National Park Service
U.S. Department of the Interior

Natural Resource Stewardship and Science

2023 Socioeconomic Research of Great Smoky Mountains National Park – Winter Season

Report on Winter 2023 Data Collection





ON THIS PAGE
During cold spells in winter the water wheel at Cable Mill in Cades Cove becomes an ice sculpture (NPS).

ON THE COVER
Ice covered trees on the crest of the Great Smoky Mountains in winter (NPS).

2023 Socioeconomic Research of Great Smoky Mountains National Park – Winter Season

Report on Winter 2023 Data Collection

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Abstract

Great Smoky Mountains National Park is among the most visited parks in the National Park System. To better understand visitors, two key visitor surveys were conducted in summer 2022 and winter 2023. This report documents the results of data collection from winter of 2023. The study uses a two-phased survey methodology to capture a representative sample of visitor information, characteristics, and behavior: (1) an on-site intercept survey conducted via tablet, and (2) a follow-up survey (with online option) for full trip details. Visitors were intercepted at sites across the park both by roadway intercept and approached at the primary visitor centers. The results are organized by these two phases and are aimed to assist park managers in understanding current utilization and perception of park resources, operations, and potential issues, as well as facilitating communication and decision-making processes within the park and between the park and its local partners and stakeholders.

Introduction

The National Park Service (NPS) has both a strong mandate and need for socioeconomic research. This is expressed in the NPS strategic goals for science, in statements by the NPS leadership, in the report of the Second Century Commission, and through the Department of the Interior priorities for 2018–2022. Because of these mandates and various acknowledgements of needs to monitor socioeconomic research, parks have conducted various studies of their visitors to better understand their preferences while at the park, information sources used, experiences received, and demographics. This information allows for a more complete understanding of who visits and how the park can better serve them while visiting.

Great Smoky Mountains National Park (GRSM) is among the most visited parks in the National Park System. This large volume of visitors places an even higher degree of importance to explore what various segments of the visitor base are seeking from their visit to GRSM. Therefore, visitor research is key to the success of GRSM's future goals. Park managers identified these needs and two visitor surveys were during the summer of 2022 and winter of 2023. This report focuses on the data collected from visitors across various sites in the park during the winter of 2023.

The primary purpose of this study is to inform core issues of visitor use management, management solutions, and to develop a current and deeper understanding of who visits GRSM, what they do during their visit, and their spending profile. The results of the study are aimed to assist the park in understanding current utilization and perception of park resources, operations, and issues that may exist along with increasing visitation. These results may also be used to facilitate communication and decision processes within the park and between the park and its local partners and stakeholders. Spending data from this study is presented in a separate report by the NPS.

The study was conducted by a large-scale research team from Otak, Inc., RRC Associates, and the Institute for Tourism and Recreation Research at the University of Montana.



Mountain peaks become visible from new vantage points after leaves have fallen (NPS).

Methods

The study used a two-phased survey methodology to capture a representative sample of visitor information, characteristics, and behavior:

1) an on-site intercept survey conducted via tablet, and
2) a follow-up (with an online option) survey for full trip details.

This comprehensive two-phase approach provides the necessary information to make on-the-ground decisions using immediate feedback from the intercept survey while also capturing key in-depth information on visitor spending profiles and trip characteristics for long-term planning. Additionally, the tablet survey was kept brief to ensure the visitor's experience was not altered. The methods also permit a larger sample to be collected on key questions of interest.



Creeks coming down the Great Smoky Mountains take a new character in winter months (NPS).

Study Area

The GRSM local area map is shown in Figure 1. The local area around GRSM consists of Blount, Sevier, Cocke, Knox, and Monroe counties in Tennessee, and Graham, Swain, Haywood, Buncombe, and Jackson counties in North Carolina. Within GRSM, the study area was comprised of seven locations. Table 1 shows more details about sampling locations. The locations and volumes of surveyor effort were determined based on historic visitor volumes and distribution across the park's main areas. A multi-day storm occurred during the middle of the study period, which closed Newfound Gap Road for four days. Because of this closure, roadway intercept sites were not feasible due to poor conditions. The team transitioned to surveying at the Sugarlands and Oconaluftee Visitor Centers during the road closure and returned to intercepting visitors on the roadway once Newfound Gap Road opened again.

Table 1. Information about sampling locations in Great Smoky Mountains National Park.

Intercept Site	Number of Completed Intercept Surveys	Percent of Total Completed Intercept Surveys	Nearby Attractions	Latitude/Longitude
Townsend Entrance	327	18.9%	Cades Cove, camping, picnic area	35.6674342, -83.7149550
Gatlinburg Entrance	477	27.6%	Sugarlands Visitor Center, Trails, Newfound Gap	35.7041784, -83.5245282
Cherokee Orchard Road	75	4.3%	Roaring Fork Motor Nature Trail, Trails	35.6967875, -83.5072685
Cherokee Entrance	572	33.1%	Oconaluftee Visitor Center, Smokemont, Newfound Gap	35.4999571, -83.3007446
Deep Creek	5	0.3%	Picnic area, trails	35.4594506, -83.43803
Sugarlands Visitor Center	170	9.8%	Restrooms, Bookstore/Shop, Exhibits	35.6851507, -83.5366195
Oconaluftee Visitor Center	103	6.0%	Restrooms, Bookstore/Shop, Exhibits, Farm Museum	35.5131154, -83.3061587

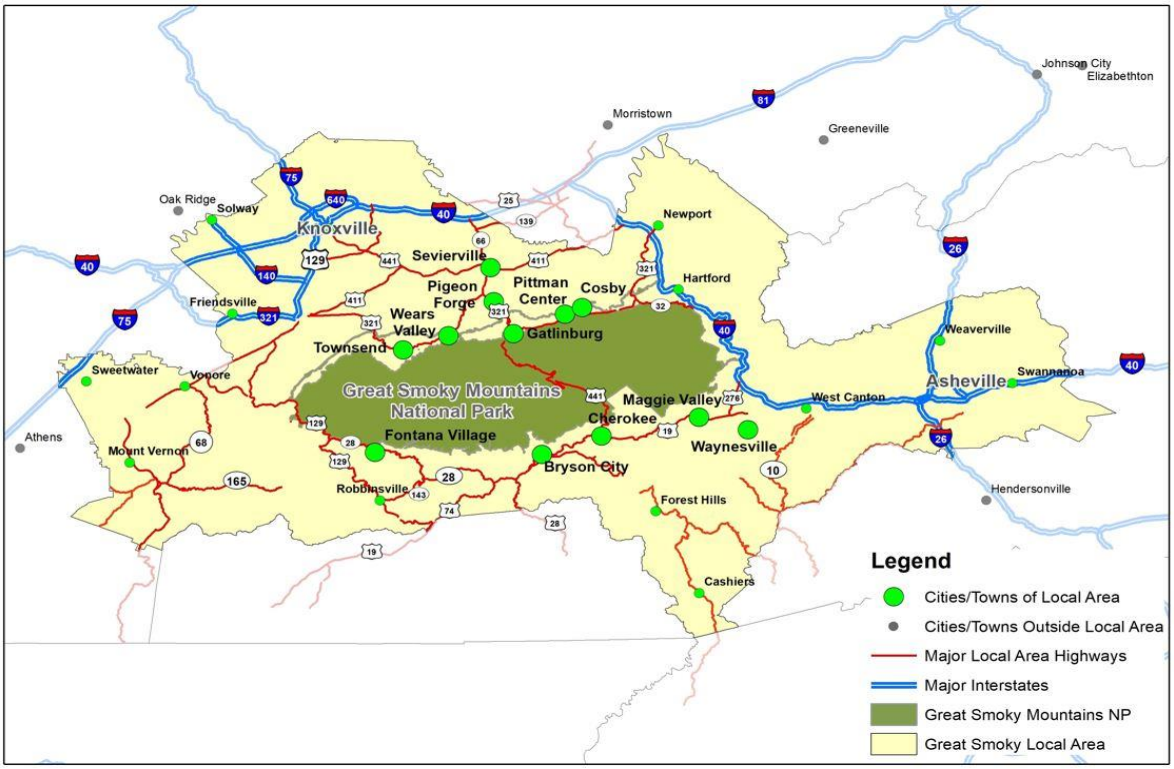


Figure 1. Great Smoky Mountains National Park local area map.

Sampling Period and Procedure

Intercept Survey

Identical to the summer 2022 study, the on-site intercept survey was developed to collect rapid visitor information via tablet-based responses, which were then analyzed and provided for park managers within several weeks of conclusion of data collection. This effort allowed for immediate management action if needed. Small modifications were made to the survey between the summer and winter data collection seasons. Modifications were only adjusted to questions where operations changed between seasons (e.g., facility opening and closings).

The intercept sampling was conducted during the period of January 5 through 20, 2023. The multi-day storm closure occurred from January 12-17. A sample of visitors were intercepted while visiting GRSM across the designated locations listed in Table 1, above. The majority of respondents were intercepted while traveling on the roadway and surveyed in their vehicle. While at the visitor centers, visitors were intercepted on foot.

Surveyors approached potential respondents at the site to introduce the purpose of the study and ask them to participate in a short 5–7-minute survey about their experience in GRSM. If the visitor was eligible (at least 18 years of age, not a GRSM employee, and had not previously taken the survey) and agreed to participate in the study, the surveyor verbally administered the survey questions and recorded the responses on a handheld tablet device. If the visitor did not agree, surveyors asked if they would be willing to answer three non-response bias questions (see Tables 4–6). Upon complete or partial refusal, the surveyor would thank the visitor for their time, log the nonresponse, and approach the next visitor group.

At the end of the intercept survey, visitors were invited to participate in a follow-up survey by mail-back or online response. Those who agreed to participate were given an envelope containing a printed copy of the follow-up survey and hyperlink and instructions for accessing it online. As part of the intercept protocol, surveyors logged a unique identifier (four-digit code) from the envelope into the tablet for future connection to the follow-up survey.

Therefore, four potential outcomes were possible when intercepting visitors (see Table 2):

1) Complete refusal, refusing to answer any questions, including non-response bias questions;
2) Partial refusal, answering non-response questions but nothing further;
3) Complete intercept, but refuse to take follow-up;
4) Complete intercept and take follow-up.

During the sampling period, five surveyors were stationed simultaneously at different sampling sites, with some surveyors rotating between several sites on different days. Start times varied day-to-day and by location to capture a diverse sample of visitors across GRSM. Each surveyor worked 14 days and had two days off during the 16-day sampling window.

Table 2. Response outcomes – GRSM Winter 2023 intercept Survey.

Outcome	Total
Eligible visitors contacted	1,970
Complete refusals	164
Partial refusals (non-response questions completed)	77
Intercept surveys completed	1,729
Follow-up surveys distributed	1,684
Intercept response rate	87.8%
Follow-up acceptance rate	97.4%

Follow-up/Online Survey

The follow-up survey followed a very similar format and structure to the summer 2022 study as comparisons were a key focus of the winter study. The follow-up/online survey was distributed to participating respondents who completed the intercept survey and then agreed to take a follow-up survey after completing their trip to GRSM. This method extended data collection and asked participants to complete the survey after their visit either through a postage-paid envelope provided to them, or online via a provided survey link. The follow-up survey covers visitor trip spending details, travel patterns, and perceptions of their recent visit. Both the intercept survey and the follow-up survey were tagged with a unique identifier (four-digit code) for each respondent so their onsite tablet responses could be paired with their follow-up responses. Joining the two datasets provides a more complete picture of connecting in-park experiences and post-visit perceptions.

At the end of the intercept survey, respondents were asked for their physical mailing address or email address. This allowed for a reminder postcard or email to be sent to all contacts about a week following the end of each data collection period. This postcard or email thanked them for their original participation and encouraged them to complete the follow-up if they had not already done so.

Three weeks after postcard mailing, a second contact (with the same unique IDs) was delivered to all outstanding addresses/emails, noting that the individual's completed questionnaire had yet to be received. The mailed survey packets included replacement surveys and postage-paid, self-addressed return envelopes. A final contact was mailed/emailed to all remaining non-respondents four weeks after sending the second contact (i.e., first full replacement survey). Table 3 shows response rate for the follow-up survey.

Table 3. Response rate – GRSM follow-up/online survey.

Outcome	Total
Follow-up surveys distributed	1,684
Valid follow-up surveys completed	407
Response rate	24.2%

Nonresponse Bias Analysis

To account for potential biases between respondents and nonrespondents, three questions were asked of eligible visitors contacted who did not wish to participate in the onsite intercept survey. These three questions can then be compared to both those who completed the intercept survey only, and those who completed both the intercept and follow-up surveys. With an intercept survey response rate of 87.8% concern over *intercept* nonresponse is muted. Tables 4 and 5 below show results of bias testing between intercept-only and full survey respondents.

A chi-square test for homogeneity was performed for two of the three questions to evaluate differences between the groups. Sample counts for the US residency question were not high enough to perform a chi-square test. This question was deemed not applicable for this analysis. Using a p-value of .05, the distribution of responses among full survey respondents and intercept-only respondents differed significantly for both applicable questions: 1) local area residence and 2) overnight visitation. Therefore, non-local residents and overnight visitors are not as well represented in the full survey responses as desired. For interpretation, these findings suggest that there are likely more non-local respondents and overnight respondents who visit the park than were captured. Some responses may shift slightly due to this difference; however, the results are still representative of winter visitation at GRSM.

Table 4. Non-Response bias question: “Are you a permanent or seasonal/second home resident of the local area around GRSM?”.

Response	Frequency: Full survey respondents	Percent: Full survey respondents	Frequency: Intercept-only respondents	Percent: Intercept-only respondents
Yes	132	32.5%	331	25.0%
No	274	67.5%	992	75.0%

*p-value: 0.003

Table 5. Non-Response bias question: “On this trip away from home, have you [and your personal group] stayed, or will you stay overnight away from your permanent residence either in GRSM and/or within the local area?”.

Response	Frequency: Full survey respondents	Percent: Full survey respondents	Frequency: Intercept-only respondents	Percent: Intercept-only respondents
Yes	253	62.3%	938	70.9%
No	153	37.7%	385	29.1%

*p-value: 0.001

Results

Intercept Survey Results

The following section provides results of the 1,729 visitor intercept surveys conducted in Great Smoky Mountains National Park from January 5 through 20, 2023. All results are presented in this report, regardless of sample size, which varies by question. Caution is recommended in the interpretation of figures with sample size lower than n=30. Categories on some questions may not sum to 100% due to rounding differences and/or the opportunity to select more than one response option. Differences in bar length for responses with equal percentage labels are also due to rounding.

Questions 1–2: Visitor Residency

First, respondents were asked to indicate if they were permanent or seasonal residents of the local area around GRSM (see local area map in Figure 1 above). If they did not reside permanently or seasonally in the local area, they were asked if they currently live in the U.S., and if so, for their ZIP code. Figure 2 depicts responses to this group of questions.

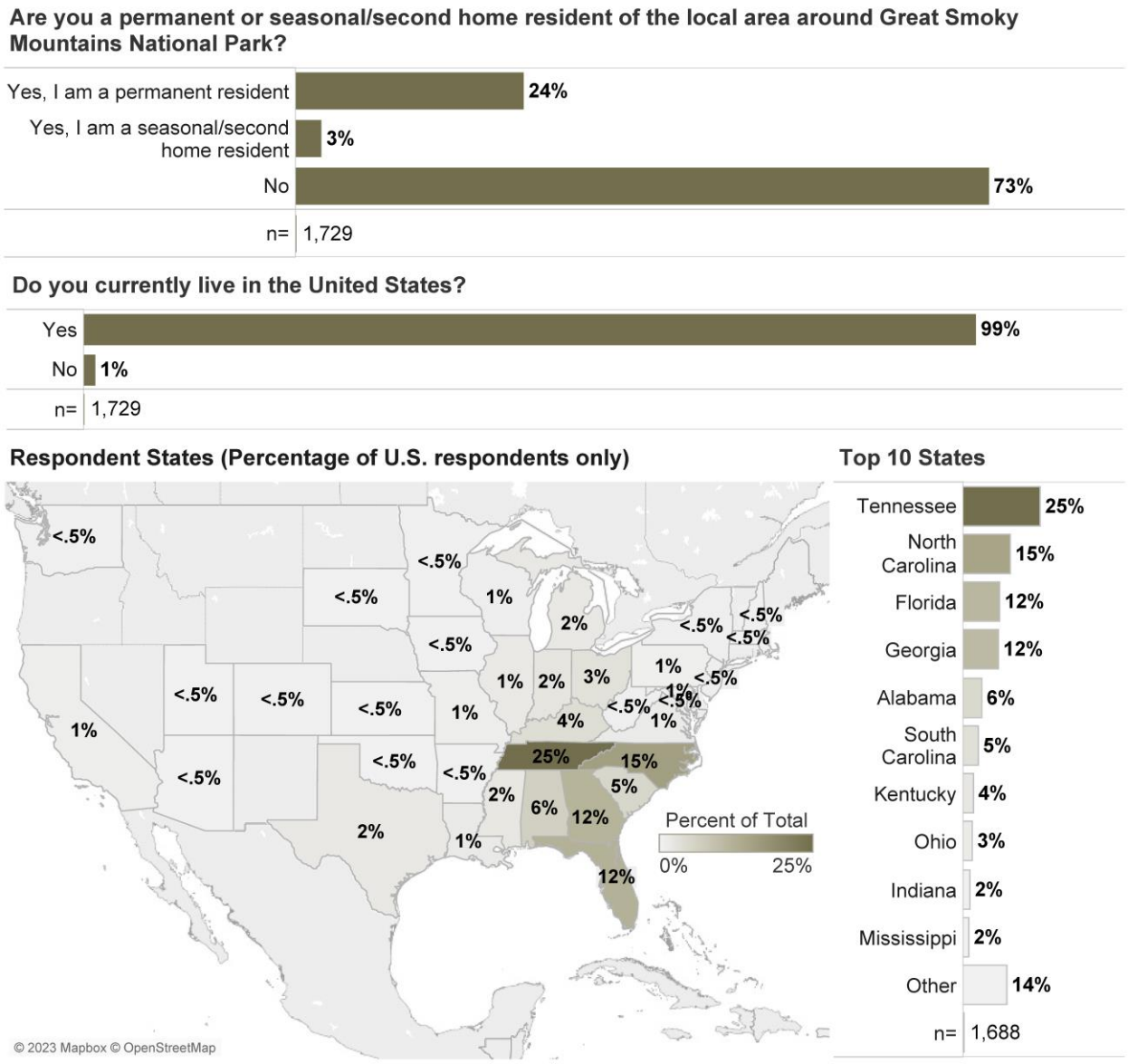


Figure 2. Visitor local residency status and geographic origin of domestic visitors to GRSM.

- Just over a fourth of respondents (a combined 27%) stated that they were either permanent or seasonal residents of the local area around GRSM.
- There was a large geographic concentration of visitors from Tennessee (25%) and North Carolina (15%) (where GRSM is located).
- Besides Tennessee and North Carolina, Florida (12%), Georgia (12%), and Alabama (6%) ranked in the top five in terms of visitor origins.

Question 3: Trip Purpose

If respondents indicated that they were not permanent or seasonal residents of the local area, they were asked about the overall purpose for their trip away from home (Figure 3).

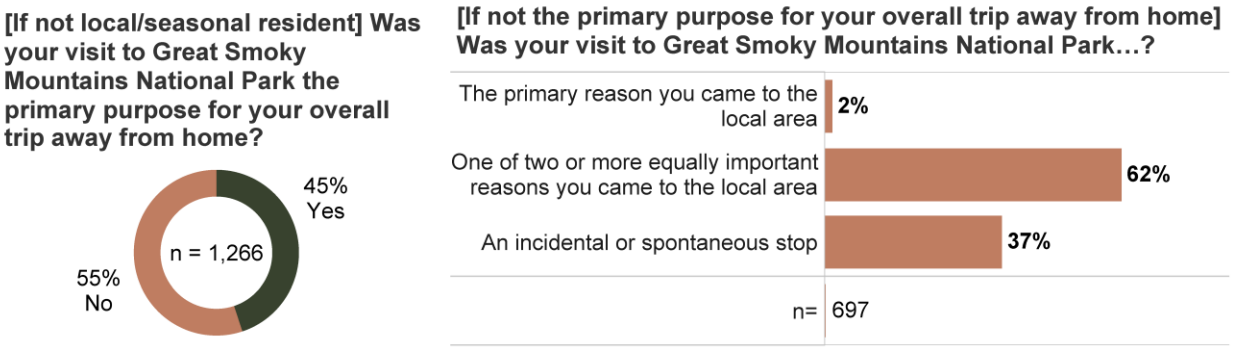


Figure 3. Role of GRSM in overall trip purpose.

- For over half of non-local respondents (55%), visiting GRSM was <u>not</u> the primary purpose for their overall trip away from home.
- Among those respondents for whom GRSM was not their primary trip purpose, 62% stated that their visit to GRSM was one of two or more equally important reasons they came to the local area, while another 37% indicated that it was an incidental or spontaneous stop.

Question 4: Length of Stay

If respondents indicated that they were not permanent or seasonal residents of the local area around GRSM, they were asked how many days they planned to spend within that local area, including days spent in the park. All respondents, regardless of residency, were asked whether they would be staying overnight away from their permanent residence within the local area. Responses to both of these questions are depicted in Figure 4.

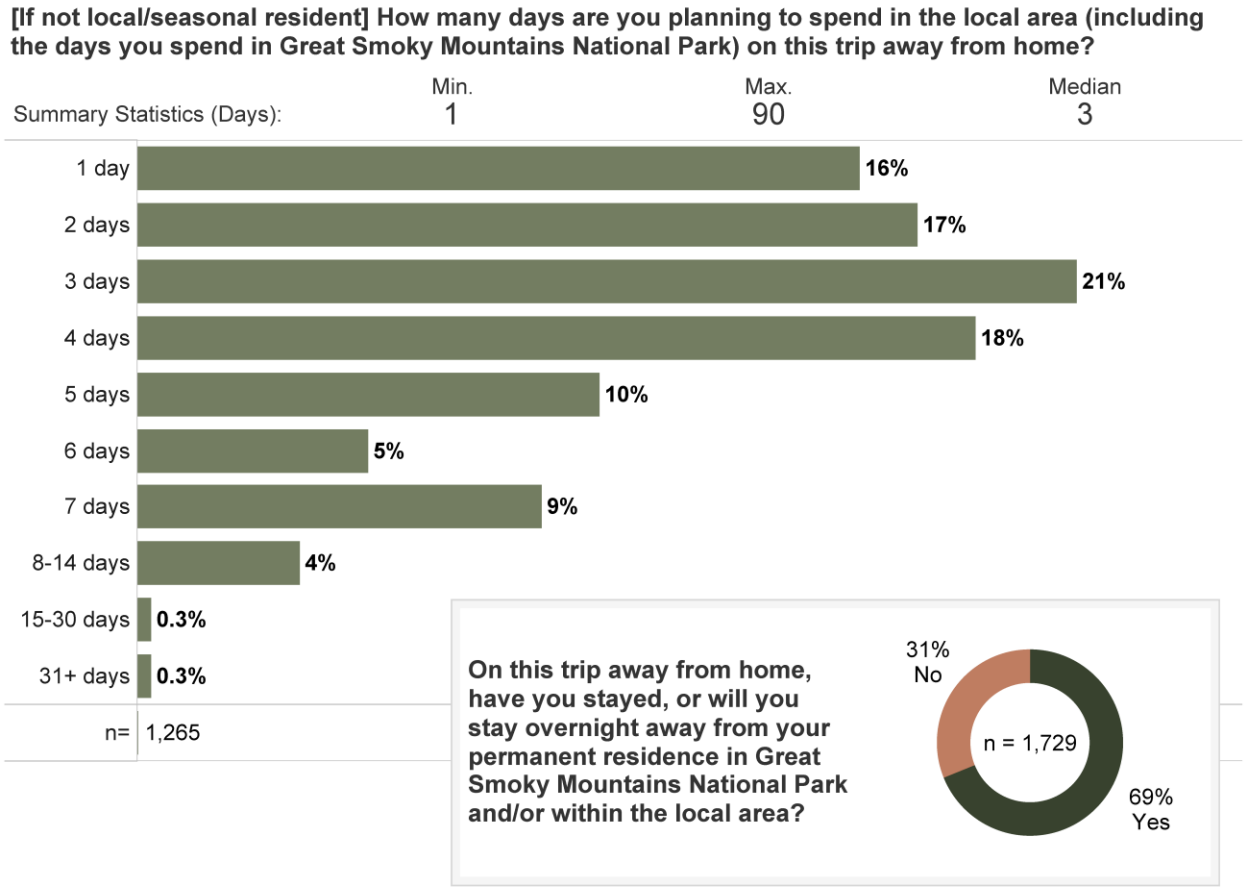


Figure 4. Time spent in the local area around GRSM.

- Just under a fifth of non-local respondents (16%) spent one day in the local area, 17% spent two days, and 21% spent three days. The median length of stay was three days.
- Additionally, over two-thirds of all respondents (69%; including permanent/seasonal residents) had stayed or planned to stay overnight away from their permanent residence in the park and/or in the local area.

Questions 5-6: Overnight Visitors

If respondents indicated that they stayed overnight in the local area, they were asked about the type(s) of accommodation they used or planned to use while there (Figure 5).

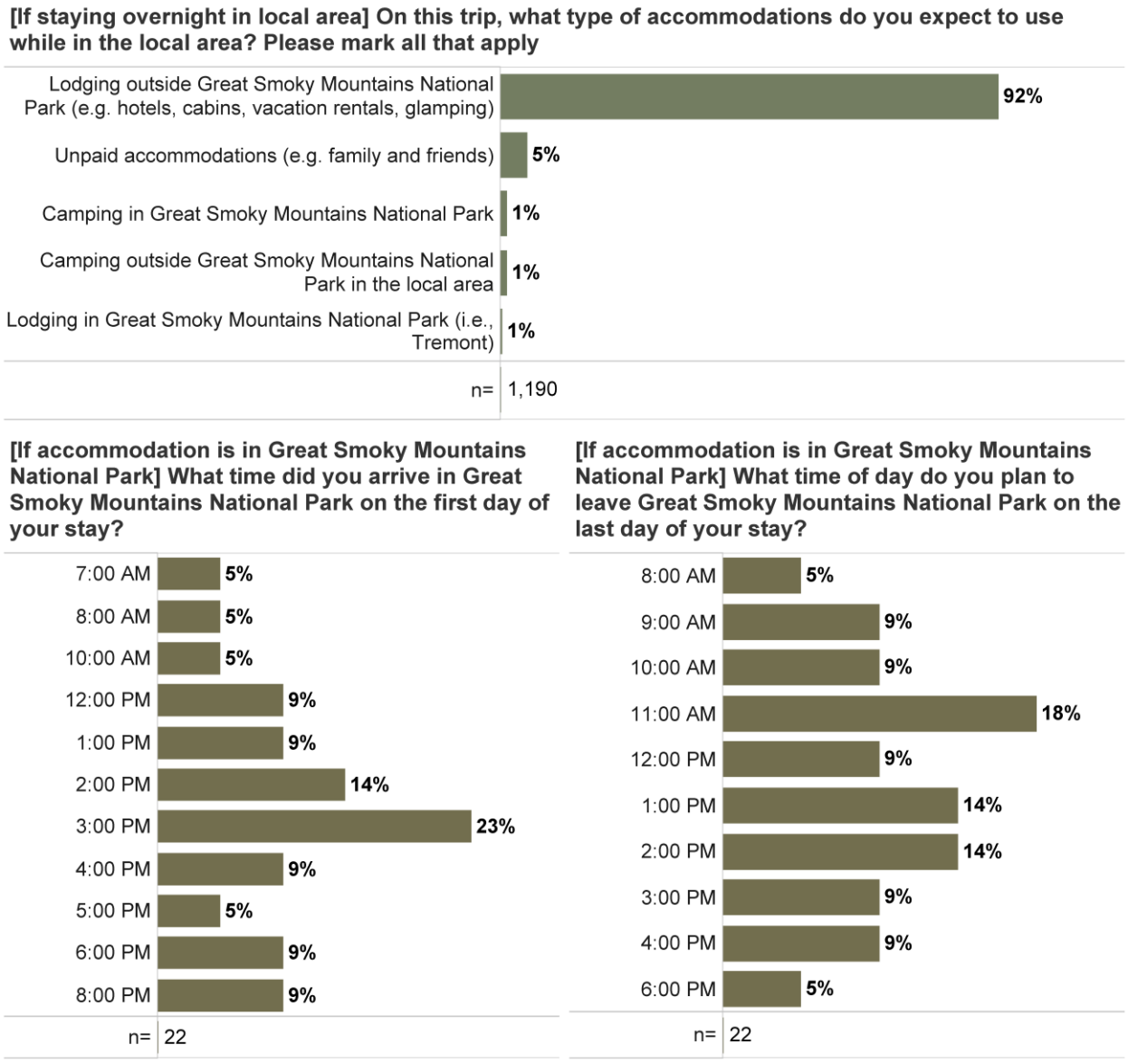


Figure 5. Accommodation types used in the local area around GRSM and arrival/departure time if staying in GRSM.

- Almost all of overnight respondents (92%) stayed in lodging outside GRSM.
- This was followed in prevalence by unpaid accmmodations (5%), with all other options only making up one percent each.

- Among respondents that stayed within GRSM, over two-thirds (69% combined) arrived in the early to late afternoon (between 12:00 PM and 5:00 PM). Depature times were somewhat more dispersed with an approximate 40%/60% split between morning and afternoon departures.

Respondents who camped in GRSM were asked in which campground(s) they had stayed or planned to stay (Figure 6). Only 15 respondents indicated they were camping in GRSM on their winter 2023 trip.

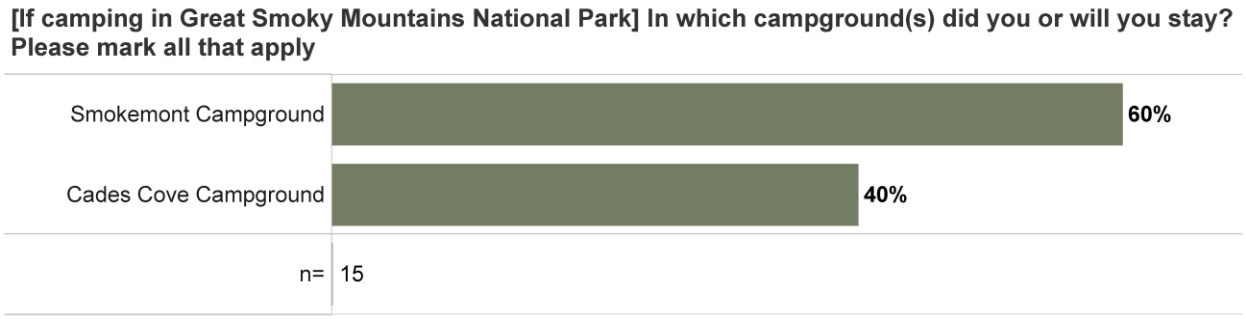


Figure 6. Campground use within GRSM.

- Smokemont Campground (60%) saw slightly higher use than Cades Cove (40%), but the difference is minor given the sample size.

Respondents were then asked to indicate the number of nights they spent or would spend in each accommodation type (Figure 7).

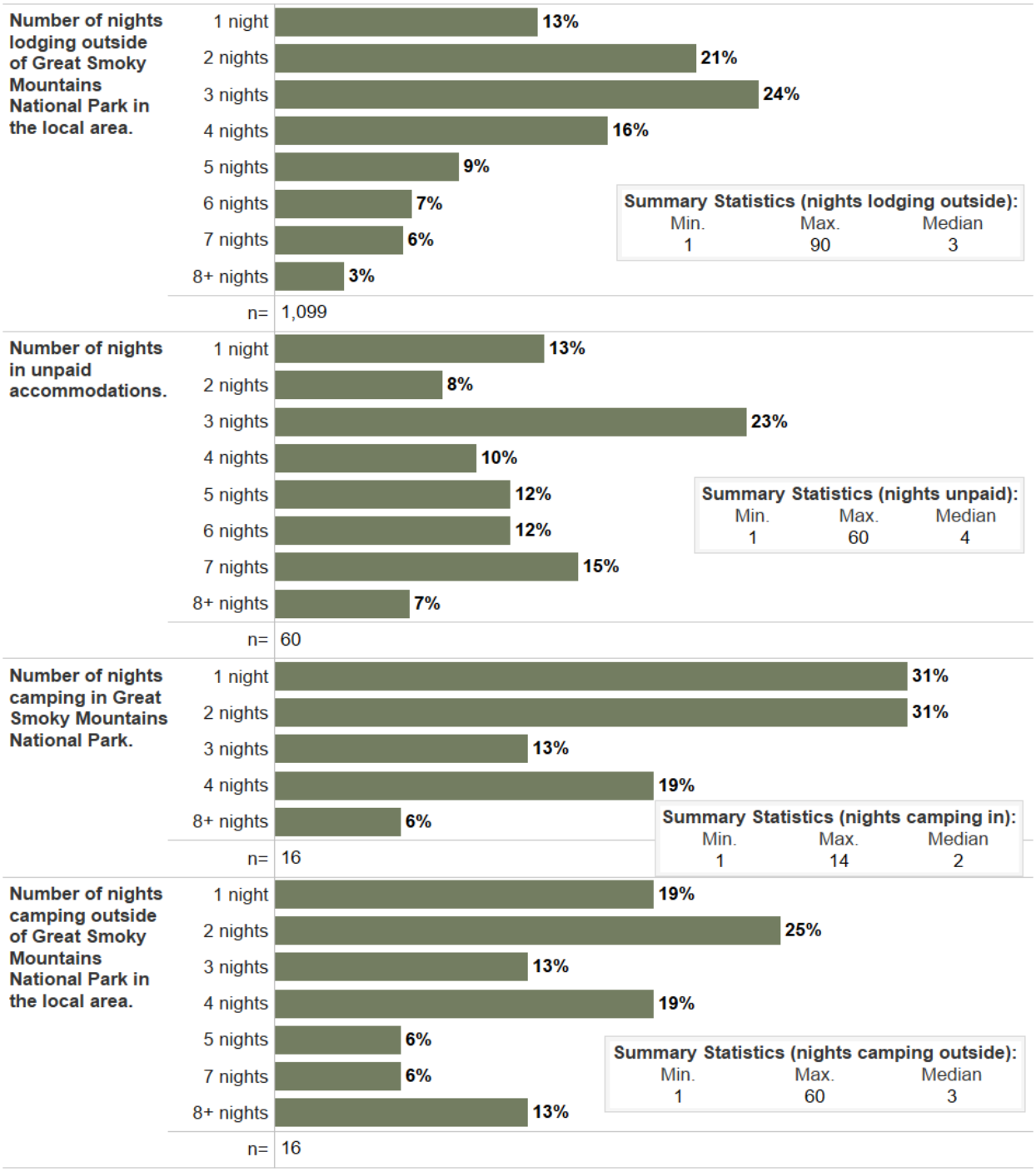


Figure 7. Number of nights spent in the local area around GRSM, by accommodation type. Tabular data shown in this figure are presented in Appendix A, Table A-1.

- Among the 92% of overnight respondents who lodged outside of GRSM (per Figure 5), median length of stay was three nights. Most (58%) of lodging stays outside of GRSM were spending three or fewer nights in the area; 74% spent four nights or fewer in the area.

- Among the 5% of overnight respondents who stayed in unpaid accommodations in the local area (per Figure 5), median length of stay four nights. There was much broader spread in length of overnight stay among those staying in unpaid accommodations than those in paid options.
- Lastly 1% each of overnight respondents camped inside GRSM or outside GRSM. Those that camped outside of GRSM tended to have a wider range of stay-lengths (median of 3) than those camping in GRSM (median of 2).

Questions 9-11: Party Characteristics

Respondents were asked to indicate how many adults (18 or older) and children (under 18) were in their personal group during their visit to GRSM (Figure 8). A personal group was defined as the visitor and companions with whom they visited the park, such as a spouse, family, and/or friends, but visitors were informed not to account for the larger group with whom they may have traveled, such as a school, church, scout, or tour group.

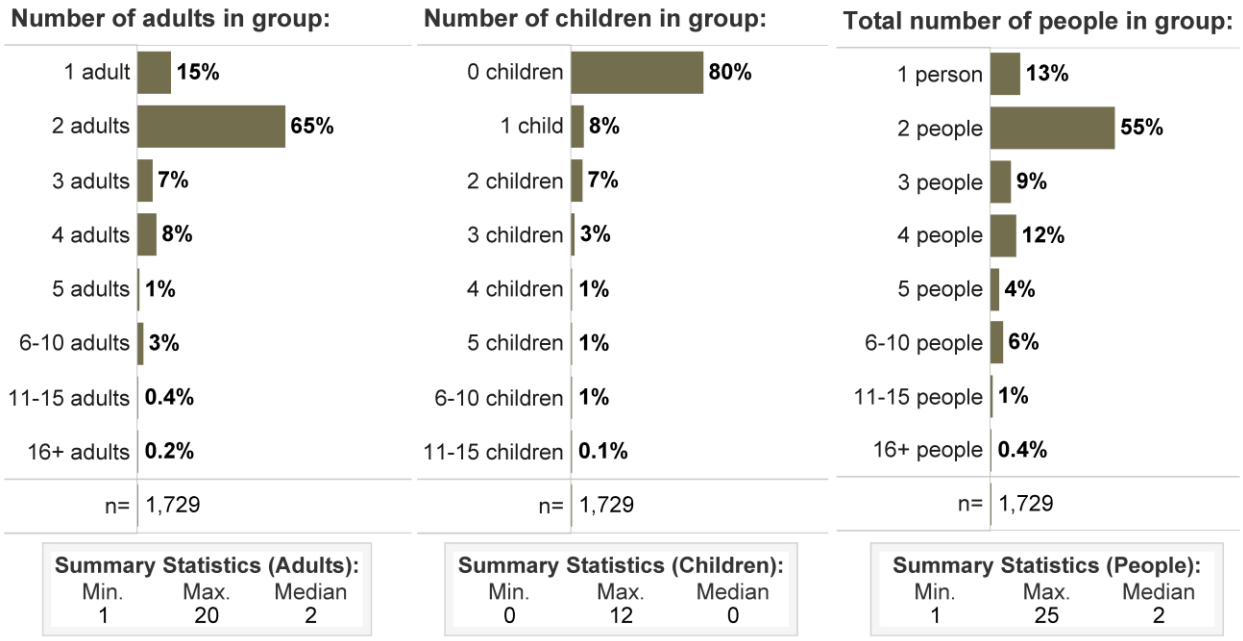


Figure 8. Number of adults and children in respondent's personal group while visiting GRSM. Tabular data shown in this figure are presented in Appendix A, Table A-2.

- The median number of adults per group was two. Most groups (65%) included two adults.
- Most groups (80%) did not include any children.

Respondents were then asked to provide the age of each member of their group (Figure 9).

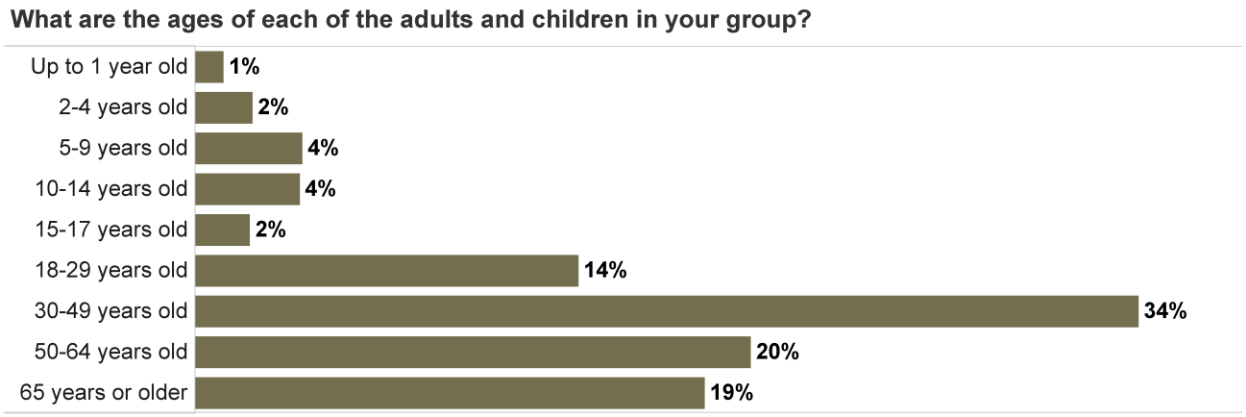


Figure 9. Age distribution of all members of respondent's personal group while visiting GRSM.

- The most common age of the adults and children in a personal group was 30-49 years old (34%), followed by 50-64 years old (20%), and 65 years and older (19%).
- Children (i.e., visitors under 18 years old) accounted for a combined total of just 13% of group members.

Questions 13-14: Local Communities

To build a more detailed understanding of the impact of GRSM on the surrounding local area, respondents were given a list of nearby communities and asked which one(s), if any, they had already visited or planned to visit during their trip. Visiting a community was defined as stopping to do or buy anything, such as purchasing gas or groceries or dining. Those respondents who had previously indicated that they were staying overnight in the local area outside GRSM (i.e., paid lodging outside the park, camping outside the park, or staying in unpaid accommodation outside the park) were then asked which local community (or communities) from that list was (or were) closest to their accommodations. Responses to both of these questions are shown in Figure 10, below.

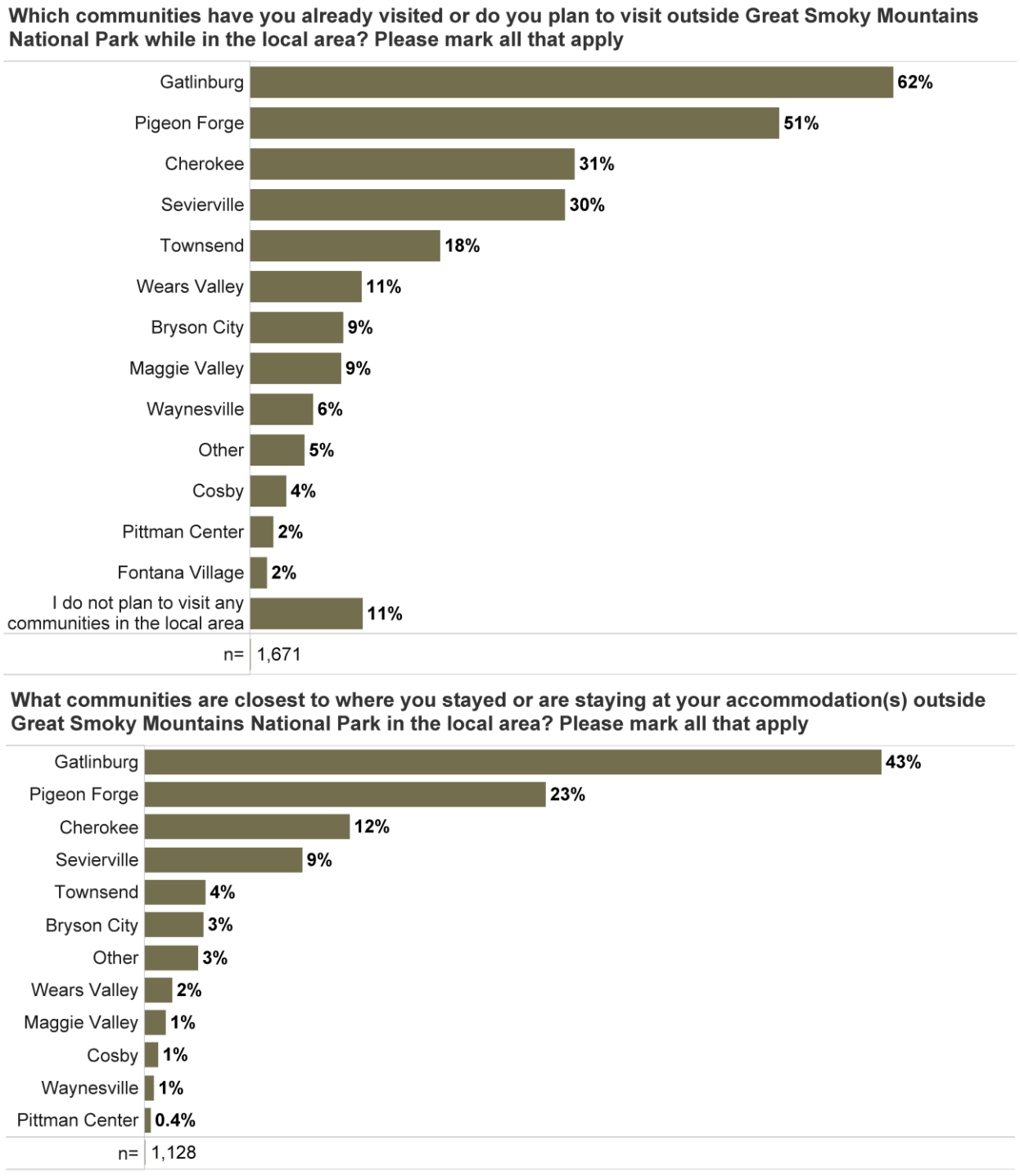


Figure 10. Communities visited outside GRSM while in the local area.

- Gatlinburg (62%) and Pigeon Forge (51%) were the two most visited communities by respondents in GRSM. Cherokee (31%) and Sevierville (30%) followed in visitation of local communities.

- For overnight stays, Gatlinburg (43%) and Pigeon Forge (23%) also represent the most common communities visitors spent the night in.

Questions 15-19: Park Use Characteristics

First, respondents were asked to indicate if they planned to visit GRSM for more than one day, and then a series of follow-up questions about the length of time they might spend in the park (Figure 11 and Table 6).

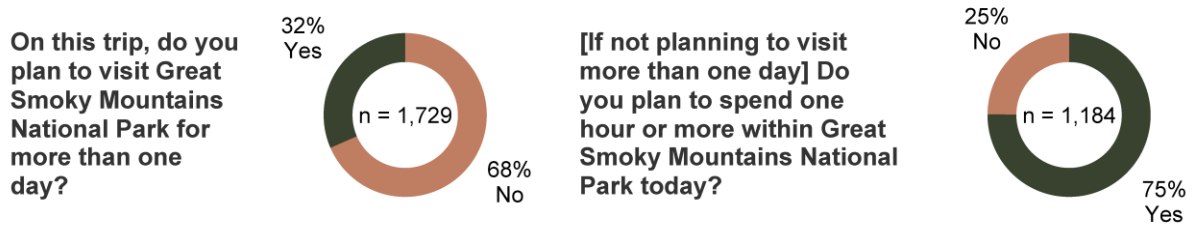


Figure 11. Duration of the respondent's trip to GRSM.

Table 6. Amount of time spent within GRSM.

Question	n	Min.	Max.	Median
[If not planning to spend one hour or more] How many minutes do you plan to spend within GRSM today?	292	1	59	30
[If planning to spend less than a day, but one hour or more] How many hours do you plan to spend within GRSM today?	887	1	10	2
[If planning to visit at least one day] How many days do you plan to spend within GRSM on this trip?	547	1	30	2
[If planning to visit at least one day] On how many different days do you expect to enter the park?	545	1	30	2

- While visiting GRSM, most visitors (68%) did not plan to spend more than one day in the park.
- Among the 68% of visitors who did not spend more than a day in GRSM, three-fourths (75%) planned to spend one hour or more in the park. The median length of time spent in the park among this group was two hours.
- The remaining 32% of visitors planned to visit for more than one day; among those visitors, the median length of stay was two days.
- Those respondents who spent at least one day in the park were also asked on how many different days they expected to enter the park; the median answer was two days.

In addition to the total duration of their trip to GRSM, visitors were also asked, more specifically, about the amount of time they planned to spend outside their vehicle while in the park on the day they were surveyed (Figure 12).

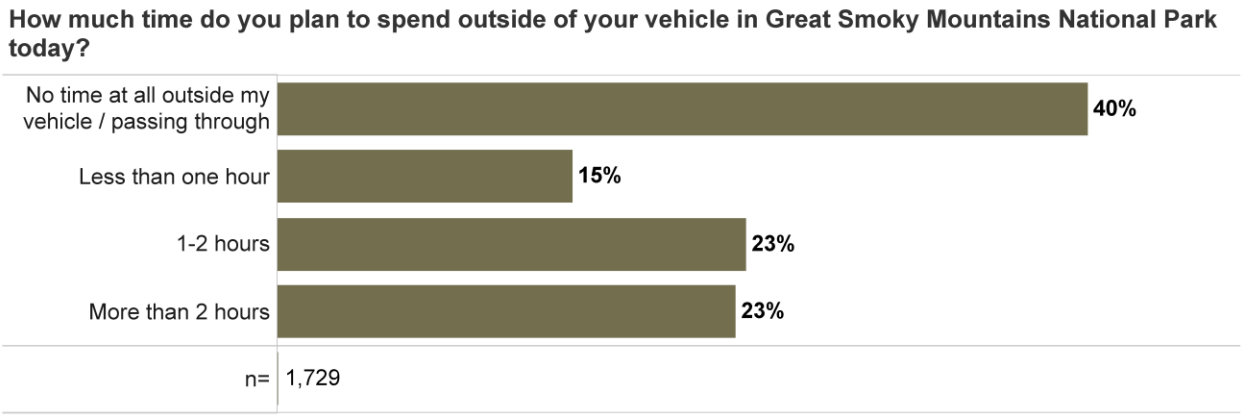


Figure 12. Amount of time spent outside one's vehicle while in GRSM on the day of the survey.

- Approximately 40% of all intercept respondents were not planning on spending any time outside of their car or were just passing through the area.
- Of those who planned to stop, just under a fourth of respondents each were spending 1-2 hours or more than two hours. Only 15% were spending less than an hour if they planned on stopping.

Next, respondents were asked to indicate the most recent entrance they used to enter GRSM (Figure 13).

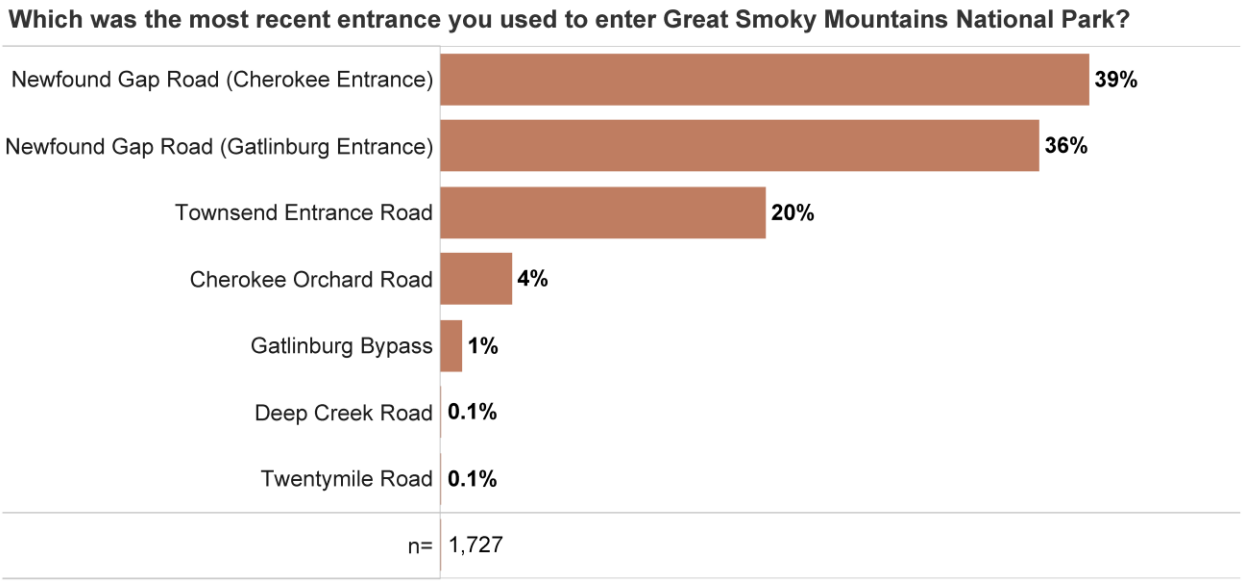


Figure 13. Most recent entrance used to enter GRSM.

- Approximately 75% of respondents were using Newfound Gap Road to enter the park (39% at Cherokee Entrance; 36% at Gatlinburg Entrance)
- About 20% of respondents used the Townsend Entrance Road to enter the park with just a few other entrances used sparsely.

- Due to park geography and proximity of intercept sites to entrances, the results for most recent entrance used were impacted by the volume of visitors intercepted at various sites.

Respondents were also presented with a list of locations within GRSM and asked to indicate if they had been to, or planned to visit them, that day (Figure 14).

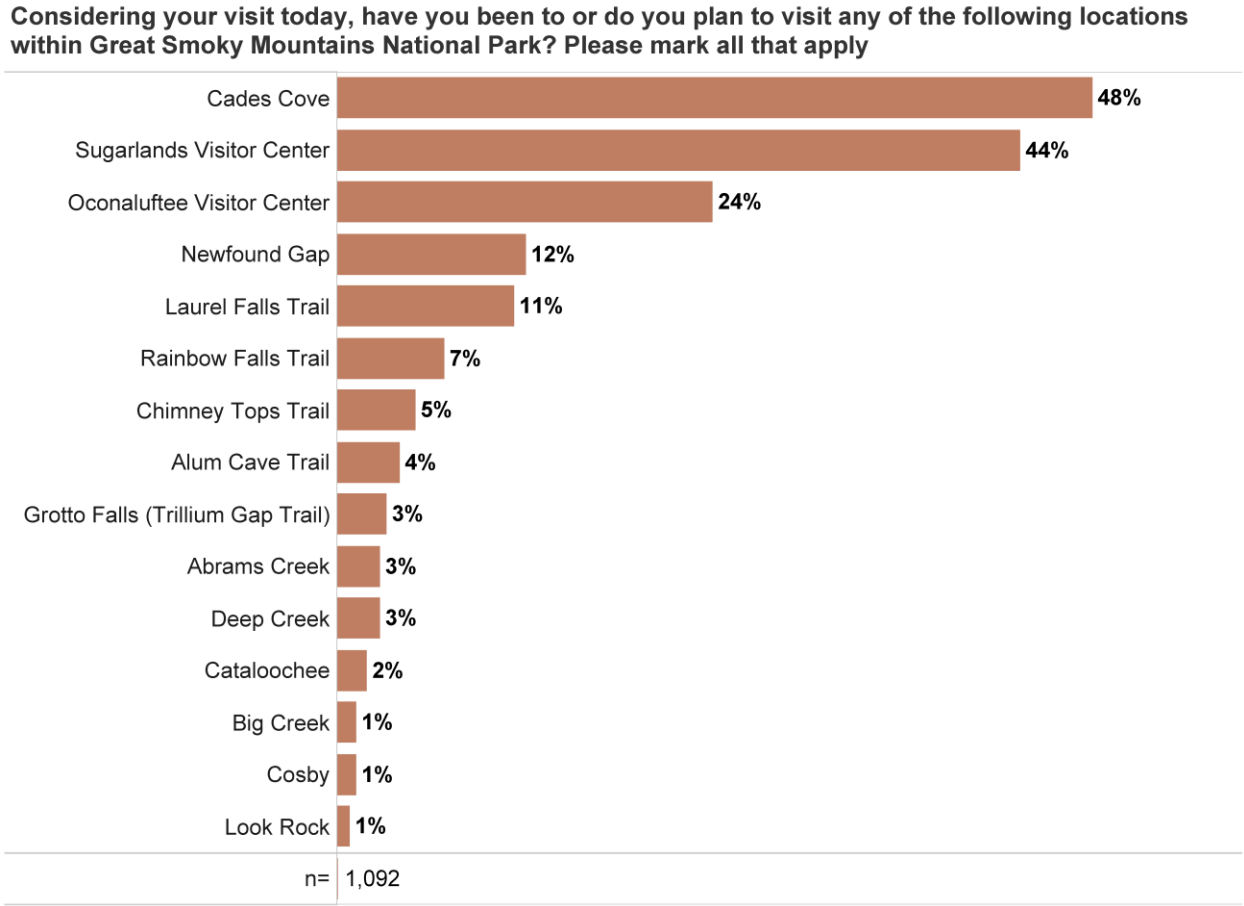


Figure 14. Park locations visited during the most recent trip to GRSM.

- The most commonly visited location in GRSM was Cades Cove (48% of respondents had either been there or planned to visit it that day), followed by Sugarlands Visitor Center (44%) and Oconaluftee Visitor Center (24%).
- Big Creek, Cosby, and Look Rock were the least-visited locations from the list provided, with only 1% of respondents each reporting having visited or planning to visit these sites.

Question 20: Transportation

Visitors were asked about the form of transportation they used to enter GRSM on the day they were surveyed (Figure 15).

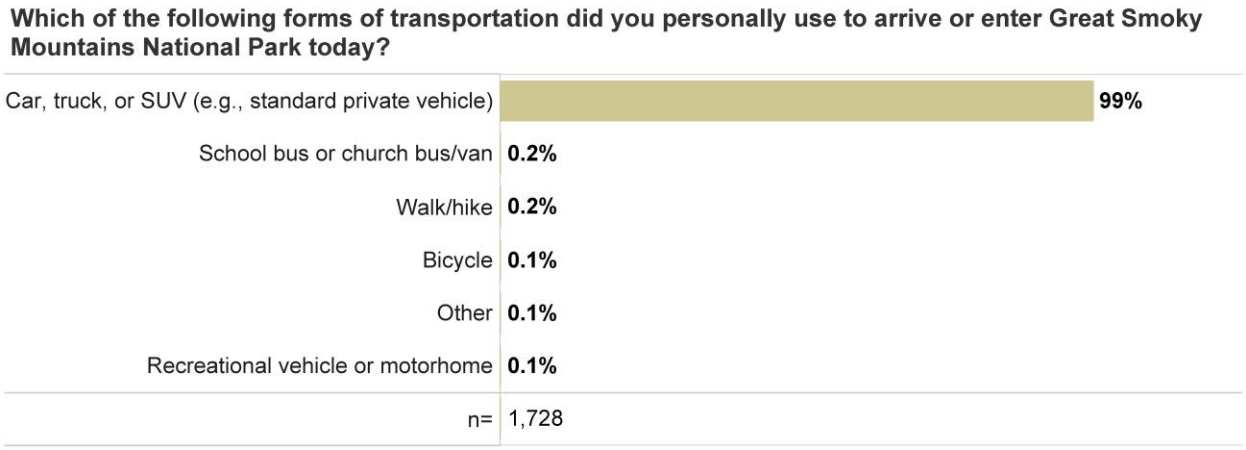


Figure 15. Form of transportation used to enter GRSM on the day of the survey.

- Virtually all respondents (99%) reported that they used their car, truck, or SUV to enter GRSM on the day of the survey.

If respondents entered the park using a multi-passenger private vehicle (i.e., car, truck or SUV; recreational vehicle or motorhome; or motorcycle), they were asked to indicate how many people were travelling in or on that vehicle (Figure 16).

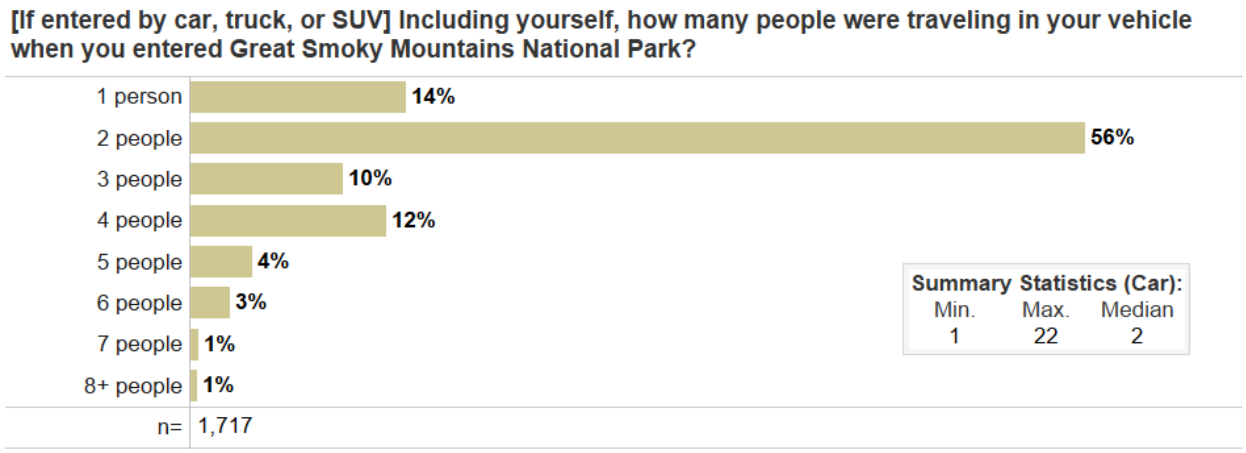


Figure 16. Number of people in or on respondent's vehicle when entering GRSM. Tabular data shown in this figure are presented in Appendix A, Table A-3.

- Over half respondents traveling by car reported two people. The next common group size was one person (14% each), followed by four people (12%).

- Only one respondent provided a group size (two people) for another form of transportation, recreational vehicle or motorhome.

Question 22: Previous Visits to GRSM

Finally, respondents were asked if they were first time visitors to GRSM. Repeat visitors were then asked how many visits they have made to GRSM in the last 12 months and the last five years (Figure 17).

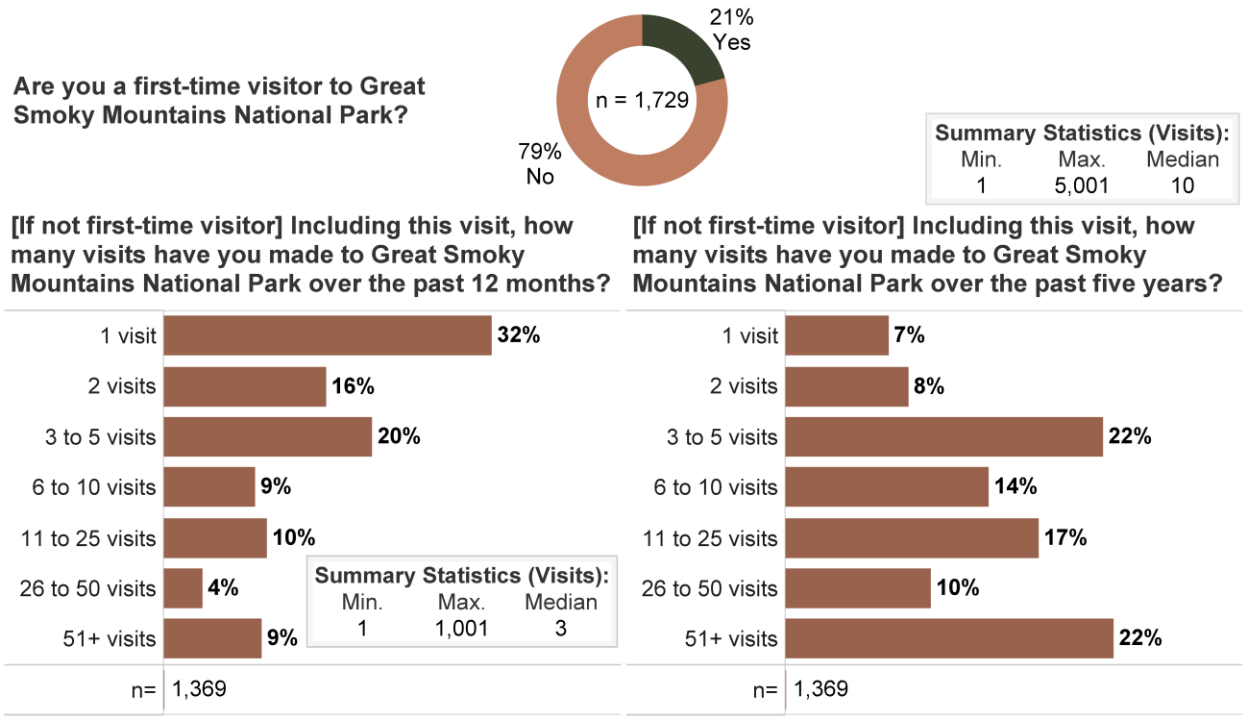


Figure 17. Previous visits to GRSM. Tabular data shown in this figure are presented in Appendix A, Table A-4.

- Most respondents (79%) had been to GRSM before.
- Among the 79% of respondents who were repeat visitors, most (32%) were on their first visit in the past 12 months (i.e., had last visited more than a year ago).
- However, the majority of repeat visitors (93%) had visited at least one prior time in the past five years.
- The median number of visits made in the past five years was ten including the current trip; 49% of repeat visitors had made more than 10 visits in the past five years.

Follow-up Survey Results

The following section provides results of the 407 follow-up visitor surveys received by mail or online following fieldwork conducted in Great Smoky Mountains National Park in January 2023. Again, caution is recommended in the interpretation of figures with sample size lower than n=30, and categories on some questions may not sum to 100% due to rounding differences and/or the opportunity to select more than one response option.

Questions 1–2: Information about GRSM

First, respondents were asked what sources they used to obtain information about GRSM before and during their trip, and whether they had the information they needed on their trip (Figure 18).

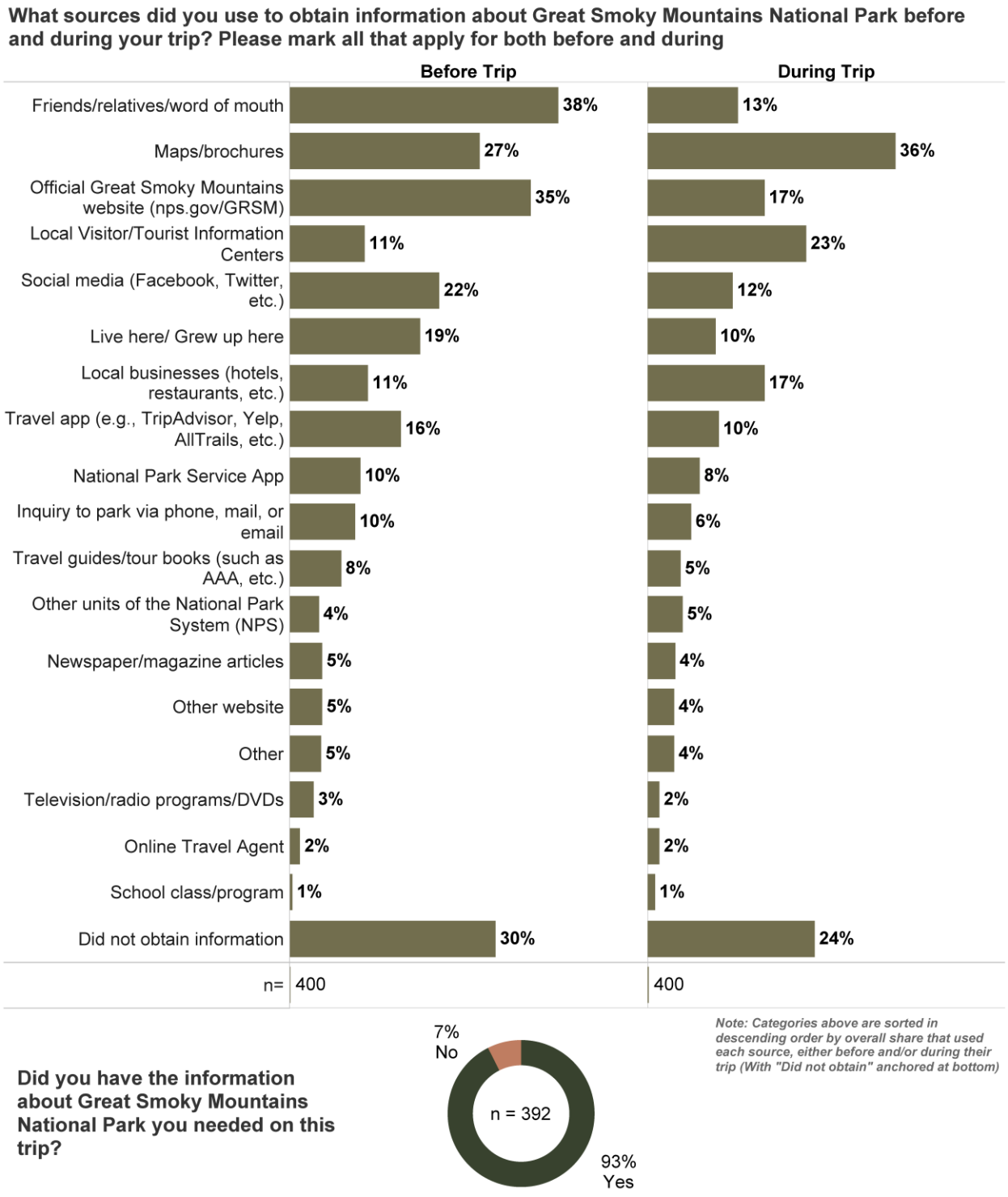


Figure 18. Sources used to obtain information about GRSM before and during the trip.

- The most used resource before the trip was recommendations from friends/relatives/word of mouth. The second most common source used before the trip was the official GRSM website

(35%), followed by maps/brochures (27%), social media (22%), and personal experience from living/growing up in the area (19%).

- While on their trip, maps/brochures (36%) were the most common source used with local visitor/tourist information centers (23%) following. The official GRSM website and local businesses (each 17%) also provide information during the trip to a segment of visitors.
- In a follow-up question, 93% of respondents said that they had the information about GRSM that they needed on their trip, while 7% indicated that there was information that they needed but did not have.
- In an open-ended follow-up question, those who did not have the information they needed on this trip were asked to elaborate.

Question 3: Transportation

While in the intercept survey, respondents indicated a mode of transportation they used to enter the park on the day of the intercept, the follow-up survey asked respondents to select all forms of transportation they personally used to travel from their home to GRSM on their trip (Figure 19).

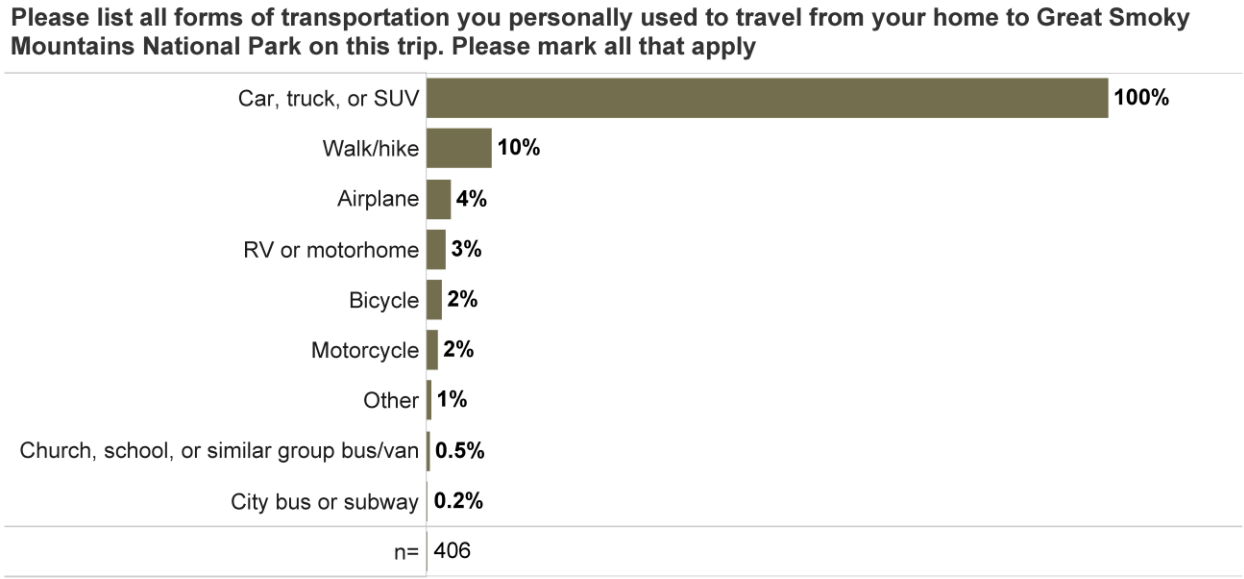


Figure 19. Forms of transportation used to travel from home to GRSM on the recent trip.

- All respondents (100%) used a personal vehicle, such as a car, truck, or SUV, at some point during their trip from home to GRSM.
- The second most common mode of travel was walking/hiking (10%), followed by a small number using an airplane and other modes (4% and lower).

Question 4: Travel Party Composition

Respondents were asked what type of group they were with during their visit to GRSM on the day of the survey (Figure 20).

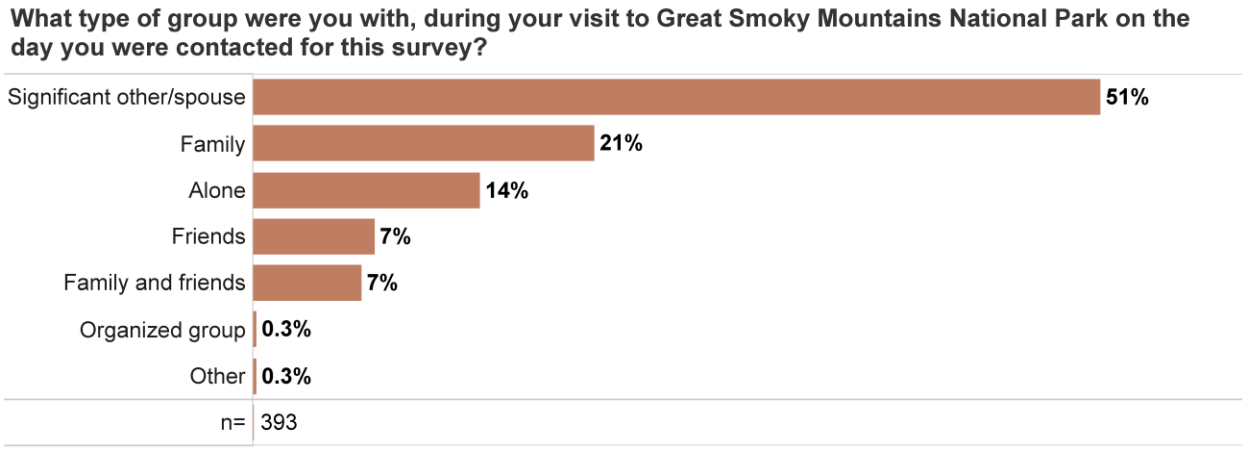


Figure 20. Travel party composition during GRSM visit.

- Just over half of respondents (51%) visited GRSM with their significant other or spouse on the day of the survey.
- A fifth of respondents (21%) explored GRSM with their family, and another 14% visited the park with their friends.

Questions 11-12: Activity Participation

Survey respondents were asked to identify all activities that they participated in while visiting GRSM, and which of those was their primary activity (Figure 21).

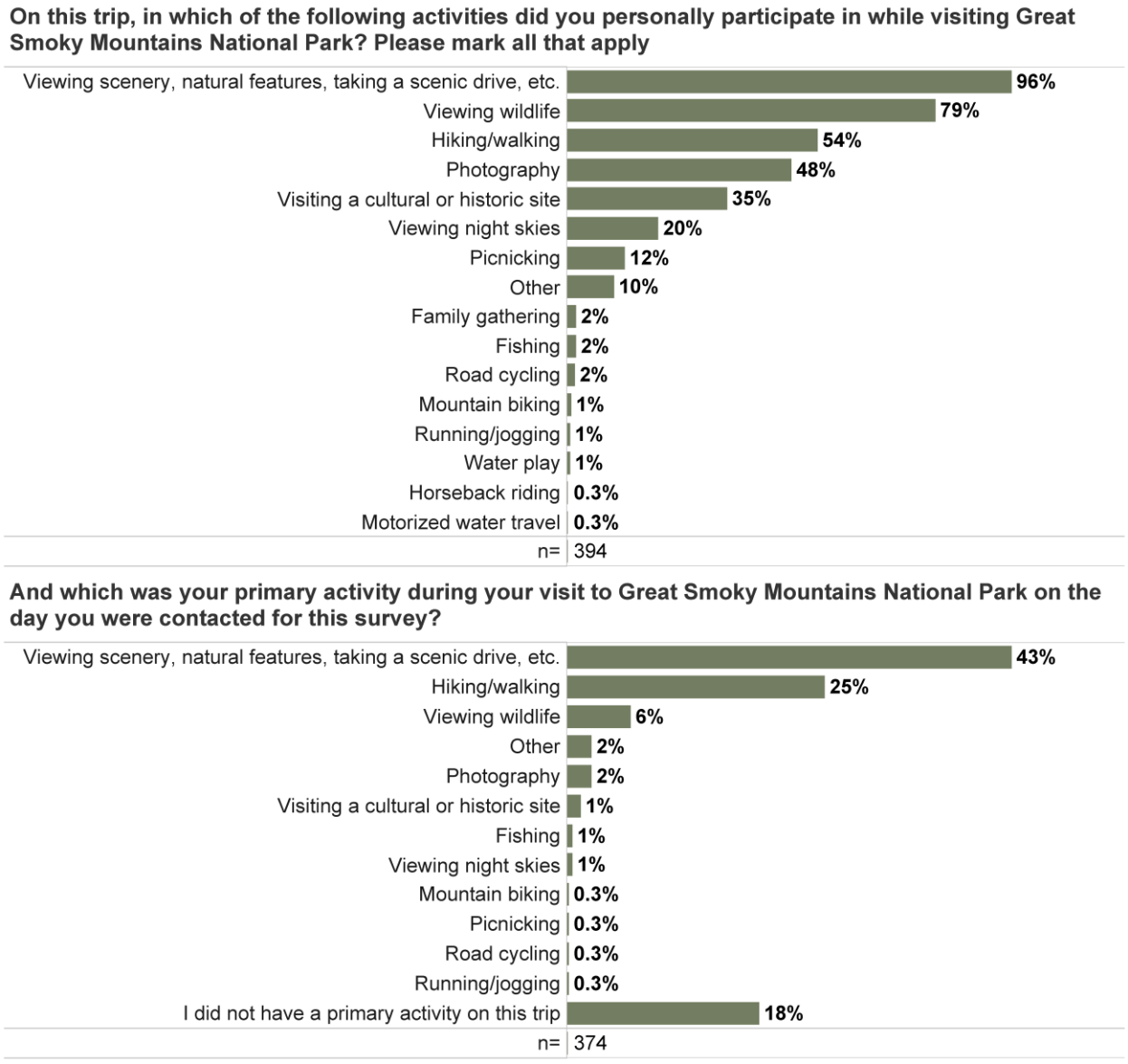


Figure 21. Participation in activities at GRSM.

- Almost all visitors reported viewing scenery natural features, taking a scenic drive (96%), with most viewing wildlife (79%), and hiking/walking (54%).
- Motorized water travel, horseback riding, water play, running/jogging, and mountain biking were all uncommon activities (reported by 1% or fewer of respondents).
- Most respondents (43%) reported viewing scenery/etc. as their primary activity, followed by hiking/walking (25%).

Questions 13–14: Reasons to Visit

Survey respondents were asked to rate the importance of various reasons to visit GRSM on their trip, then asked which of those was the most important reason for them to visit GRSM (Figure 22).

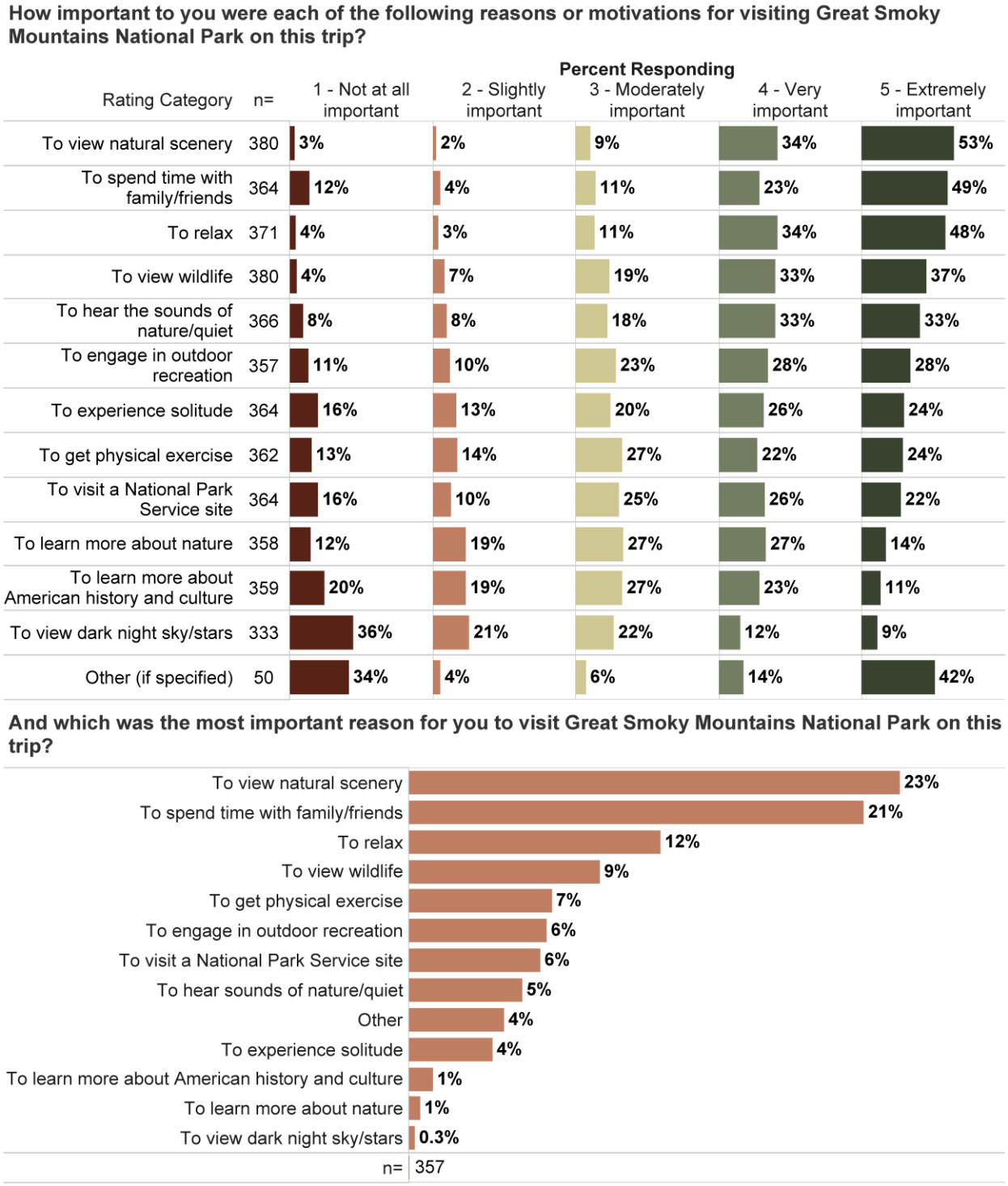


Figure 22. Reasons or motivations to visit GRSM. Tabular data shown in this figure are presented in Appendix A, Table A-5.

- Most visitors chose to view natural scenery (53%) and to spend time with family/friends (49%) as extremely important reasons for their trip to GRSM.
- Other important reasons were to relax and to view wildlife (48% and 37% of respondents, respectively, rated them as extremely important).
- The reasons of lowest overall importance to respondents were to view dark night sky/stars and to learn more about American history and culture (only 9% and 11% of respondents, respectively, reported them as extremely important, and 36% and 20% of respondents, respectively, rated them as not at all important).
- The most common response about the most important reason was to view natural scenery (23%), followed by to spend time with family/friends (21%)

Questions 15–16: Programs, Services, and Learning

Respondents were asked to identify all programs and services that they personally participated in in GRSM during their trip (Figure 23).

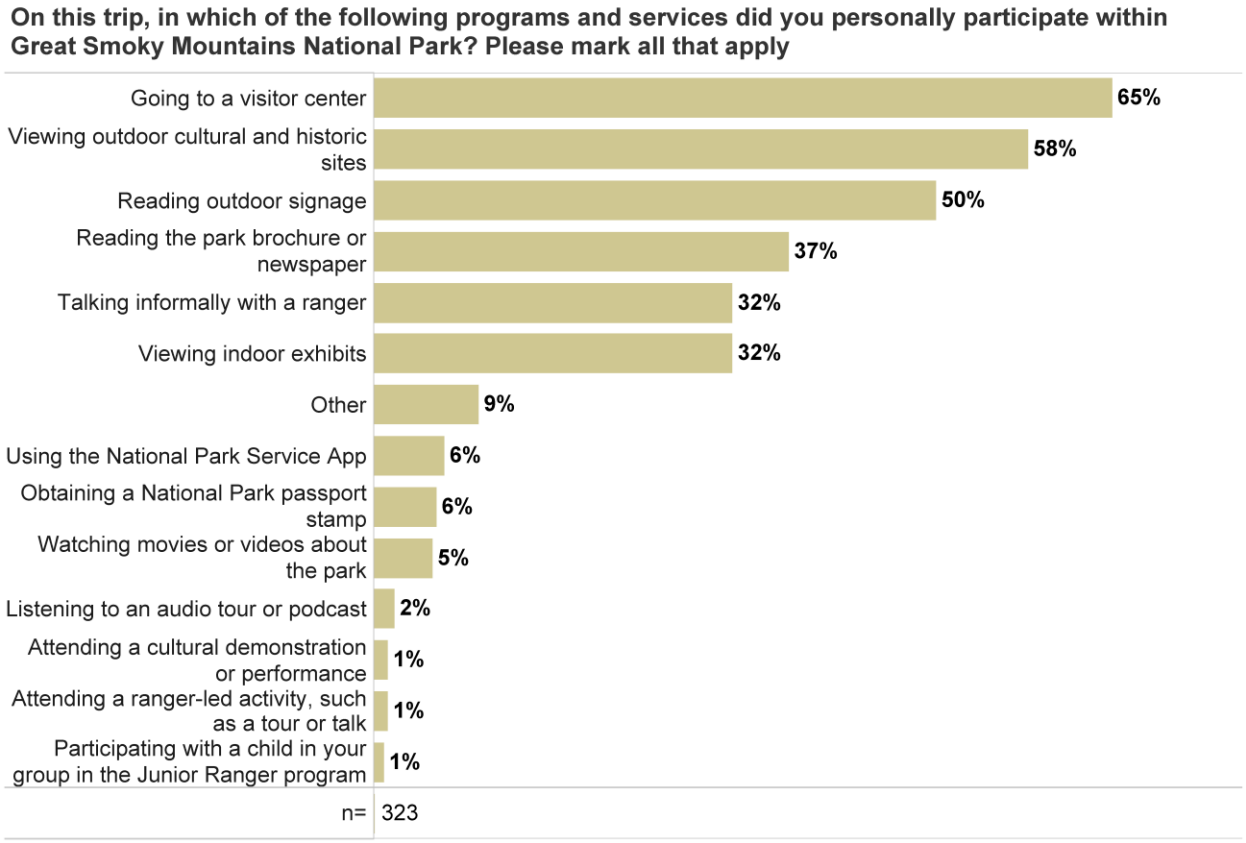


Figure 23. Programs participated while visiting GRSM.

- The two most-used programs were going to a visitor center and viewing outdoor and historic sites, with over half of respondents reporting participating in each of them.

A follow-up question asked respondents how they would prefer to learn about the various educational aspects of GRSM if they were to visit in the future (Figure 24).

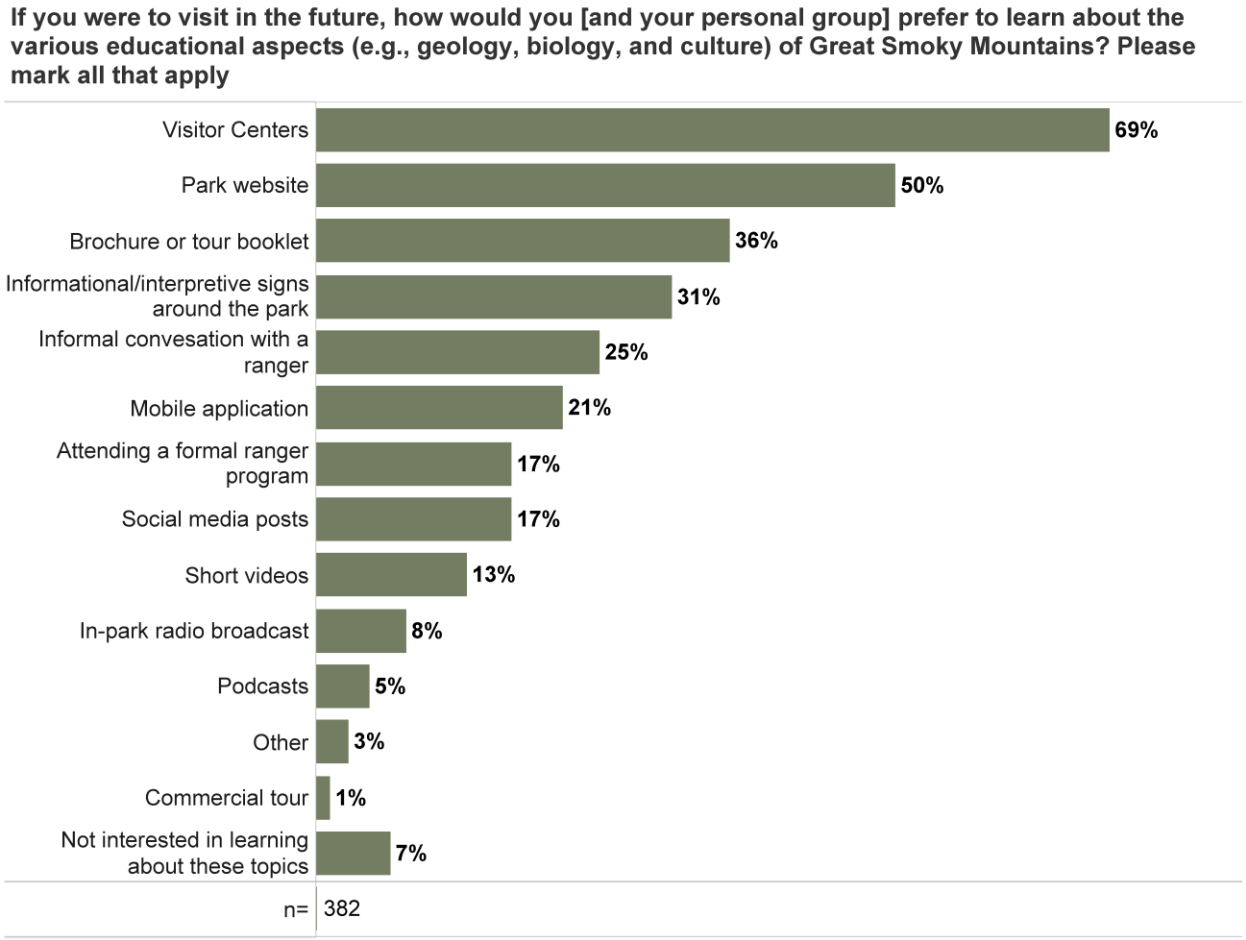


Figure 24. Future learning resources.

- Visitor centers (69%) represented the most preferred way to learn about various educational aspects, with park website (50%), and brochure or tour booklet (36%) following.
- Commercial tours (1%) and podcasts (5%) are the least preferred way to learn about educational aspects in GRSM.

Questions 17–18: Personal Electronic Devices

One survey question focused specifically on the use of personal electronic devices while in the park, while a second pertained more broadly to visitors' feelings about mobile devices. First, respondents were asked which personal electronic devices they used while in GRSM (Figure 25).

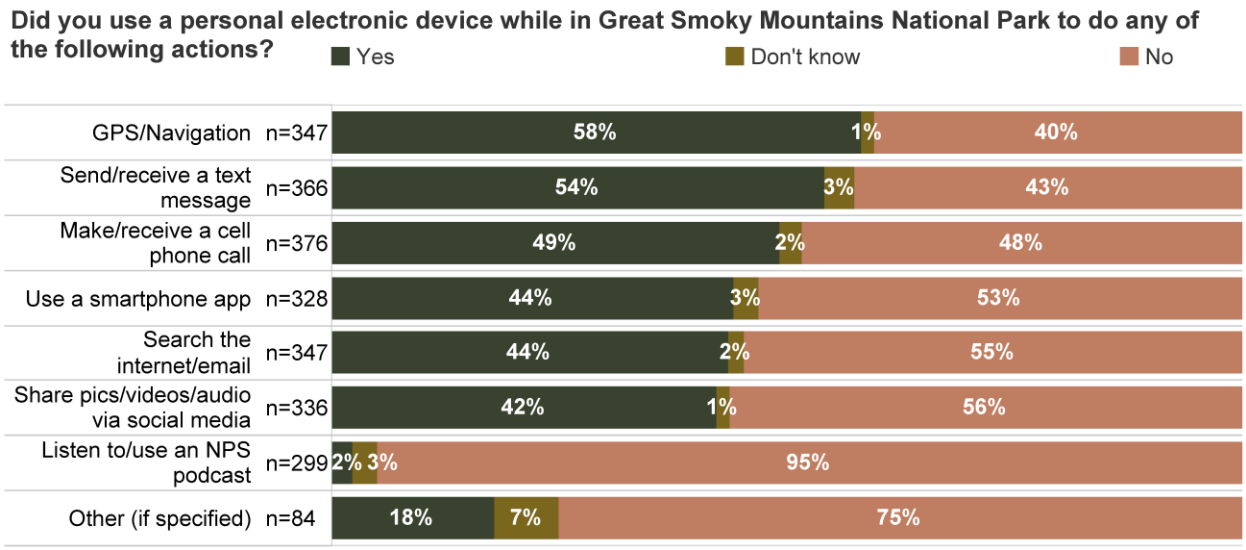


Figure 25. Use of personal electronic devices while visiting GRSM. Tabular data shown in this figure are presented in Appendix A, Table A-6.

- Over half of respondents (58%) reported using their device for GPS/navigation or sending/receiving a text message (54%).
- Conversely, only 2% of respondents listened to or used an NPS podcast.

Then, respondents were asked to indicate to what extent they agree or disagree with a variety of statements about mobile devices (Figure 26).

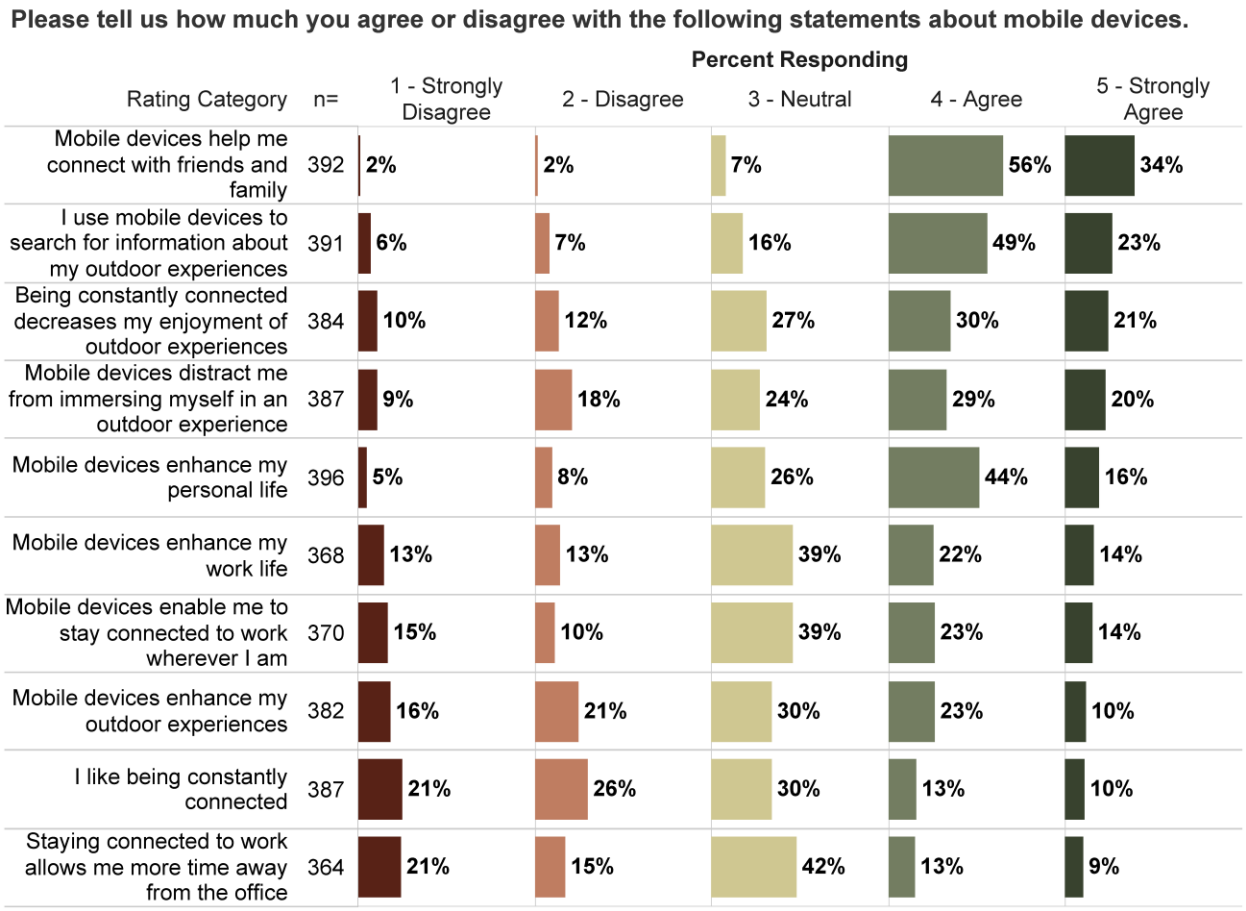


Figure 26. Agreement or disagreement with statements about mobile devices. Tabular data shown in this figure are presented in Appendix A, Table A-7.

- Respondents had strong agreement for the following statements (over 50% agree or strongly agree)
    - "Mobile devices help me connect with friends and family." (90% agree)
    - "I use mobile devices to search for information about outdoor experiences." (72% agree)
    - "Mobile devices enhance my personal life." (60% agree)
    - "Being constantly connected decreases my enjoyment of outdoor experiences." (51% agree)

- The least agreed upon statements (combined strongly disagree or disagree) are:
    - "I like being constantly connected." (47% disagree)
    - "Mobile devices enhance my outdoor experiences." (37% disagree)
    - "Staying connected to work allows me more time away from the office." (36% disagree).

Question 19: Physical Difficulties

Respondents were asked if anyone in their personal group had a physical condition that made it difficult to access or participate in park activities or services during their visit to GRSM. If such a condition was identified, respondents were asked to specify the type of difficulty (Figure 27).

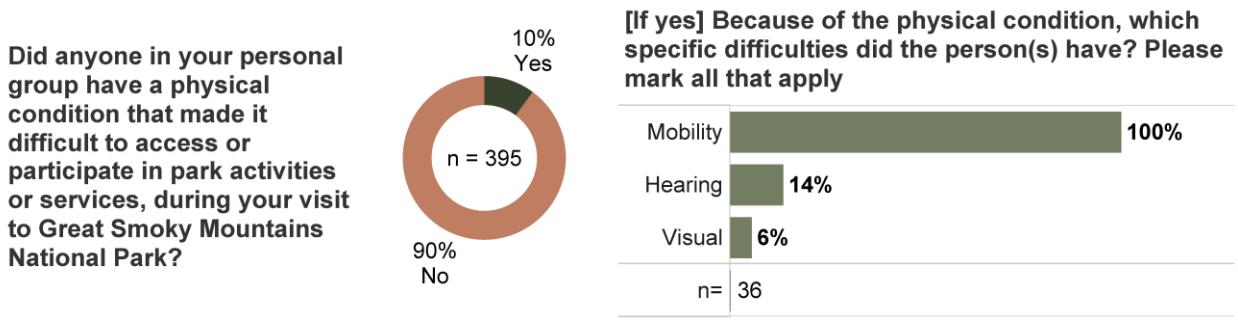


Figure 27. Physical difficulties while visiting GRSM.

- The majority of respondents (90%) reported that nobody in their personal group had a physical condition that made it difficult to access or participate in park activities or services during their visit to GRSM.
- Among the 10% of visitors who identified at least one difficulty, 100% reported mobility issues in their group, with small portions also reporting hearing and/or visual difficulties.

Questions 22-27: Visitor Experience

Respondents were asked if their visit to GRSM met their expectations (Figure 28).

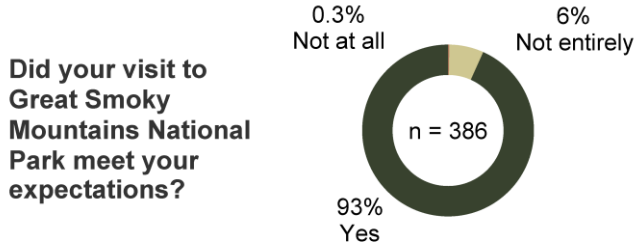


Figure 28. Meeting GRSM expectations.

- The majority of respondents (93%) reported that their visit to GRSM met their expectations, while 6% of respondents said it did not meet their expectations entirely, and under 0.5% indicated that it did not meet their expectations at all.
- In an open-ended follow-up question, respondents who indicated that GRSM did not meet their expectations were asked to elaborate.

Respondents were then given several statements about GRSM and asked to indicate their level of agreement or disagreement with each given statement (Figure 29).

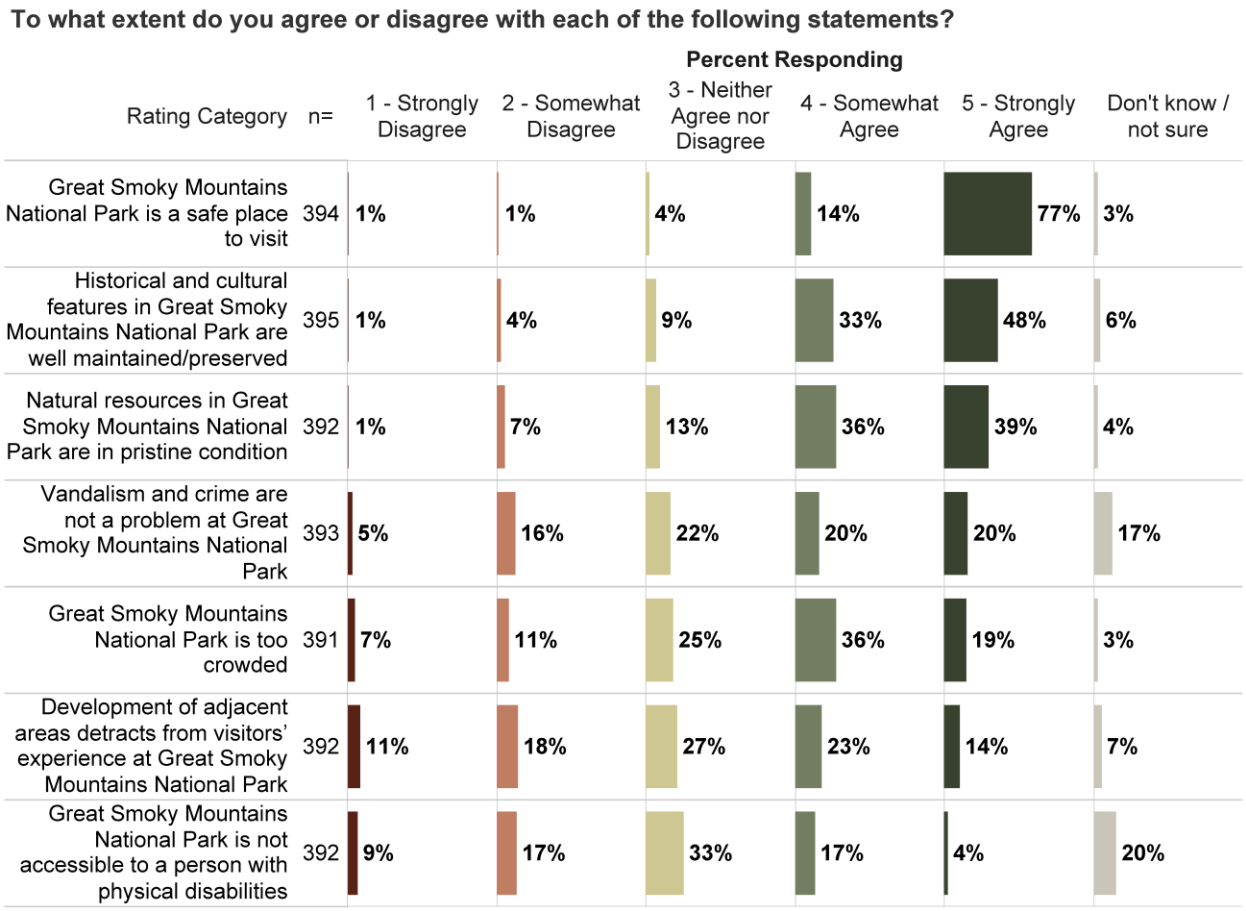


Figure 29. Rating GRSM experience. Tabular data shown in this figure are presented in Appendix A, Table A-8.

- From all the statements listed, "Great Smoky Mountains National Park is a safe place to visit" received the most consensus with a combined 91% of respondents saying they either strongly or somewhat agree with it. That was followed by "Historical and cultural features in Great Smoky Mountains National Park are well maintained/preserved" and "Natural resources in Great Smoky Mountains National Park are in pristine condition" (81% and 69% of respondents, respectively, strongly or somewhat agreed with these statements).
- Conversely, "Great Smoky Mountains is not accessible to a person with physical disabilities" and "Development of adjacent areas detracts from visitors' experience at Great Smoky Mountains National Park" received the least support.

Next, respondents were asked to rate the quality of park facilities, visitor services, and recreational opportunities in GRSM (Figure 30).

How would you rate the quality of the park facilities, visitor services, and recreational opportunities in Great Smoky Mountains National Park?

Rating Category	n=	1 - Very poor	2 - Poor	3 - Average	4 - Good	5 - Very good	Not used or not available
		Percent Responding					
Visitor Center	392		0.3%	5%	19%	63%	14%
Outdoor recreation	388	0.3%		4%	15%	57%	23%
Walkways, trails, and roads	395	0.3%	1%	7%	35%	50%	6%
Indoor exhibits	393			6%	23%	48%	23%
Park map or brochure	390		0.3%	5%	20%	47%	27%
Restrooms	392	2%	4%	12%	26%	45%	11%
Learning about nature, history, or culture	387	0.3%	0.3%	6%	22%	44%	27%
Assistance from park employees	392		1%	5%	17%	43%	34%
Campgrounds and/or picnic areas	389		1%	5%	17%	26%	52%
Commercial services in the park	389	1%	3%	10%	15%	19%	51%
Ranger programs	387	0.3%	1%	3%	8%	16%	72%
Other services (if specified)	110	2%		5%	5%	5%	82%

Figure 30. Rating the quality of GRSM facilities, visitor services, and recreational opportunities. Tabular data shown in this figure are presented in Appendix A, Table A-9.

- Over half of visitors (ranging from 50% to 63%) rated visitor centers, outdoor recreation, and walkways/trails/roads as very good.
- Very few respondents rated many of the facilities or services as poor or very poor. Restrooms was the only option that received over 5% of respondents rating them poorly.

After rating specific aspects, respondents were then asked to rate overall quality of the park facilities, visitor services, and recreation opportunities (Figure 31).

Overall, how would you rate the quality of the park facilities, visitor services, and recreational opportunities in Great Smoky Mountains National Park?

2 - Poor	1%
3 - Average	8%
4 - Good	36%
5 - Very good	55%
n=	384

Figure 31. Rating overall quality of GRSM facilities, visitor services, and recreational opportunities.

- In general, about half of respondents (55%) rated the quality of the park facilities, visitor services, and recreational opportunities in GRSM as very good, and another 36% rated them as good.
- Just about a tenth of respondents rated the overall quality as average or below.

Next, visitors were asked what reasons prevented them from visiting a site within GRSM that they had planned to visit, if applicable (Figure 32).

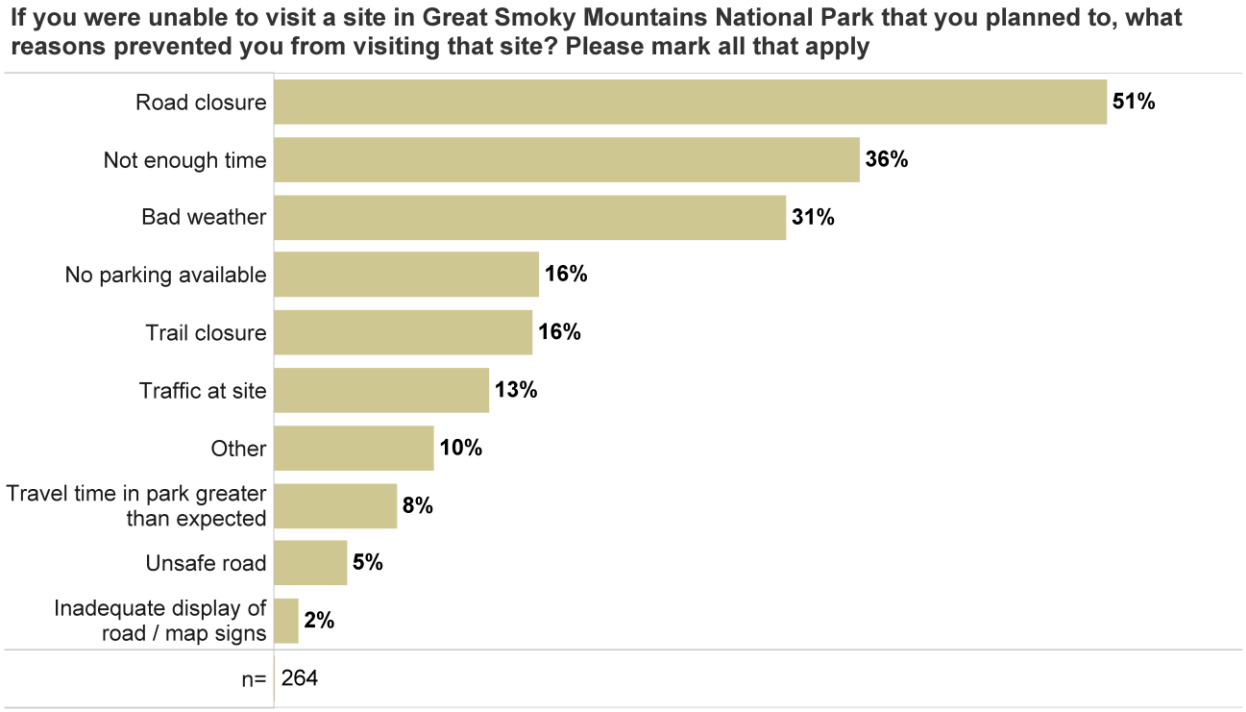


Figure 32. Reasons preventing visiting planned sites, if applicable.

- Just over half of respondents said that road closures (51%) were the reason they could not visit sites they wished to visit. Not enough time (36%) and bad weather (31%) were the next most common reason they couldn't visit all the sites they wanted.
- These results reflect the multi-day storm that occurred during the middle of the study period, which closed Newfound Gap Road for four days. Due to this storm, road closure reasoning in this question may be overstated.

Finally, respondents were asked about their likelihood to use a variety of sources to obtain information about conditions at GRSM (Figure 33).

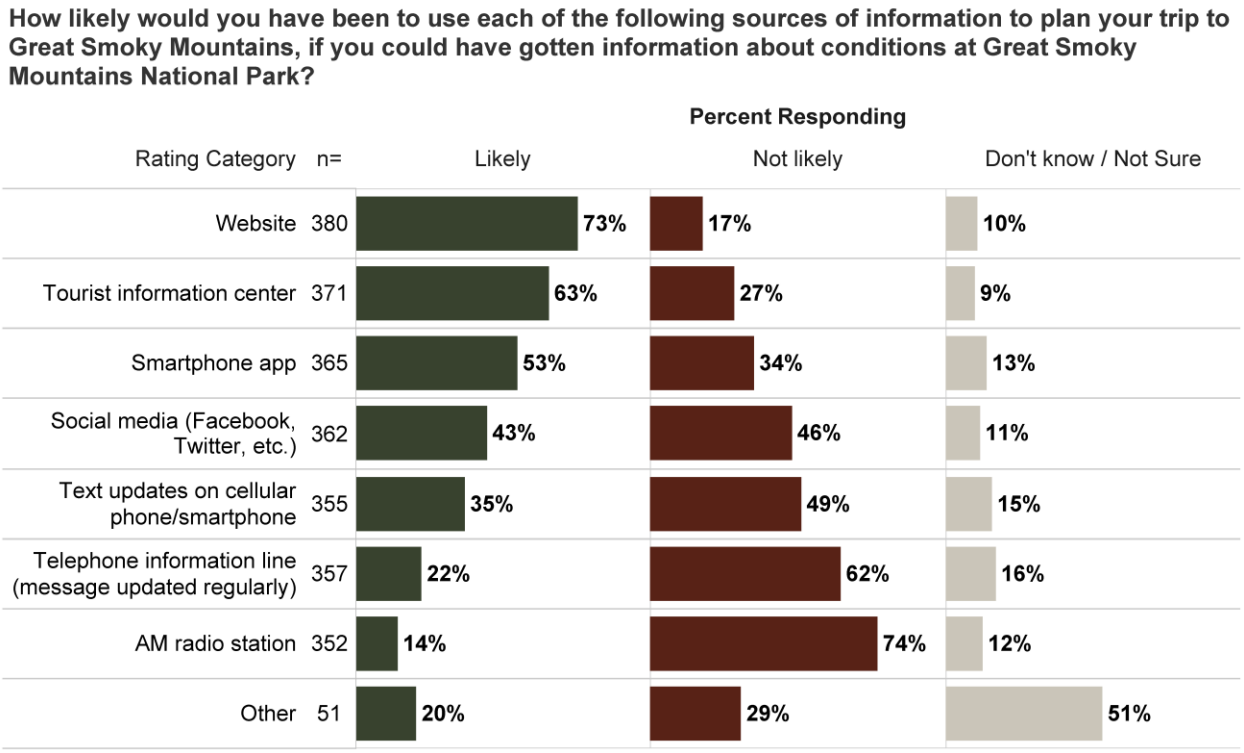


Figure 33. Likelihood to use sources of information to plan a trip to GRSM, if such sources gave information about conditions. Tabular data shown in this figure are presented in Appendix A, Table A-10.

- Almost three-fourths would use the website (73%) with an additional 63% saying they would use a tourist information center and 53% using a smartphone app.
- An AM radio station (14%) and telephone information line (22%) were the least likely to be used by visitors.

Questions 28-36: Background/Demographics

In the final section of the follow-up survey, respondents were asked various questions about their personal and household demographics. Figure 34 depicts descriptive statistics for respondent gender, age, and education.

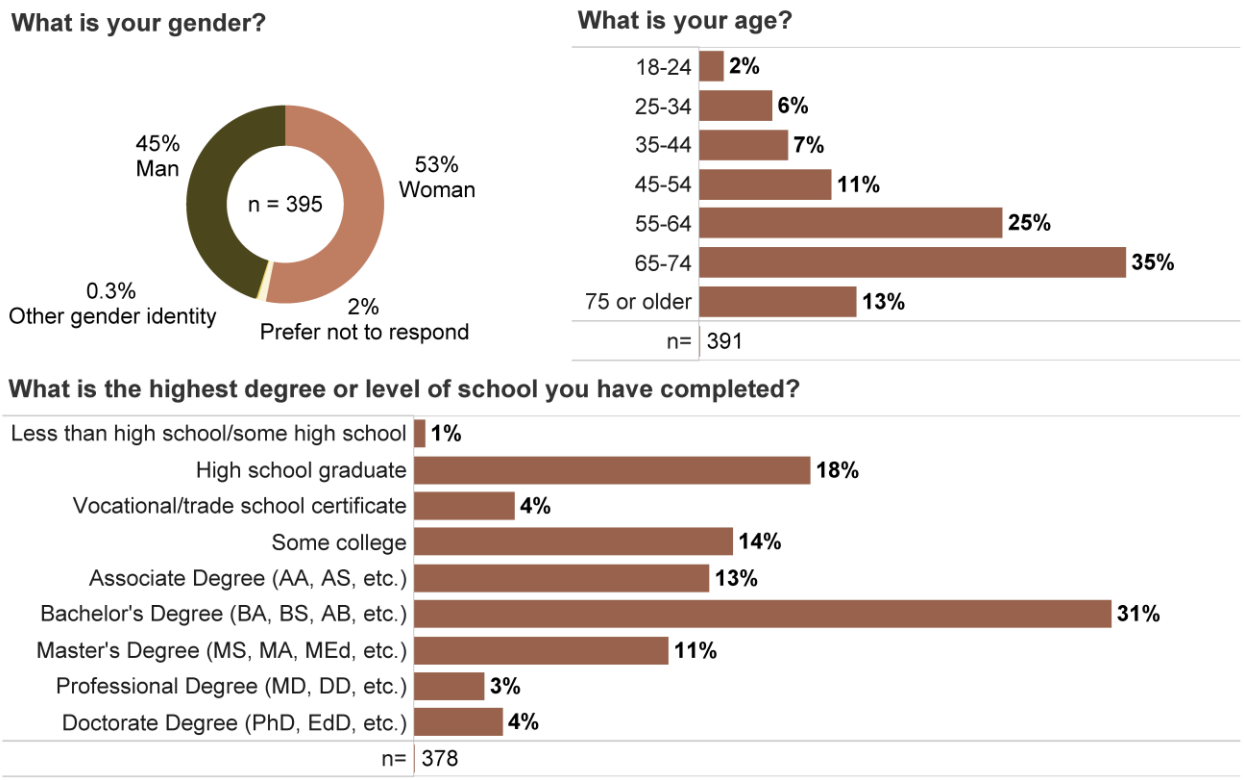


Figure 34. Respondent demographics: gender, age, and level of education.

- Follow-up survey respondents were slightly more likely to be women than men, though the sample was relatively balanced (53% vs 45%). Another 0.3% had another gender identity, while 2% preferred not to disclose their gender identity.
- The most common age categories were 65-74 (35%), 55-64 (25%), and 45-54 (11%). The least represented age group were 18-24 (only 2% of the participants surveyed).
- Most survey respondents reported obtaining higher education, with a combined 75% having some college degree, and a plurality (31%) holding a bachelor's degree.

Respondents were also asked to identify their race(s) and if they were of Hispanic, Latino or Spanish Origin (Figure 35).

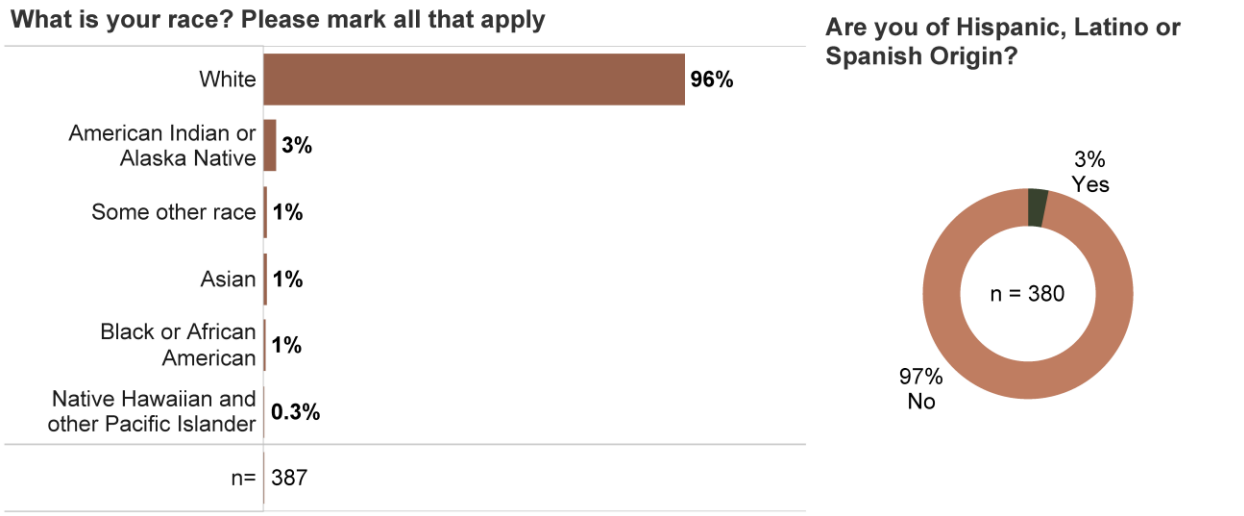


Figure 35. Respondent demographics: race and ethnicity.

- The majority of respondents (96%) were White, while 3% were American Indian or Alaska Native.
- Most respondents (97%) were not of Hispanic, Latino or Spanish origin.

At a household level, respondents were asked to report annual income and number of contributors, as well as how many people (adults and children) live in their household (Figure 36).

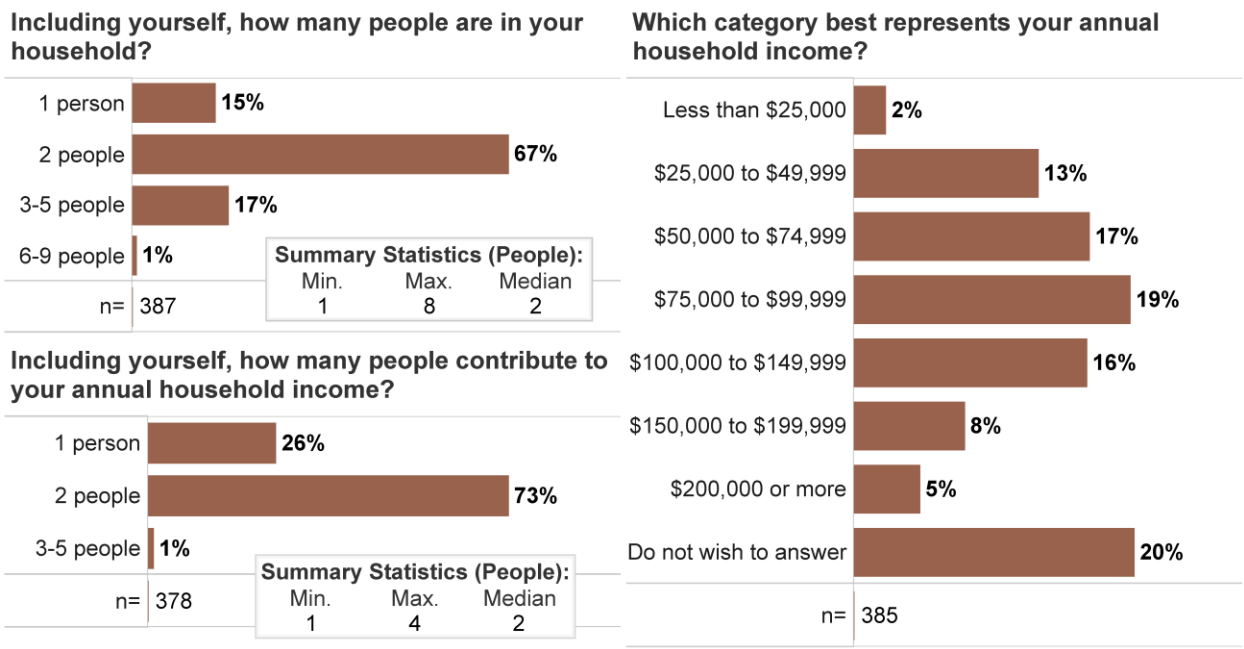


Figure 36. Household demographics: annual household income and household size. Tabular data shown in this figure are presented in Appendix A, Table A-11.

- Two-thirds of respondents (67%) had two people in their household, followed by 3-5 people (another 17%).
- In addition to obtaining higher education, GRSM respondents also reported relatively high income levels. 29% of respondents reported that their annual household income was over $100k.
- Most respondents (73%) came from a dual-income household.

Finally, respondents were asked about their language preference (Figure 37).

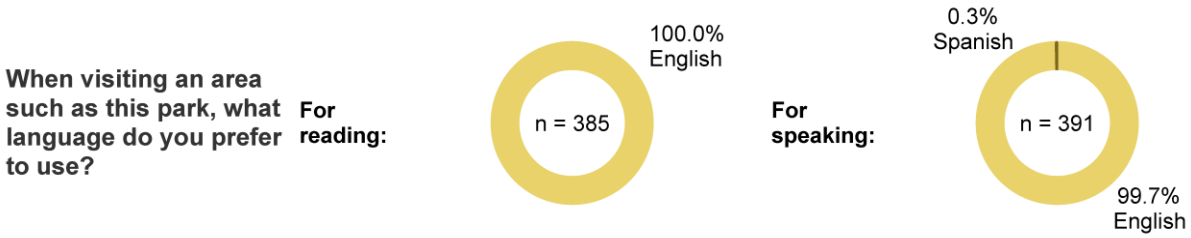


Figure 37. Respondent's language preference.

- All respondents said they would prefer to use English as their language for reading in the park.
- Only 0.3% of respondents preferred Spanish for either reading and/or speaking.

References

National Park Service (NPS). 2023a. 2023 socioeconomic monitoring of Great Smoky Mountains National Park – Winter Season: Visitor intercept survey. https://irma.nps.gov/DataStore/Reference/Profile/2302367

National Park Service (NPS). 2023b. 2023 socioeconomic monitoring of Great Smoky Mountains National Park – Winter Season: Visitor post-trip survey. https://irma.nps.gov/DataStore/Reference/Profile/2302323

Appendix A: Accessible Tables

This appendix contains accessible tables with data from figures found in the body of the report. Table captions include hyperlinks to the corresponding figures.

Table A-1. Data from Figure 7. Number of nights spent in the local area around GRSM, by accommodation type.

Accommodation Type	n	Min.	Max.	Median
Camping in GRSM	16	1	14	2
Camping outside GRSM	16	1	60	3
Lodging in GRSM	6	3	14	6
Lodging outside GRSM	1099	1	90	3
Unpaid accommodations	60	1	60	4

Table A-2. Data from Figure 8. Number of adults and children in respondent's personal group while visiting GRSM.

Age Category	n	Min.	Max.	Median
Adults	1729	1	20	2
Children	1729	0	12	0

Table A-3. Data from Figure 16. Number of people in respondent's vehicle when entering GRSM.

Question	n	Min.	Max.	Median
[If entered by car, truck, or SUV] Including yourself, how many people were traveling in your vehicle when you entered GRSM?	1717	1	22	2
[If entered by RV/motorhome] Including yourself, how many people were traveling in your RV when you entered GRSM?	1	2	2	2

Table A-4. Data from Figure 17. Previous visits to GRSM.

Question	n	Min.	Max.	Median
[If not first-time visitor] Including this visit, how many visits have you made to GRSM over the past 12 months?	1369	1	1001	3
[If not first-time visitor] Including this visit, how many visits have you made to GRSM over the past five years?	1369	1	5001	10

Table A-5. Data from Figure 22. Reasons or motivations to visit GRSM.

Rating Category	n
To visit a National Park Service site	364
To experience solitude	364
To hear the sounds of nature/quiet	366
To learn more about nature	358
To learn more about American history and culture	359
To spend time with family/friends	364
To get physical exercise	362
To engage in outdoor recreation	357
To view wildlife	380
To view natural scenery	380
To relax	371
To view dark night sky/stars	333
Other (if specified)	50

Table A-6. Data from Figure 25. Use of personal electronic devices while visiting GRSM.

Device Use	n
Make/receive a cell phone call	376
Send/receive a text message	366
Search the internet/email	347
GPS/Navigation	347
Share pics/videos/audio via social media	336
Use a smartphone app	299
Listen to/use an NPS podcast	84
Other (if specified)	376

Table A-7. Data from Figure 26. Statements about mobile devices.

Device Use	n
Mobile devices enhance my personal life	396
Mobile devices help me connect with friends and family	392
Mobile devices enhance my work life	368
Mobile devices enable me to stay connected to work wherever I am	370
Staying connected to work allows me more time away from the office	364
Mobile devices enhance my outdoor experiences	382
I use mobile devices to search for information about my outdoor experiences	391
I like being constantly connected	387
Being constantly connected decreases my enjoyment of outdoor experiences	384
Mobile devices distract me from immersing myself in an outdoor experience	387

Table A-8. Data from Figure 29. Rating GRSM experience.

Rating Category	n
GRSM is a safe place to visit	394
GRSM is too crowded	391
Natural resources in GRSM are in pristine condition	392
Vandalism and crime are not a problem at GRSM	393
GRSM is not accessible to a person with physical disabilities	392
Historical and cultural features in GRSM are well maintained/preserved	395
Development of adjacent areas detracts from visitors' experience at GRSM	392

Table A-9. Data from Figure 30. Rating the quality of GRSM facilities, visitor services, and recreational opportunities.

Rating Category	n
Visitor Center	392
Indoor exhibits	393
Restrooms	392
Walkways, trails, and roads	395
Campgrounds and/or picnic areas	389
Assistance from park employees	392
Park map or brochure	390
Ranger programs	387
Commercial services in the park (food, lodging, gifts, rental, etc.)	389
Other services (if specified)	110
Learning about nature, history, or culture	387
Outdoor recreation (sightseeing, camping, bicycling, boating, hiking, etc.)	388

Table A-10. Data from Figure 33. Likelihood to use sources to obtain information about conditions at GRSM.

Device Use	n
Website	380
Smartphone app	365
Social media (Facebook, Twitter, etc.)	362
Text updates on cellular phone/smartphone	355
AM radio station	352
Telephone information line (message updated regularly)	357
Tourist information center	371
Other	51

Table A-11. Data from Figure 36. Household demographics: annual household income and household size.

Question	n	Min.	Max.	Median
Including yourself, how many people are in your household?	387	1	8	2
Including yourself, how many people contribute to your annual household income?	378	1	4	2

January 2023 Schedule

Day	Date	Shift Time	Gatlinburg entrance			Townsend Entrance		Cherokee Orchard Turnaround		Cherokee Entrance		Deep Creek		Cosby Picnic Area	
Thursday	1/5	9:00-4:00	Surveyor 1	Surveyor 2	Surveyor 3					Surveyor 4	Surveyor 5				
Friday	1/6	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3				Surveyor 4	Surveyor 5				
Saturday	1/7	9:00-4:00	Surveyor 1	Surveyor 2				Surveyor 3		Surveyor 4	Surveyor 5				
Sunday	1/8	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3						Surveyor 4	Surveyor 5		
Monday	1/9	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3				Surveyor 4	Surveyor 5				
Tuesday	1/10	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3				Surveyor 4	Surveyor 5				
Wednesday	1/11	OFF	OFF												
Thursday	1/12	OFF	OFF												
Friday	1/13	9:00-4:00	OFF DUE TO WEATHER												
Saturday	1/14	9:00-4:00	OFF DUE TO WEATHER												
Sunday	1/15	9:00-4:00	SURVEYORS AT VC (Sugarlands)							SURVEYORS AT VC (Oconaluftee)					
Monday	1/16	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3				Surveyor 4	Surveyor 5				
Tuesday	1/17	9:00-4:00	SURVEYORS AT VC (Sugarlands)							SURVEYORS AT VC (Oconaluftee)					
Wednesday	1/18	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3						Surveyor 4	Surveyor 5		
Thursday	1/19	9:00-4:00	SURVEYORS AT VC (Sugarlands)							SURVEYORS AT VC (Oconaluftee)					
Friday	1/20	9:00-4:00	Surveyor 1	Surveyor 2		Surveyor 3				Surveyor 4	Surveyor 5				

Figure A-1. Survey Schedule – Winter 2023

National Park Service
U.S. Department of the Interior

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