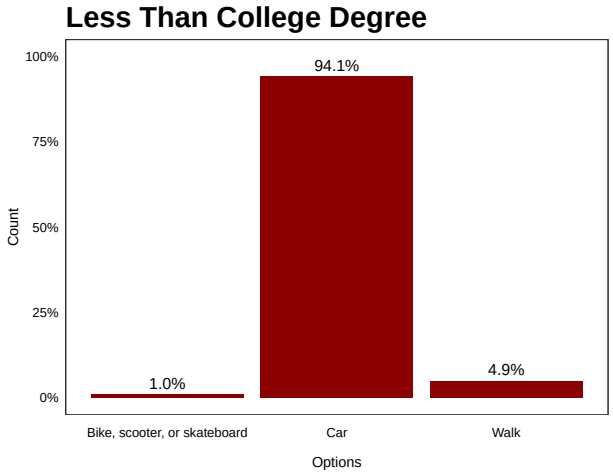


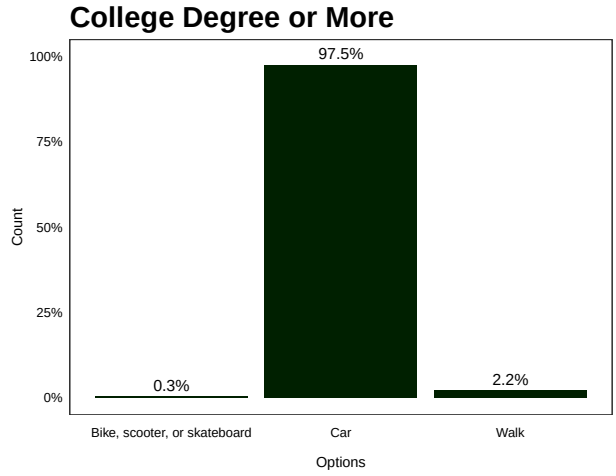




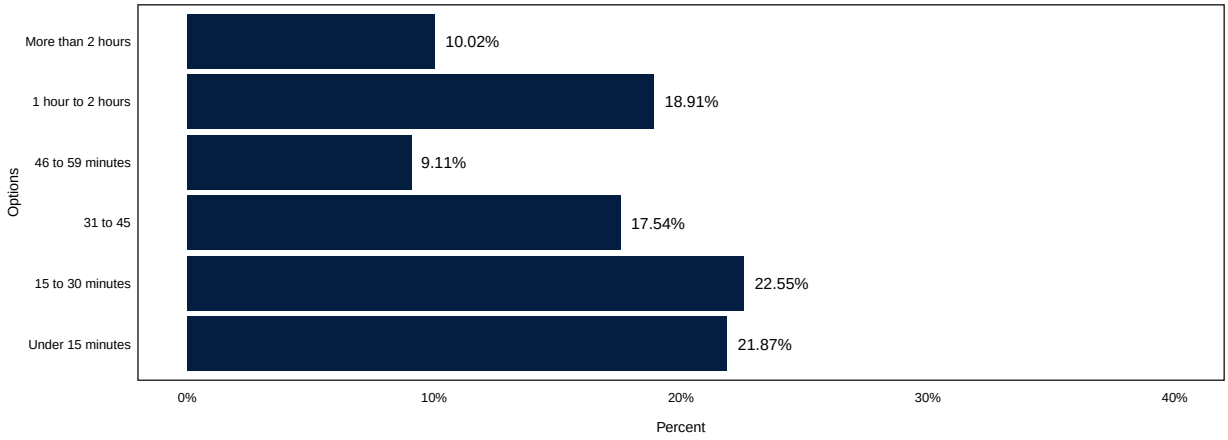
[Q16] How did you get to the park today?

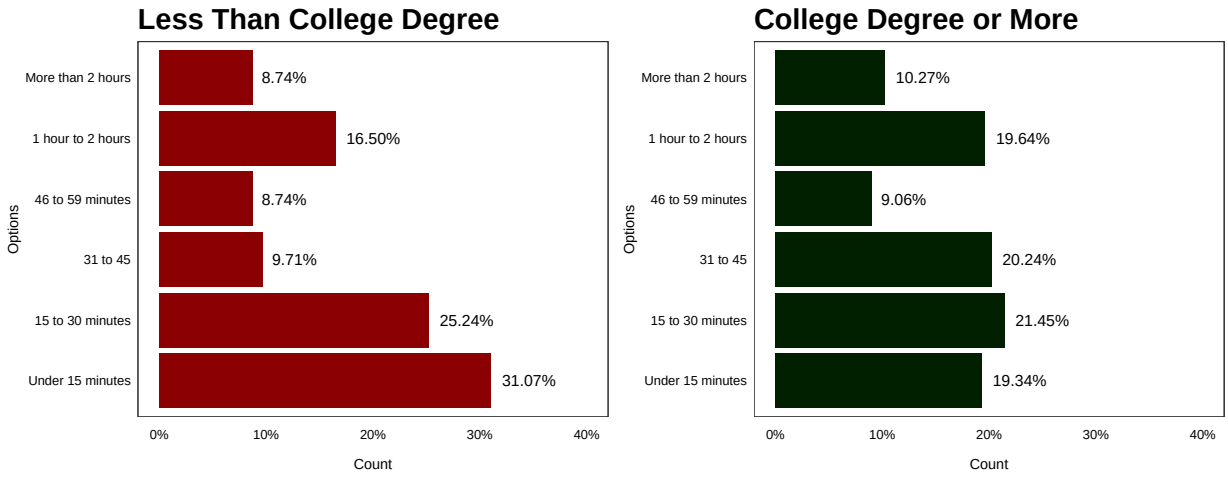






[Q17] How long did it take you to get to the park today?





Sample Demographics

Gender

	Percent
Female	46.3%
Male	48.5%
Nonbinary	0.7%
Prefer not to answer	4.5%

Race

	Percent
White	72.9%
Black or African American	7.8%
Asian	13.4%
American Indian or Alaskan Native	1.3%
Middle Eastern/ North African	1.6%

Income Level

	Percent
Under $30,000	1.7%
$30,000-59,000	9.9%
$60,000-89,000	17.9%
$90,000-120,000	25.1%
Over $120,000	45.4%

Education Level

	Percent
Less than High School graduate	1.0%
High School degree	0.0%
Some college	17.5%
College degree	34.5%
Graduate degree	47.0%

Age

	Percent
18-30	24.5%
31-50	41.6%
51-64	20.7%
over 65	13.2%