A Survey of Visitor Safety in the National Park System

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1.0 Introduction

This report describes the methods and results of a survey of visitor safety that was conducted in 30 National Park units. The survey was conducted in two parts. Surveys were distributed at seven of the parks between January 27 and March 25, 2001 (the "winter survey"). Additional surveys were distributed at all 30 parks (including the seven surveyed in winter) between May 23 and August 15, 2001 (the "summer survey"). The data were analyzed between September and November 2001.

The remainder of this section describes the methods of data collection and analysis that were used. Sections 2-8 present brief summaries of the winter survey results for the seven selected parks. Sections 9-38 present summaries of the summer survey results for 30 parks. Section 39 describes the results of the analysis of the combined data from all the parks. Section 40 provides conclusions from our analysis.

The objective of Task 5 of the project was to gather information on visitor perceptions of risk, visitor perceptions of safety messages and other safety related management activities, and visitor risk behavior. To gather this information, the project team developed a concise, readable, but comprehensive questionnaire for distribution at each of 30 selected NPS units. The task involved three subsidiary tasks.

1.1 Survey Instrument Development

The research and other literature was reviewed to identify the scope, content, and methods of implementation of visitor surveys conducted in parks and other areas, such as:

- the NPS Visitor Survey Card (VSC), which was distributed at most of the NPS park units in 1998 and 2000 to evaluate the performance and quality of services in response to GPRA;
- the NPS Visitor Services Project (VSP), which has conducted in-depth visitor studies regarding visitor characteristics, needs, and opinions in over 80 units of the NPS since 1988;
- surveys in other government agencies (e.g., the U.S. Forest Service, Fish and Wildlife Service, and Bureau of Land Management); and
- *ad hoc* surveys relating to parks and wilderness areas, regarding safety and other related issues.

The project team solicited input from the NPS Social Science Program and other program and park managers regarding the scope, content, and implementation of the survey. The winter survey instrument was 14 pages in length, and included 31 multi-part questions. The summer survey was 12 pages in length, and included 30 multi-part questions. Both the winter and summer instruments included a cover, a letter of introduction from Dick Powell bearing the official imprimatur of the National Park Service. The decision was made to drop one question on secondary activities from the winter survey because few respondents answered it. Dropping one multi-part question reduced the length of the questionnaire by two pages. The project team believed this would enhance response rates. The survey was designed so that it could be folded in half and sealed shut, showing the return address with pre-paid postage.

The survey was designed to address a variety of visitor safety topics, including:

- background information about the individual respondent and the nature of his/her activities in the park;
- visitor perceptions of the risks associated with various activities (e.g., hiking) and conditions (e.g., facilities and infrastructure)
- safety information and advice;
- responses to perceived risks and risk information and preparedness for chosen activities ;
- the level of support for or opposition to various risk management activities (e.g., increased signage regarding risks, restrictions on activities);
- expectations and responsibilities of individuals engaged in different activities (i.e., to themselves, other park users, and park personnel).

The survey instrument and supporting materials (see Appendices 3-5) were developed by the project personnel in collaboration with a consultant, Dave Lime, who has considerable experience conducting similar surveys for the National Park Service. Drafts of the survey instrument were reviewed by NPS managers, several faculty and graduate students at Clark University and the University of Minnesota, and pre-tested with a sample of visitors to Lowell National Historic Park. The survey instrument and supporting materials were revised following each of these reviews and the pre-test.

A package of materials was submitted on December 8, 2000 for OMB expedited approval. OMB approval (#1024-0224) and NPS approval (NPS01-002) were received on December 14, 2000. The approval numbers and expiration date (03/31/02) were printed on all the surveys and individual information forms used to solicit public input.

1.2 Survey Implementation

The goal of the project was to distribute approximately 400 questionnaires at each of the 30 NPS units in the summer 2001, and an additional 250 questionnaires at 7 of the 30 park units during the winter (2000/2001)[1]. The surveys were distributed at strategic locations where significant numbers of visitors were expected to congregate, such as visitor centers, parking lots, and popular trailheads. These locations were selected in consultation with park staff at each of the park units. To ensure that survey captures the likely differences between weekday and weekend visitors to the park units, questionnaires were distributed for approximately three hours in the morning and three hours in the afternoon on each of 4 weekdays and 2 weekend days during the summer and 2 weekdays and 2 weekend days in the winter. The surveys were administered by four students, who were trained in the survey protocols by senior project personnel.

The same basic approach was used for the distribution of questionnaires in the summer and the winter surveys. Every nth visitor group was greeted by one of our trained students, briefly introduced to the purpose of the study, and asked if they would be

[1] The seven parks selected for the winter survey included: Everglades NP, Lake Mead NRA, Mt. Rainier NP, Rocky Mountain NP, Saguaro NP, Statue of Liberty NM, Yosemite NP.

willing to participate (see Appendix 3 for a copy of the *Script for Initial Visitor Contact*). The number of visitor groups that refused to participate was recorded and, where possible, interviewers noted any reasons given for refusing to participate, such as language difficulties and lack of time.

Interviewers conducted a "front-end" interview with those visitors that agreed to participate, using an *Individual Information Form* (see Appendix 4). This interview took less than 2 minutes per group and was designed to help increase response rates and to serve as a check on response bias.

Interviewers recorded the following information on the *Individual Information Form* (Appendix 4)*:*

- Date and time of interview.
- Interviewer(s) initials.
- Questionnaire number.
- Location of survey distribution (e.g., visitor center, parking lot by name, trailhead, etc.).

One participating adult for each group was asked to complete the remainder of the *Individual Information Form* onsite and return it to the interviewer. This form asks the individual for the following information:

- Respondent name and address
- Group type (such as friends or family, and whether or not they are part of tour group).
- Group size (including size of tour group, if applicable).
- Whether or not this is the first visit to this park.
- Intended duration of visit.
- Gender of respondent.
- Age of respondent.

Study participants were encouraged to complete the survey onsite at the completion of their visit and return the completed questionnaire to the interviewer, if possible. Participants were also made aware that they could complete the questionnaire later and mail it back (the survey instrument was designed to be mailed back, so the return address was preprinted and postage was prepaid).

Approximately two weeks following the survey a postcard was mailed to thank all participants and to remind non-respondents to return the completed questionnaire (see Appendix 5). Four weeks after the survey date a reminder letter with a stamped, addressed replacement questionnaire was sent to participants who had failed to respond (see Appendix 5). The follow-up procedure required coding the questionnaires with a number and four-letter park code so that returns could be matched to respondent names and addresses. To ensure confidentiality, separate files for questionnaire responses and respondents' names and addresses were kept in secure locations. No names or identifying information appear on the questionnaires or in any of the project reports or

publications. The address file will be destroyed on completion of the project and all project personnel were made aware of these protocols and the need for confidentiality at all times.

International participants presented a particular problem for the survey because of the high cost of follow-up and replacement mailings, and because in many parks the number of international visitors is quite small. Encouraging one or two additional international respondents at parks with only 5 or 6 international survey participants would add little of statistical value to the analysis. Thus, the marginal costs may exceed the benefits. Alternatively, some parks have significant numbers of international visitors. To try to balance this problem, the project team developed a set of protocols for the conduct of international mailings. In those parks where the proportion of international participants exceeded 25% (as indicated by the *Individual Information Forms*), the project team would carefully monitor the U.S. response rate after the follow-up mailings with the international response rate before a follow-up mailing. If the international response rate is lower by 15 percent or more than the U.S. response rate for a given park, the team would send replacement questionnaires to all of that park's international non-respondents to close the gap as much as possible. In the end, the only park that exceeded 25% international visitors was the Statue of Liberty during the winter survey, and the response rates differed by less than 15%, so no international mailings were conducted.

1.3 Analysis

1.3.1 Response rates

This survey method closely follows the approach used in recent VSP surveys (e.g., Visitor Services Project 1997). These surveys use a modified version of the traditional mail-back questionnaire to enhance response rates. The three modifications include (1) a carefully crafted initial interaction sequence to enhance the saliency and memorability of receiving the questionnaire; (2) a postcard reminder one week later; and (3) a letter and replacement questionnaire four weeks after the initial contact. As a result of these modifications, the VSP was able to achieve response rates of 70-80%. By using similar methods, we fully expected response rates to exceed 70%.

In the winter survey, the survey team made initial contact with 1,740 visitors in total, for an average of 249 visitors/park (Table 1.1). Ninety-six percent of initial contacts agreed to participate, and 1,662 surveys were distributed. Nine hundred ninety-two participants returned completed surveys for an overall response rate of 60.1%. Response rates ranged from a high of 68.1% at Everglades National Park to a low of 50.8% at the Statue of Liberty/Ellis Island. The type and numbers of refusals by park are summarized in Table 1.2. Eighty-six percent of the refusals (67/78) were at the Statue of Liberty. Many initial contacts refused to participate because they believed their language skills were insufficient to allow them to complete the survey adequately, and this probably reflects the relatively large number of foreign visitors to this park.

Table 1.1 Winter Survey Response Rates

Park	Survey Dates	Initial Contacts	Refusals	Acceptance Rate (%)	Participants	Completed Surveys	Response Rate (%)
EVER	1/27-1/30/01	251	0	100.0%	251	171	68.1%
LAME	3/17-3/20/01	255	0	100.0%	255	143	56.1%
MORA	2/10-2/13/01	140	0	100.0%	140	94	67.1%
ROMO	2/22-2/24/01	253	3	98.8%	250	142	56.8%
SAGU	3/17-3/20/01	261	4	98.5%	257	155	60.3%
STLI	1/20-1/23; 2/28/01*	315	67	78.7%	248	126	50.8%
YOSE	2/16-2/18/01	265	4	98.5%	261	161	61.7%
TOTAL		1740	78		1662	992	
AVERAGE		248.57	11.14	96.36%	237.43	141.71	60.13%

* snowstorm closed park and interrupted survey distribution

Table 1.2 Winter Survey Refusals

Park	Reasons for Refusal			Total Refusals
	Lack of Time	Language Difficulties	Other Reasons	
EVER	0	0	0	0
LAME	0	0	0	0
MORA	0	0	0	0
ROMO	0	1	2	3
SAGU	2	0	2	4
STLI	8	37	22	67
YOSE	1	0	3	4
TOTAL	11	38	29	78
AVERAGE	1.67	6.33	4.33	12.33

Table 1.3 shows the composition of the sample of participants and respondents in terms of domestic versus foreign residence. As noted above, the survey team kept track of the composition of the participants to determine if and when international follow up mailings

were required according to the agreed criteria. The Everglades had significant numbers of international visitors (11%) but did not exceed the threshold criteria of 25%. The Statue of Liberty did exceed the 25% threshold, but the difference in response rates between domestic and international participants fell just short of the 15% trigger. As a consequence, there were no follow-up mailings to international participants.

Table 1.3 Composition of Winter Participants and Respondents

Park	Participants (% sample)			Respondents (% response rate)			Overall Response
	Domestic	International	Unknown	Domestic	International	Unknown	
EVER	211 (84.1)	29 (11.6)	11 (4.4)	161 (76.3)	10 (34.5)	0 (0.0)	171 (68.1)
LAME	243 (95.3)	10 (3.9)	2 (0.8)	138 (56.8)	4 (40.0)	1 (50.0)	143 (56.1)
MORA	136 (97.1)	0 (0.0)	4 (2.9)	94 (69/1)	0 (0)	0 (0.0)	94 (67.1)
ROMO	240 (96.0)	10 (4.0)	0 (0.0)	137 (57.1)	5 (50.0)	0 (0.0)	142 (56.8)
SAGU	238 (92.6)	18 (7.0)	1 (0.4)	149 (62.6)	6 (33.3)	0 (0.0)	155 (60.3)
STLI	150 (60.5)	98 (39.5)	0 (0.0)	85 (56.7)	41 (41.8)	0 (0.0)	126 (50.8)
YOSE	240 (91.2)	14 (5.4)	7 (2.7)	159 (60.9)	2 (14.3)	0 (0.0)	161 (61.7)

In the summer survey, the survey team made initial contact with 10,726 visitors in total, for an average of 358 visitors/park (Table 1.4). Eighty-eight percent of initial contacts agreed to participate, and 9,275 surveys were distributed. Five thousand three hundred twenty-five participants returned completed surveys for an overall response rate of 57.44%. Response rates ranged from a high of 73.7% at Natchez Trace Parkway to a low of 32.2% at the Delaware Water Gap National Recreation Area. The type and numbers of refusals by park are summarized in Table 1.5. The number of refusals varied substantially from park to park, but average 48/park overall. Of the 1,454 refusals, 654 (45%) were for lack of time, 254 (17%) were because visitors believed their language skills were inadequate, and 556 (38%) were for other reasons, such as not wishing to give out personal information.

Table 1.4 Summer Survey Response Rates

Park	Survey Dates	Initial Contacts	Refusals	Acceptance Rate (%)	Participants	Completed Surveys	Response Rate (%)
ASIS	7/12-7/17/01	272	0	100.0	272	127	46.7
BADL	7/12-7/17/01	456	56	87.7	400	257	64.3
BIBE	6/7-6/12/01	116	15	87.8	101	68	67.3
BLRI	6/28-7/3/01	318	0	100.0	318	211	65.9
CACA	6/14-6/19/01	405	12	97.0	393	221	56.2
CAHA	7/5-7/10/01	411	45	89.1	366	183	50.0
CANY	6/21-6/26/01	469	69	85.3	400	273	68.3
CURE	6/7-6/12/01	204	0	100.0	204	129	63.2
CUVA	7/12-7/17/01	432	32	92.6	400	289	72.3
DENA	7/13-7/18/01	327	85	74.0	242	149	61.6
DEWA	8/2-8/7/01	240	66	73.8	177	57	32.2
EVER	6/14-6/19/01	271	22	91.9	249	137	55.0
FOSU	6/7-6/12/01	433	35	91.9	398	184	46.2
GETT	6/28-7/3/01	430	30	93.0	400	261	65.3
GRTE	8/2-8/7/01	501	101	79.8	400	216	54.0
LAME	6/28-7/3/01	296	137	53.7	159	71	44.7
LIBI	7/26-7/31/01	529	129	75.6	400	259	64.8
LOWE	5/23-5/28/01	122	114	88.5	108	72	66.7
MEVE	6/14-6/19/01	537	137	74.5	400	290	72.5
MORA	8/2-8/7/01	432	32	92.6	400	232	58.0
MORU	7/5-7/10/01	481	81	83.2	400	205	51.3
NATR	5/31-6/5/01	141	0	100	141	104	73.7
OLYM	8/9-8/14/01	427	27	93.7	400	213	53.3
OZSC	8/2-8/7/01	204	5	97.5	199	67	33.7
PAIS	5/31-6/5/01	386	20	94.8	366	160	43.7
PORE	7/26-7/31/01	305	49	83.9	256	143	55.9
ROMO	5/31-6/5/01	464	64	95.4	400	278	70.3
SAGU	6/21-6/26/01	133	7	94.7	126	90	71.4
STLI	7/25-7/30/01	528	128	75.8	400	196	49.0
YOSE	7/12-7/17/01	456	56	87.8	400	183	45.8
TOTAL		10726	1554		9275	5325	
AVERAGE		357.53	51.8	87.85	309.17	177.5	57.44

Table 1.5 Summer Survey Refusals

Park	Reasons for Refusal			Total Refusals
	Lack of Time	Language Difficulties	Other Reasons	
ASIS	0	0	0	0
BADL	16	2	38	56
BIBE	5	8	2	15
BLRI	0	0	0	0
CACA	3	5	4	12
CAHA	31	6	8	45
CANY	20	19	30	69
CURE	0	0	0	0
CUVA	19	1	12	32
DENA	23	12	50	85
DEWA	35	6	25	66
EVER	6	14	2	22
FOSU	29	1	5	35
GETT	25	3	2	30
GRTE	31	12	58	101
LAME	50	25	62	137
LIBI	49	3	77	129
LOWE	5	1	8	14
MEVE	94	6	37	137
MORA	13	10	9	32
MORU	38	6	37	81
NATR	0	0	0	0
OLYM	10	9	8	27
OZSC	3	0	2	5
PAIS	13	0	7	20
PORE	23	17	19	49
ROMO	30	8	26	64
SAGU	1	5	1	7
STLI	61	56	11	128
YOSE	21	19	16	56
TOTAL	654	254	556	1454
AVERAGE	21.83	8.10	18.62	48.47

Table 1.6 shows the composition of the sample of participants and respondents in terms of domestic versus foreign residence. As noted above, the survey team kept track of the composition of the participants to determine if and when international follow up mailings were required according to the agreed criteria. While Canyonlands (20.5%) and the Statue of Liberty (19%) had substantial numbers of international visitors, no park reached the threshold of 25%. Consequently, there were no follow-up mailings to international participants.

Unfortunately, while our response rates would be considered admirable by many social scientists, they did not meet our expectations. Response rates for the winter survey ranged from 50.8% to 68.1%, with an average of 60.1%, and for the summer survey they ranged from 32.2% to 73.7%, with an average of 57.4%. The lower than expected response rates may be related to the nature of the survey and its length. They may also reflect that fact that we were using student interviewers rather than uniformed park personnel to distribute the surveys. Since we were using standardized methods, the variation in response rates between parks may reflect differences in the nature of the parks, the dominant activities therein, and the types of visitors. Several of the parks with relatively low response rates were recreation areas or coastal parks, and it may be that visitors to these parks are less amenable to completing surveys. Another factor that may influence both the lower than expected response rates and the variation among parks is timing. Many participants took a long time to return surveys, and substantial numbers of surveys were continuing to arrive after the analysis was complete. This may explain the low response rates at the Delaware Water Gap and the Ozark Scenic River, since these parks were two of the last parks to be surveyed. Finally, there was a notable drop in the flow of completed surveys in the weeks following the September 11 terrorist attack in New York and the scare about anthrax in the mail may also have affected return rates.

1.3.2 Non-response bias

Information collected during the “front-end” interview was used to check for non-response bias. Following the Visitor Service Project example, the project team compared respondents and non-respondents on the key variables of age and group size. For each park in both the winter and summer surveys, t-tests were used to compare the respondent and non-respondents in terms of age and group size. Tables 1.7 and 1.8 summarize the results of these analyses for the winter and summer surveys, and indicate which park data required weighting.

Table 1.6 Composition of Summer Participants and Respondents

Park	Participants (% sample)			Respondents (% response rate)			Overall Response
	Domestic	International	Unknown	Domestic	International	Unknown	
ASIS	263 (96.7)	2 (0.7)	7 (2.6)	125 (47.5)	0 (0.0)	2 (28.6)	46.7
BADL	367 (91.8)	19 (4.8)	14 (3.5)	243 (66.23)	5 (26.3)	9 (64.3)	64.3
BIBE	98 (97.0)	3 (3.0)	0 (0.0)	65 (66.3)	3 (100.0	0 (0.0)	67.3
BLRI	309 (96.6)	4 (1.3)	7 (2.2)	205 (66.3)	1 (25.0)	5 (71.4)	65.9
CACA	386 (98.2)	6 (1.5)	1 (0.3)	217 (56.2)	3 (50.0)	1 (100)	56.2
CAHA	360 (98.4)	5 (1.4)	1 (0.3)	179 (49.7)	4 (80.0)	0 (0.0)	50.0
CANY	314 (78.5)	82 (20.5)	4 (1.0)	219 (69.8)	52 (63.4)	2 (50.0)	68.3
CURE	204 (100.0)	0 (0.0)	0 (0.0)	129 (63.2)	0 (0.0)	0 (0.0)	63.2
CUVA	393 (98.3)	1 (0.3)	6 (1.5)	288 (73.3)	1 (100.0)	0 (0.0)	73.3
DENA	230 (95.0)	9 (3.7)	3 (1.2)	144 (62.6)	5 (55.6)	0 (0.0)	61.6
DEWA	171 (96.6)	6 (3.4)	0 (0.0)	53 (31.0)	4 (66.7)	0 (0.0)	32.2
EVER	205 (82.3)	42 (16.9)	2 (0.8)	120 (58.6)	17 (40.5)	0 (0.0)	55.0
FOSU	387 (97.2)	11 (2.8)	0 (0.0)	180 (46.5)	4 (36.4)	0 (0.0)	46.2
GETT	386 (96.5)	10 (2.5)	4 (1.0)	258 (66.84)	3 (30.0)	0 (0.0)	65.3
GRTE	365 (91.3)	33 (8.3)	2 (0.5)	197 (54.0)	19 (57.6)	0 (0.0)	54.0
LAME	153 (96.2)	4 (2.5)	2 (1.3)	70 (45.8)	1 (25.0)	0 (0.0)	44.7
LIBI	360 (90.0)	17 (4.3)	23 (5.8)	240 (66.7)	7 (41.2)	12 (52.2)	64.8
LOWE	104 (96.3)	4 (3.7)	0 (0.0)	69 (66.4)	3 (75.0)	0 (0.0)	66.7
MEVE	367 (91.8)	25 (6.25)	8 (2.0)	273 (74.4)	9 (36.0)	8 (100)	72.5
MORA	368 (92.0)	16 (4.0)	16 (4.0)	222 (60.3)	8 (50.0)	2 (12.5)	58.0
MORU	368 (92.0)	12 (3.0)	20 (5.0)	196 (53.3)	6 (50.0)	3 (15.0)	51.3
NATR	136 (96.4)	4 (2.8)	1 (0.7)	102 (75.0)	1 (25.0)	1 (100)	73.7
OLYM	381 (95.3)	16 (4.0)	3 (0.8)	203 (53.3)	9 (56.3)	1 (33.3)	53.3
OZSC	199 (100.0)	0 (0.0)	0 (0.0)	67 (33.7)	0 (0.0)	0 (0.0)	33.7
PAIS	354 (96.7)	10 (2.7)	2 (0.6)	158 (44.6)	2 (20.0)	0 (0.0)	43.7
PORE	237 (92.6)	8 (3.1)	11 (4.3)	139 (58.7)	0 (0.0)	3 (36.4)	55.9
ROMO	375 (93.8)	24 (6.0)	1 (0.3)	268 (71.5)	12 (50.0)	1 (100)	70.3
SAGU	120 (95.2)	5 (4.0)	1 (0.8)	85 (70.8)	5 (100)	0 (0.0)	71.4
STLI	292 (73.0)	76 (19.0)	32 (8.0)	167 (57.2)	24 (31.6)	5 (15.6)	49.0
YOSE	357 (89.30	35 (8.8)	8 (2.0)	164 (46.0)	18 (51.4)	1 (12.5)	45.8

Table 1.7 Winter Survey Non-Response Bias

PARK	AGE				GROUP SIZE				WEIGHT
	Respondents		Non-respondents		Respondents		Non-respondents		
	N	Mean	N	Mean	N	Mean	N	Mean	
EVER	165	52.9	68	49.4	139	3.6	55	4.4	NONE
LAME	139	48.3	112	40.5	111	4.3	112	3.0	AGE
MORA	94	40.6	42	37.7	89	6.3	42	5.2	NONE
ROMO	140	47.1	105	39.1	127	3.6	107	3.5	AGE
SAGU	154	55.9	98	46.4	133	3.0	101	2.9	AGE
STLI	126	40.5	121	39.5	108	4.3	121	5.6	NONE
YOSE	161	43.4	95	36.5	150	6.1	95	4.4	AGE

* Note: N refers to the number of participants and respondents for whom we have data on age and group size. The total number of participants and respondents in the survey may be larger.

In those parks where there was a significant difference in the ages of the respondents and non-respondents, the data were weighted by age. In each case, we found that the respondents were slightly older than the non-respondents. To correct for this, the responses of the younger respondents were given more emphasis by weighting them. The weights were calculated by comparing the age distribution of the non-respondents with the age distribution of the respondents.

Table 1.8 Summer Survey Non-Response Bias

PARK	AGE				GROUP SIZE				WEIGHT?
	Respondents		Non-respondents		Respondents		Non-respondents		
	N	Mean	N	Mean	N	Mean	N	Mean	
ASIS	122	45.1	145	42.9	125	4.4	146	5.0	NONE
BADL	251	48.4	150	45.7	227	3.8	145	4.1	NONE
BIBE	67	49.1	34	45.6	58	3.6	33	5.1	NONE
BLRI	207	52.9	113	50.6	176	3.0	113	3.0	NONE
CACA	221	47.9	171	43.6	210	5.1	169	4.9	AGE
CAHA	187	46.4	179	44.1	178	4.3	179	4.3	NONE
CANY	273	48.4	127	46.2	273	4.2	127	3.2	NONE
CURE	127	54.8	74	51.9	102	4.7	70	4.9	NONE
CUVA	285	48.5	111	46.9	217	4.0	111	3.1	NONE
DENA	142	54.9	95	52.1	131	3.8	95	3.9	NONE
DEWA	55	43.8	124	42.7	44	3.8	120	3.9	NONE
EVER	135	43.5	113	41.2	116	3.8	114	3.5	NONE
FOSU	178	47.3	215	44.6	176	5.9	214	6.2	NONE
GETT	252	48.4	137	46.1	230	5.1	137	5.8	NONE
GRTE	209	49.7	183	47.2	188	6.1	189	4.8	NONE
LAME	70	45.8	84	441	61	3.7	84	3.4	NONE
LIBI	249	53.7	143	52.2	219	3.7	143	3.9	NONE
LOWE	63	50.7	35	43.3	50	3.9	35	3.0	AGE
MEVE	287	48.7	110	45.6	271	3.8	126	3.8	AGE
MORA	229	44.5	166	43.4	211	4.1	168	4.6	NONE
MORU	204	48.5	192	46.3	188	5.0	194	4.2	NONE
NATR	102	55.4	46	50.3	85	2.8	48	2.6	AGE
OLYM	209	48.4	188	46.5	202	3.6	187	3.8	NONE
OZSC	67	40.5	132	37.3	58	9.1	62	8.6	NONE
PAIS	156	42.9	210	40.7	146	4.7	211	4.5	NONE
PORE	138	45.1	113	43.7	125	3.3	113	3.5	NONE
ROMO	278	45.7	122	42.0	249	3.8	120	3.8	AGE
SAGU	89	46.7	35	48.4	90	3.1	36	3.5	NONE
STLI	188	44.4	202	42.7	171	4.4	201	4.1	NONE
YOSE	181	43.3	217	41.4	167	5.2	217	4.4	NONE

* Note: N refers to the number of participants and respondents for whom we have data on age and group size. The total number of participants and respondents in the survey may be larger.

1.3.3 Results

Despite the problems with variable response rates and non-response bias, the survey represents an enormous collection of information on public activities and safety. Descriptive statistics (including frequency distributions and cross-tabulations) were used to summarize data for individual parks and all parks as a whole. Sections 2-8 present brief summaries of the results of the analysis for each individual park in the winter survey. Sections 9-38 present brief summaries of the results of the analysis for each individual park in the summer survey. The summary for each park is organized in a similar fashion, although each summary is tailored to highlight any distinctive patterns and relationships for that park. Each park summary begins with a description of the sample, a description of the demographic composition of the respondents (including age, sex, education, and race), and a description of the visitation characteristics of respondents (including the frequency of visitation, whether or not the park was a primary destination, the expected duration of the visit, and the nature of the visiting group. The second part of each park summary describes the activities that visitors engaged in during their visit, and their level of experience in and preparedness for their primary activity. This part also examines the level of concerns expressed about various hazards ranging from poisonous plants to motor vehicle accidents. Since driving is one of the biggest hazards in most of the park unit, the third section examines safety issues of motor vehicles in a little more detail. Finally, each park summary presents data on visitor opinions about park management in general with regard to safety, including the locus of responsibility for safety and the appropriate levels of management intervention.

Section 39 presents a summary of the results of the analysis of the aggregated data for all 30 summer surveys, and Section 40 presents our conclusions.

2.0 Everglades National Park (winter survey)

2.1 Sample:

At Everglades National Park, 251 visitor groups were contacted between January 27 and January 30, 2001, and 251 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 171 visitor groups, resulting in a 68.1% response rate for this park.

2.2 Demographics:

Figure 2.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty four percent of respondents were female and 56% male. The overwhelming majority (91%)of respondents were white, with 5% Hispanic, and 2% Asian. Graduate school was the highest level of education attained by 30% of respondents, while another 30% classified themselves as college graduates. The majority (84%) of respondents were residents of the US and 12% were international visitors.

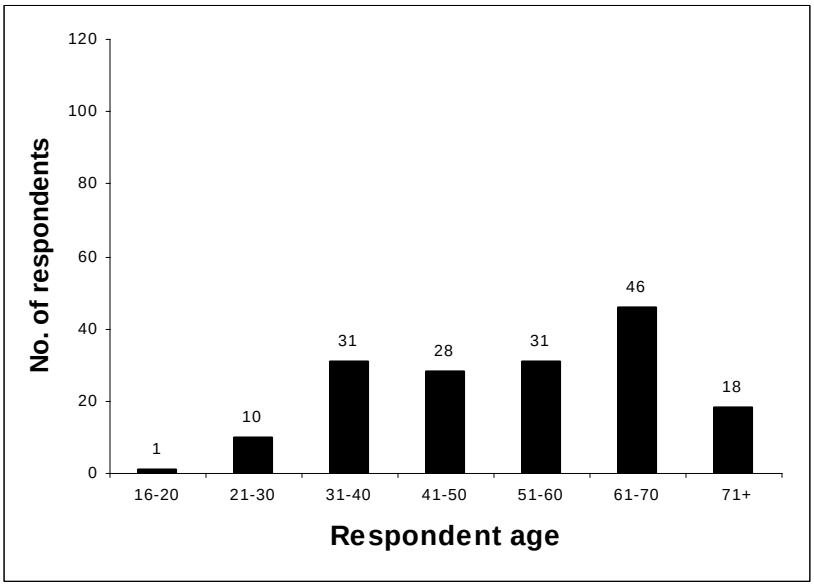

Figure 2.1: Distribution of respondents by age (N=165)

2.3 Visitation

For 85 (52%) of respondents, this was their first visit to the park. Among those 83 respondents returning to the park, 48% had visited the park twice in the past 10 years (including the current visit), 29% 3-5 times, 16% 6-10 times, and 7% 11 or more times. This visit was the primary destination for 32% of respondents, but one of only several destinations for 59% of respondents. For 9% of respondents this visit was not a planned destination at all. Nineteen percent of the respondents expected to visit the park for a half day or less, 39% expected to stay for up to one day, and 43% expected to stay for more

than one day. Ten percent of respondents were visiting the park by themselves, 57% with family members, 17% with friends, and 12% with family members and friends.

2.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 2.2).

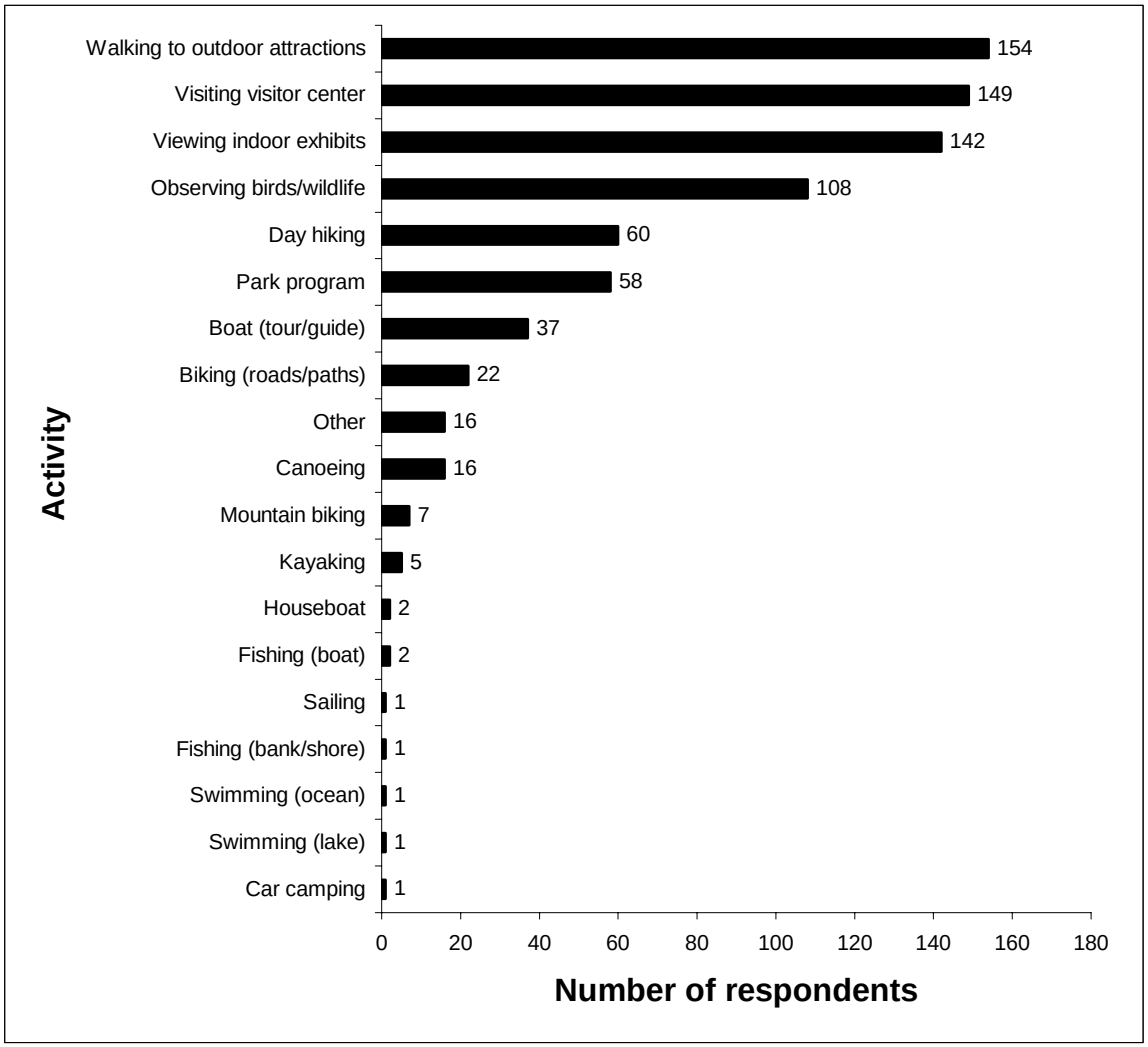

Figure 2.2: Visitor activities (N=170)
(Note: Several respondents listed more than one activity)

Figure 2.2 illustrates that most respondents walk to outdoor attractions (91%), visit the visitor center (88%), view indoor exhibits (84%), and observe wildlife (64%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 2.3 illustrates that walking to outdoor attractions (31%), and observing birds and other wildlife (30%) are the most popular primary

activities. Most respondents (73%) engage in these activities with members of their own personal group (i.e., friends and family members), although 10% engage in these activities alone, 9% with people aside from their own personal group, and 3% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people consider themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 2.4). Ratings of personal experience varied little between activities and between males and females. Preparedness is one aspect of experience, and Figure 2.5 shows how prepared respondents were based on the safety items that they had available during their visit.

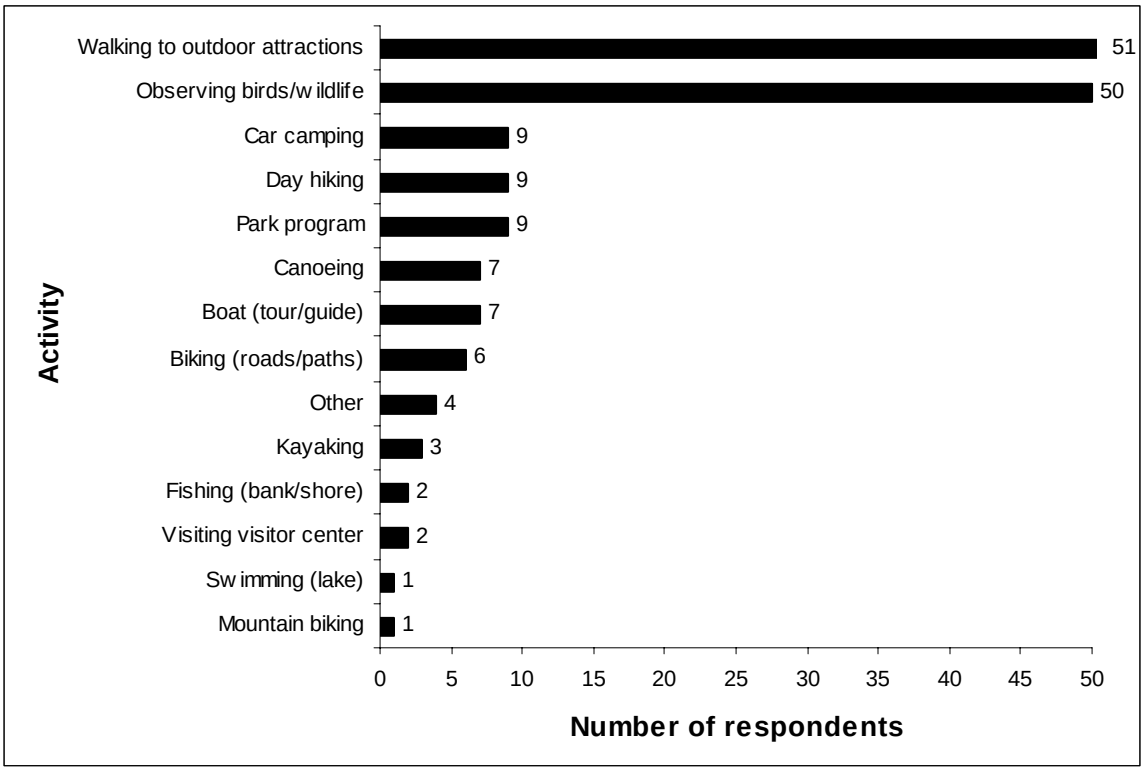

Figure 2.3: Primary visitor activities (N=164)

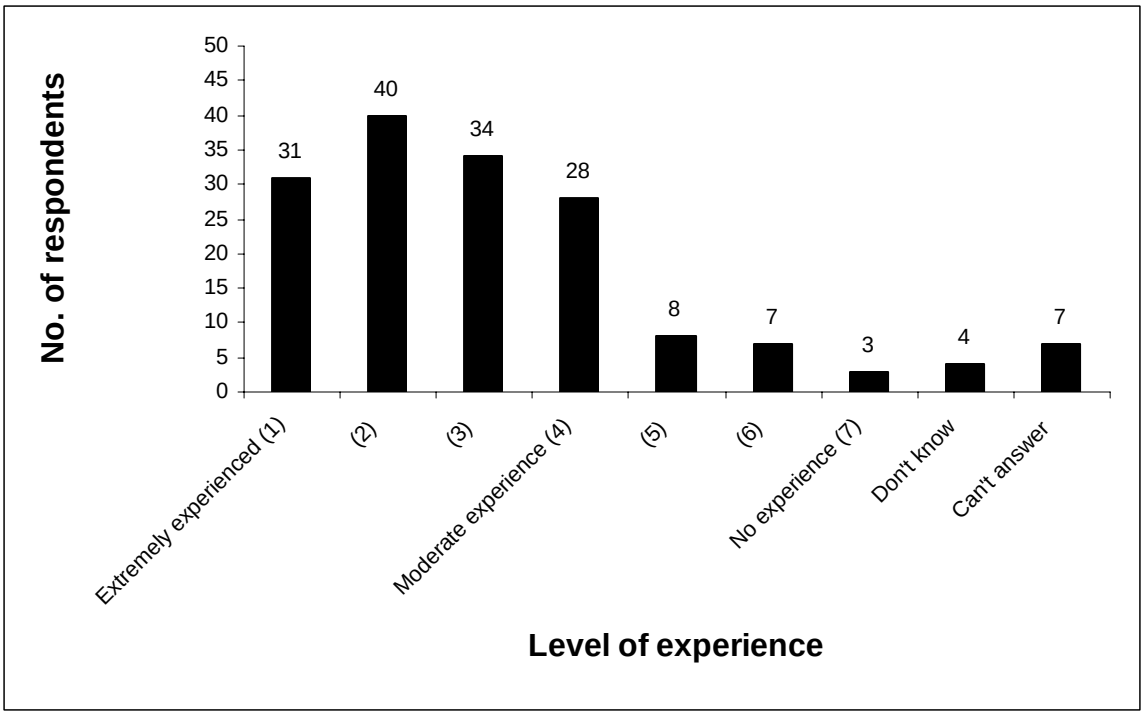

Figure 2.4: Personal level of experience (N=164)

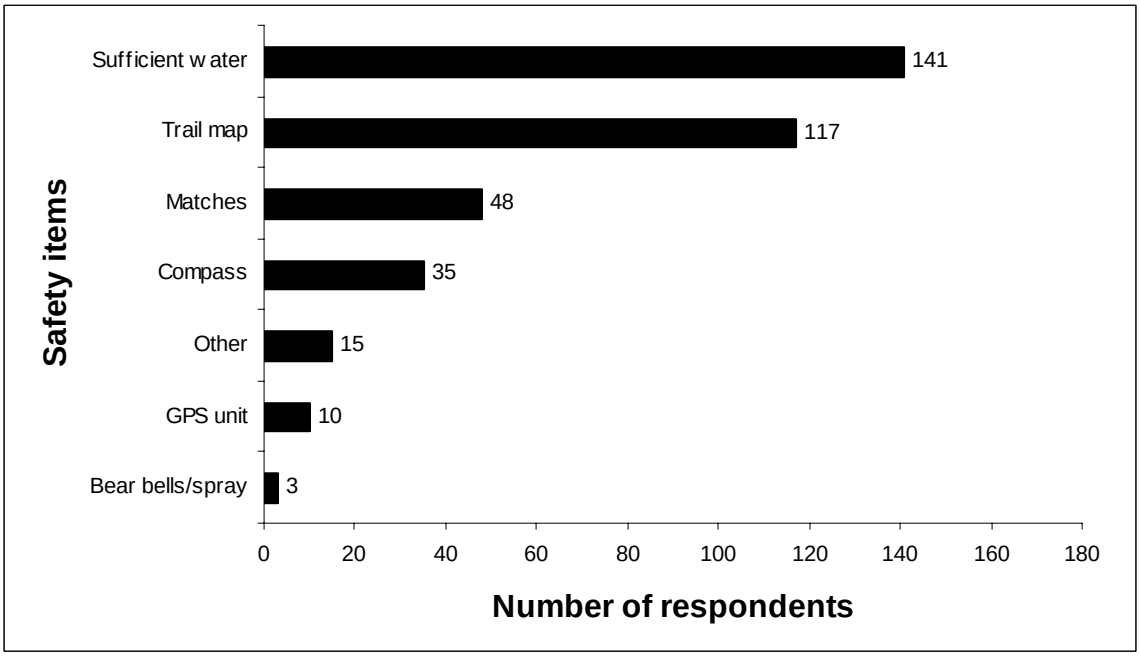

Figure 2.5: Personal safety items (N=141)

Few respondents (5%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 2.6 shows how concerned respondents were about various hazards that might be encountered in the park.

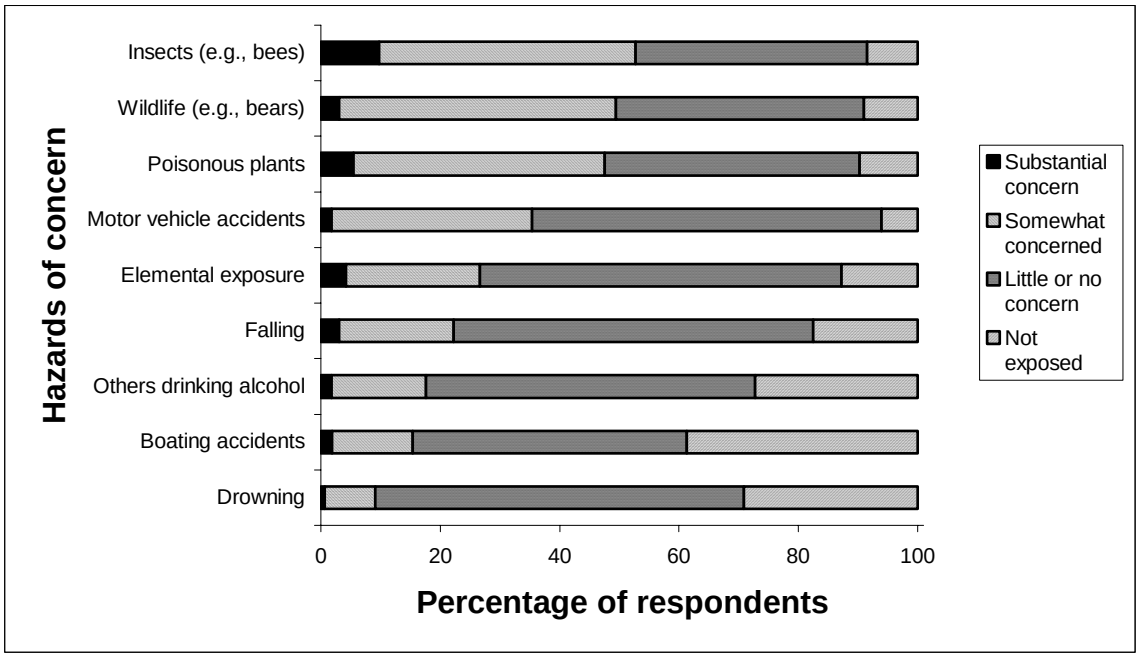

Figure 2.6: Level of concern about various hazards (N=163-166)

2.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 95% of respondents were traveling in privately owned or rented vehicles. Eighty-nine percent of respondents spent all of the time in the front seat, and 6% spent some of the time in the front seat. Of these individuals, 60% were driving for all or most of the time and 93% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-one percent of respondents never encountered cars that were driving too fast, and 52% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 42% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 94% thought that hazard-warning signs were adequate most or all of the time. Figure 2.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles, bicycle riders, and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

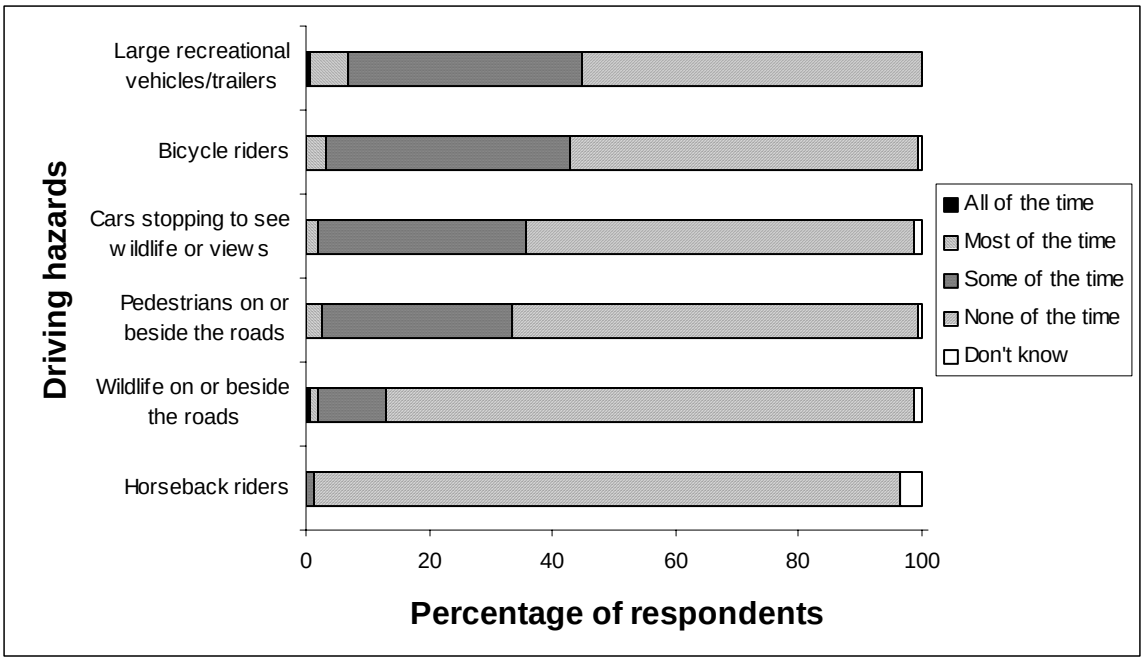

Figure 2.7: How often do these make traveling on roads more hazardous? (N=163-166)

2.6 Management issues:

With regard to the primary activity undertaken during their visit, 38% of respondents believed that safety was entirely the responsibility of the visitor, while 37% believed safety was the responsibility of both the visitor and the park staff (Figure 2.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 2.9 shows that the overwhelming majority (69%) of respondents thought such measures definitely did not detract. Among the three respondents (2%) who indicated that the safety measures definitely did detract from their enjoyment, 2 were involved in birding and one was engaged in other unspecified primary activities.

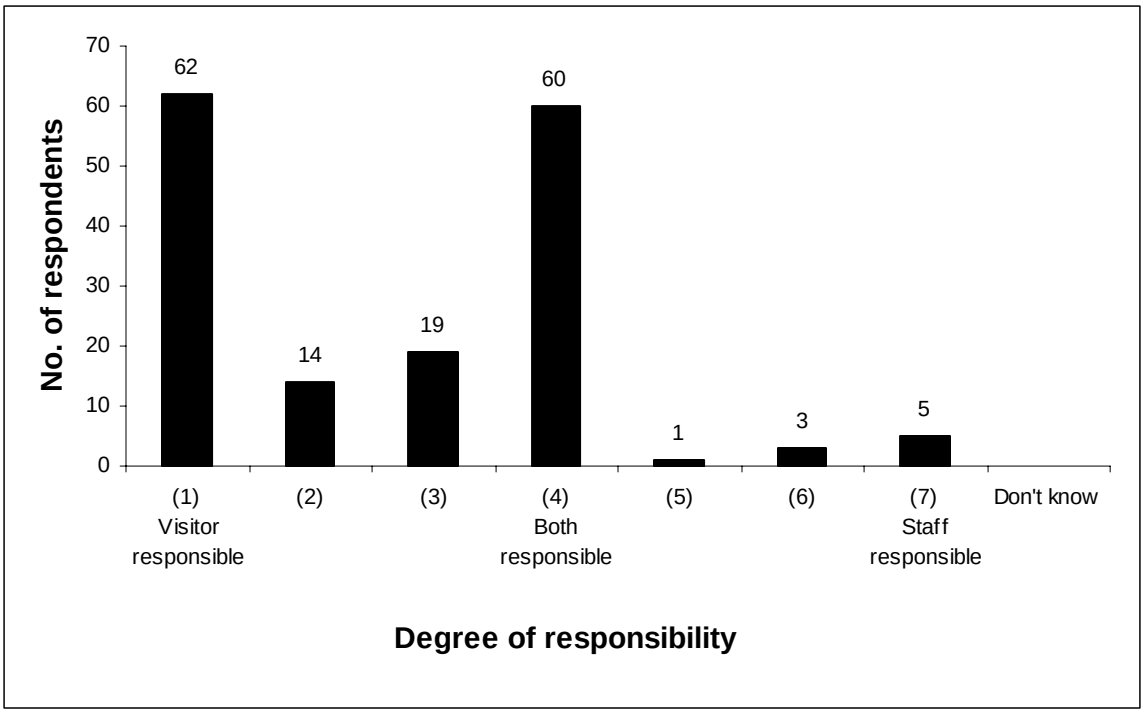

Figure 2.8: Responsibility for safety in chosen primary activity (N=164)

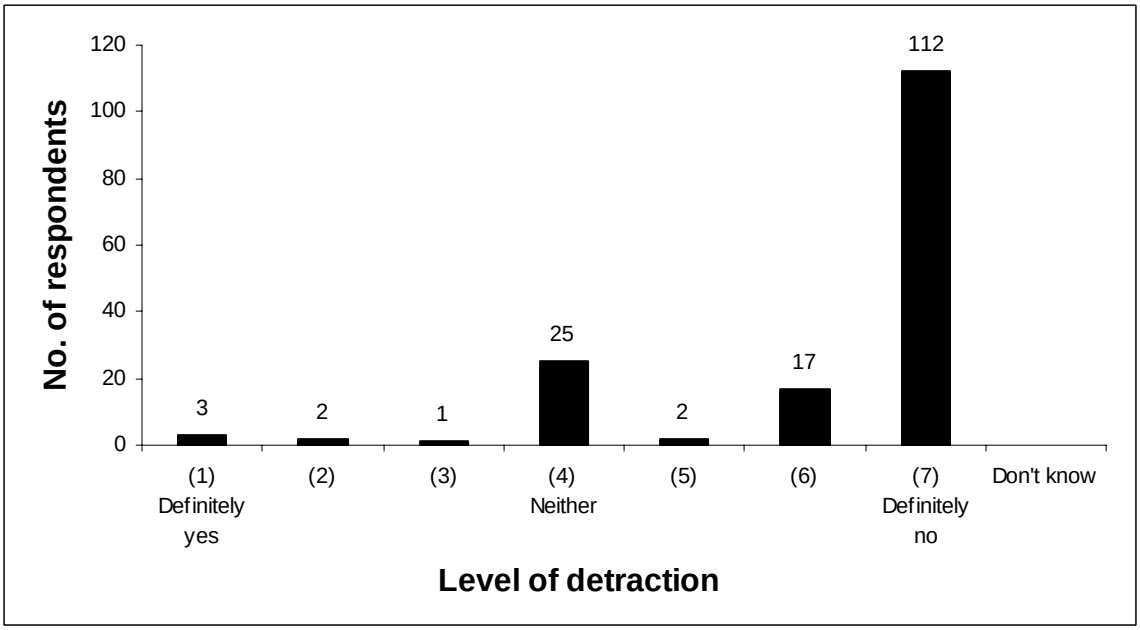

Figure 2.9: Do safety measures detract from visitor enjoyment? (N=162)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-nine percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty-two percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 30% disagree or disagree strongly, and 36% neither agree nor disagree. Thirty-eight percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 25% agree or agree strongly, and 34% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (84%);
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (77%);
- restrictions on the number of persons/groups who undertake particular activities (76%);
- park rangers to enforce rules and regulations (66%);
- enforcement of alcoholic beverage restrictions (60%); and,
- safe surfaces on walkways and stairs (82%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (25%), more brochures and other information warning and advising about hazards, and more or much more enforcement of alcoholic beverage prohibitions (14%). Substantial proportions of respondents did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities (15%) or if there should be more enforcement of alcoholic beverage prohibitions (21%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 2.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

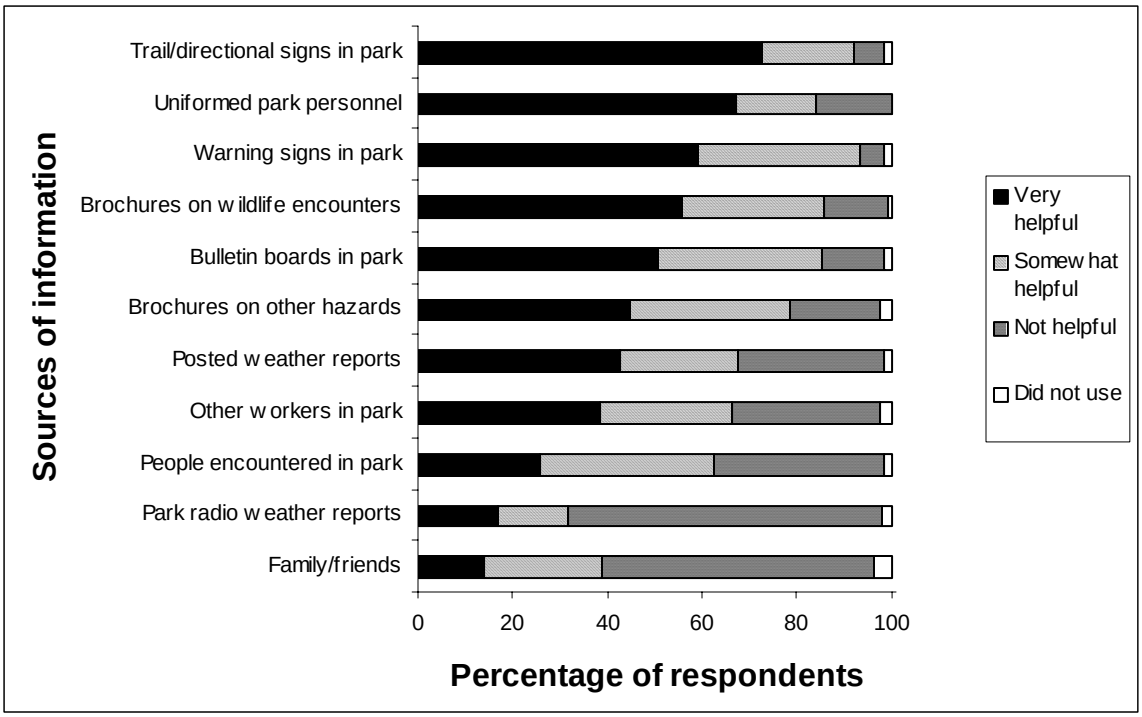

Figure 2.10: How helpful are various sources of safety information (N=95-150)

3.0 Lake Mead National Recreation Area (winter survey)

3.1 Sample:

At Lake Mead National Recreation Area, 255 visitor groups were contacted between March 17 and March 20, 2001, and 255 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 143 visitor groups, resulting in a 56.1% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 4 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 139 in most cases below.

3.2 Demographics:

Figure 3.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-four percent of respondents were female and 56% male. The overwhelming majority (93%)of respondents were white, with 2% African-American, 1% Hispanic, and 2% Asian. Graduate school was the highest level of education attained by 15% of respondents, while an additional 24% classified themselves as college graduates. The majority (95%) of respondents were residents of the US and 4% were international.

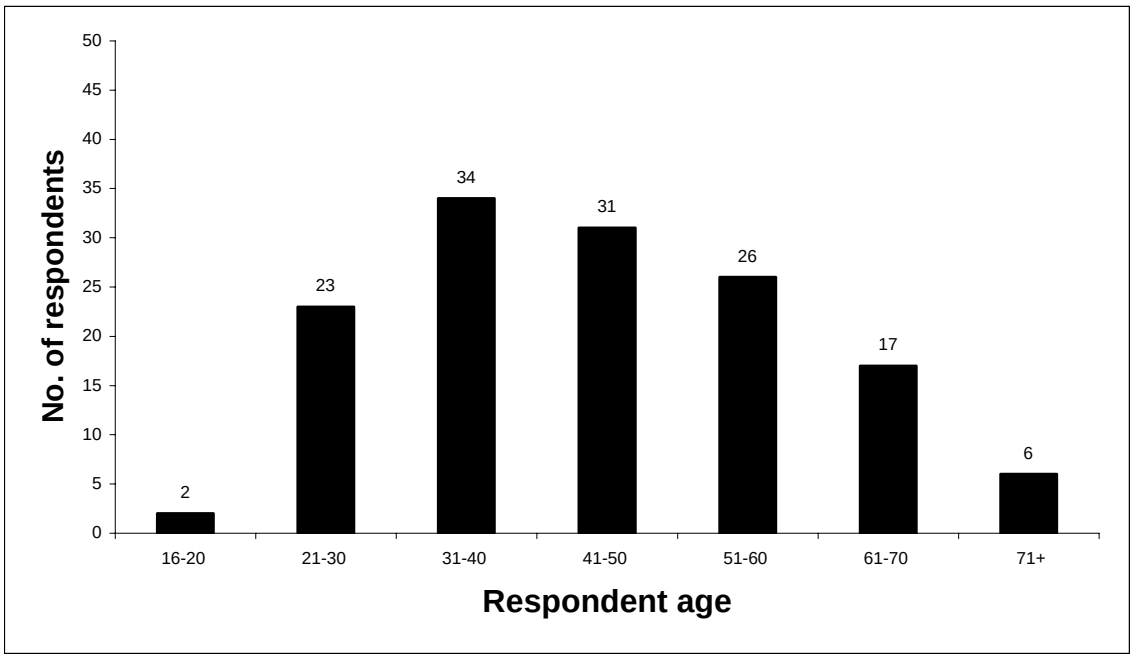

Figure 3.1: Distribution of respondents by age (N=139)

3.3 Visitation

For fifty-five (40%) respondents, this was their first visit to the park. Among those 81 respondents returning to the park, 9% had visited the park twice in the past 10 years (including the current visit), 19% 3-5 times, 8% 6-10 times, and 64% 11 or more times. This visit was the primary destination for 42% of respondents, but one of only several

destinations for 36% of respondents. For 22% of respondents this visit was not a planned destination at all. Sixty-four percent of the respondents visited the park for a half day or less, 25% visited for up to one day, and 11% visited for more than one day. Thirteen percent of respondents were visiting the park by themselves, 58% with family members, 13% with friends, and 12% with family members and friends.

3.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 3.2).

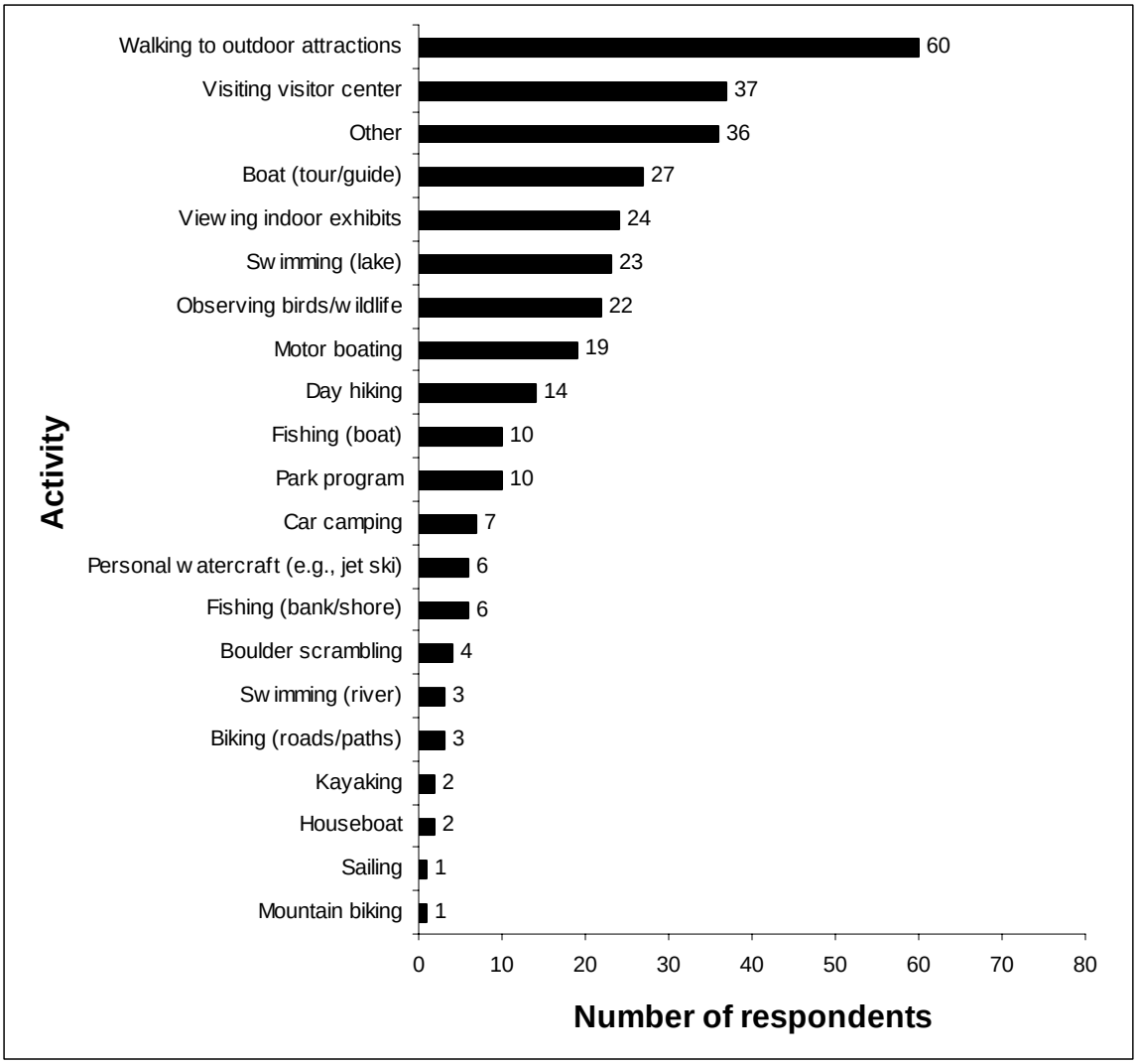

Figure 3.2: Visitor activities (317 responses)
(Note: Several respondents listed more than one activity)

Figure 3.2 illustrates that most respondents walked to outdoor (43%) attractions or visited the visitor center (27%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the

activity that engaged them for most of the time during their visit. Figure 3.3 illustrates that walking to outdoor attractions (16%), tour boating (16%), motor boating (11%), and various other (18%) activities are the most popular primary activities. Most respondents (68%) engage in these activities with members of their own personal group (i.e., friends and family members), although 14% engage in these activities alone, less than 10% with people aside from their own personal group, and 6% as members of organized groups.

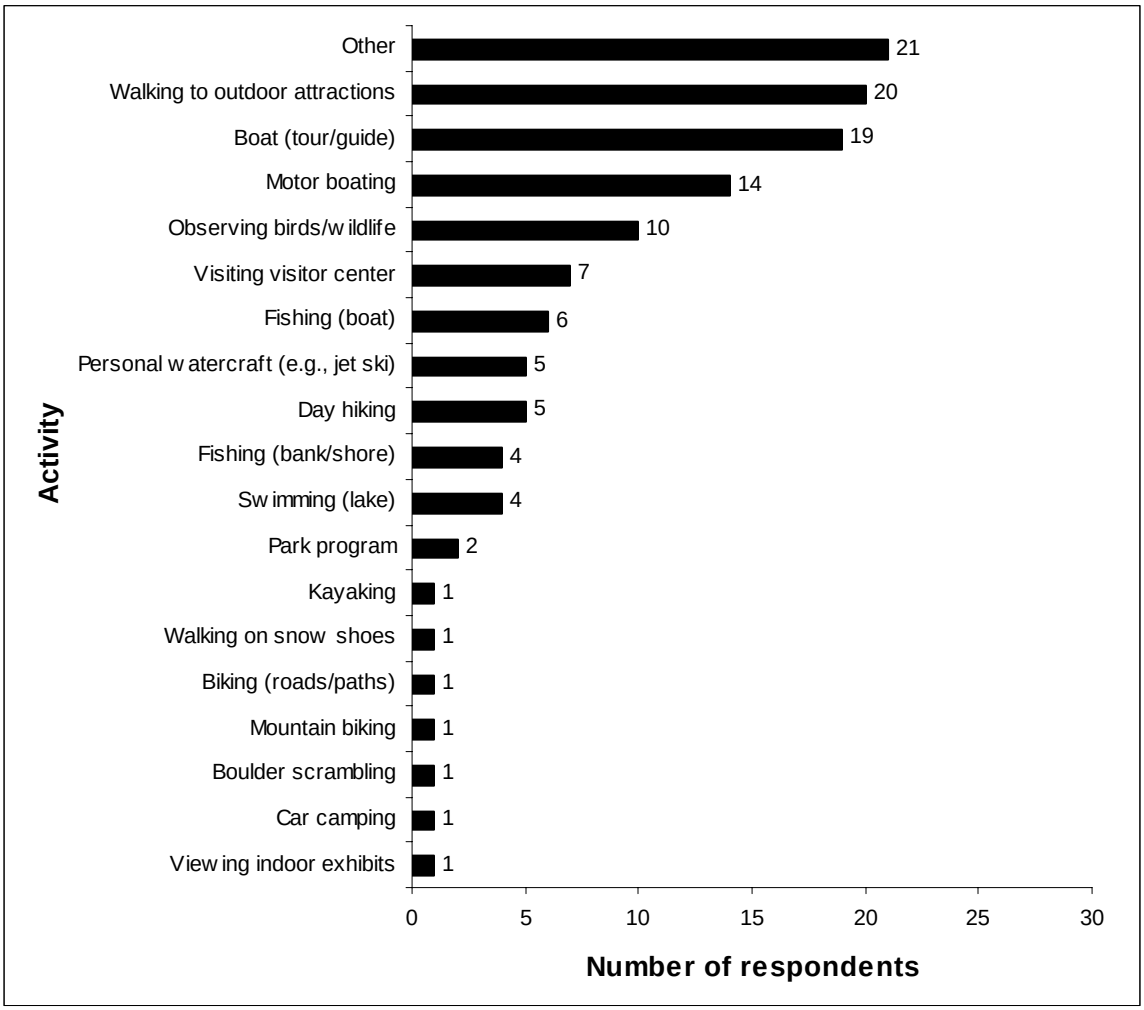

Figure 3.3: Primary visitor activities (N=124)

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people consider themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 3.4). Ratings of personal experience varied little between activities and between males and females.

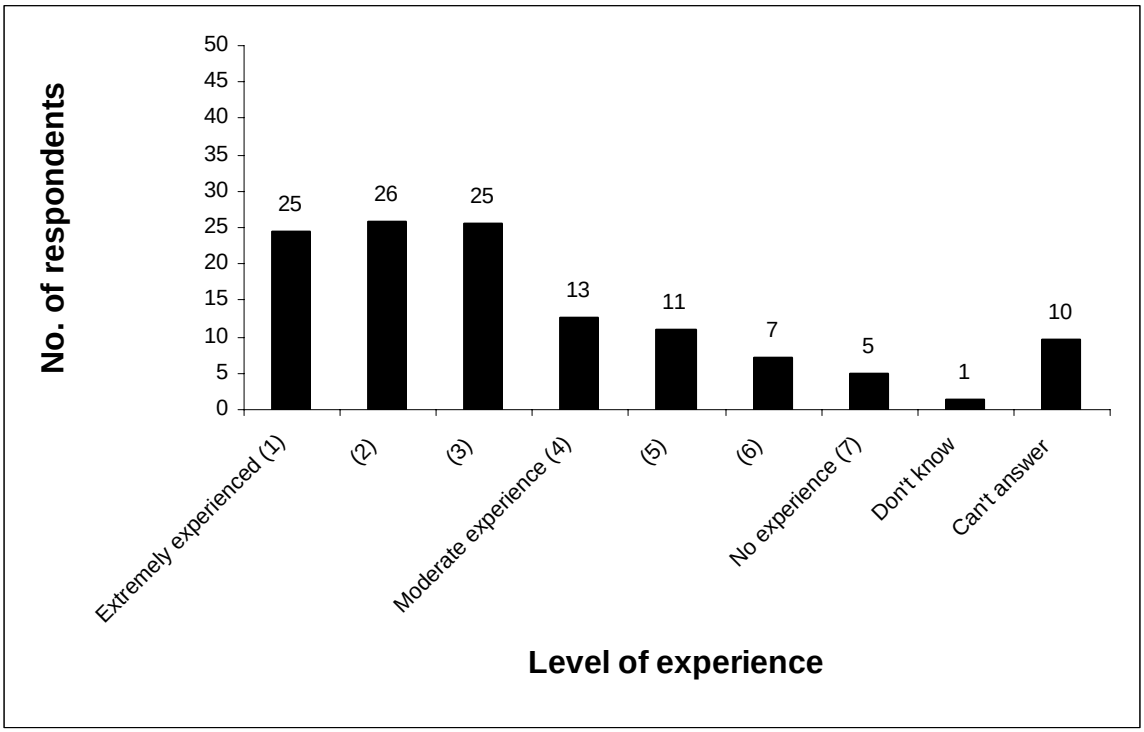

Figure 3.4: Personal level of experience (N=123)

Preparedness is one aspect of experience, and Figure 3.5 shows how prepared respondents were based on the safety items that they had available during their visit.

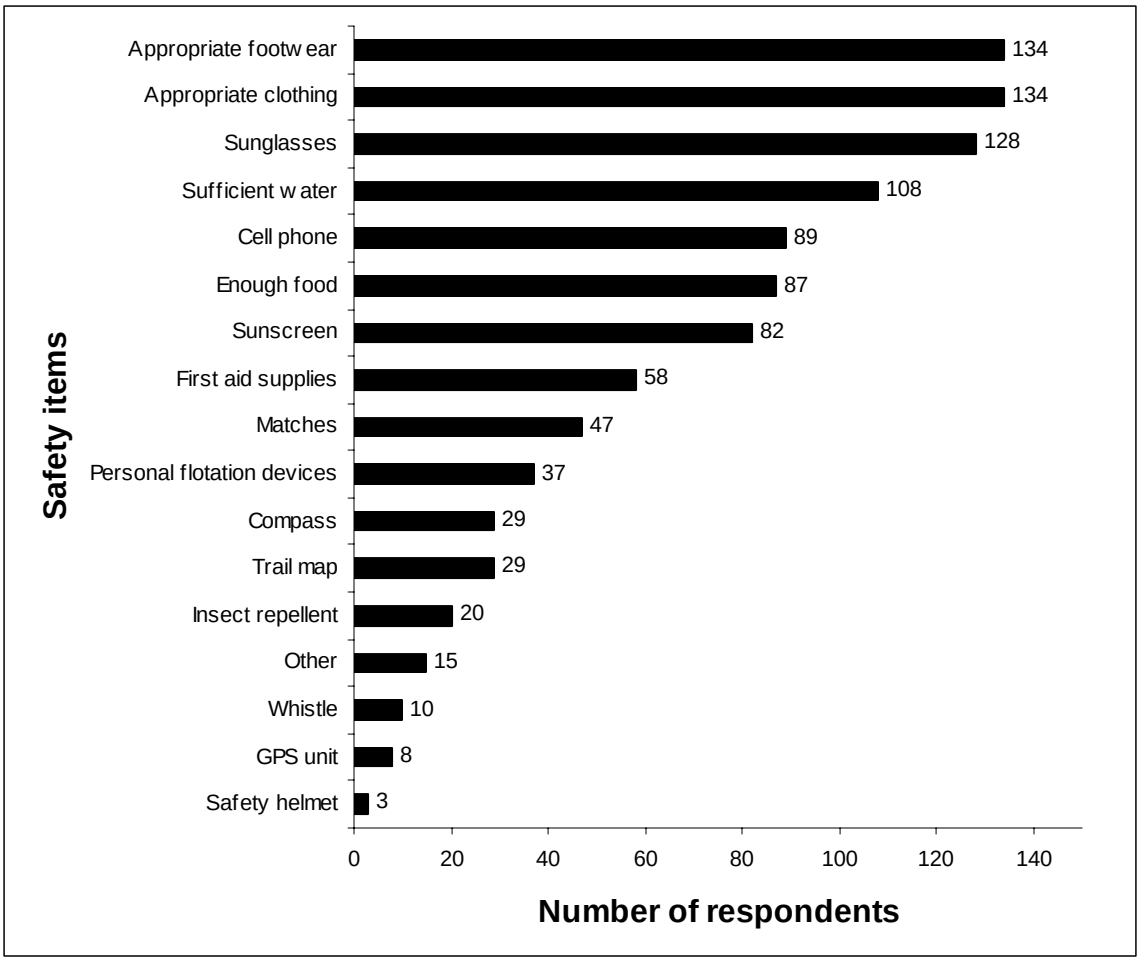

Figure 3.5: Personal safety items (N= 134)

Few respondents (4%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 3.6 shows how concerned respondents were about various hazards that might be encountered in the park.

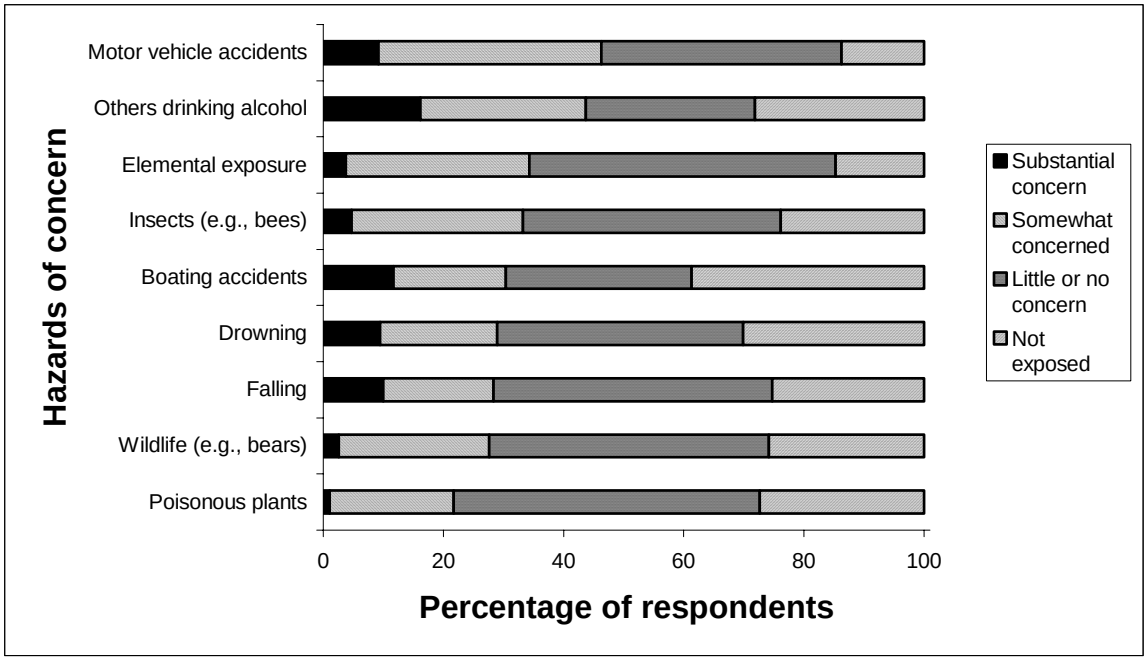

Figure 3.6: Level of concern about various hazards (N=135-138)

3.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 84% of respondents were traveling in privately owned or rented vehicles. Ninety percent of respondents spent all of the time in the front seat, and 4% spent some of the time in the front seat. Of these individuals, 73% were driving for all or most of the time and 94% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty-eight percent of respondents never encountered cars that were driving too fast, and 58% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 47% of respondents encountered cars that were driving too slowly. Most (87%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 92% thought that hazard-warning signs were adequate most or all of the time. Figure 3.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and bicycle riders are the most commonly cited driving hazards.

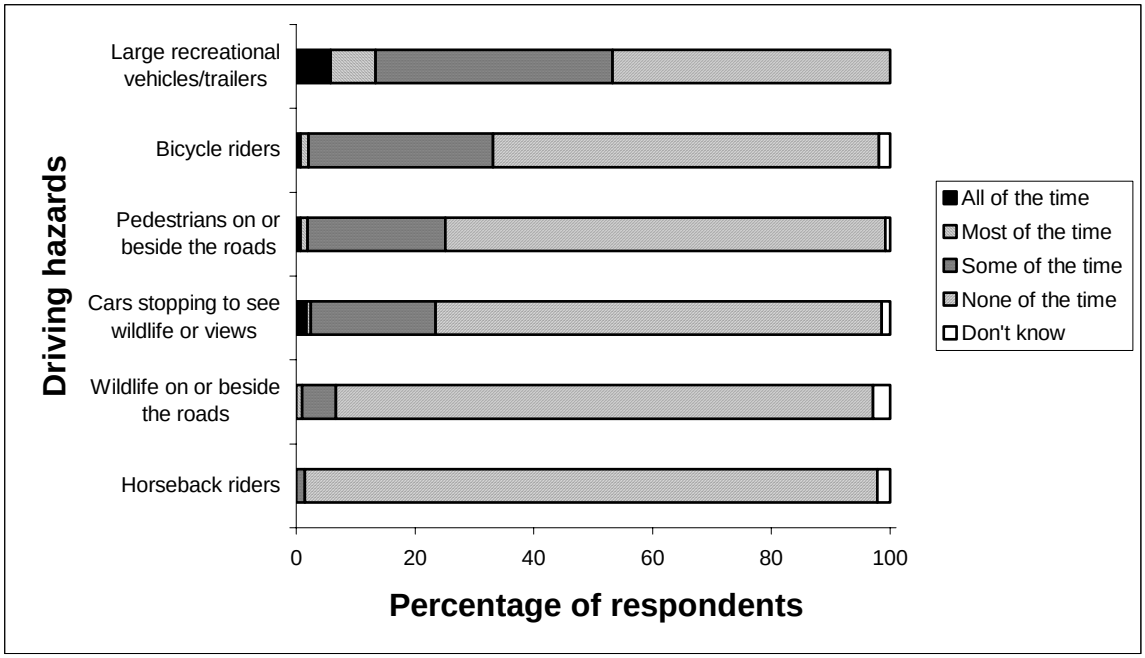

Figure 3.7: How often do these make traveling on roads more hazardous? (N=111)

3.6 Management issues:

With regard to the primary activity undertaken during their visit, 43% of respondents believed that safety was entirely the responsibility of the visitor, while 41% believed safety was the responsibility of both the visitor and the park staff (Figure 3.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 3.9 shows that the overwhelming majority (66%) of respondents thought such measures definitely did not detract. The 8 respondents who indicated that the safety measures did detract from their enjoyment to some extent were involved in 7 different activities, including mountain biking, fishing, birding, snowshoeing, swimming, riding a tour boat, and other unspecified activities.

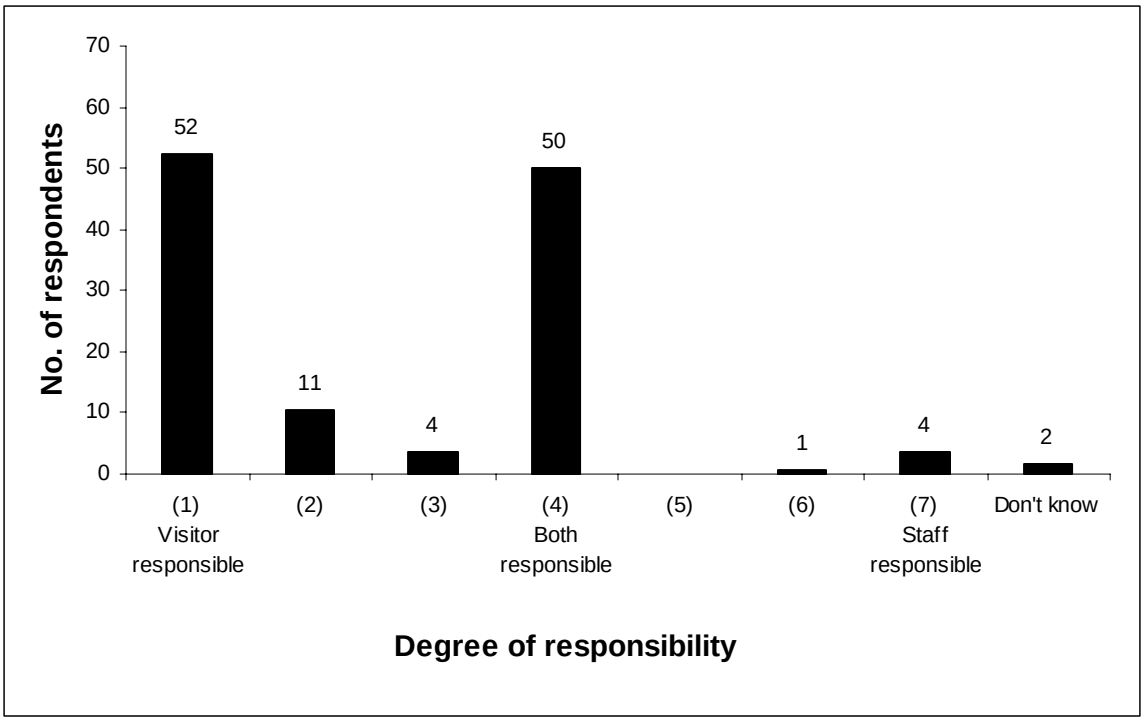

Figure 3.8: Responsibility for safety in chosen primary activity (N=122)

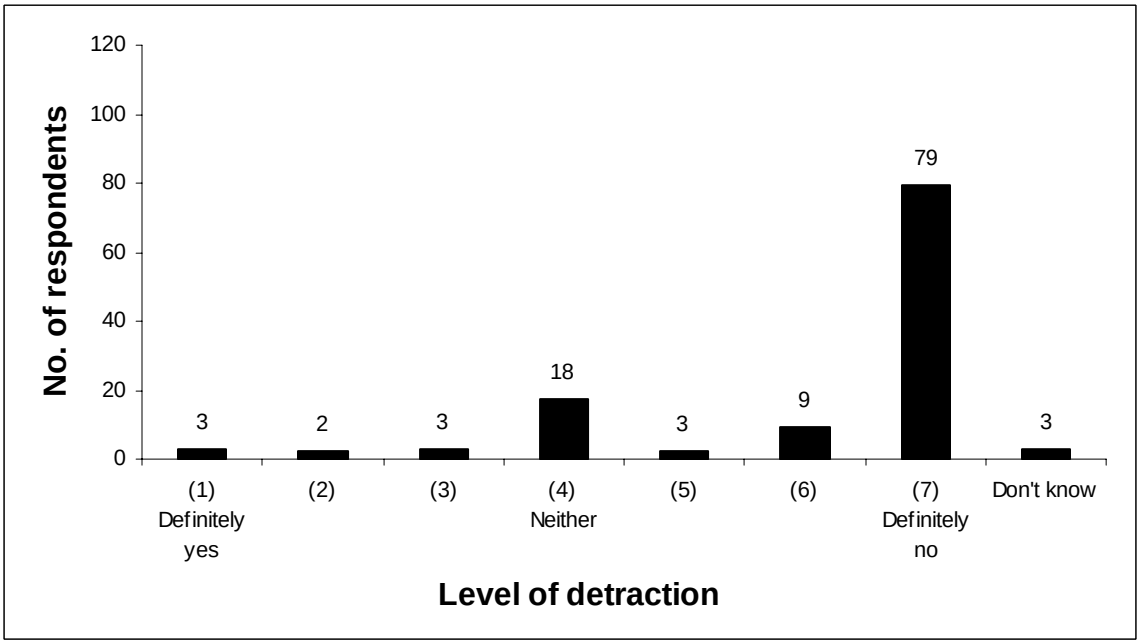

Figure 3.9: Do safety measures detract from visitor enjoyment? (N=119)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Thirty-nine percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 14% disagree or disagree strongly, and 40% neither agree nor disagree. Twenty-three percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 33% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 25% agree or agree strongly, and 40% neither agree nor disagree.

Many respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (69%);
- signs warning and advising about hazards (74%);
- brochures and other information warning about hazards (60%);
- restrictions on the number of persons/groups who undertake particular activities (51%);
- park rangers to enforce rules and regulations (50%);
- enforcement of alcoholic beverage restrictions (45%); and,
- safe surfaces on walkways and stairs (72%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (28%) and more or much more enforcement of alcoholic beverage prohibitions (29%). A substantial proportion (26%) of respondents did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities.

Among those respondents who were aware of the various sources of safety information in the park, Figure 3.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

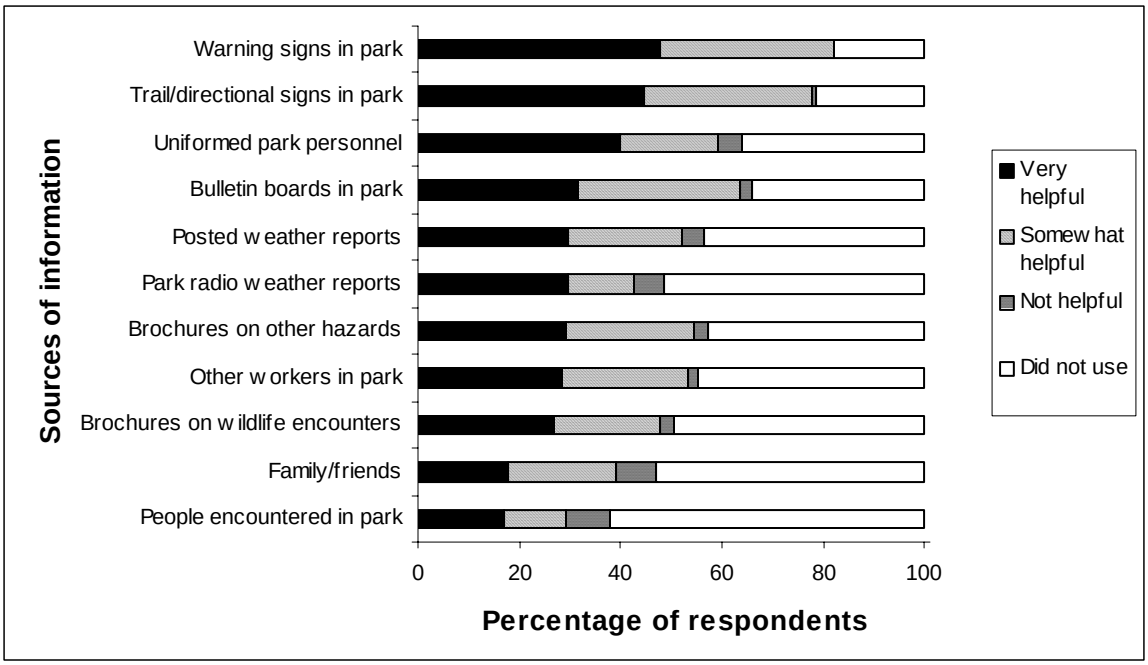

Figure 3.10: How helpful are various sources of safety information (N=74-100)

4.0 Mount Rainier National Park (winter survey)

4.1 Sample:

At Mount Rainier National Park, 140 visitor groups were contacted between February 10and February 13, 2001, and 140 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 94 visitor groups, resulting in a 67.1% response rate for this park.

4.2 Demographics:

Figure 4.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Thirty-six percent of respondents were female and 64% male. The overwhelming majority (93%)of respondents were white, with 1% Hispanic, 1% American Indian, 1% Hawaiian and 1% Asian. Graduate school was the highest level of education attained by 23% of respondents, while 44% classified themselves as college graduates. The majority (97%) of respondents were residents of the US and 3% were of unknown nationality.

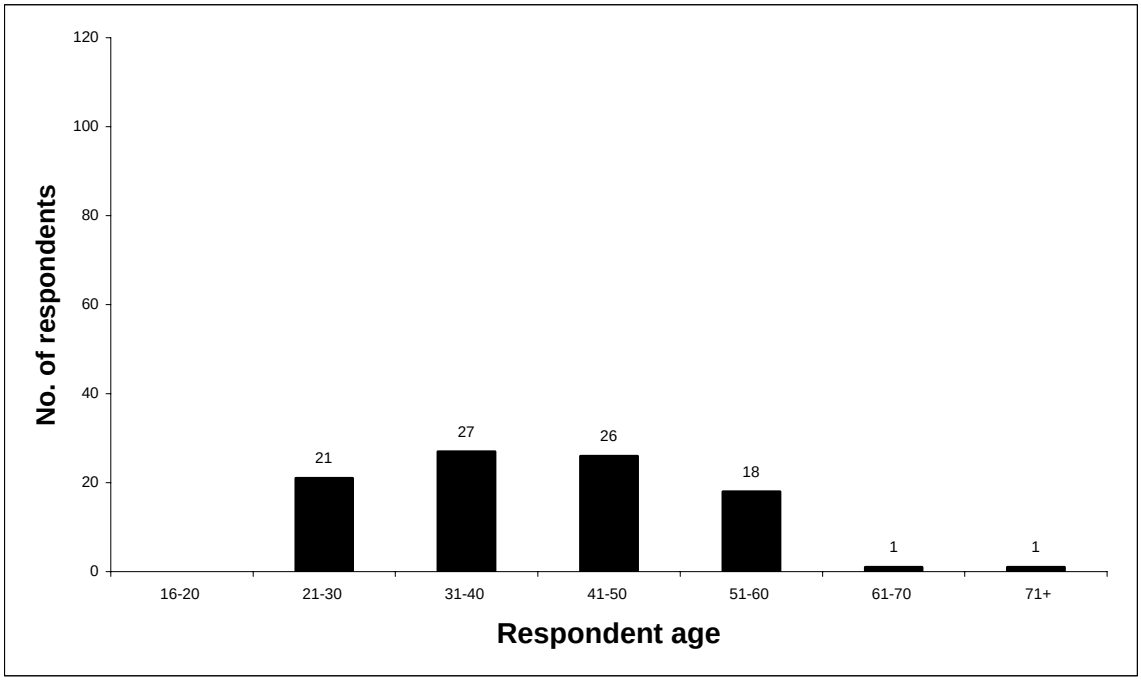

Figure 4.1: Distribution of respondents by age (N=94)

4.3 Visitation

For 15 (16%) respondents, this was their first visit to the park. Among those 79 respondents returning to the park, 11% had visited the park twice in the past 10 years (including the current visit), 22% 3-5 times, 19% 6-10 times, and 48% 11 or more times. This visit was the primary destination for 86% of respondents, but one of only several

destinations for 11% of respondents. For 3% of respondents this visit was not a planned destination at all. Thirty-two percent of the respondents expected to visit the park for a half day or less, 47% expected to stay for up to one day, and 21% expected to stay for more than one day. Two percent of respondents were visiting the park by themselves, 40% with family members, 27% with friends, and 22% with family members and friends.

4.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 4.2).

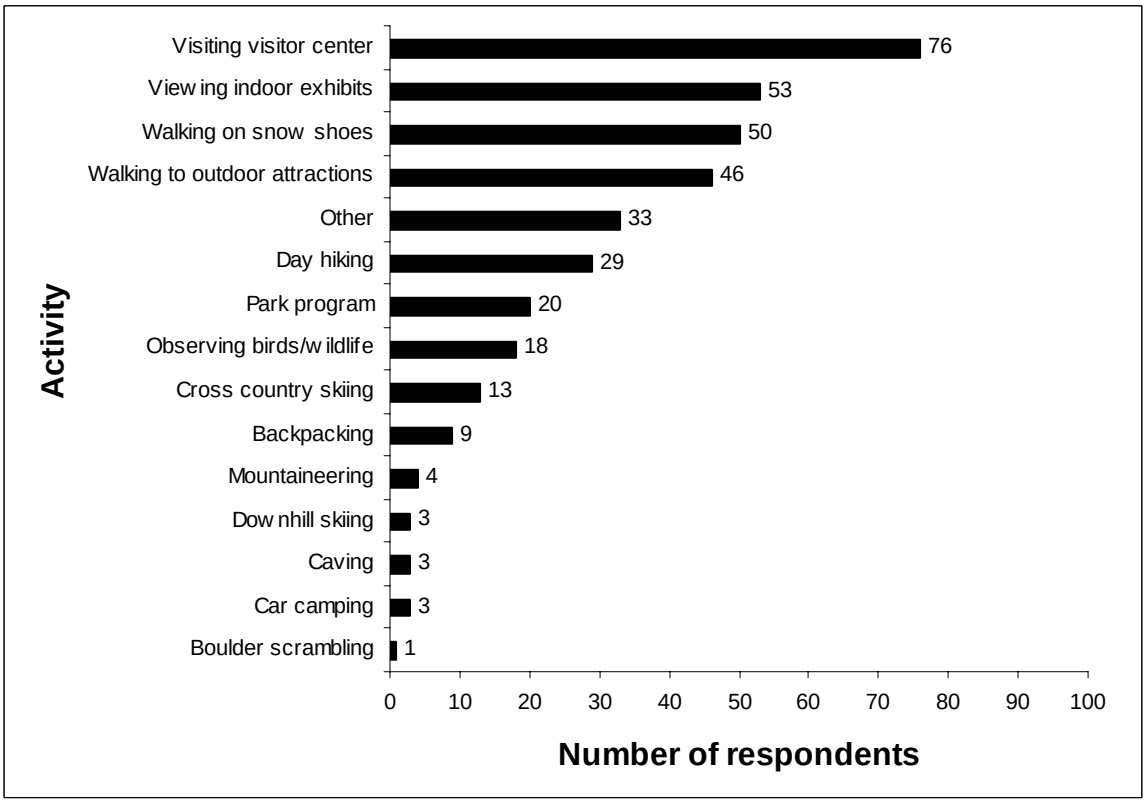

Figure 4.2: Visitor activities (N=94)
(Note: Several respondents listed more than one activity)

Figure 4.2 illustrates that most respondents visit the visitor center (81%) and many view indoor exhibits (56%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 4.3 illustrates that the most popular winter activities were walking on snowshoes (35%), cross-country skiing (10%), and various other (19%) activities. Most respondents (72%) engage in these activities with members of their own personal group (i.e., friends and family members), although 4% engage in these activities alone, 6% with people aside from their own personal group, and 16% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people consider themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 4.4). Ratings of personal experience varied little between activities and between males and females. Preparedness is one aspect of experience, and Figure 4.5 shows how prepared respondents were based on the safety items that they had available during their visit.

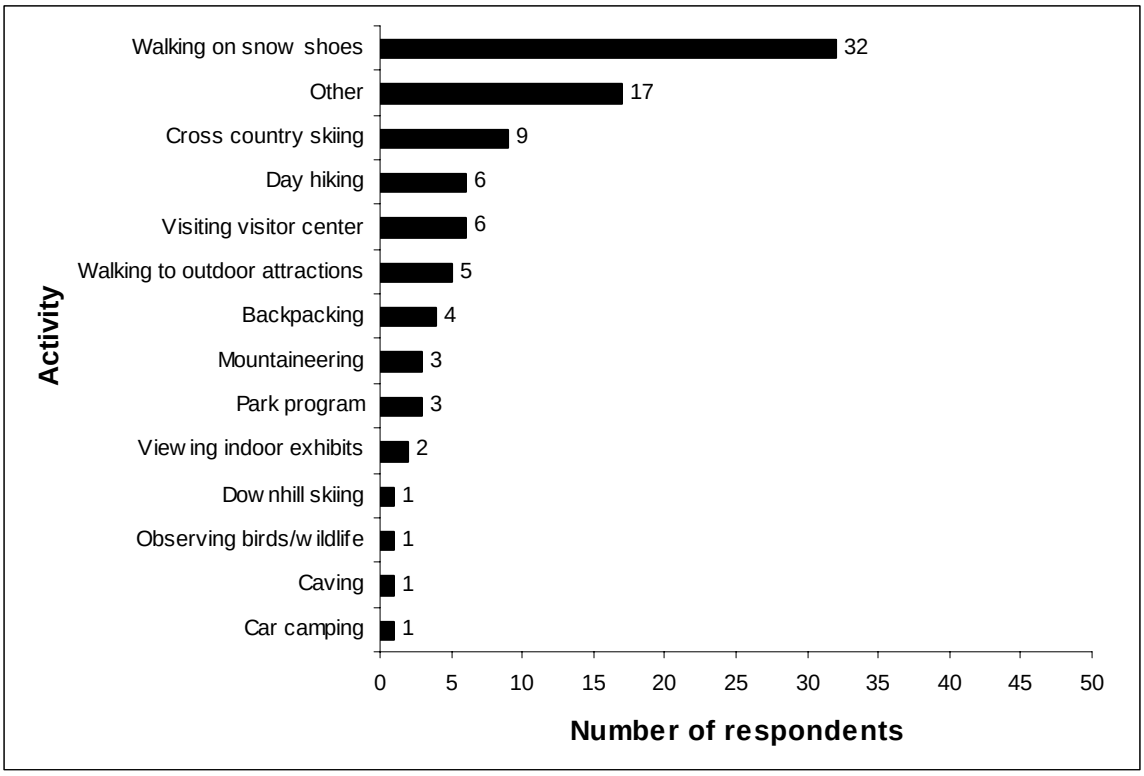

Figure 4.3: Primary visitor activities (N=94)

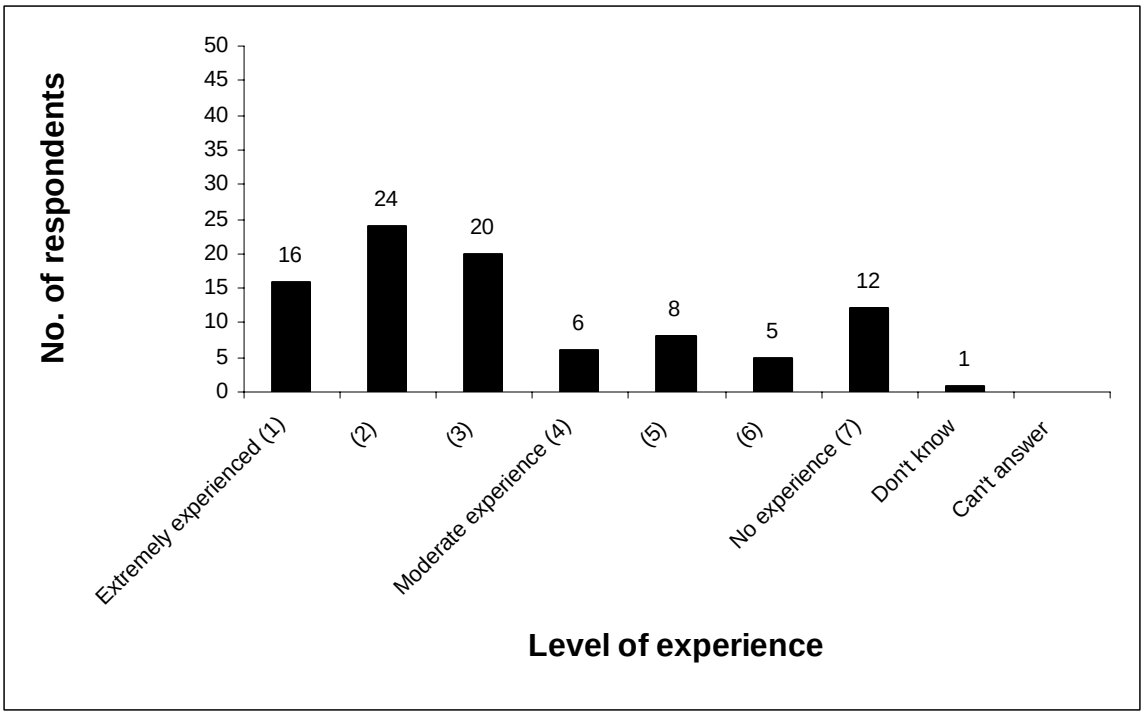

Figure 4.4: Personal level of experience (N=92)

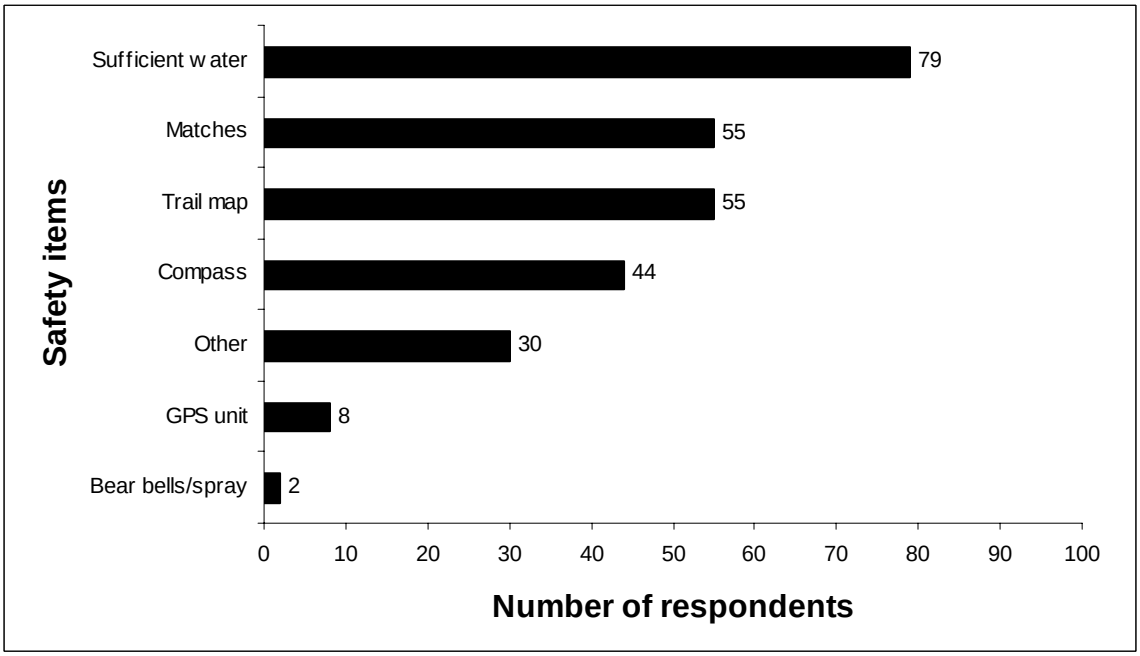

Figure 4.5: Personal safety items (N=79)

Eighteen respondents (19%) expressed concern about suffering an injury or illness while engaged in their primary activity, although most of these individuals were only marginally concerned for brief periods. Without reference to a particular activity, however, Figure 4.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, motor vehicle accidents, elemental exposure, and falling were the most common concerns, and these probably reflect the typical winter conditions at Mount Rainier.

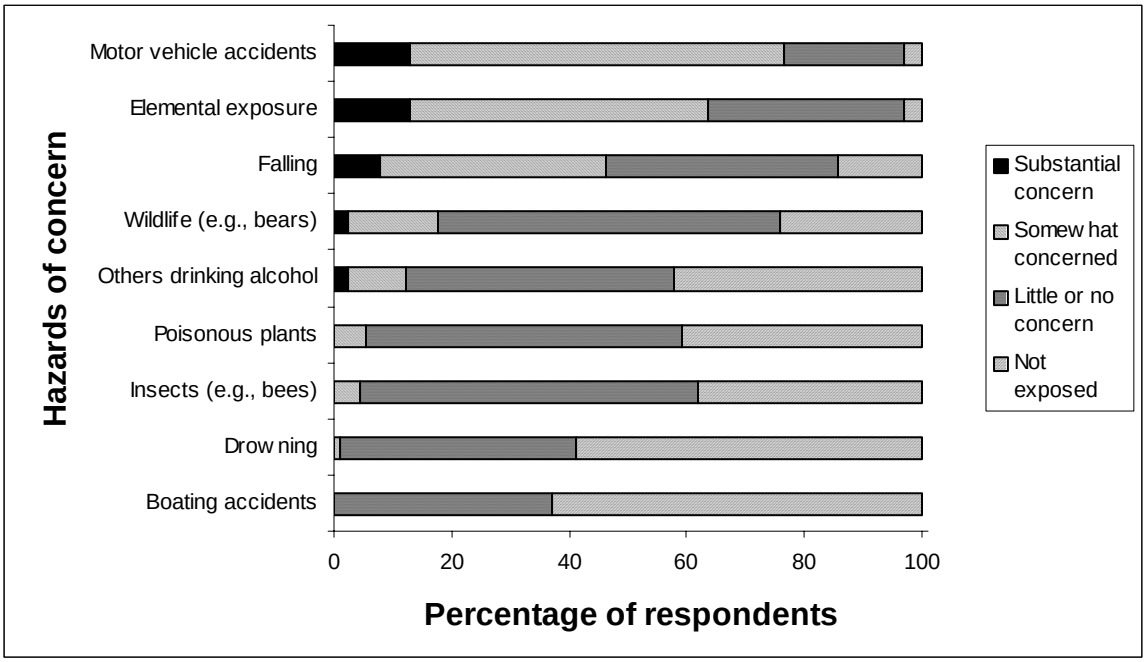

Figure 4.6: Level of concern about various hazards (N=90-94)

4.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. Ninety-two percent of respondents spent all of the time in the front seat, and 2% spent some of the time in the front seat. Of these individuals, 65% were driving for all or most of the time and 98% were wearing seatbelts most or all of the time. The majority (99%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-nine percent of respondents never encountered cars that were driving too fast, and 49% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 70% of respondents encountered cars that were driving too slowly. Most (86%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 90% thought that hazard-warning signs were adequate most or all of the time. Figure 4.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, pedestrians on or beside the roads and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

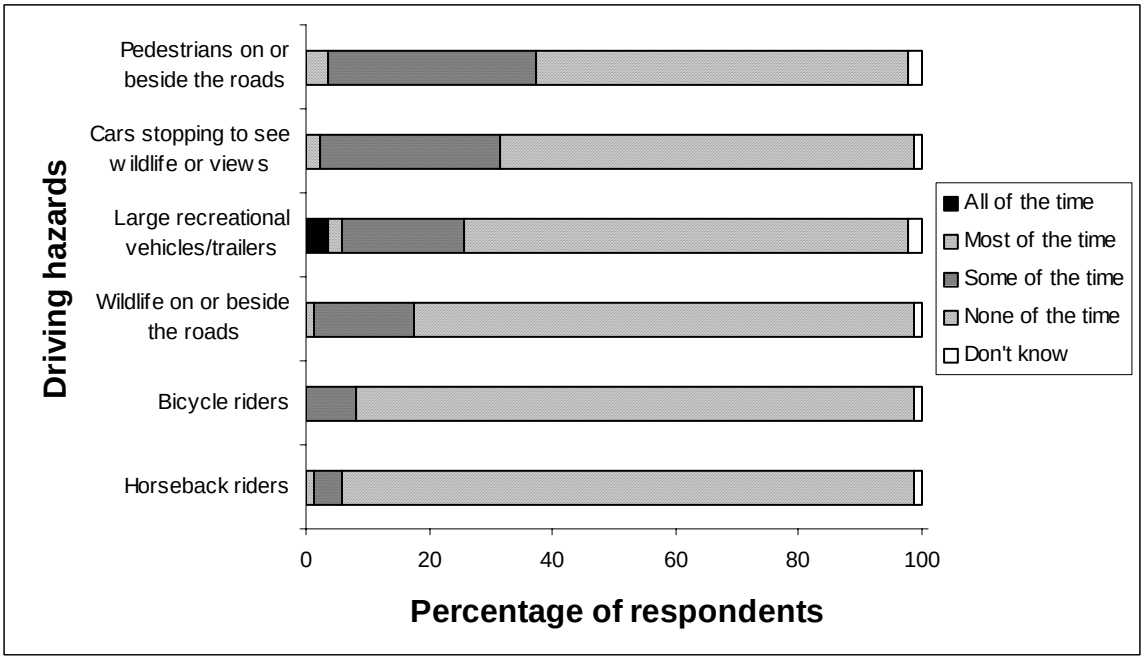

Figure 4.7: How often do these make traveling on roads more hazardous? (N=86)

4.6 Management issues:

With regard to the primary activity undertaken during their visit, 46% of respondents believed that safety was entirely the responsibility of the visitor, while 28% believed safety was the responsibility of both the visitor and the park staff (Figure 4.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 4.9 shows that the overwhelming majority (66%) of respondents thought such measures definitely did not detract.

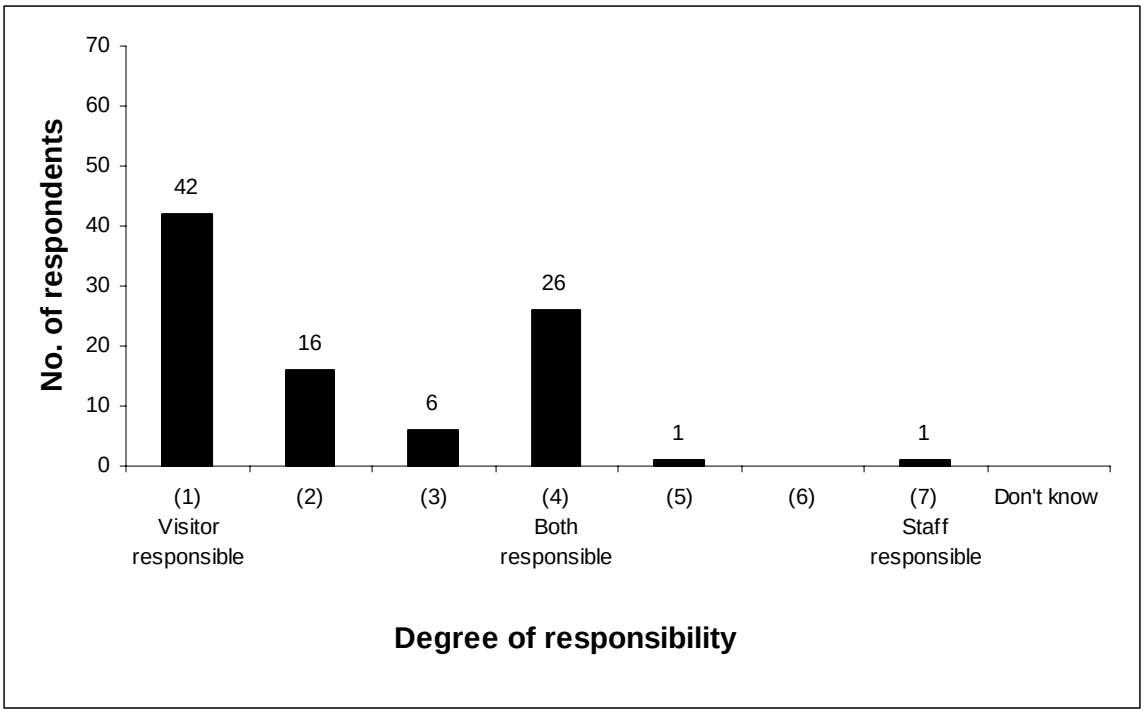

Figure 4.8: Responsibility for safety in chosen primary activity (N=92)

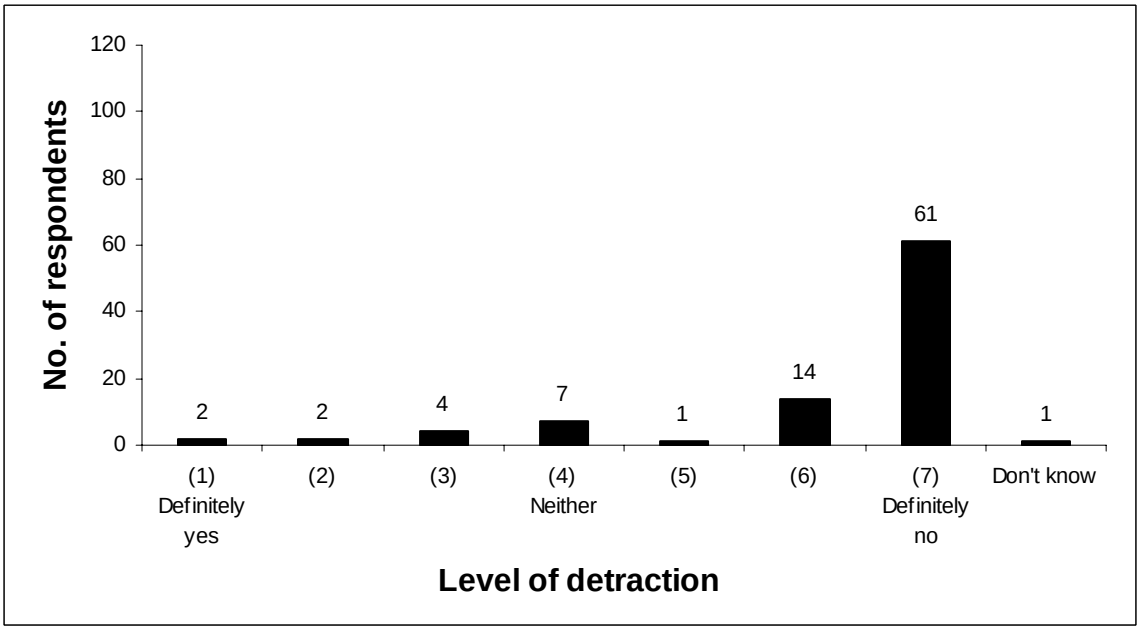

Figure 4.9: Do safety measures detract from visitor enjoyment? (N=92)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Sixty-one percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 1% disagree or disagree strongly, and 37% neither agree nor disagree. Ten percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 53% disagree or disagree strongly, and 36% neither agree nor disagree. Twenty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 42% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (80%);
- signs warning and advising about hazards (86%);
- brochures and other information warning about hazards (79%);
- restrictions on the number of persons/groups who undertake particular activities (74%);
- park rangers to enforce rules and regulations (67%);
- enforcement of alcoholic beverage restrictions (59%); and,
- safe surfaces on walkways and stairs (79%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (22%) and more or much more enforcement of alcoholic beverage prohibitions (21%). A substantial proportion of respondents did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities (10%) or if there should be greater or less enforcement of alcoholic beverage restrictions (19%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 4.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel, posted weather reports, and directional and warning signs are the most helpful sources of safety information.

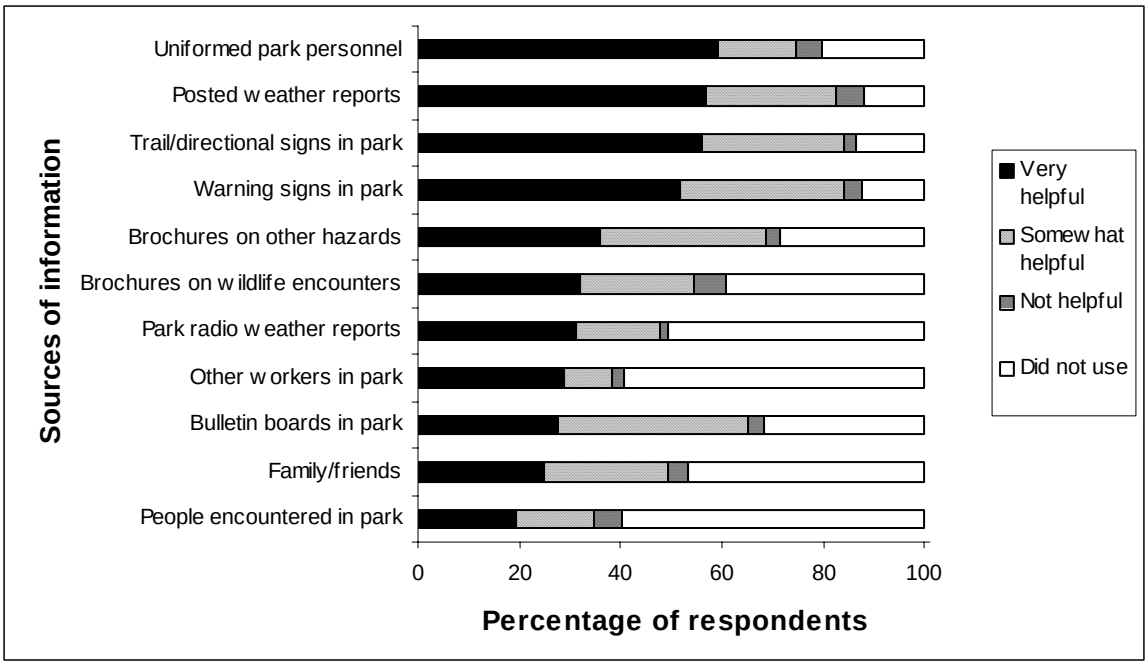

Figure 4.10: How helpful are various sources of safety information (N=66-83)

5.0 Rocky Mountain National Park (winter survey)

5.1 Sample:

At Rocky Mountain National Park, 253 visitor groups were contacted between March 22 and March 24, 2001, and 250 (98.8%) of these groups accepted questionnaires. Questionnaires were completed and returned by 142 visitor groups, resulting in a 56.8% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process).

5.2 Demographics:

Figure 5.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-seven percent of respondents were female and 53% male. The overwhelming majority (92%)of respondents were white, with 1% African-American, 1% Hispanic, and 3% Asian. Graduate school was the highest level of education attained by 32% of respondents, while an additional 39% classified themselves as college graduates. The majority (96%) of respondents were residents of the US and 4% were international visitors.

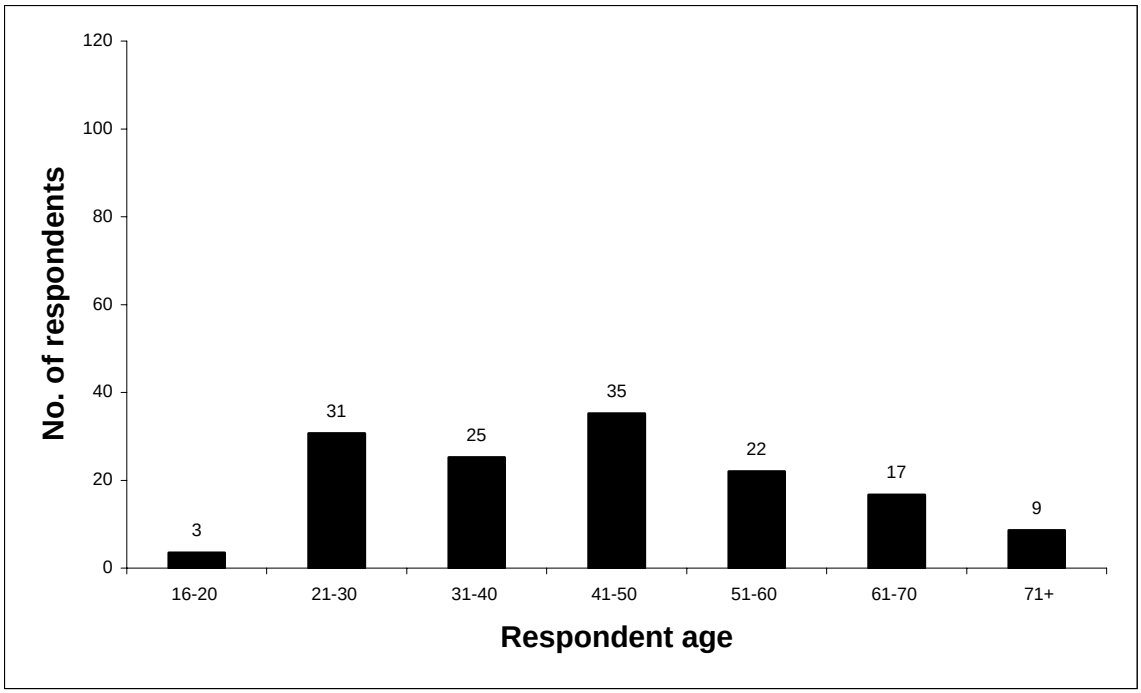

Figure 5.1: Distribution of respondents by age (N=142)

5.3 Visitation

For 30 (21%) respondents, this was their first visit to the park. Among those 112 respondents returning to the park, 19% had visited the park twice in the past 10 years

(including the current visit), 19% 3-5 times, 15% 6-10 times, and 47% 11 or more times. This visit was the primary destination for 51% of respondents, but one of only several destinations for 32% of respondents. For 17% of respondents this visit was not a planned destination at all. Fifty-seven percent of the respondents visited the park for a half day or less, 31% visited for up to one day, and 12% visited for more than one day. Seven percent of respondents were visiting the park by themselves, 59% with family members, 24% with friends, and 8% with family members and friends.

5.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 5.2).

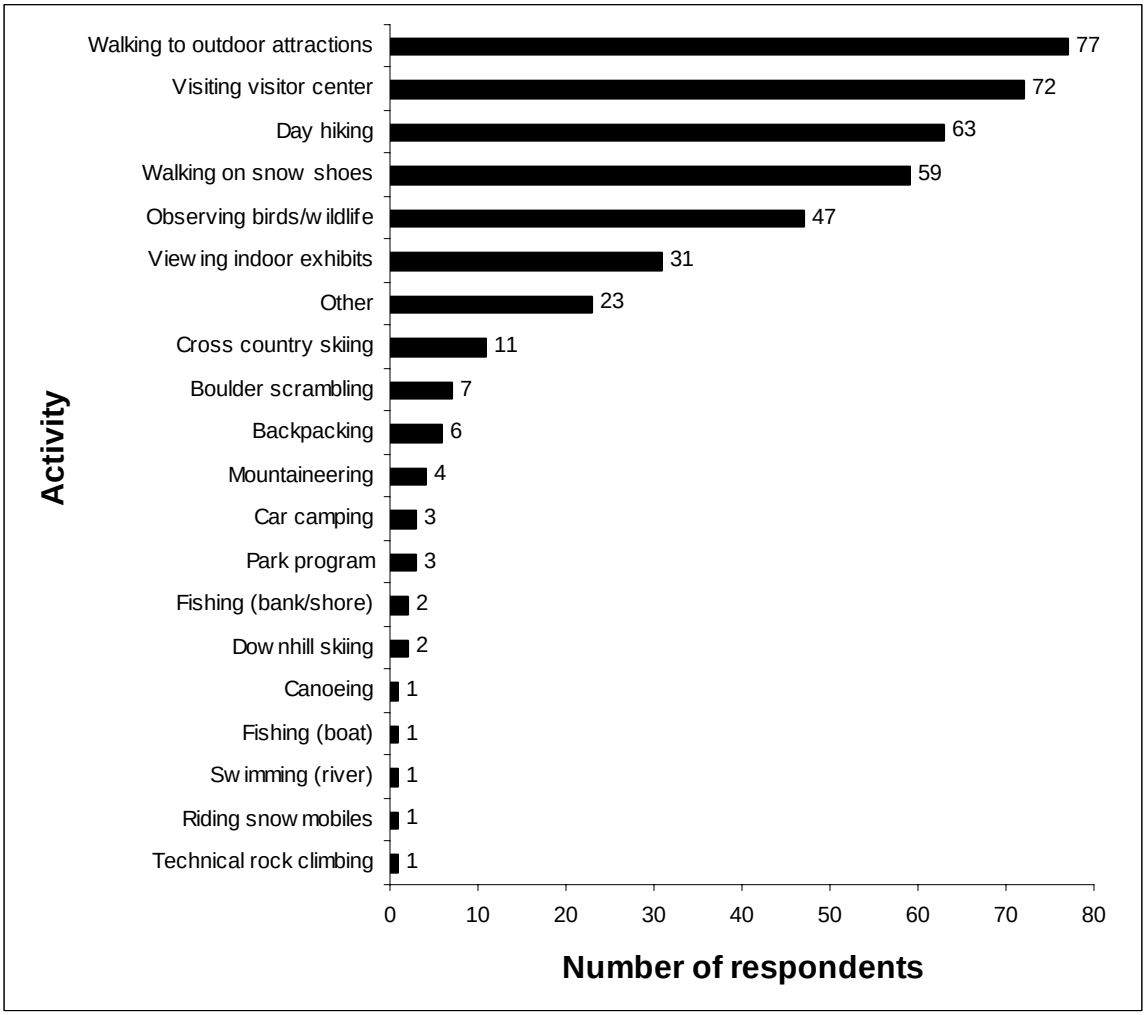

Figure 5.2: Visitor activities (N=141)
(Note: Several respondents listed more than one activity)

Figure 5.2 illustrates that many respondents walked to outdoor attractions (54%) and visited the visitor center (50%), but these are often only adjunct activities and not the

primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 5.3 illustrates that snowshoeing (30%), dayhiking (26%), and walking to outdoor attractions (21%), and various other (9%) activities were the most popular primary activities. Most respondents (87%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 8% engaged in these activities alone, less than 2% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 5.4). Ratings of personal experience varied little between between males and females, but 8 of the 9 respondents indicating no experience and 9 of the 18 with little experience (i.e., a score of 5 or 6) were engaged in snowshoeing.

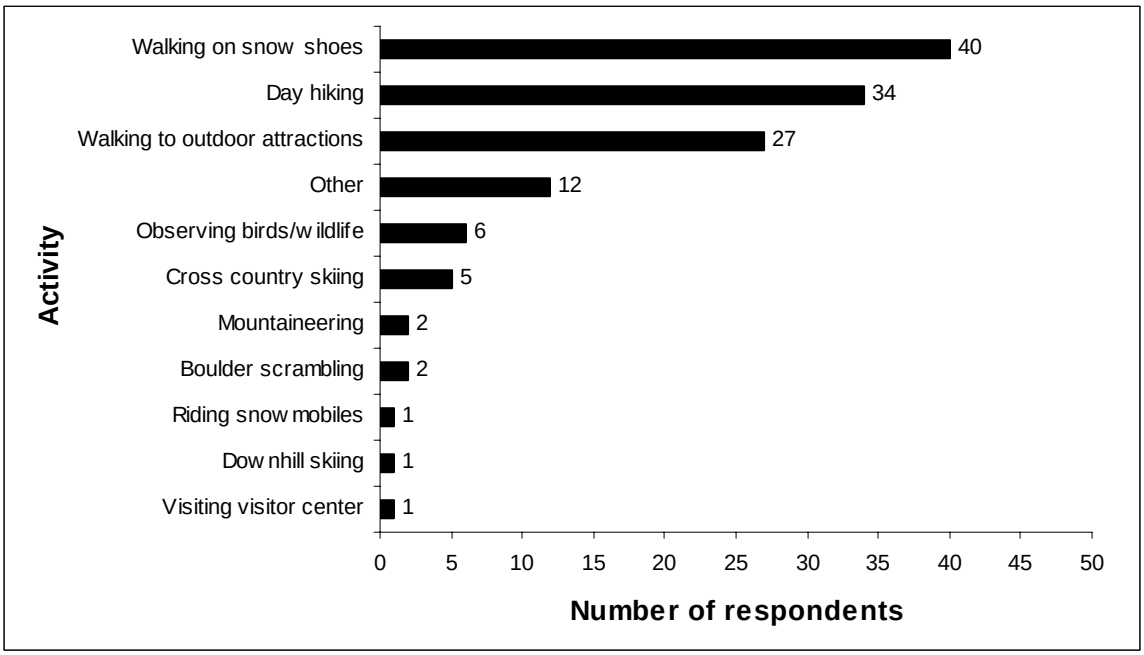

Figure 5.3: Primary visitor activities (N=131)

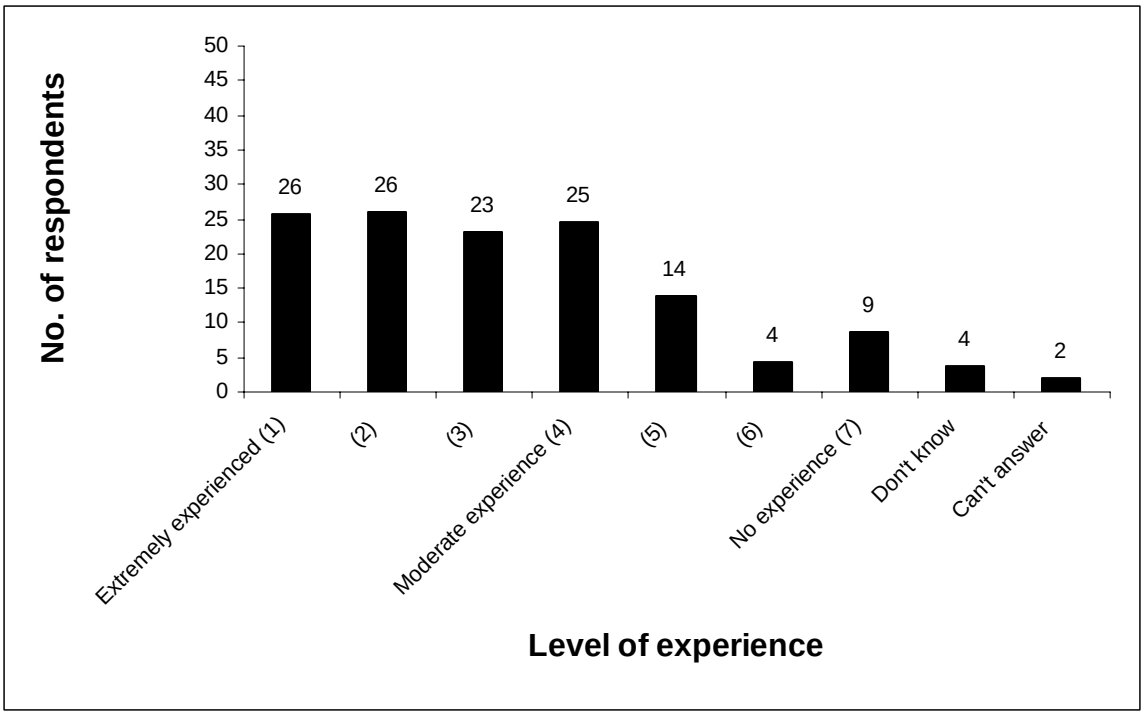

Figure 5.4: Personal level of experience (N=132)

Preparedness is one aspect of experience, and Figure 5.5 shows how prepared respondents were based on the safety items that they had available during their visit.

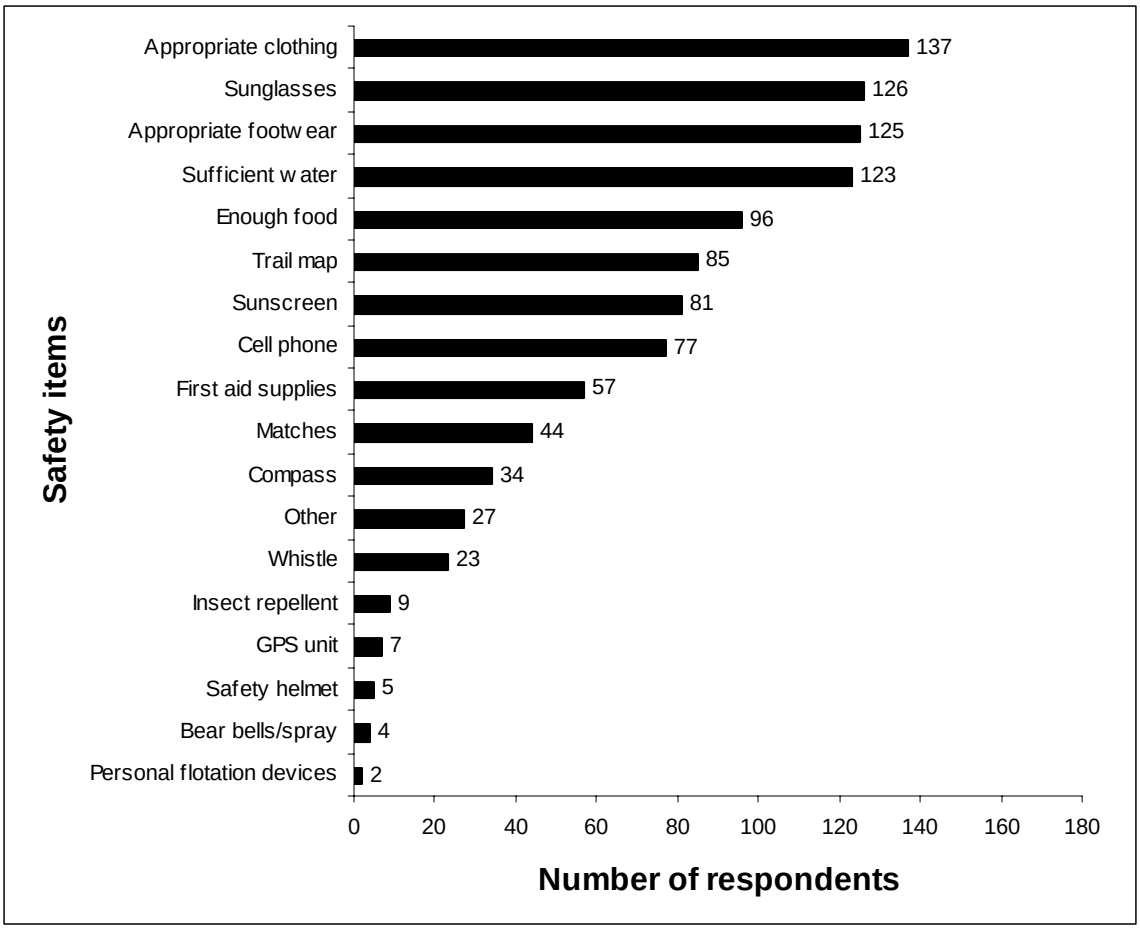

Figure 5.5: Personal safety items (N=137)

A relatively large number of respondents (26) expressed concerns about suffering an injury or illness while engaged in their primary activity, and this may reflect the inherent dangers of recreating in winter conditions. Among these 26, some were concerned for their own safety only briefly (46%) or for some of time (27%). Twenty-four respondents expressed concern for others for much of the time (17%), some of the time (23%), or only briefly (41%).

Without reference to a particular activity, however, Figure 5.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, falls, elemental exposure, and motor vehicle accidents were the most common concerns.

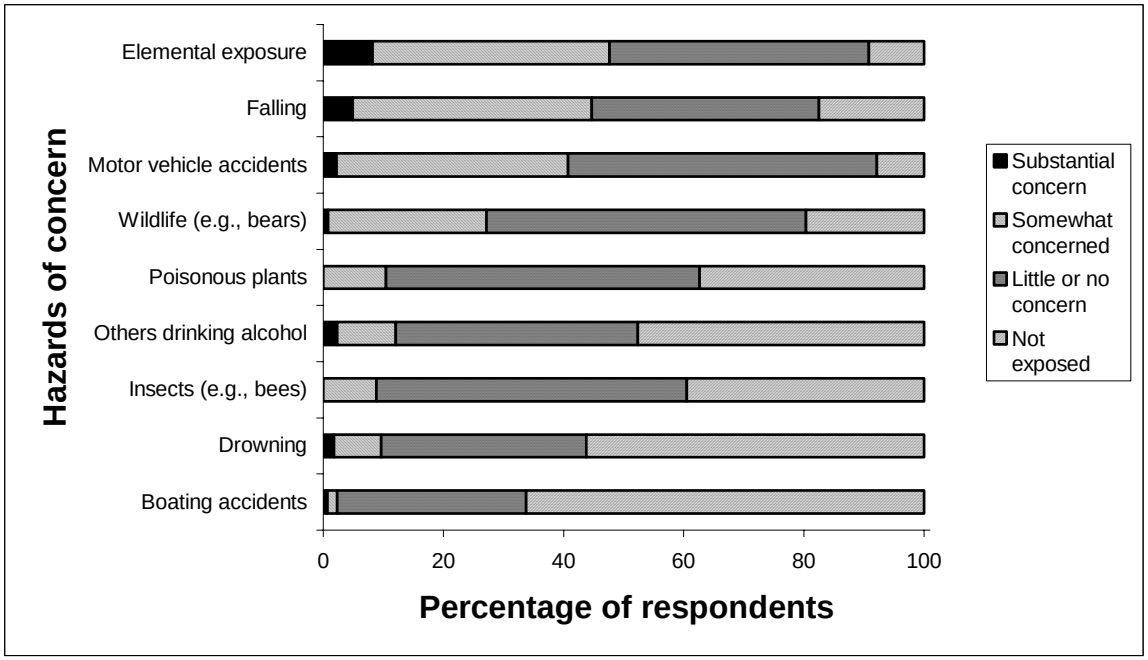

Figure 5.6: Level of concern about various hazards (N=137-140)

5.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 99% of respondents were traveling in privately owned or rented vehicles. Ninety percent of respondents spent all of the time in the front seat, and 3% spent some of the time in the front seat. Of these individuals, 70% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-two percent of respondents never encountered cars that were driving too fast, and 44% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 46% of respondents encountered cars that were driving too slowly. Most (84%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time. Figure 5.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, wildlife on or beside the roads and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

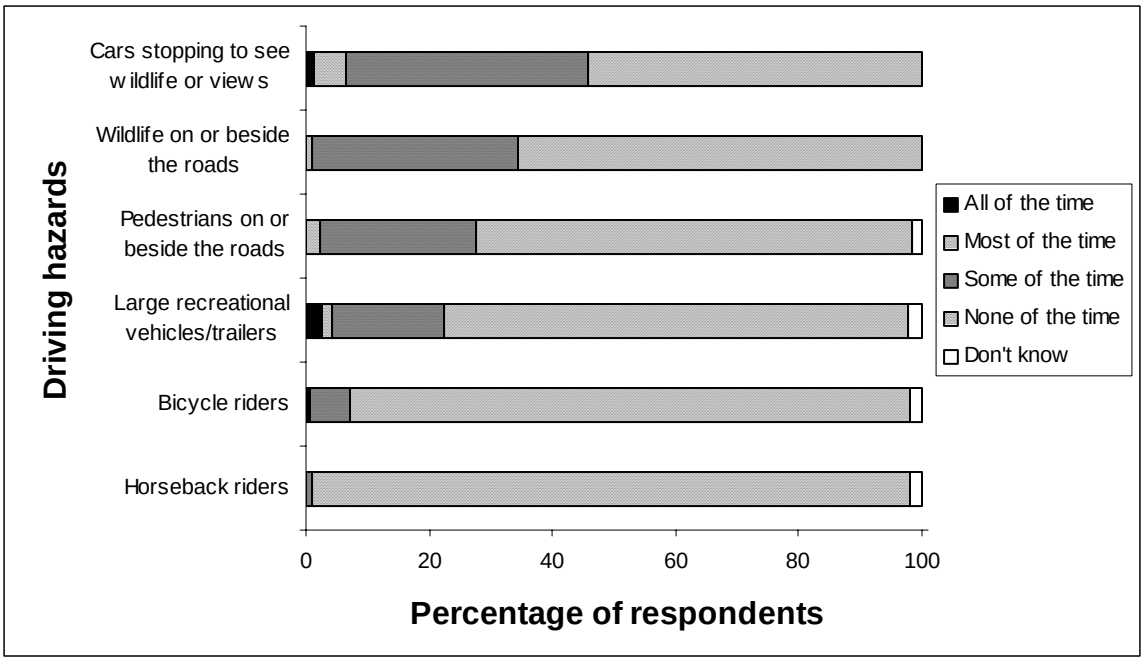

Figure 5.7: How often do these make traveling on roads more hazardous? (N=129-131)

5.6 Management issues:

With regard to the primary activity undertaken during their visit, 59% of respondents believed that safety was entirely the responsibility of the visitor, while 16% believed safety was the responsibility of both the visitor and the park staff (Figure 5.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 5.9 shows that the overwhelming majority (74%) of respondents thought such measures definitely did not detract. The one respondent who indicated that the safety measures did detract from their enjoyment, was engaged in dayhiking.

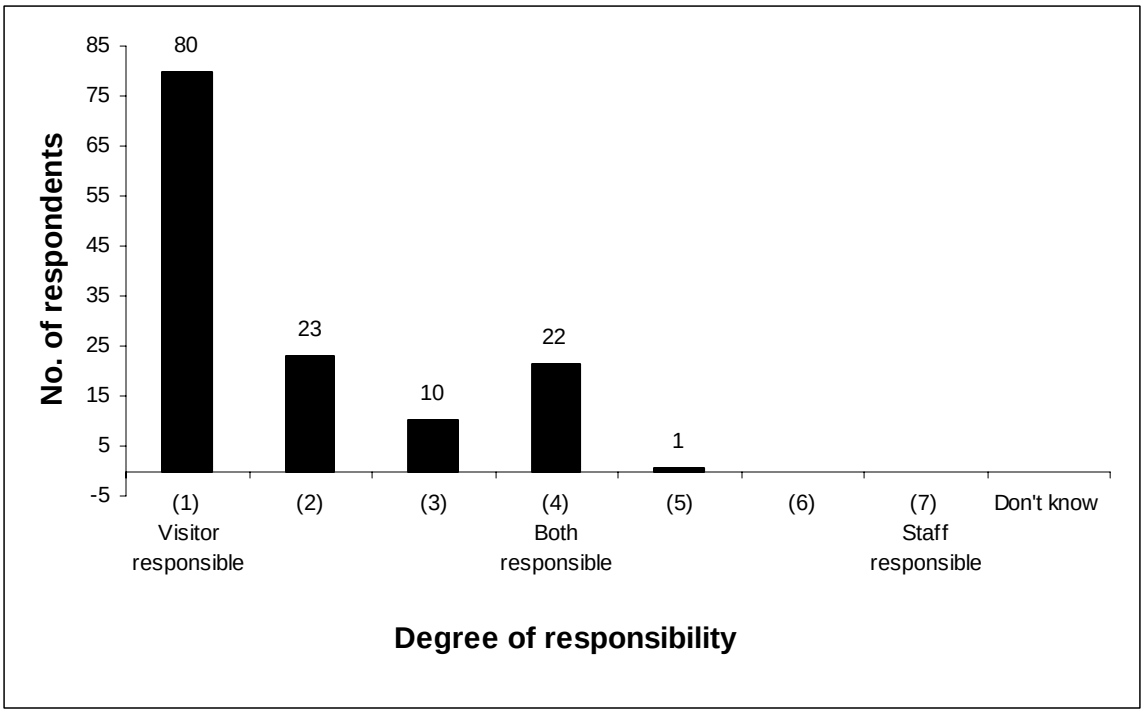

Figure 5.8: Responsibility for safety in chosen primary activity (N=135)

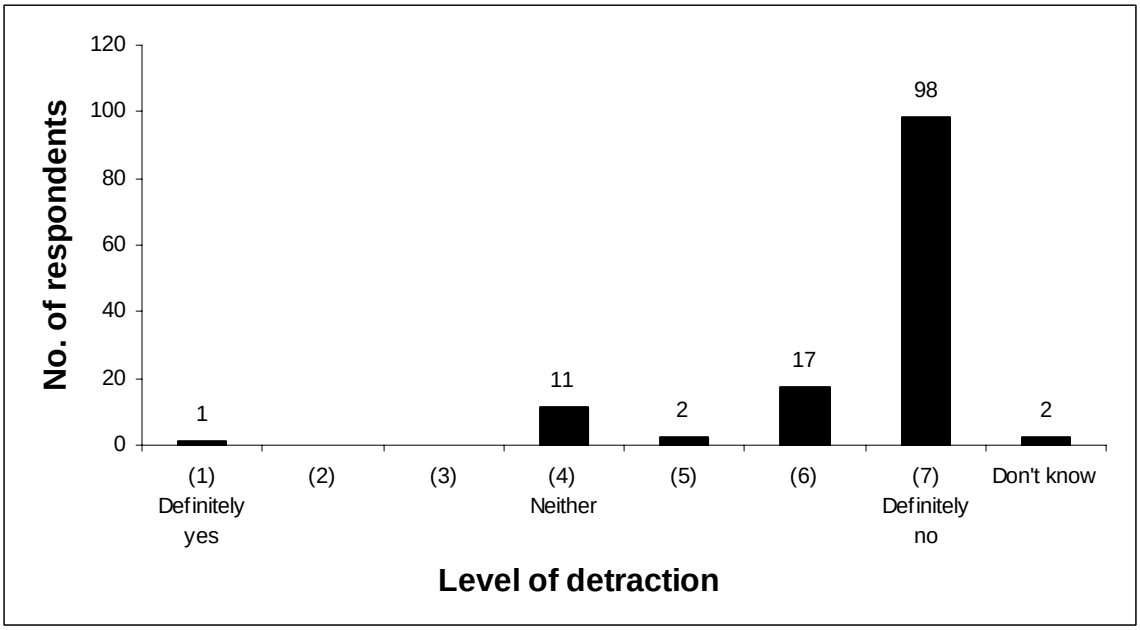

Figure 5.9: Do safety measures detract from visitor enjoyment? (N=133)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Sixty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, less than 1% disagree or disagree strongly, and 33% neither agree nor disagree. Eight percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 57% disagree or disagree strongly, and 33% neither agree nor disagree. Thirty-one percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 37% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (80%);
- signs warning and advising about hazards (89%);
- brochures and other information warning about hazards (71%);
- restrictions on the number of persons/groups who undertake particular activities (60%);
- park rangers to enforce rules and regulations (61%);
- enforcement of alcoholic beverage restrictions (57%); and,
- safe surfaces on walkways and stairs (76%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (27%) and more or much more enforcement of alcoholic beverage prohibitions (15%). Substantial proportions of respondents, however, did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities (26%) or if there should be greater enforcement of alcoholic beverage prohibitions (25%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 5.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

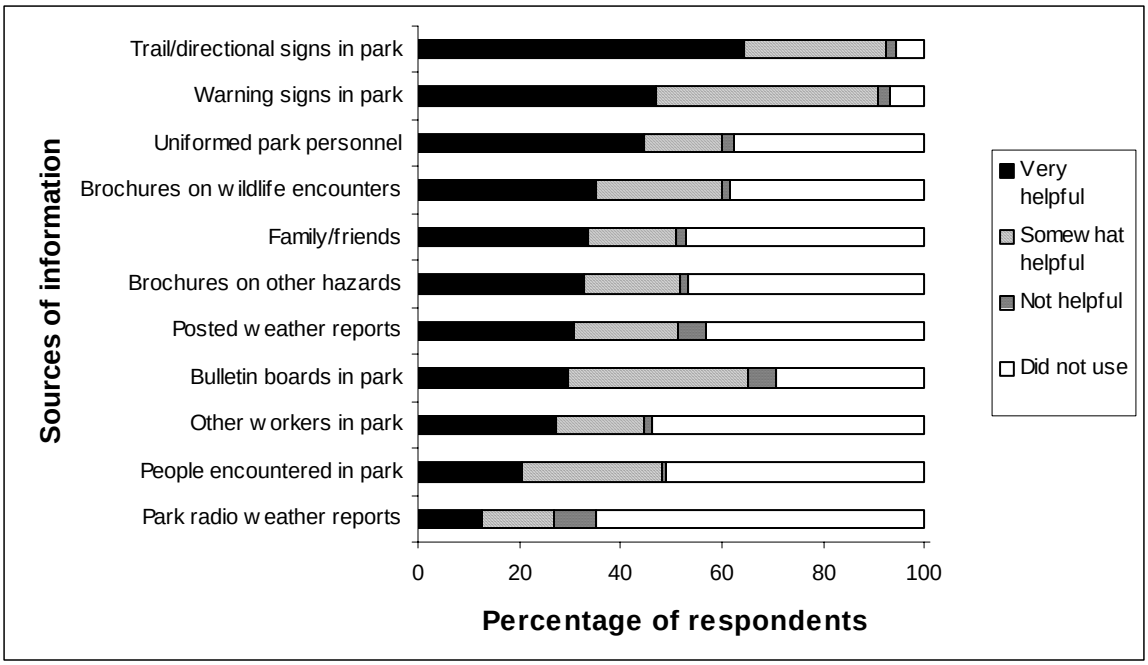

Figure 5.10: How helpful are various sources of safety information (N=78-132)

6.0 Saguaro National Park (winter survey)

6.1 Sample:

At Saguaro National Park, 261 visitor groups were contacted between March 17 and March 20, 2001, and 257 (98%) of these groups accepted questionnaires. Questionnaires were completed and returned by 155 visitor groups, resulting in a 60.3% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 1 respondent failed to report his or her age, the responses could not be appropriately weighted and were excluded from the analysis. This means that the sample size (N) is 154 in most cases below.

6.2 Demographics:

Figure 6.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-eight percent of respondents were female and 42% male. The overwhelming majority (93%)of respondents were white, with 2% Hispanic, and 1% Asian. Graduate school was the highest level of education attained by 27% of respondents, while an additional 36% classified themselves as college graduates. The majority (93%) of respondents were US residents and 7% were international visitors.

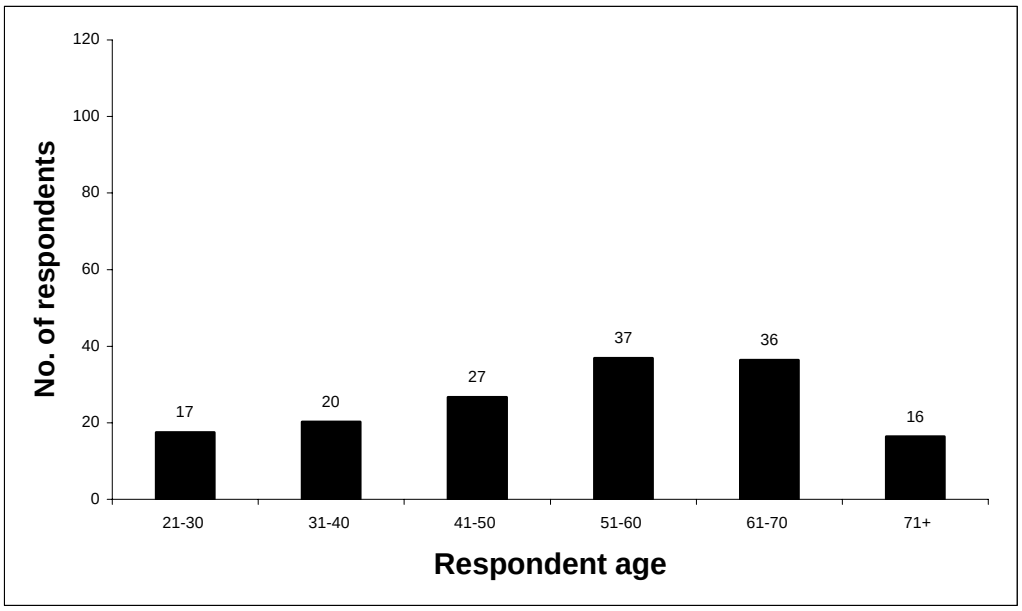

Figure 6.1: Distribution of respondents by age (N=154)

6.3 Visitation

For 74 (49%) respondents, this was their first visit to the park. Among those 80 respondents returning to the park, 34% had visited the park twice in the past 10 years (including the current visit), 28% 3-5 times, 17% 6-10 times, and 21% 11 or more times. This visit was the primary destination for 25% of respondents, but one of only several destinations for 59% of respondents. For 16% of respondents this visit was not a planned

destination at all. Seventy-two percent of the respondents visited the park for a half day or less, 14% visited for up to one day, and 14% visited for more than one day. Nine percent of respondents were visiting the park by themselves, 63% with family members, 17% with friends, and 8% with family members and friends.

6.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 6.2).

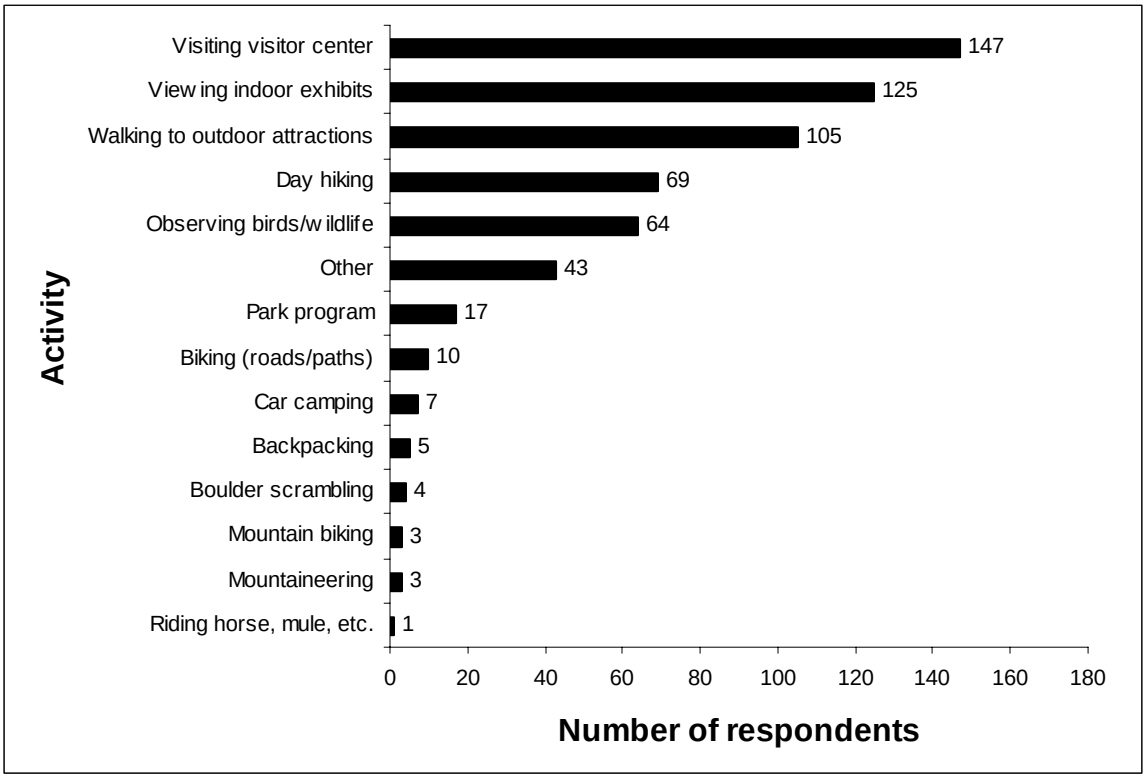

Figure 6.2: Visitor activities (N=154)
(Note: Several respondents listed more than one activity)

Figure 6.2 illustrates that many respondents visited the visitor center (96%) and viewed indoor exhibits (81%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 6.3 illustrates that dayhiking (31%), walking to outdoor attractions (23%), visiting the visitor center (11%), and various other (19%) activities were the most popular primary activities. Most respondents (85%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 13% engaged in these activities alone, less than 1% with people aside from their own personal group, and 1% as members of organized groups.

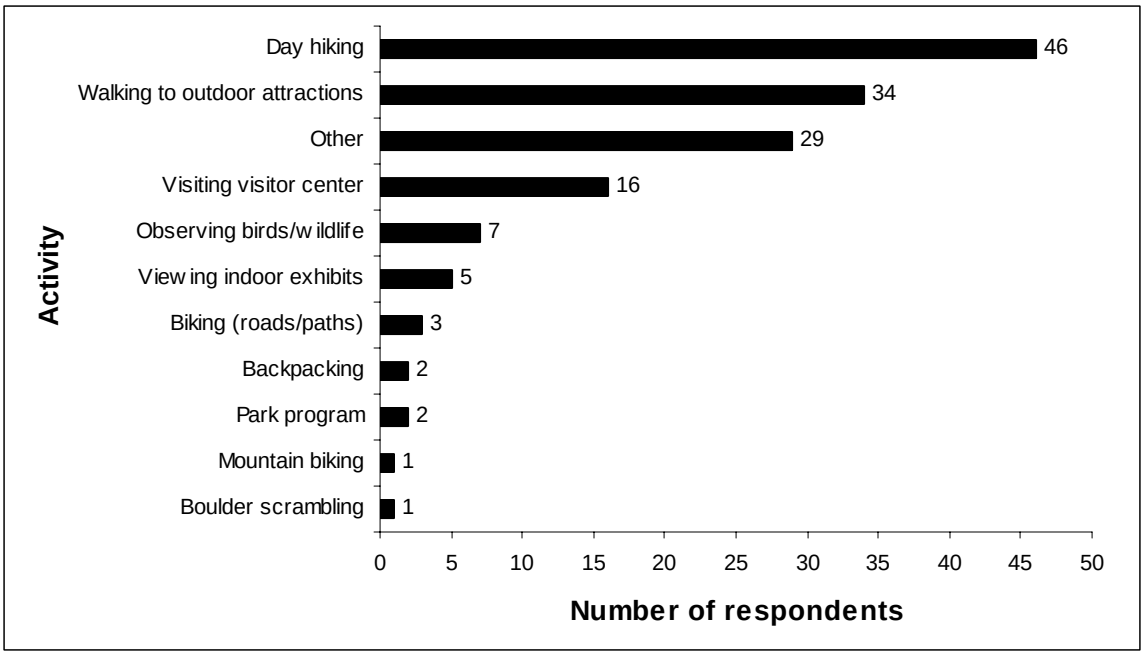

Figure 6.3: Primary visitor activities (N=146)

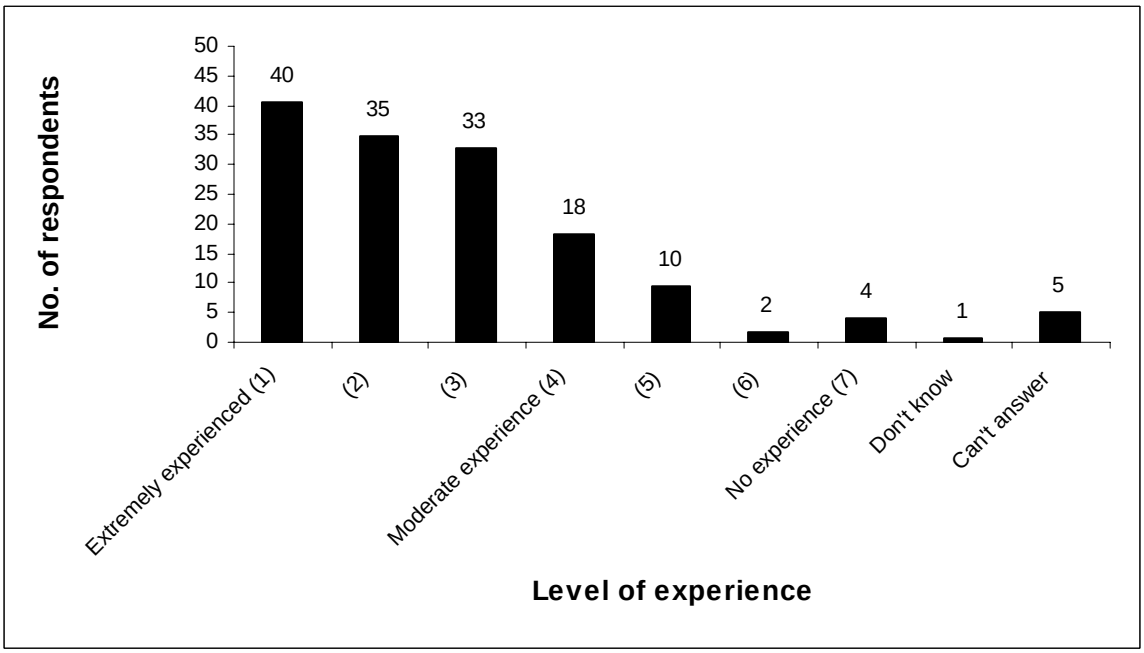

Figure 6.4: Personal level of experience (N=147)

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7

(not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 6.4). Ratings of personal experience varied little between activities and between males and females. Preparedness is one aspect of experience, and Figure 6.5 shows how prepared respondents were based on the safety items that they had available during their visit.

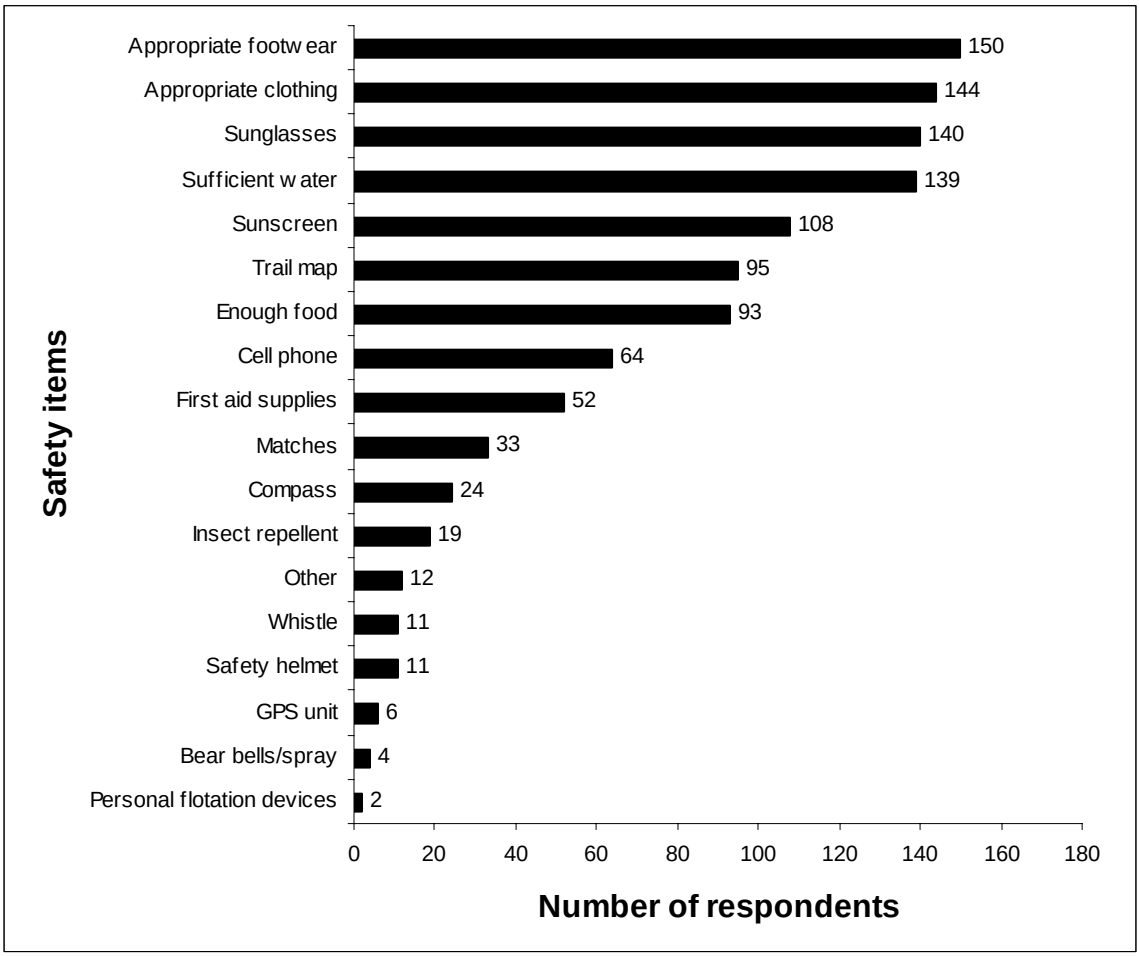

Figure 6.5: Personal safety items (N=150)

Only seven respondents (5%) expressed any concern about suffering an injury or illness while engaged in their primary activity, and they were concerned only briefly or for some of the time. Without reference to a particular activity, however, Figure 6.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, few people were seriously concerned, but more than 28% or more had some concerns about wildlife, insects, falling, elemental exposure, and motor vehicle accidents.

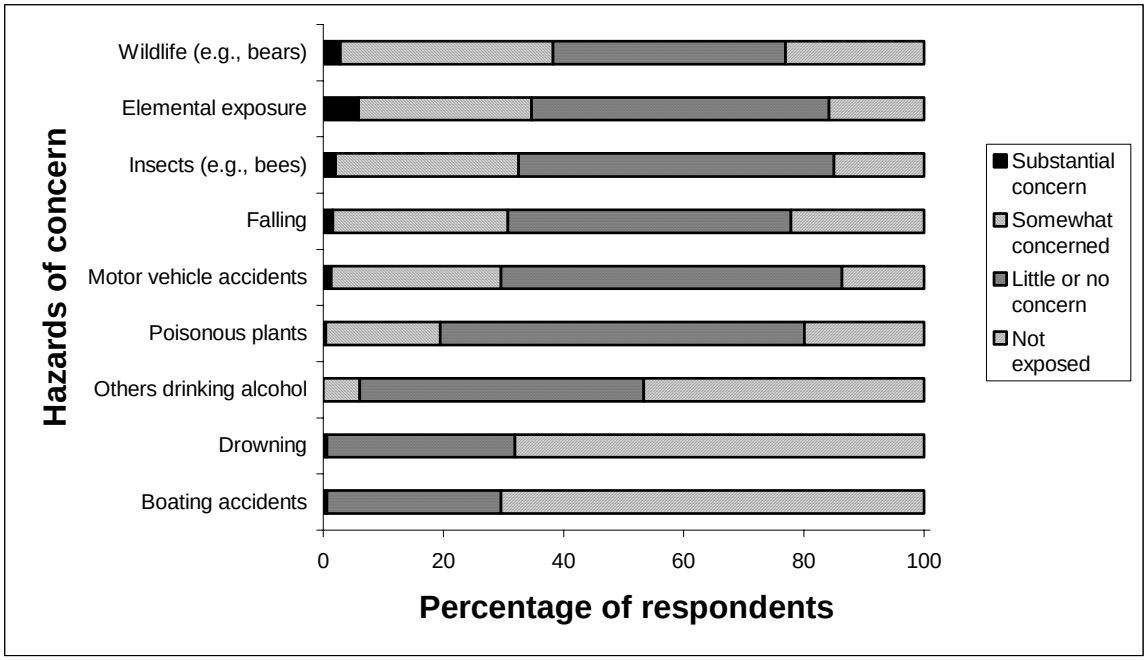

Figure 6.6: Level of concern about various hazards (N=150-153)

6.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 96% of respondents were traveling in privately owned or rented vehicles. Eighty-four percent of respondents spent all of the time in the front seat, and 4% spent some of the time in the front seat. Of these individuals, 56% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Sixty percent of respondents never encountered cars that were driving too fast, and 34% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 38% of respondents encountered cars that were driving too slowly. Most (96%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 6.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

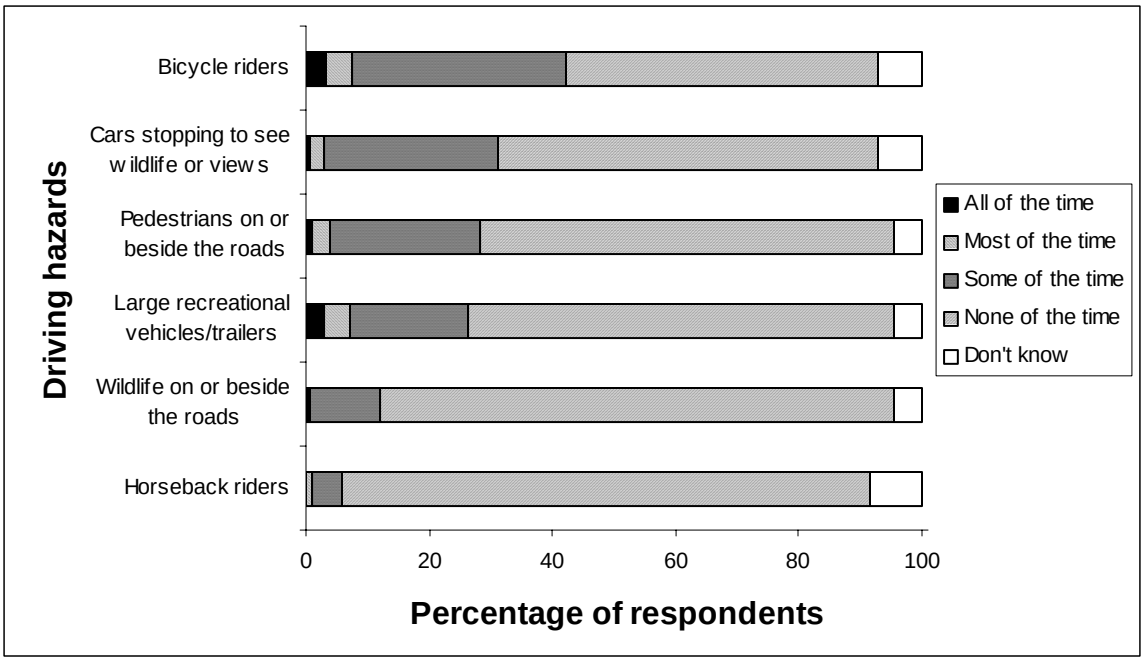

Figure 6.7: How often do these make traveling on roads more hazardous? (N=126-128)

6.6 Management issues:

With regard to the primary activity undertaken during their visit, 42% of respondents believed that safety was entirely the responsibility of the visitor, while 35% believed safety was the responsibility of both the visitor and the park staff (Figure 6.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 6.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (4%) who indicated that the safety measures did detract from their enjoyment, two were birding, one was hiking, and three were engaged in other activities.

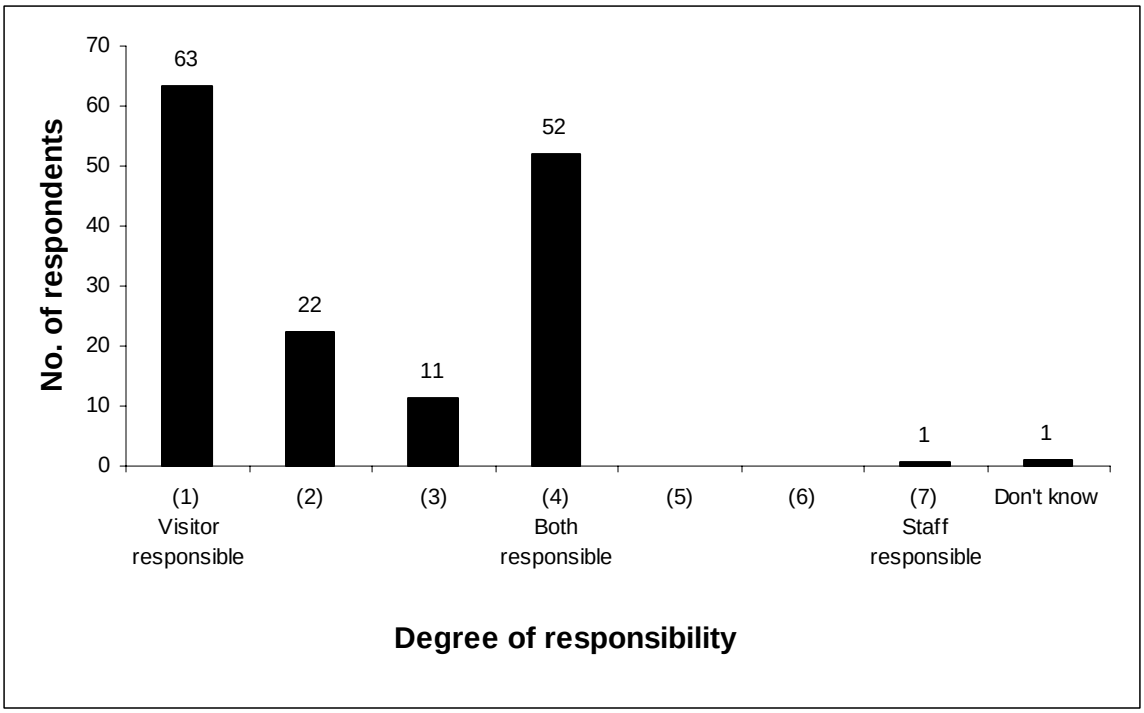

Figure 6.8: Responsibility for safety in chosen primary activity (N=151)

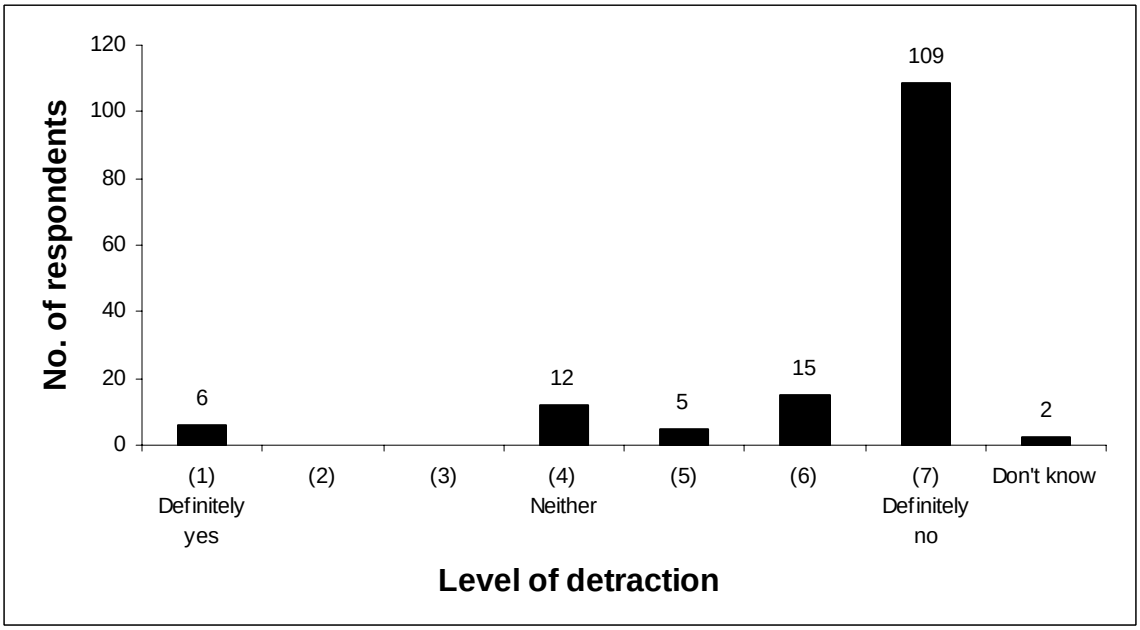

Figure 6.9: Do safety measures detract from visitor enjoyment? (N=149)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 8% disagree or disagree strongly, and 34% neither agree nor disagree. Sixteen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 44% disagree or disagree strongly, and 37% neither agree nor disagree. Twenty-seven percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 30% agree or agree strongly, and 41% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (79%);
- signs warning and advising about hazards (84%);
- brochures and other information warning about hazards (79%);
- restrictions on the number of persons/groups who undertake particular activities (58%);
- park rangers to enforce rules and regulations (64%);
- enforcement of alcoholic beverage restrictions (57%); and,
- safe surfaces on walkways and stairs (83%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (18%) and more or much more enforcement of alcoholic beverage prohibitions (14%). Substantial proportion of respondents did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities (28%) or if there should be greater enforcement of alcohol prohibitions (25%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 6.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

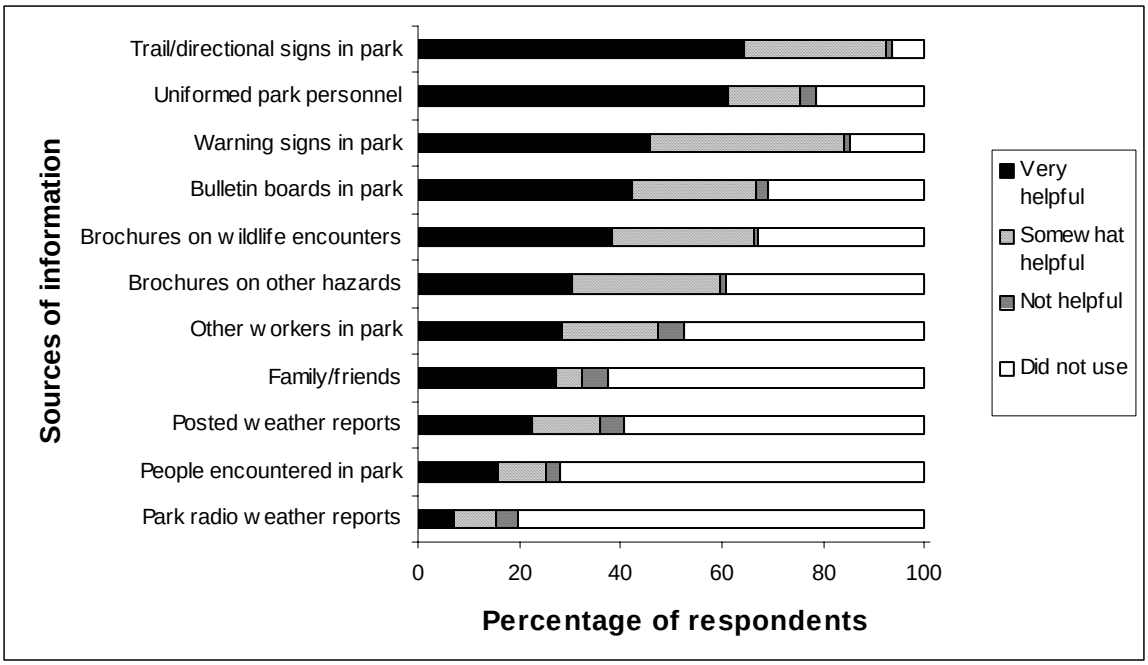

Figure 6.10: How helpful are various sources of safety information (N=69-134)

7.0 Statue of Liberty/Ellis Island National Monument (winter survey)

7.1 Sample:

At the Statue of Liberty/Ellis Island National Monument, 315 visitor groups were contacted between January 20 and January 23, 2001, and on February 28, 2001.[2] Two hundred forty-eight (78.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 126 visitor groups, resulting in a 50.8% response rate for this park.

7.2 Demographics:

Figure 7.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (90%)of respondents were white, with 3% African-American, 2% Hispanic, and 2% Asian. Graduate school was the highest level of education attained by 20% of respondents, while 34% classified themselves as college graduates. The majority (67.5%) of respondents were residents of the US and 32.5% were international visitors.

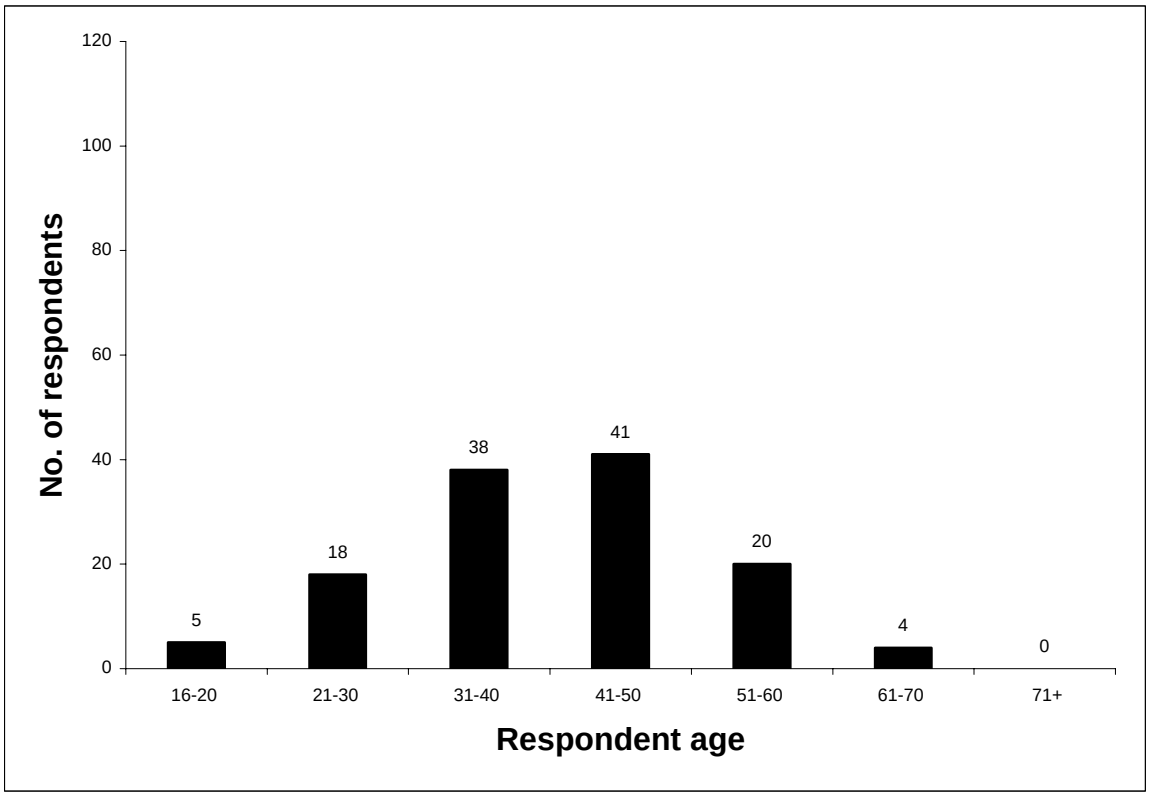

Figure 7.1: Distribution of respondents by age (N=126)

[2] The distribution of surveys was interrupted on January 21, 2001 when the park was closed due to a snow storm. The survey team returned to complete the distribution of surveys on February 28, 2001.

7.3 Visitation

For 97 (78%) respondents, this was their first visit to the park. Among those respondents returning to the park, 84% had visited the park twice in the past 10 years (including the current visit) and 16% had visited 3-5 times. This visit was the primary destination for 19% of respondents, but one of only several destinations for 75% of respondents. For 6% of respondents this visit was not a planned destination at all. Eighty-eight percent of the respondents expected to visit the park for a half day or less, 11% expected to stay for up to one day, and 1% expected to stay for more than one day. Seven percent of respondents were visiting the park by themselves, 50% with family members, 29% with friends, and 10% with family members and friends.

7.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 7.2), although many of the named activities do not apply at the Statue of Liberty/Ellis Island.

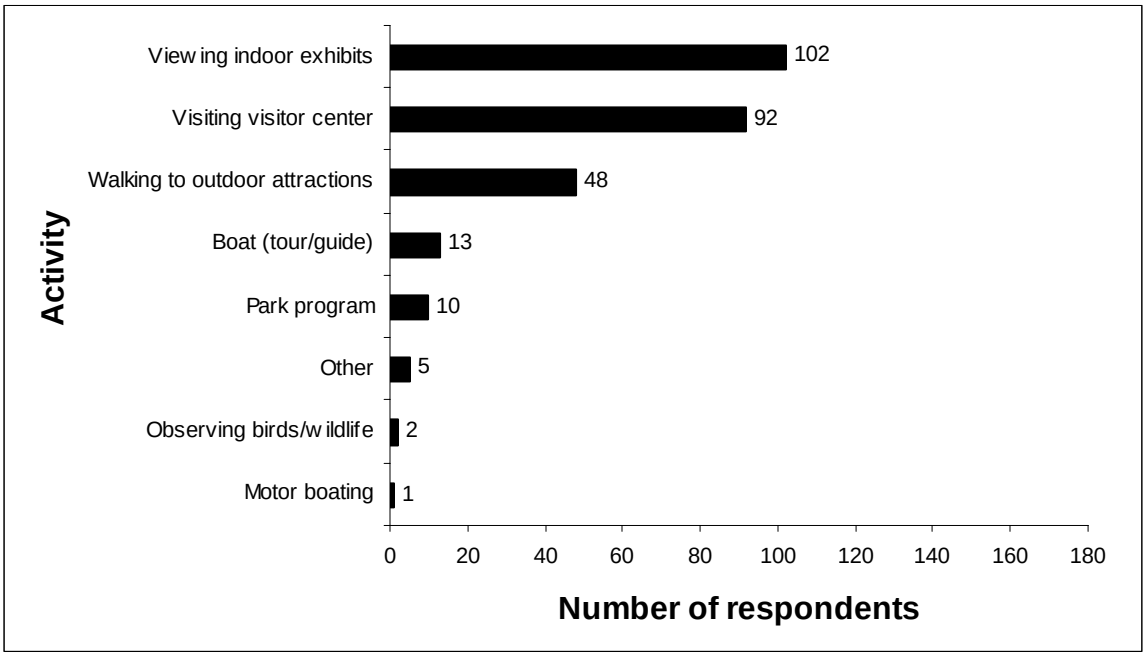

Figure 7.2: Visitor activities (N=126)
(Note: Several respondents listed more than one activity)

Figure 7.2 illustrates that most respondents visited the visitor center (72%) and viewed indoor exhibits (80%). Whereas these are often only adjunct activities at many parks, they are the primary purpose for many visitors to the Statue of Liberty/Ellis Island, as illustrated in Figure 7.3 which shows the activities that engaged the respondents for most of the time during their visit. Most respondents (83%) engage in these activities with

members of their own personal group (i.e., friends and family members), although 8% engage in these activities alone, and 6% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people consider themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 7.4). The question regarding experience really applies better to activities such as mountaineering, however, and rating experience for visiting visitor centers and viewing indoor exhibits may seem somewhat absurd. Preparedness is one aspect of experience, although again, this may be less relevant to a park such as the Statue of Liberty/Ellis Island. Nevertheless, Figure 7.5 shows how prepared respondents were based on the safety items that they had available during their visit.

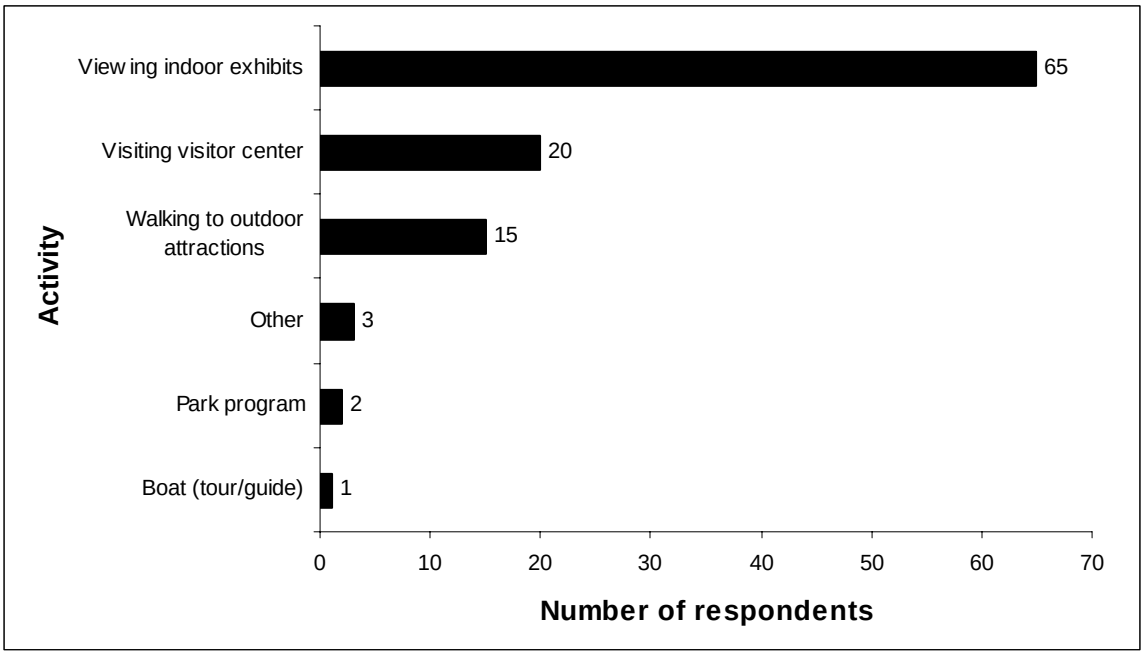

Figure 7.3: Primary visitor activities (N=106)

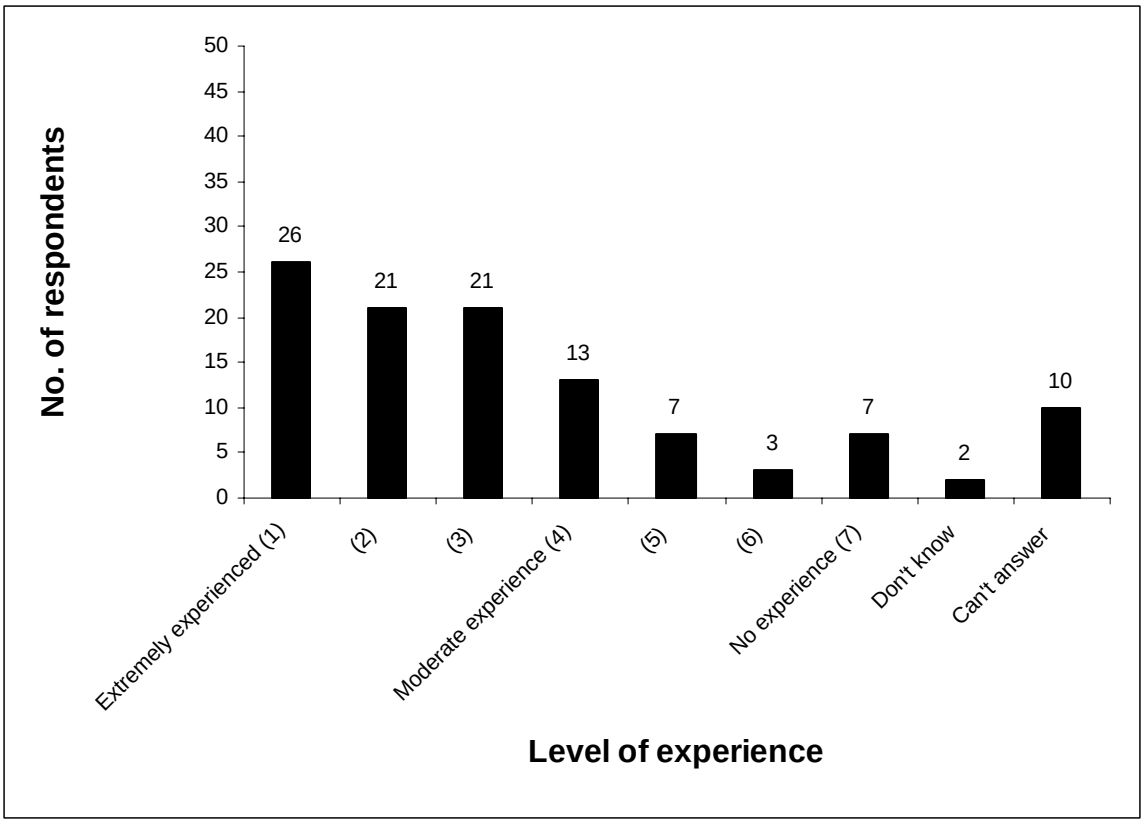

Figure 7.4: Personal level of experience (N=110)

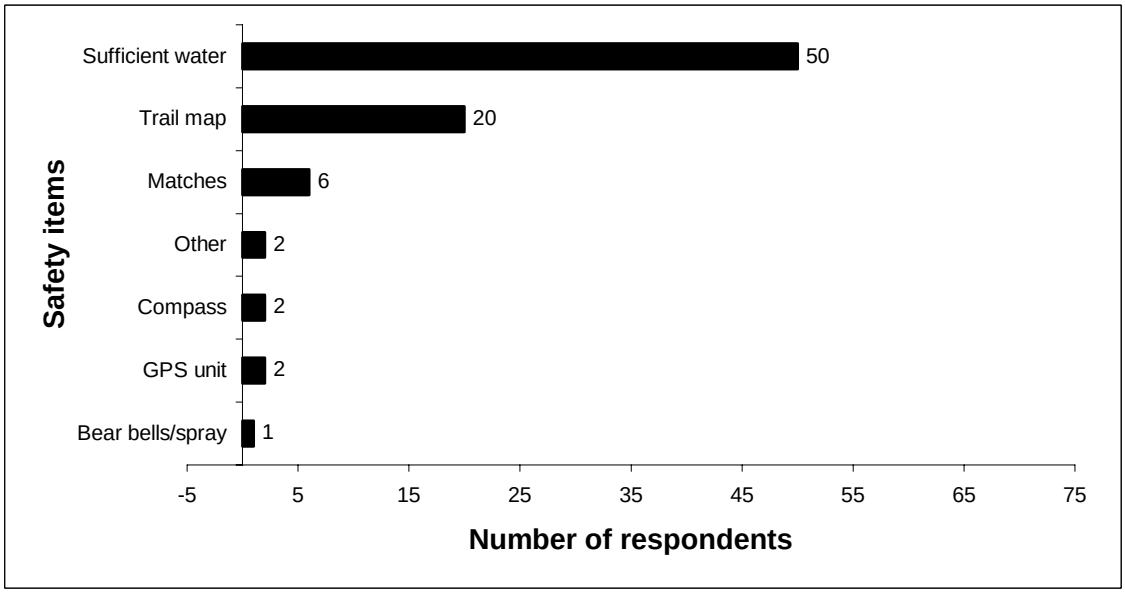

Figure 7.5: Personal safety items (N=83)

Surprisingly, 19 (17%) respondents expressed concern about suffering an injury or illness while engaged in their primary activity, although 15 were concerned only briefly. Sixteen were quite or somewhat concerned about the safety of themselves and others.

Without reference to a particular activity, however, Figure 7.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, falling, exposure to the weather, and boating accidents are of most concern. Insects and wildlife were of little of no concern. This may not seem surprising, except that many of the most common accidents at the Statue of Liberty/Ellis Island are bee stings.

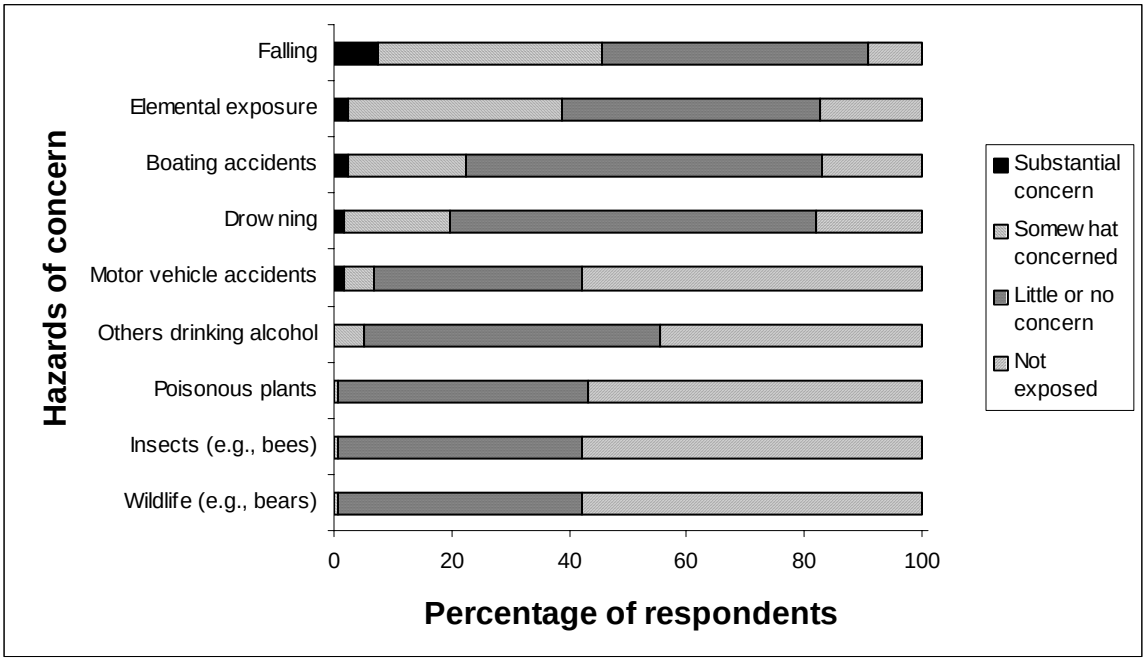

Figure 7.6: Level of concern about various hazards (N=119-122)

7.5 Motor vehicles:
Many respondents answered the battery of questions pertaining to motor vehicle safety. Unfortunately, the responses must refer to driving to and from the park, since visitors are not allowed to drive in the park. Consequently, we have excluded these responses.

7.6 Management issues:
With regard to the primary activity undertaken during their visit, only 13% of respondents believed that safety was entirely the responsibility of the visitor, while 65% believed safety was the responsibility of both the visitor and the park staff (Figure 7.8). This pattern is quite different from that found in many other parks, where respondents place much more burden for responsibility on the visitor. This may reflect the nature of the park itself and the kinds of activities that visitors pursue.

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 7.9 shows that the overwhelming majority (62%) of respondents thought such measures definitely did not detract. This pattern is consistent with that found at other parks.

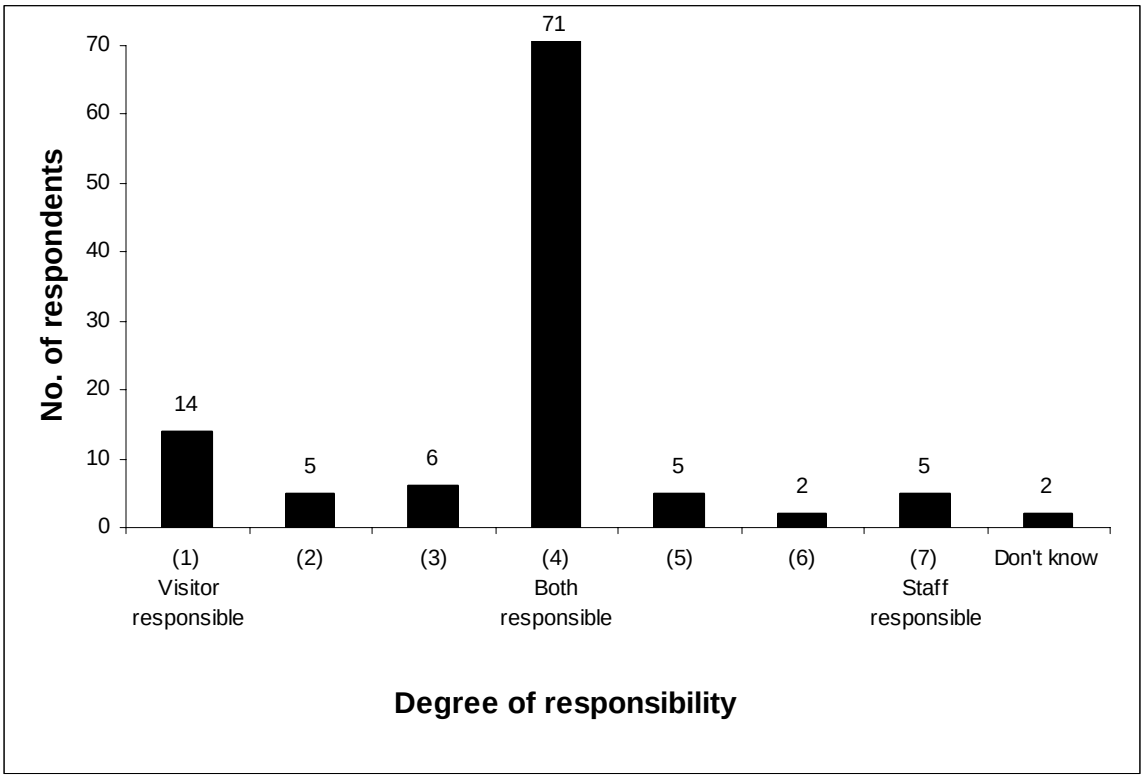

Figure 7.8: Responsibility for safety in chosen primary activity (N=110)

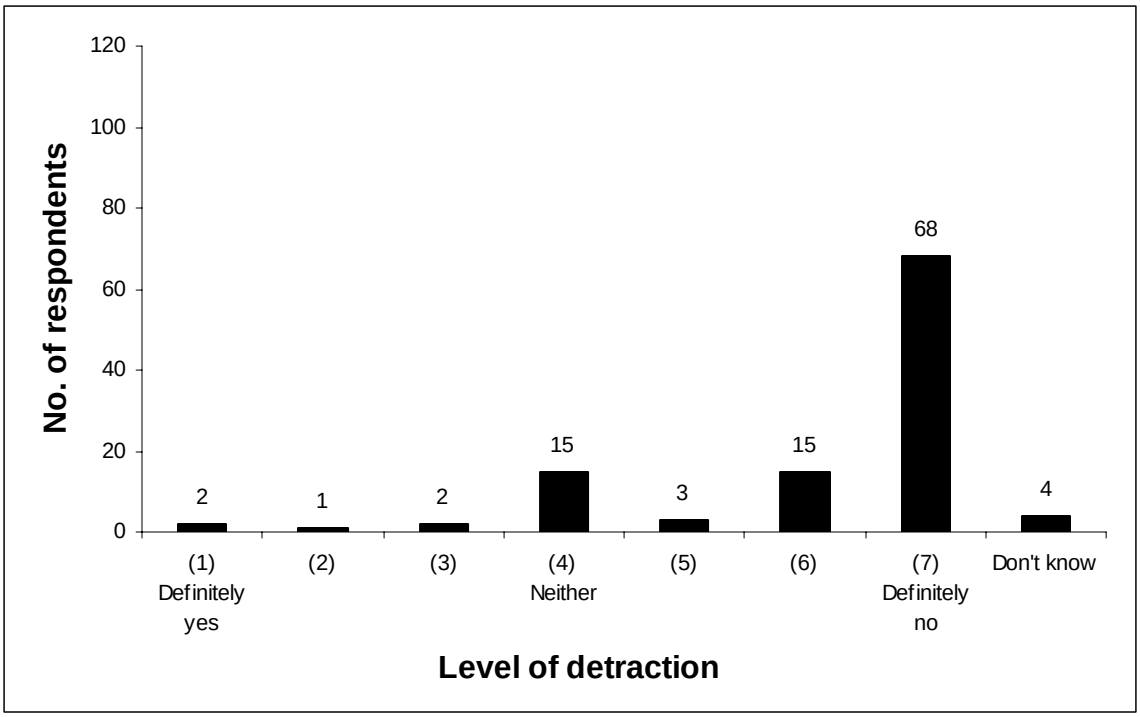

Figure 7.9: Do safety measures detract from visitor enjoyment? (N=110)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Twenty-seven percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 20% disagree or disagree strongly, and 45% neither agree nor disagree. Thirty-three percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 24% disagree or disagree strongly, and 40% neither agree nor disagree. Forty-eight percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 16% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (81%);
- signs warning and advising about hazards (79%);
- brochures and other information warning about hazards (80%);
- restrictions on the number of persons/groups who undertake particular activities (76%);
- park rangers to enforce rules and regulations (80%);
- enforcement of alcoholic beverage restrictions (78%); and,
- safe surfaces on walkways and stairs (74%).

Eleven percent of respondents believe that there should be more or many more rangers to enforce rules and regulations. A substantial proportion (18%) of respondents were more ambivalent and said they did not know if there should be greater restrictions on the number of persons/groups who undertake particular activities.

Among those respondents who were aware of the various sources of safety information in the park, Figure 7.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

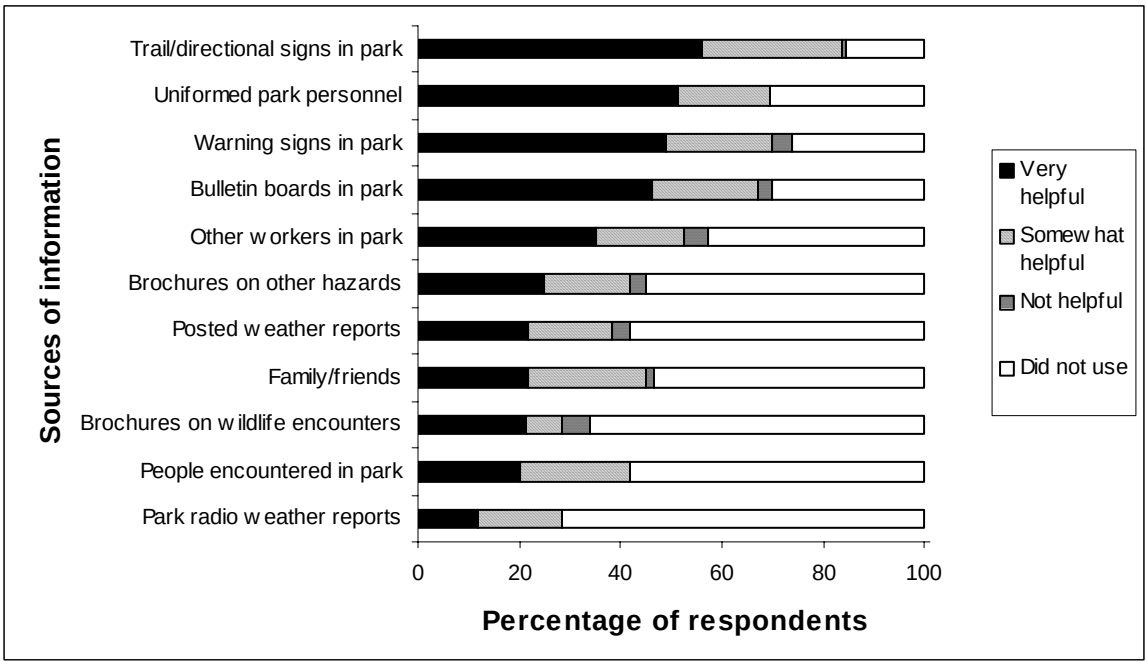

Figure 7.10: How helpful are various sources of safety information (N=42-91)

8.0 Yosemite National Park

8.1 Sample:

At Yosemite National Park, 265 visitor groups were contacted between February 16 and February 18, 2001, and 261 (98.5%) of these groups accepted questionnaires. Questionnaires were completed and returned by 161 visitor groups, resulting in a 61.7% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process).

8.2 Demographics:

Figure 8.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (87%)of respondents were white, with 4% Hispanic, 2% Asian, 1% African-American, 1% American Indian, and 1% Hawaiian. Graduate school was the highest level of education attained by 28% of respondents, while an additional 41% classified themselves as college graduates. One hundred fifty-nine respondents were residents of the US, one was from the UK and one was from Australia.

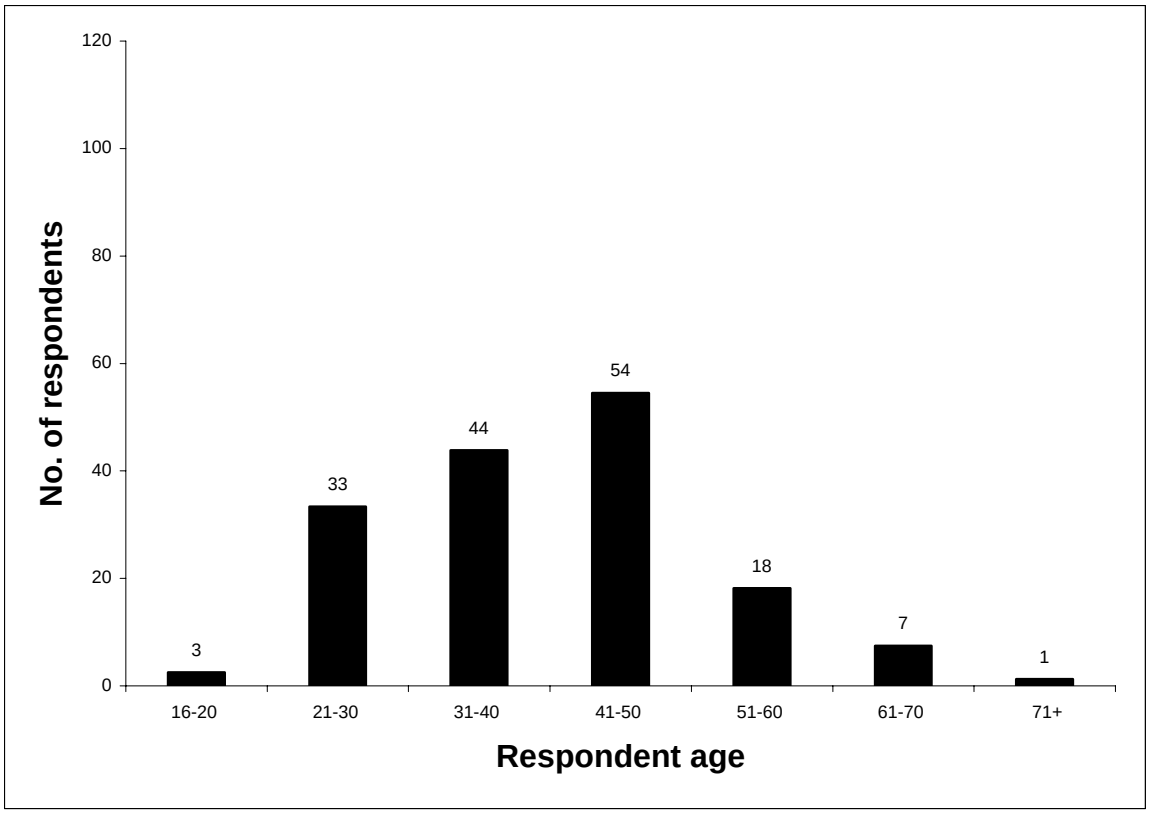

Figure 8.1: Distribution of respondents by age (N=161)

8.3 Visitation

For 18% of respondents, this was their first visit to the park. Among those 131 respondents who indicated they were returning to the park, 20% had visited the park twice in the past 10 years (including the current visit), 26% 3-5 times, 21% 6-10 times, and 33% 11 or more times. This visit was the primary destination for 86% of respondents, but one of only several destinations for 14% of respondents. Six percent of the respondents visited the park for a half day or less, 30% visited for up to one day, and 64% visited for more than one day. Four percent of respondents were visiting the park by themselves, 45% with family members, 27% with friends, and 22% with family members and friends.

8.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 8.2).

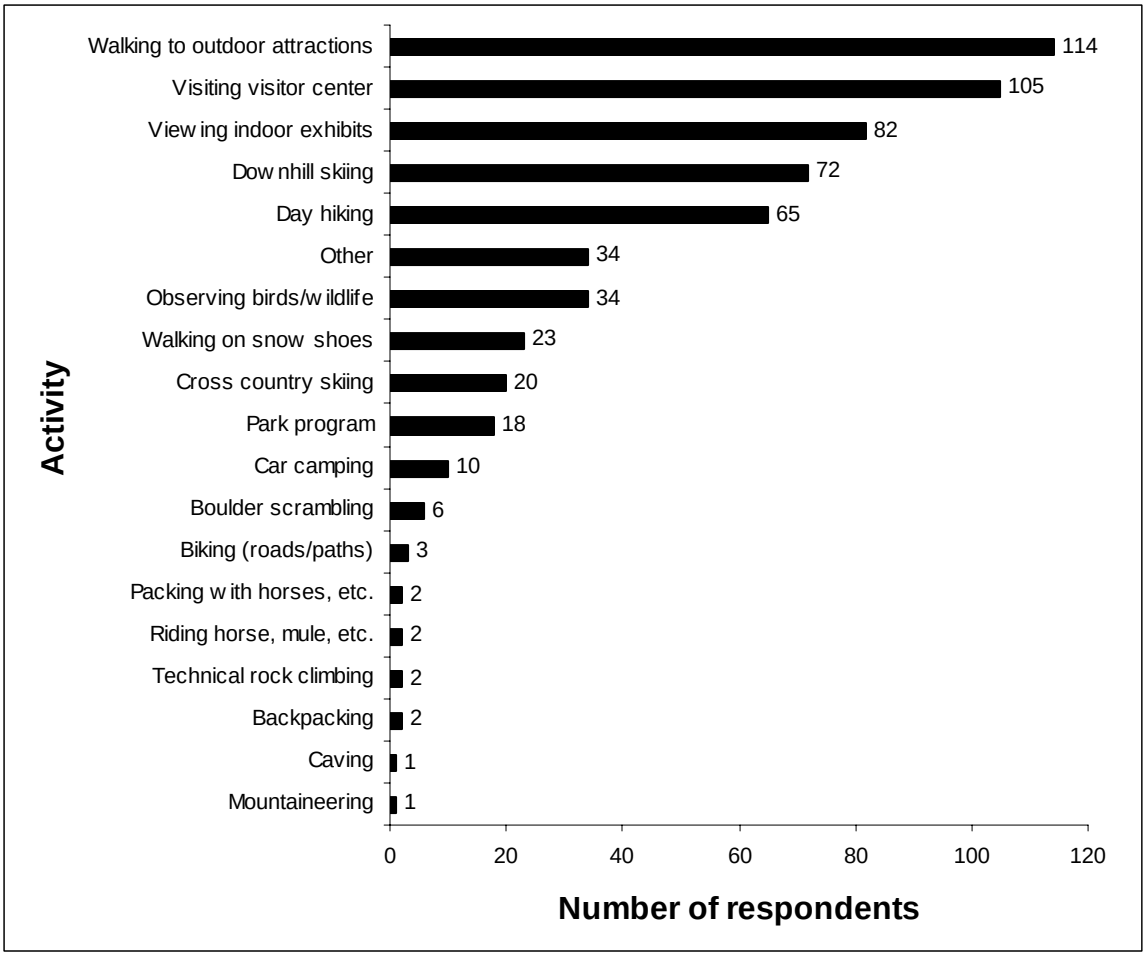

Figure 8.2: Visitor activities (N=161)
(Note: Several respondents listed more than one activity)

Figure 8.2 illustrates that many respondents walked to outdoor attractions (71%), visited the visitor center (65%) and viewed indoor exhibits (51%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 8.3 illustrates that downhill skiing (34%), walking to outdoor attractions (26%), and day hiking (15%) were the most popular primary activities. Most respondents (86%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 5% engaged in these activities alone, 7% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 8.4). Ratings of personal experience varied little between activities and between males and females.

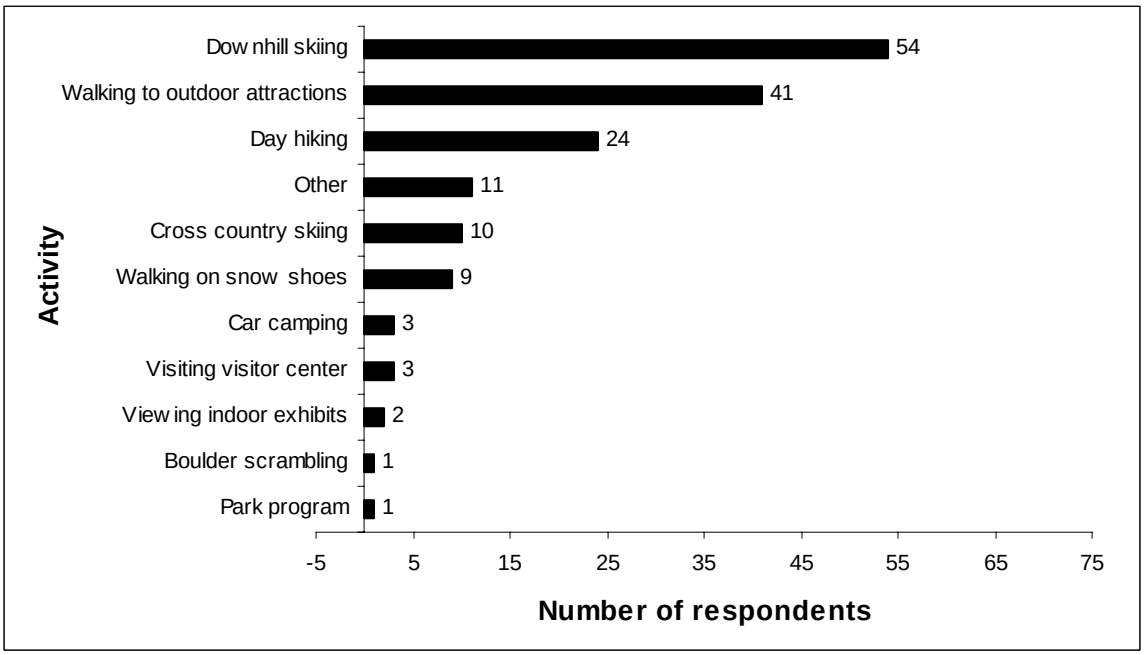

Figure 8.3: Primary visitor activities (N=158)

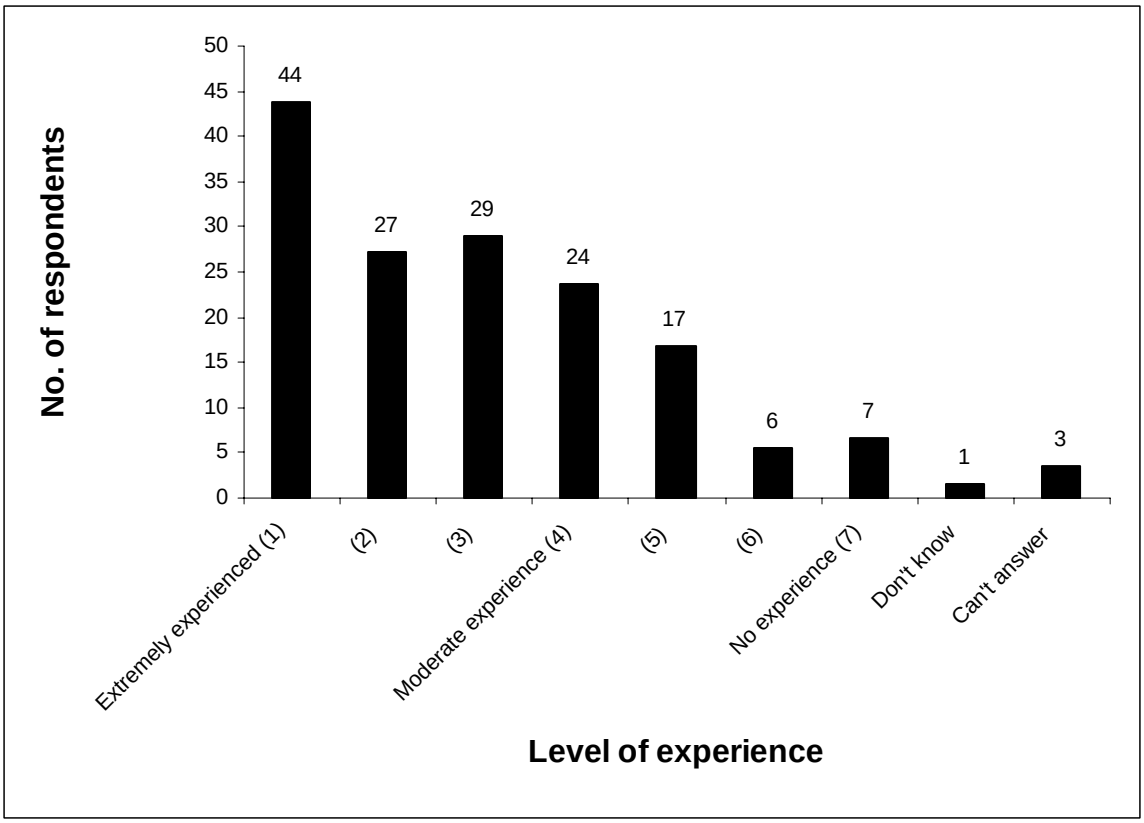

Figure 8.4: Personal level of experience (N=158)

Preparedness is one aspect of experience, and Figure 8.5 shows how prepared respondents were based on the safety items that they had available during their visit.

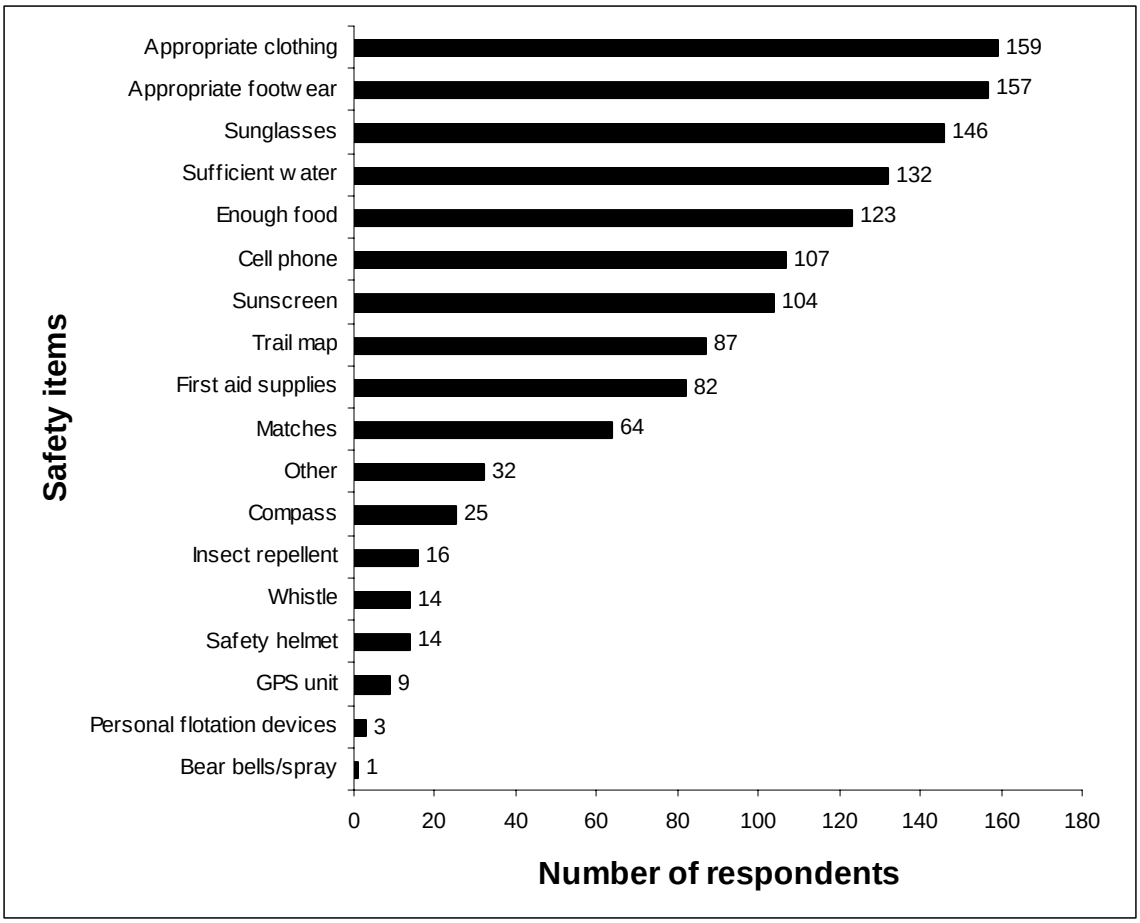

Figure 8.5: Personal safety items (N=159)

Nineteen percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity. Eighty-two percent of these respondents were concerned briefly or for some limited time, and 74% were only somewhat concerned. Nevertheless, 4% were very concerned, and 3% were concerned for much of the time during their visit. This level of concern, however, may reflect the relatively large number of visitors engaged in downhill skiing.

Without reference to a particular activity, however, Figure 8.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be consistent with the nature of accidents reported in the park, especially during winter.

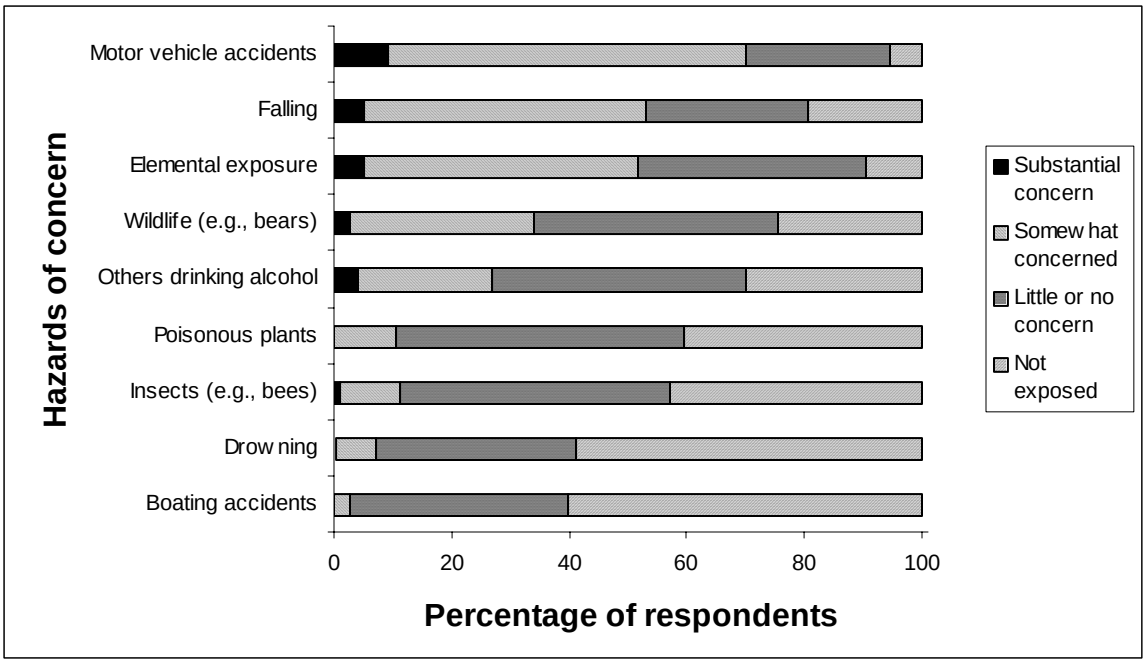

Figure 8.6: Level of concern about various hazards (N=159-161)

8.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 94% of respondents were traveling in privately owned or rented vehicles. Eighty-seven percent of respondents spent all of the time in the front seat, and 7% spent some of the time in the front seat. Of these individuals, 59% were driving for all or most of the time and 99% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-three percent of respondents never encountered cars that were driving too fast, and 55% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 55% of respondents encountered cars that were driving too slowly. Most (79%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 94% thought that hazard-warning signs were adequate most or all of the time. Figure 8.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently,cars stopping to see the views or wildlife and pedestrians on or beside the roads are the most commonly cited driving hazards.

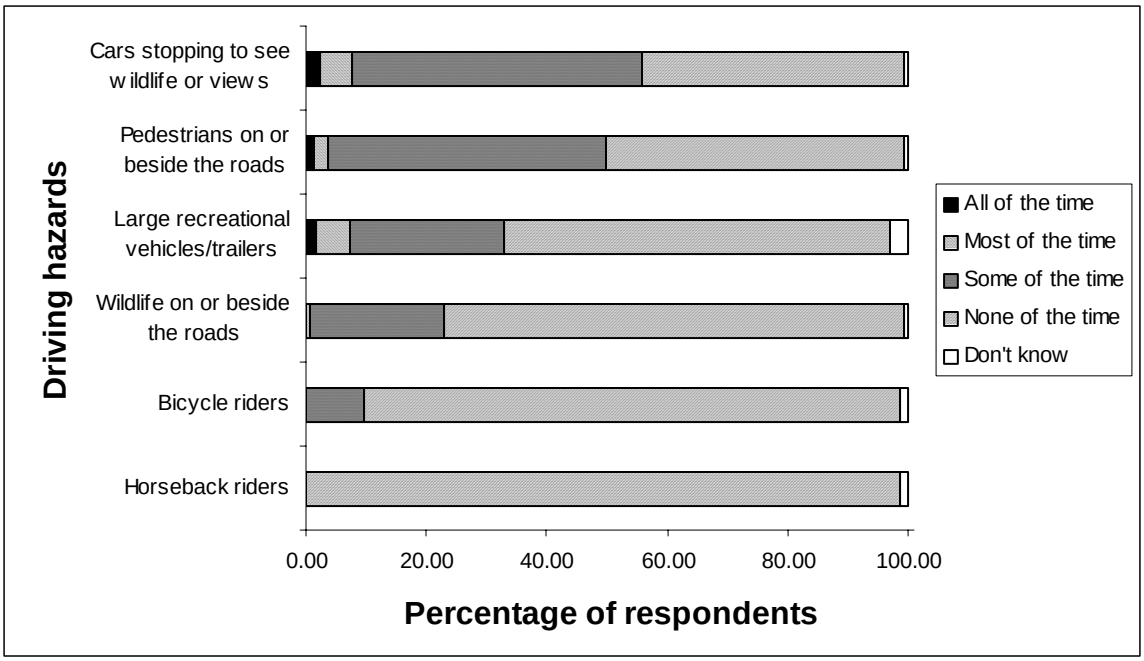

Figure 8.7: How often do these make traveling on roads more hazardous? (N=139-141)

8.6 Management issues:

With regard to the primary activity undertaken during their visit, 34% of respondents believed that safety was entirely the responsibility of the visitor, while 34% believed safety was the responsibility of both the visitor and the park staff (Figure 8.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 8.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Among the three respondents who indicated that the safety measures definitely did detract from their enjoyment, one was walking to outdoor attractions and 2 were downhill skiing.

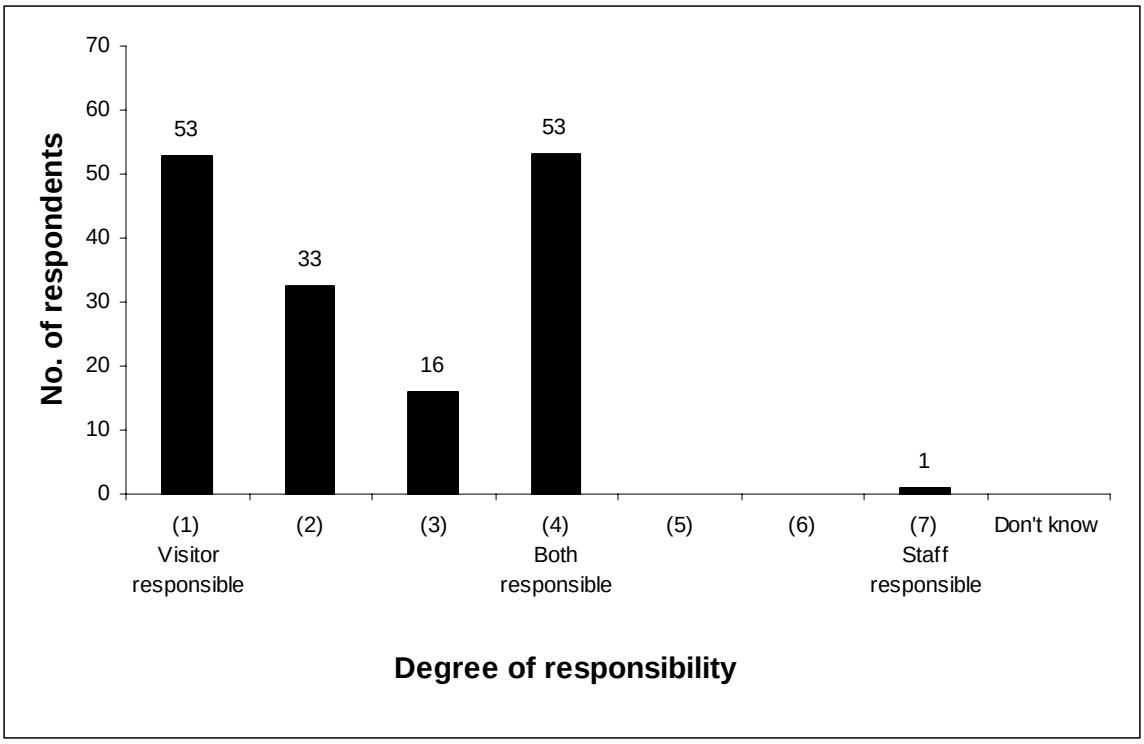

Figure 8.8: Responsibility for safety in chosen primary activity (N=155)

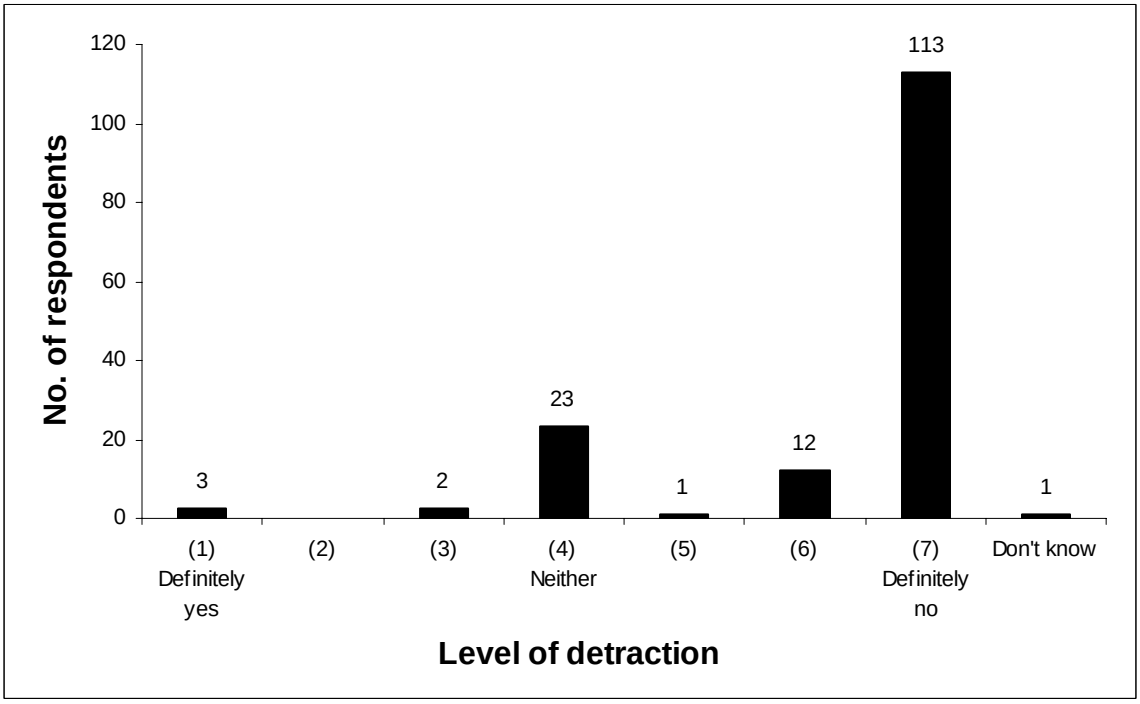

Figure 8.9: Do safety measures detract from visitor enjoyment? (N=155)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-seven percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 6% disagree or disagree strongly, and 34% neither agree nor disagree. Nineteen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 47% disagree or disagree strongly, and 32% neither agree nor disagree. Twenty-eight percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 19% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (81%);
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (82%);
- restrictions on the number of persons/groups who undertake particular activities (64%);
- park rangers to enforce rules and regulations (66%);
- enforcement of alcoholic beverage restrictions (60%); and,
- safe surfaces on walkways and stairs (66%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (25%) and more or much more enforcement of alcoholic beverage prohibitions (14%). A substantial number of respondents also believed there should be fewer rules restricting the number of persons/groups who undertake particular activities (12%) and less enforcement of alcoholic beverage restrictions (9%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 8.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are among the most helpful sources of safety information. Unlike other parks, posted weather reports rank high as sources of information, and this may reflect winter conditions.

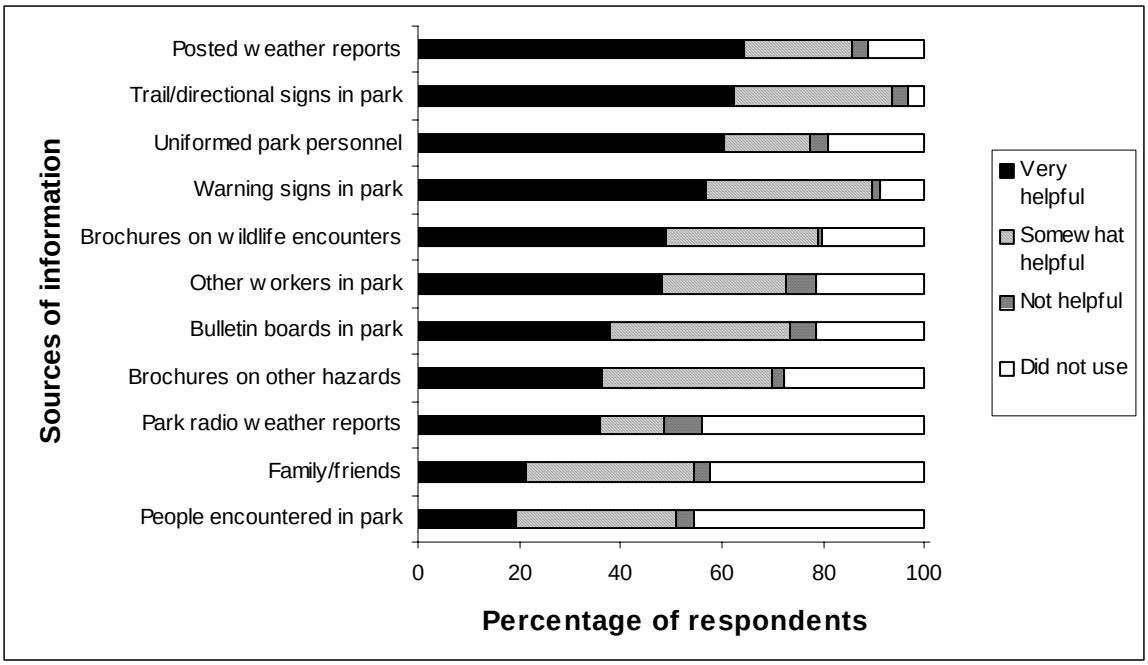

Figure 8.10: How helpful are various sources of safety information (N=103-152)

9.0 Assateague Island National Seashore

9.1 Sample:

At Assateague Island National Seashore, 272 visitor groups were contacted between July 12 and July 17, 2001, and 272 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 127 visitor groups, resulting in a 46.7% response rate for this park.

9.2 Demographics:

Figure 9.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-seven percent of respondents were female and 43% male. The overwhelming majority (94%)of respondents were white, with 1% Hispanic, 2% Asian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 17% of respondents, while an additional 24% classified themselves as college graduates. All the respondents were residents of the US.

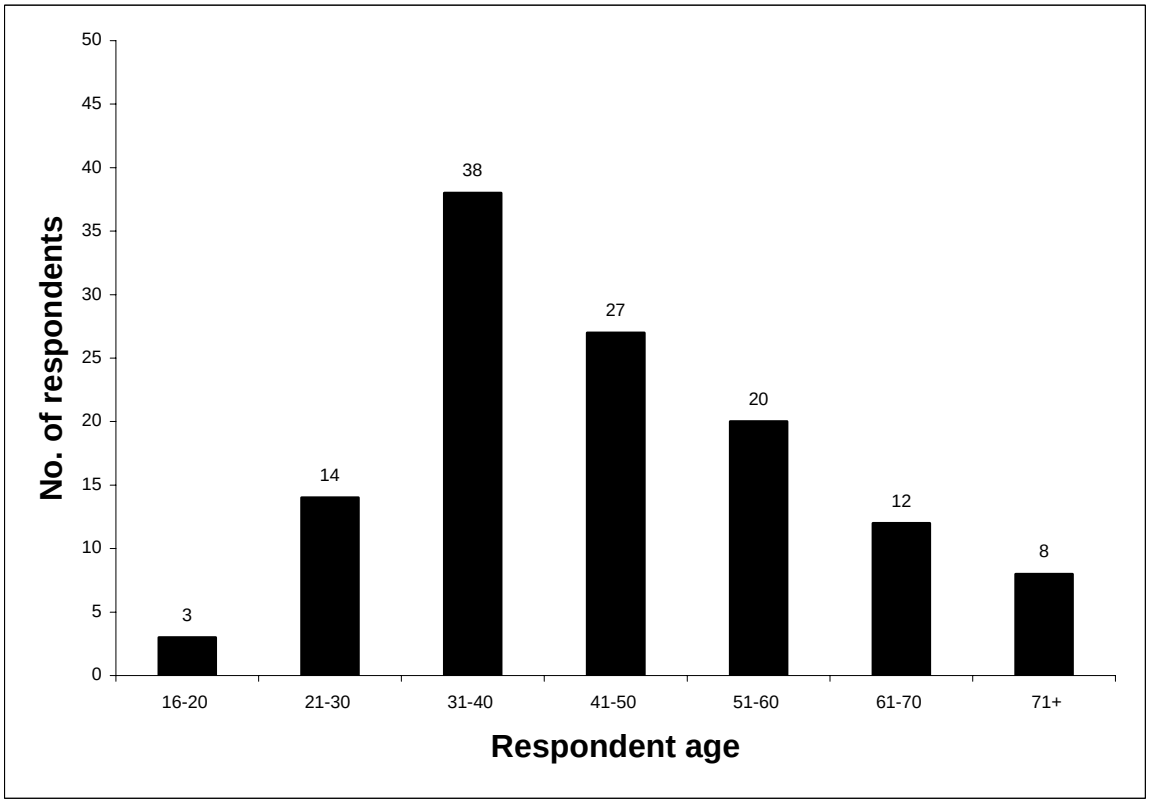

Figure 9.1: Distribution of respondents by age (N=122)

9.3 Visitation

For 45% of respondents, this was their first visit to the park. Among those 67 respondents who indicated they were returning to the park, 21% had visited the park twice in the past 10 years (including the current visit), 34% 3-5 times, 28% 6-10 times,

and 16% 11 or more times. This visit was the primary destination for 26% of respondents, but one of only several destinations for 59% of respondents. For 15% of respondents this visit was not a planned destination at all. Fifty-five percent of the respondents visited the park for a half day or less, 24% visited for up to one day, and 20% visited for more than one day. One percent of respondents were visiting the park by themselves, 71% with family members, 12% with friends, and 16% with family members and friends.

9.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 9.2).

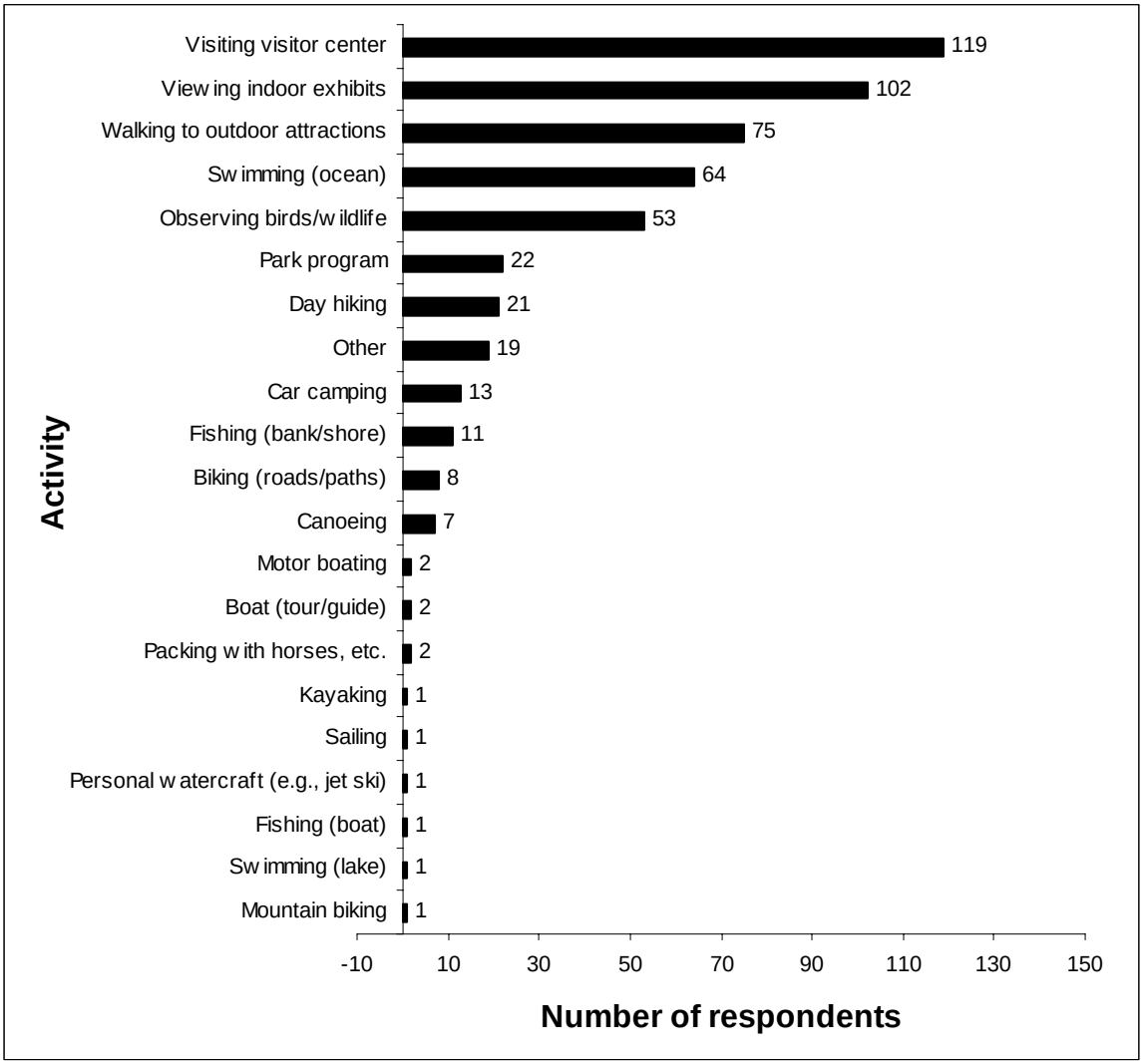

Figure 9.2: Visitor activities (N=127)
(Note: Several respondents listed more than one activity)

Figure 9.2 illustrates that many respondents visited the visitor center (94%) and viewed indoor exhibits (80%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 9.3 illustrates that swimming in the ocean (28%), walking to outdoor attractions (20%), visiting the visitor center (11%), and observing wildlife (11%) were the most popular primary activities. Most respondents (93%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 2% engaged in these activities alone, 3% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 9.4). Ratings of personal experience varied little between activities and between males and females.

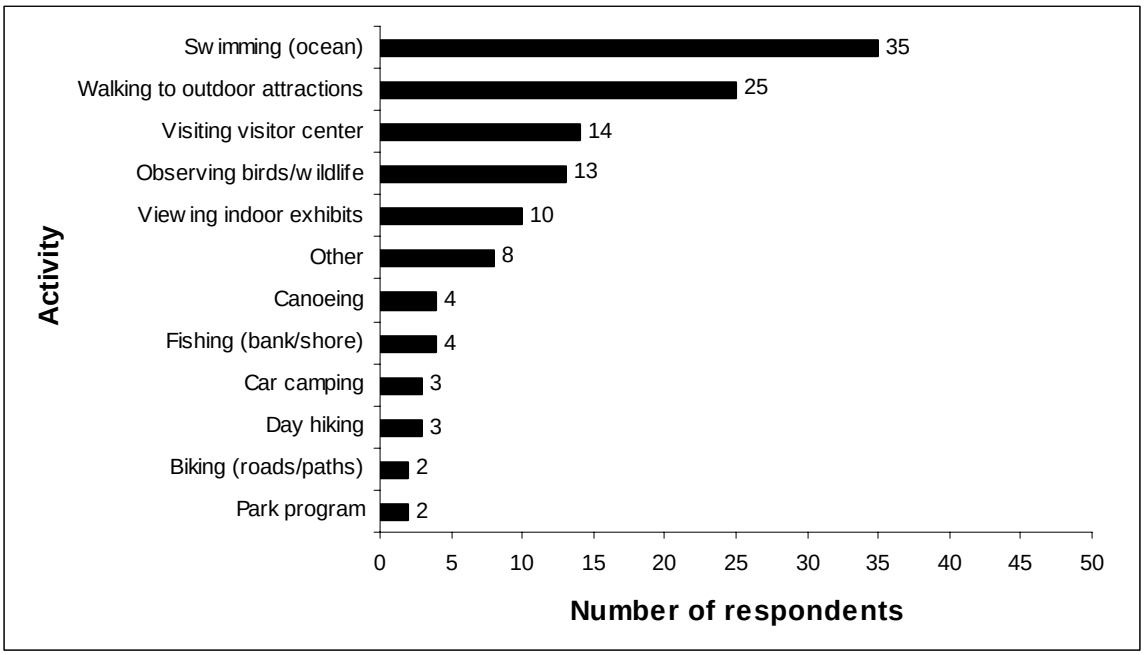

Figure 9.3: Primary visitor activities (N=123)

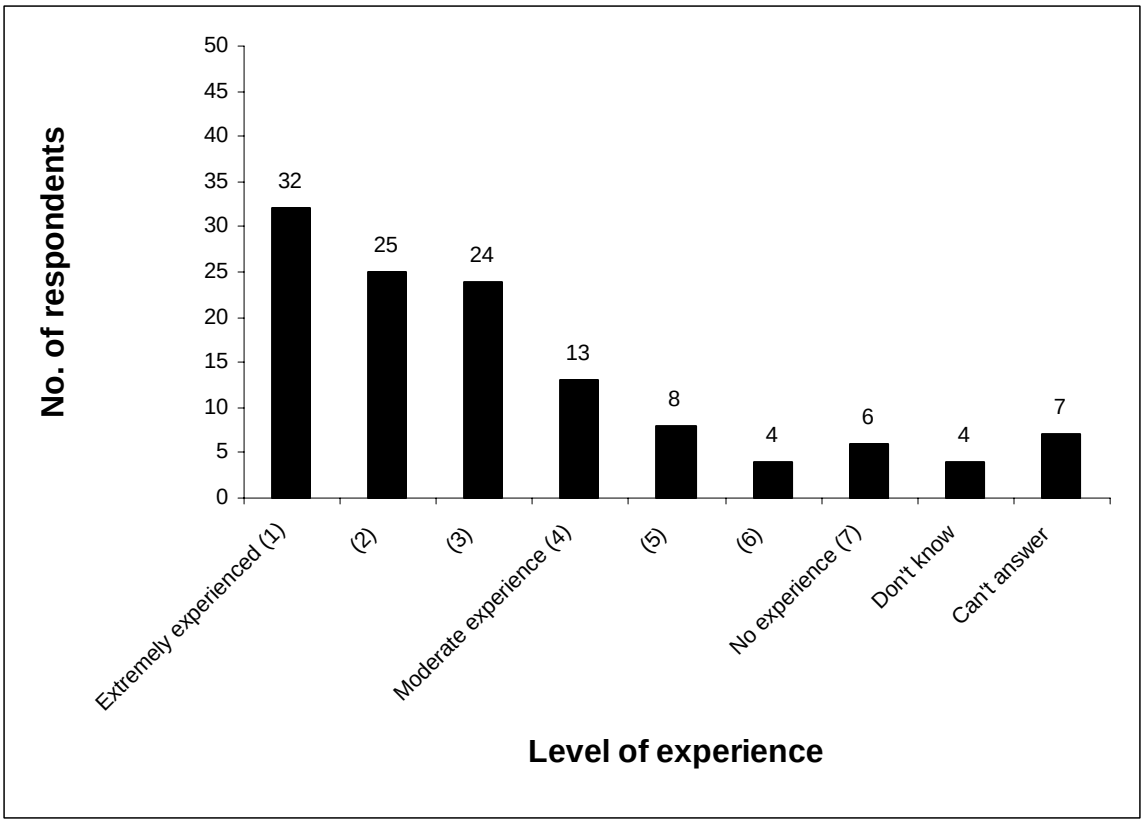

Figure 9.4: Personal level of experience (N=123)

Preparedness is one aspect of experience, and Figure 9.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given the nature of the park, it is perhaps surprising that no one checked off appropriate clothing, sunscreen, sunglasses, or insect repellents as safety items.

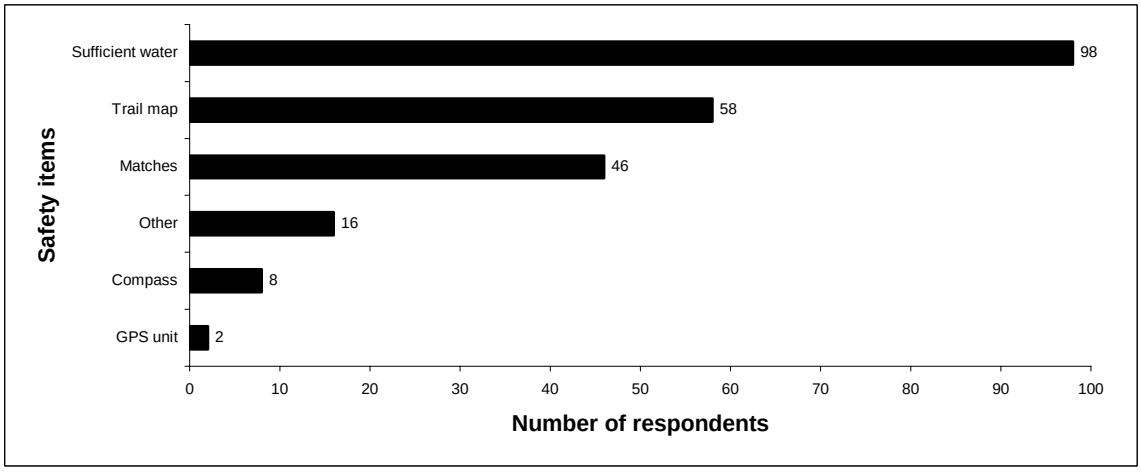

Figure 9.5: Personal safety items (N=98)

Relatively few respondents (12%) expressed concern about suffering an injury or illness while engaged in their primary activity. Of the 15 respondents who expressed some concern, 62% were only minimally concerned and 73% were concerned briefly or for limited periods.

Without reference to a particular activity, however, Figure 9.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park. Given the concern about insects, it is even more remarkable that no respondent indicated they had insect repellents with them. Concern for wildlife most likely reflects concern about jellyfish and stinging fish while swimming.

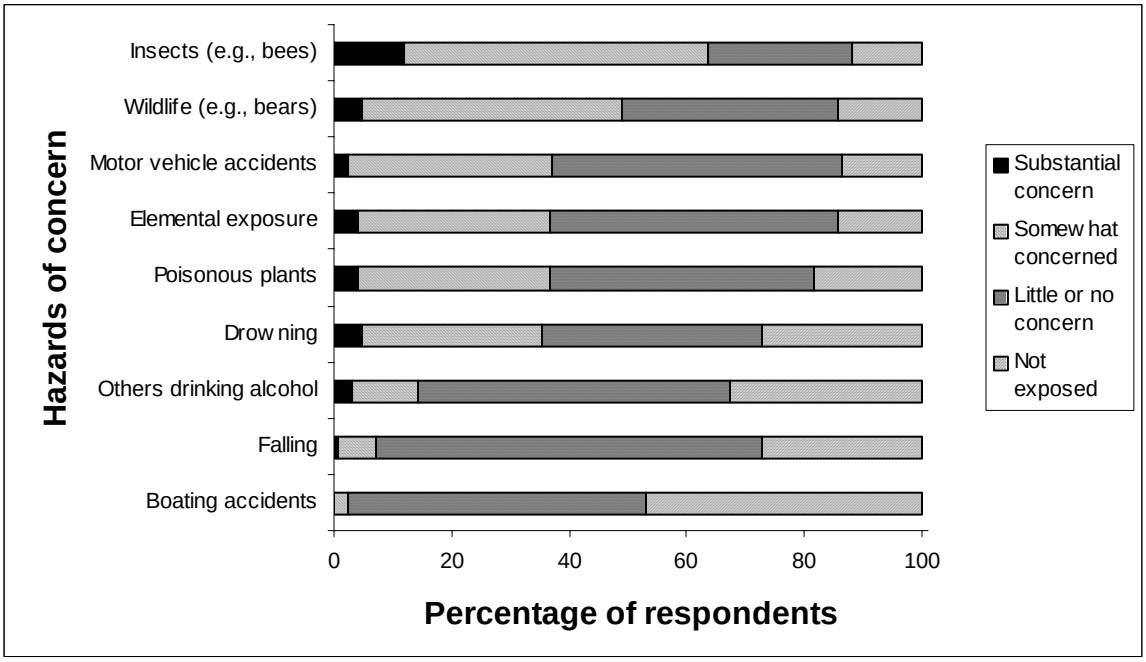

Figure 9.6: Level of concern about various hazards (N=124-126)

9.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. Eighty-six percent of respondents spent all of the time in the front seat, and 8% spent some of the time in the front seat. Of these individuals, 47% were driving for all or most of the time and 96% were wearing seatbelts most or all of the time. The majority (99%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-seven percent of respondents never encountered cars that were driving too fast, and 47% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 52% of respondents encountered cars that were driving too slowly. Most (97%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time.

Figure 9.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, wildlife on or beside the roads and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

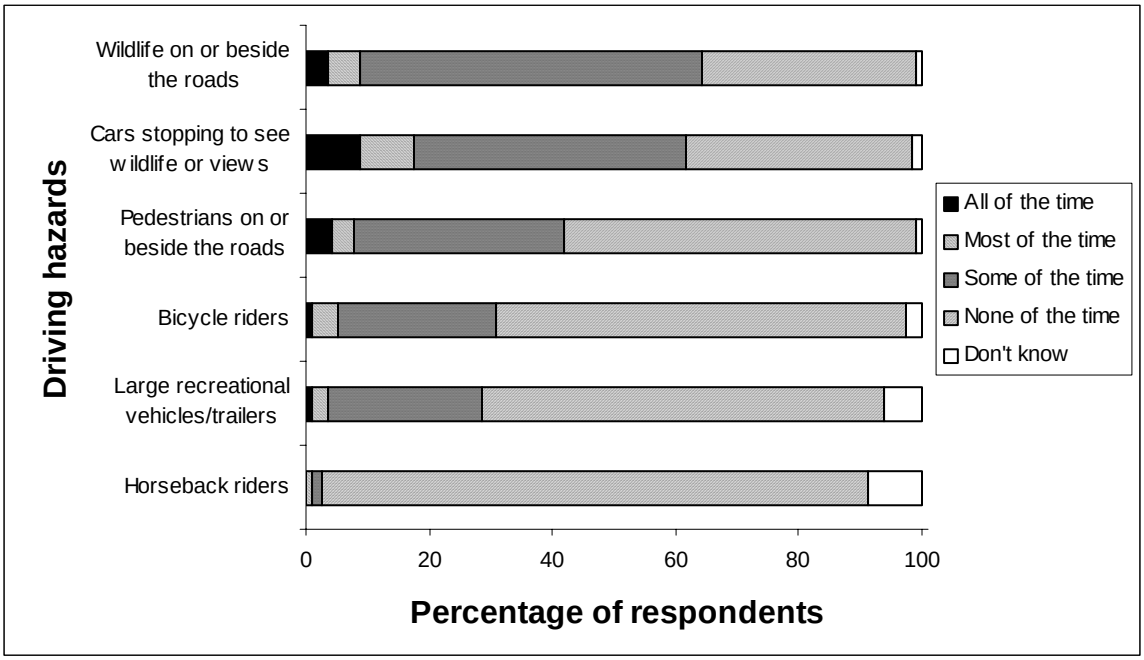

Figure 9.7: How often do these make traveling on roads more hazardous? (N=114-115)

9.6 Management issues:

With regard to the primary activity undertaken during their visit, 38% of respondents believed that safety was entirely the responsibility of the visitor, while 37% believed safety was the responsibility of both the visitor and the park staff (Figure 9.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 9.9 shows that the overwhelming majority (78%) of respondents thought such measures definitely did not detract. The three respondents who indicated that the safety measures did detract from their enjoyment were primarily engaged in visiting the visitor center, viewing indoor exhibits, and canoeing.

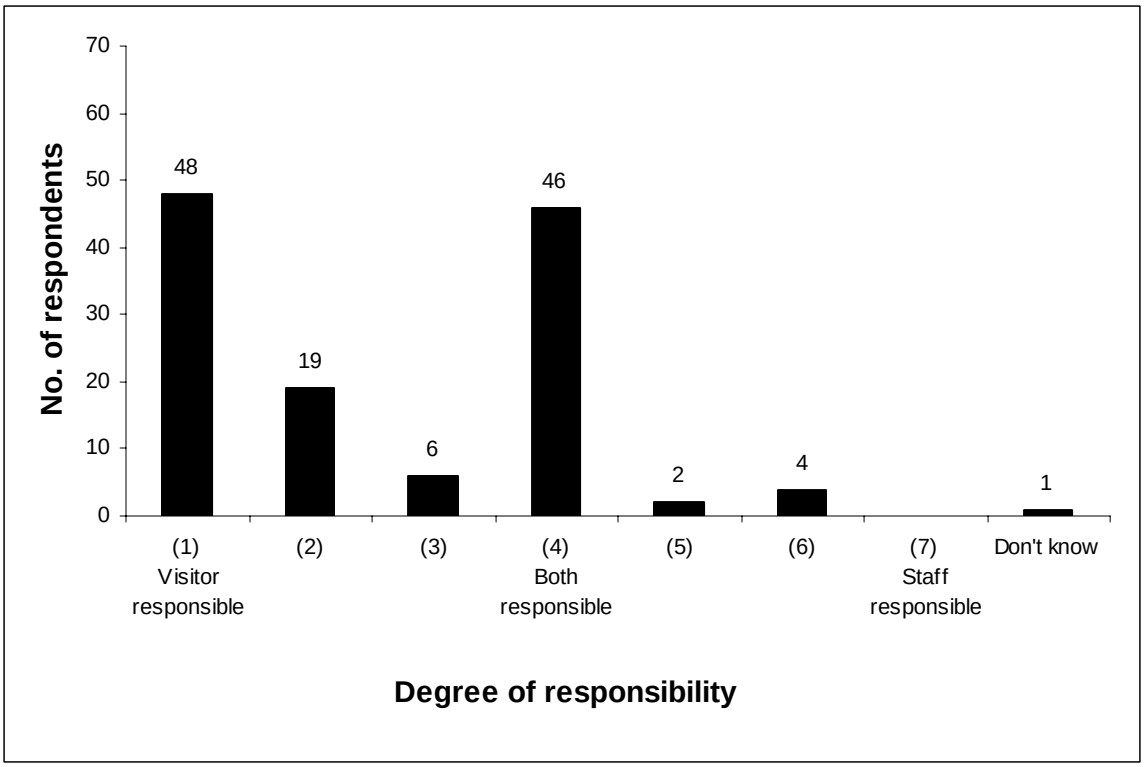

Figure 9.8: Responsibility for safety in chosen primary activity (N=126)

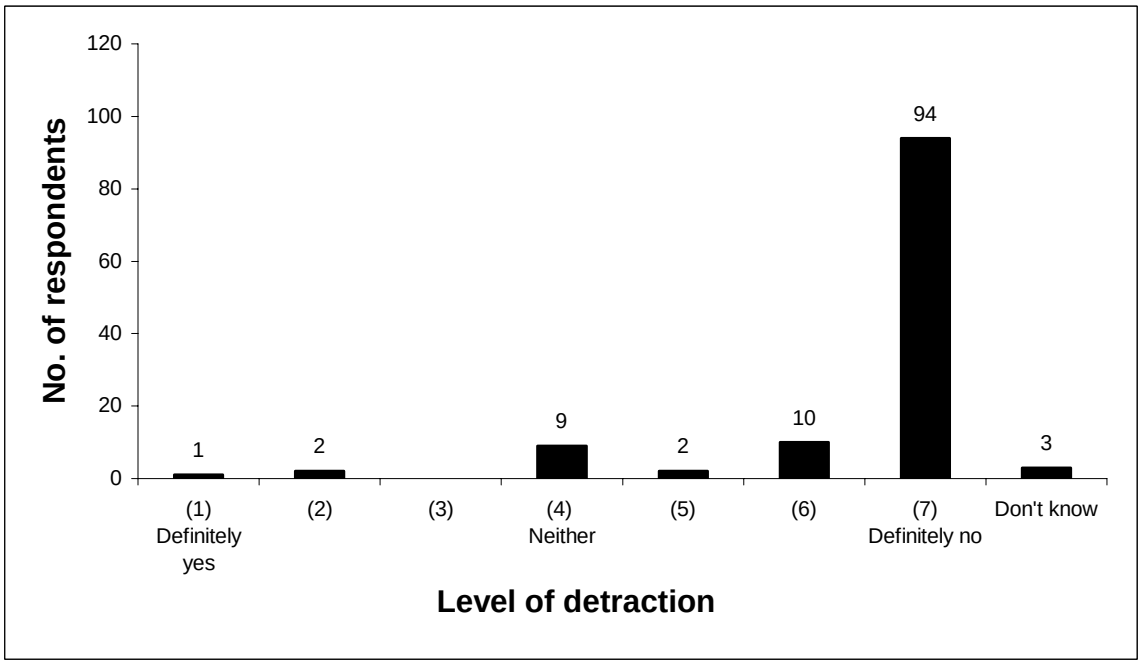

Figure 9.9: Do safety measures detract from visitor enjoyment? (N=121)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-nine percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 10% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty-four percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 26% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty-six percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 22% agree or agree strongly, and 35% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (83%);
- signs warning and advising about hazards (80%);
- brochures and other information warning about hazards (77%);
- restrictions on the number of persons/groups who undertake particular activities (76%);
- park rangers to enforce rules and regulations (62%);
- enforcement of alcoholic beverage restrictions (66%); and,
- safe surfaces on walkways and stairs (85%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (26%) and more or much more enforcement of alcoholic beverage prohibitions (15%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 16% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 17% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 9.10 indicates the level of helpfulness provided by each source of information. As in many other parks, respondents find that uniformed park personnel and directional and warning signs are among the most helpful sources of safety information, but brochures on wildlife encounters and bulletin boards are also rated very highly.

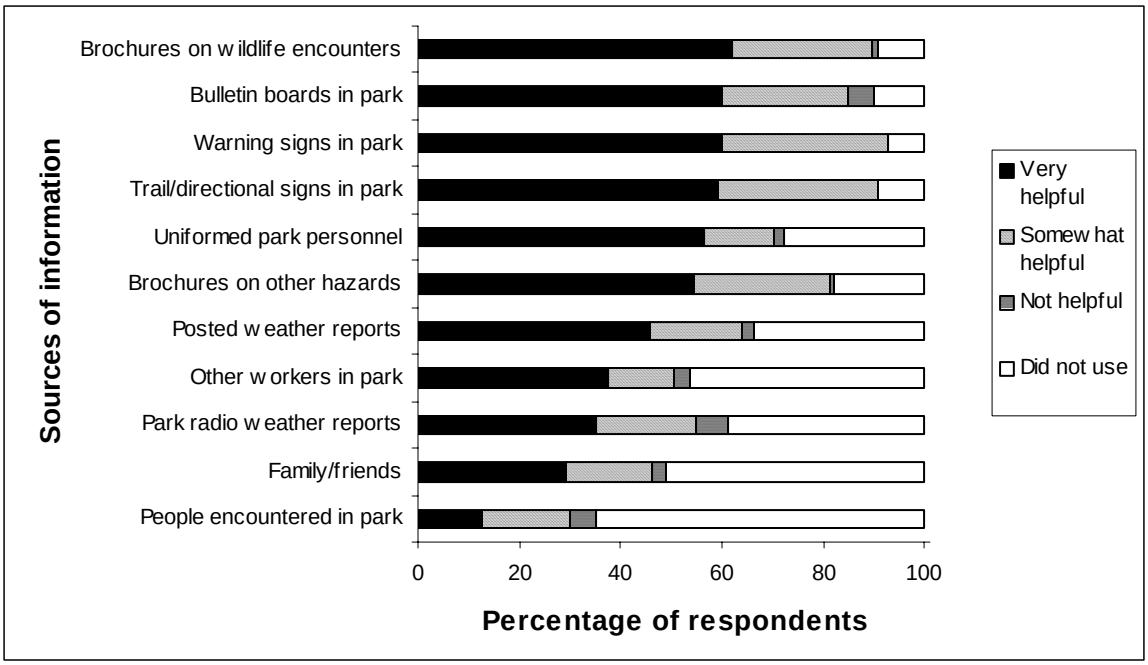

Figure 9.10: How helpful are various sources of safety information (N=80-108)

10.0 Badlands National Park

10.1 Sample:

At Badlands National Park, 456 visitor groups were contacted between July 12 and July 17, 2001, and 400 (87.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 257 visitor groups, resulting in a 64.3% response rate.

10.2 Demographics:

Figure 10.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-five percent of respondents were female and 45% male. The overwhelming majority (97%)of respondents were white, with less than 1% Hispanic, and less than 1% Asian. Graduate school was the highest level of education attained by 25% of respondents, while an additional 39% classified themselves as college graduates. The majority (98%) of respondents were residents of the US and 2% were international visitors, with one visitor from each of the following countries: Belgium, Canada, Singapore, Switzerland, and the UK.

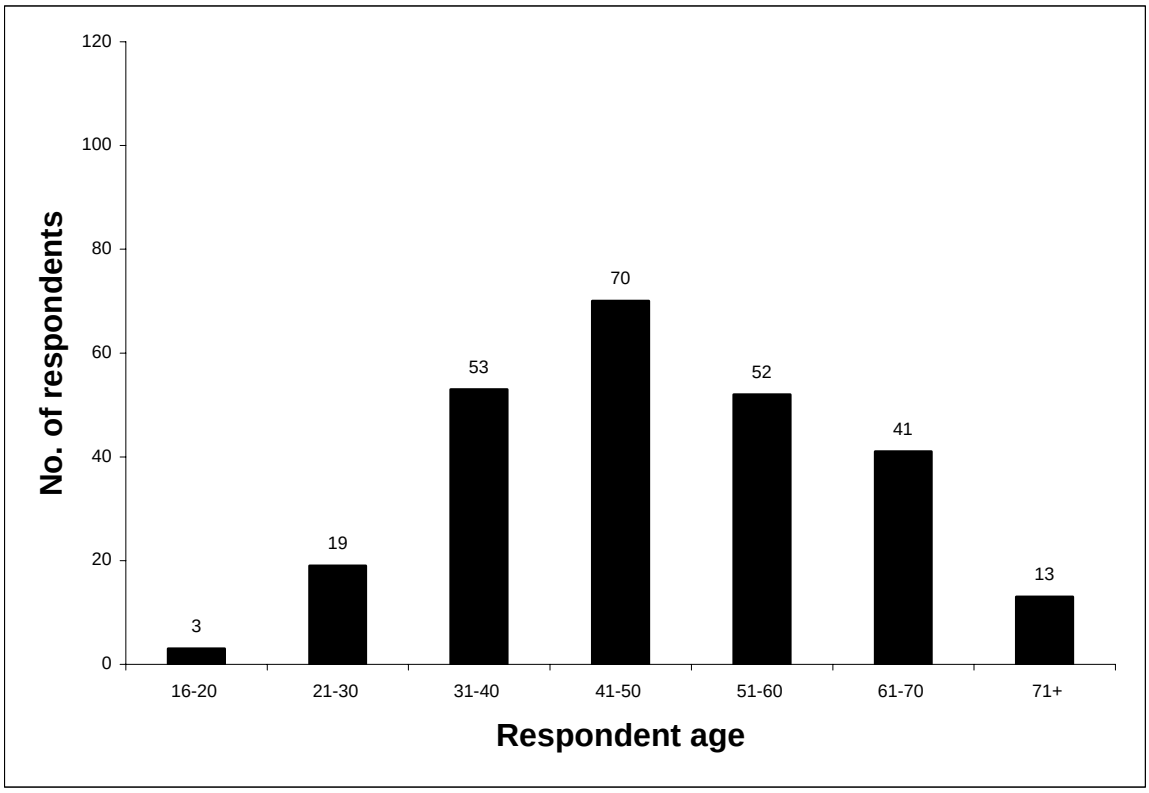

Figure 10.1: Distribution of respondents by age (N=251)

10.3 Visitation

For 63% of respondents, this was their first visit to the park. Among those 82 respondents who indicated they were returning to the park, 78% had visited the park

twice in the past 10 years (including the current visit), 18% 3-5 times, and 4% 6-10 times. This visit was the primary destination for 3% of respondents, but one of only several destinations for 92% of respondents. For 5% of respondents this visit was not a planned destination at all. Sixty-four percent of the respondents visited the park for a half day or less, 23% visited for up to one day, and 14% visited for more than one day. Four percent of respondents were visiting the park by themselves, 80% with family members, 10% with friends, and 4% with family members and friends.

10.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 10.2).

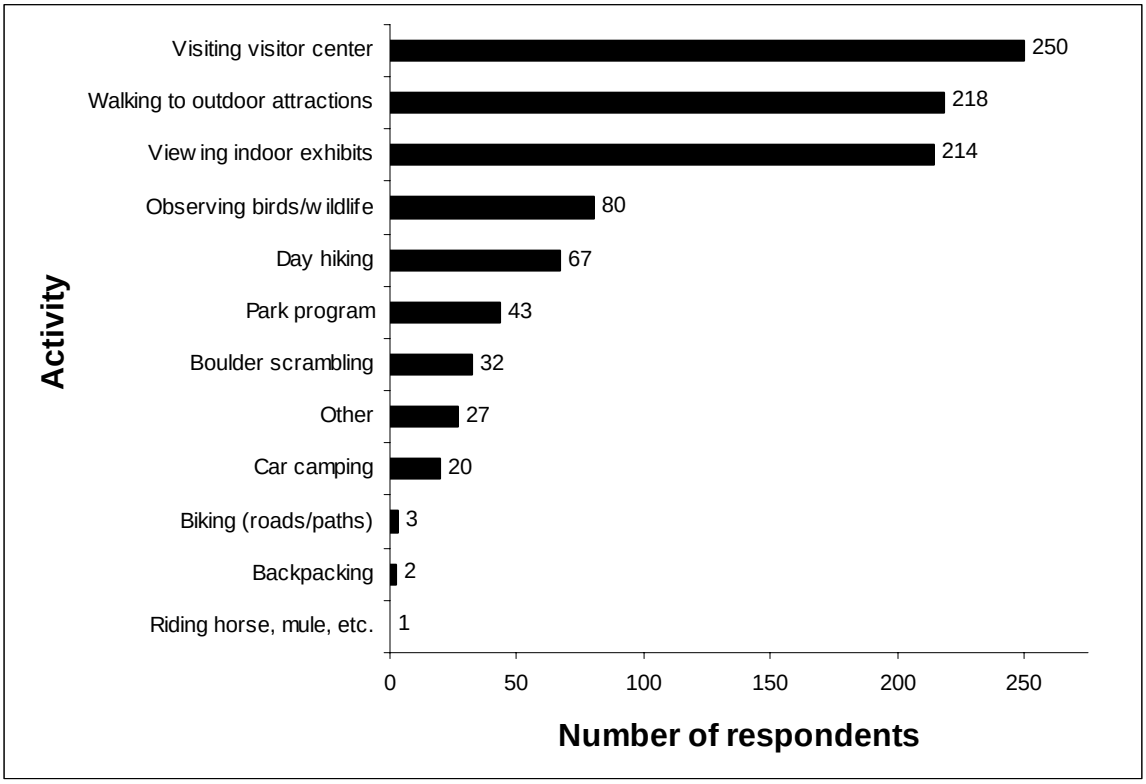

Figure 10.2: Visitor activities (N=257)
(Note: Several respondents listed more than one activity)

Figure 10.2 illustrates that many respondents visited the visitor center (97%) and viewed indoor exhibits (83%), but these are often only adjunct activities and not the primary purpose of many visitors at many parks. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 10.3 illustrates that walking to outdoor attractions (27%), day hiking ((9%), and visiting the visitor center (6%), and various other activities (4%) were the most popular primary activities. Most respondents (90%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these

activities alone, 1% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 10.4). Rating experience with regard to visiting a visitor center is difficult, however, and this may account for the relatively large number of respondents indicating "don't know" and "can't answer."

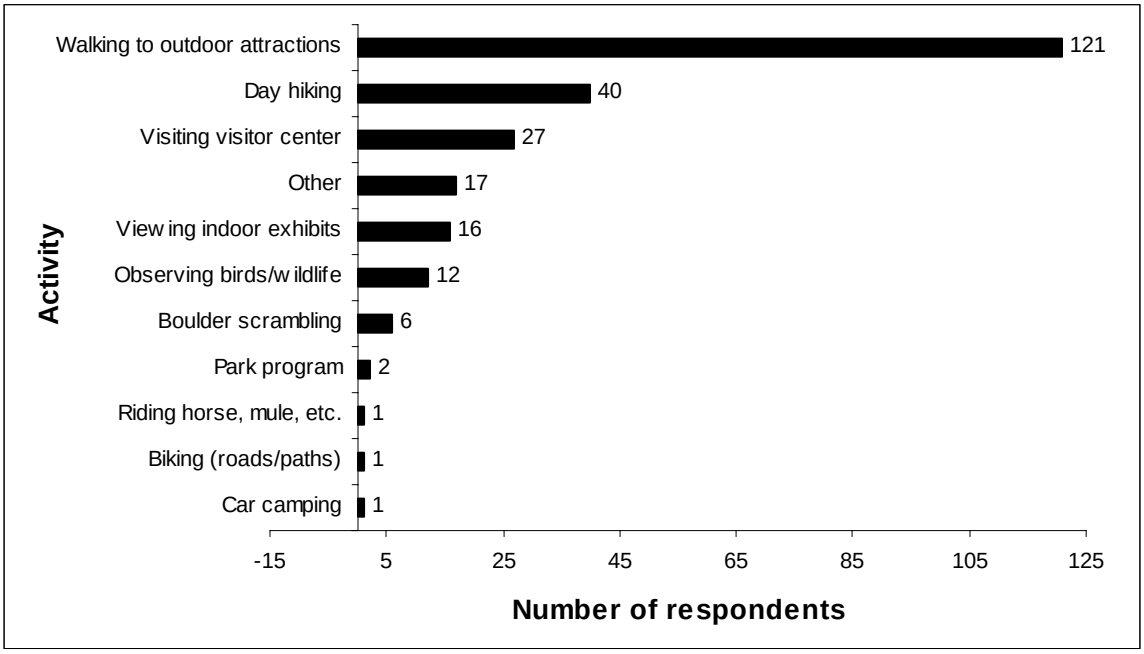

Figure 10.3: Primary visitor activities (N=244)

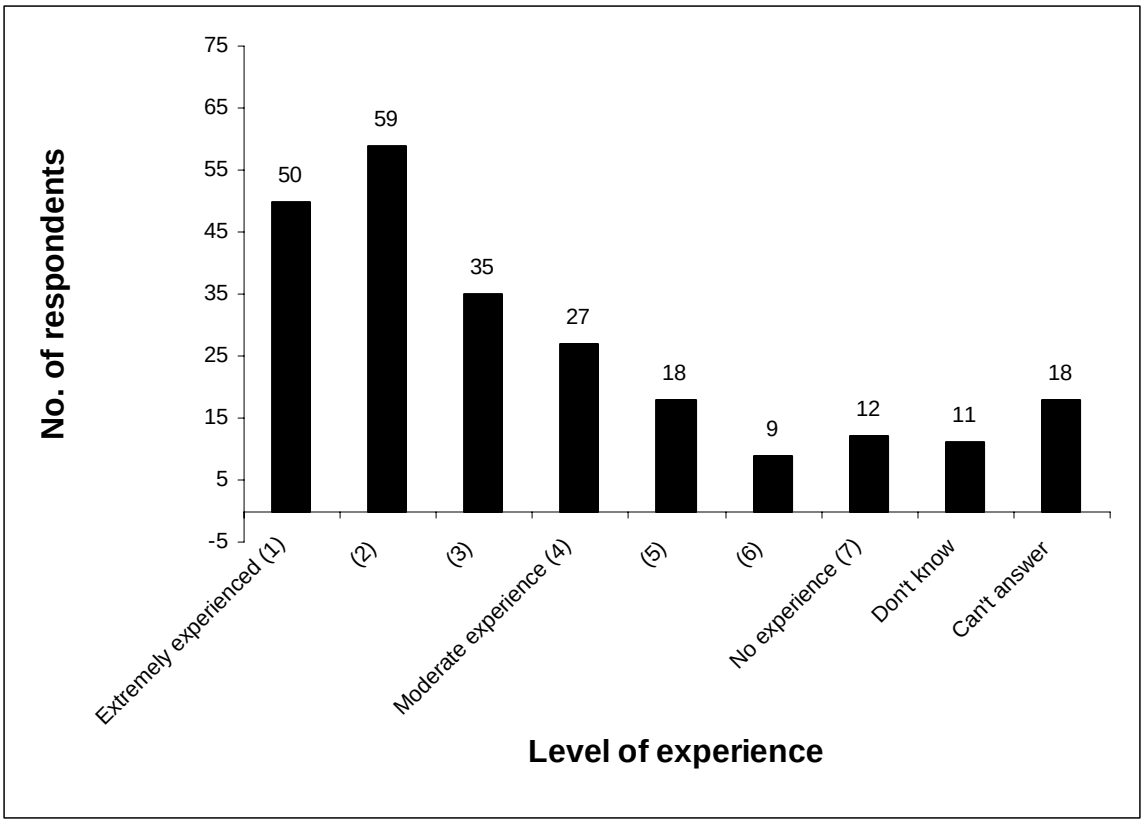

Figure 10.4: Personal level of experience (N=239)

Preparedness is one aspect of experience, and Figure 10.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given the nature of the park and respondents concerns (see below), it is surprising that no one checked off appropriate clothing and footwear as safety items.

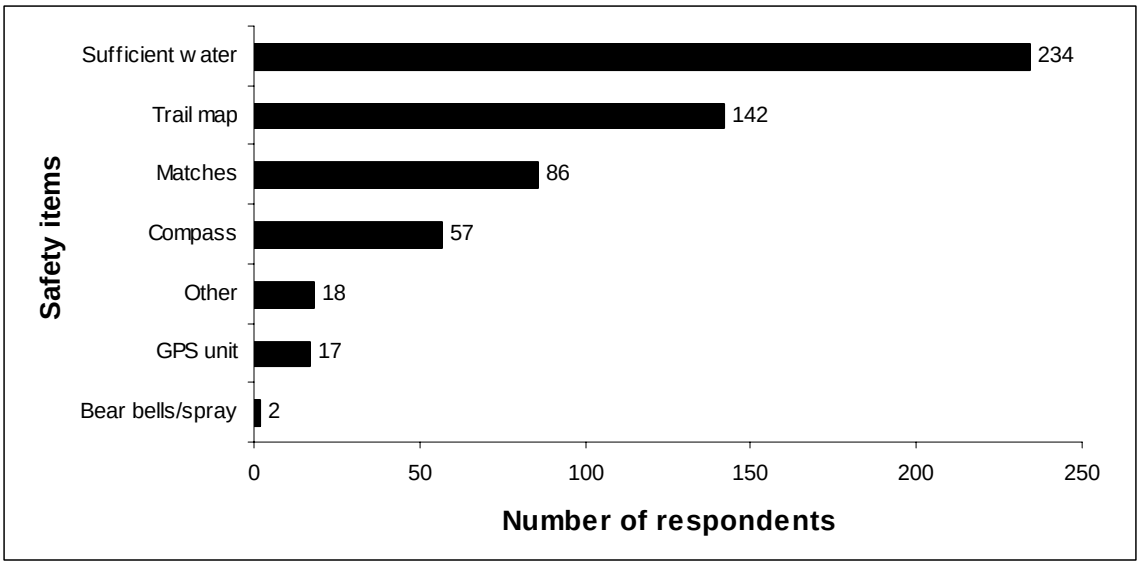

Figure 10.5: Personal safety items (N=234)

Fourteen percent of respondents expressed some concern about suffering an injury or illness while engaged in their primary activity. Sixty percent of these respondents were concerned for the safety of others in their group for some or all of the time during their visit. Twenty one percent indicated they were very concerned for the safety of others in their group, and 72% were less concerned.

Without reference to a particular activity, however, Figure 10.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

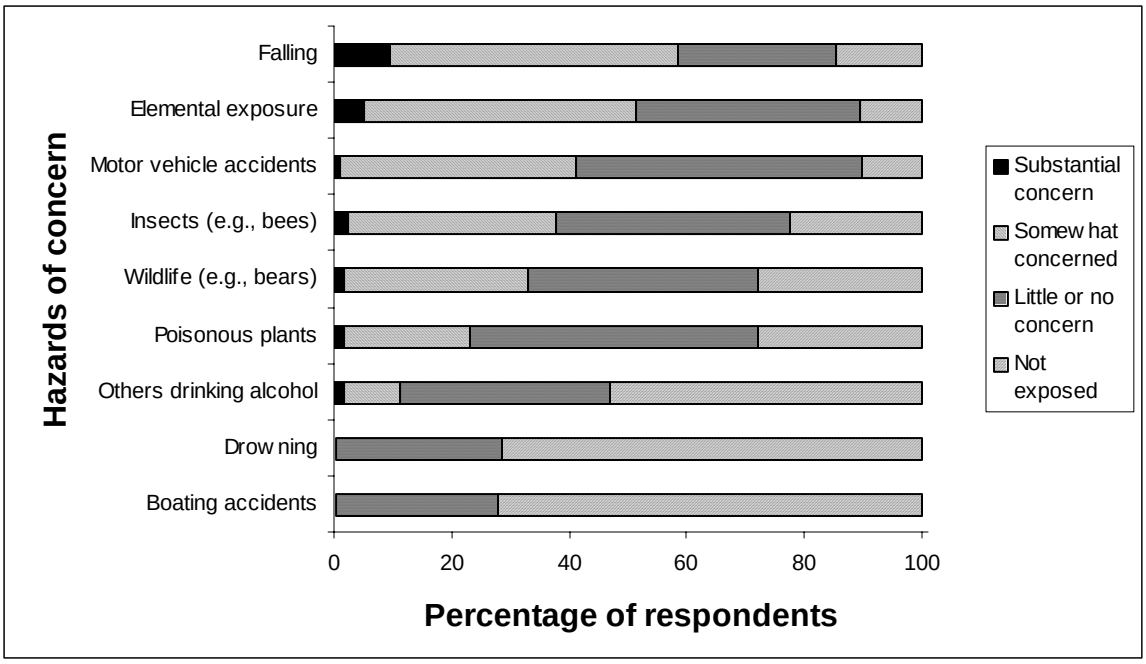

Figure 10.6: Level of concern about various hazards (N=250-253)

10.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 96% of respondents were traveling in privately owned or rented vehicles. Ninety percent of respondents spent all of the time in the front seat, and 6% spent some of the time in the front seat. Of these individuals, 52% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (94%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-four percent of respondents never encountered cars that were driving too fast, and 35% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 50% of respondents encountered cars that were driving too slowly. Most (69%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 91% thought that hazard-warning signs were adequate most or all of the time. Figure 10.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

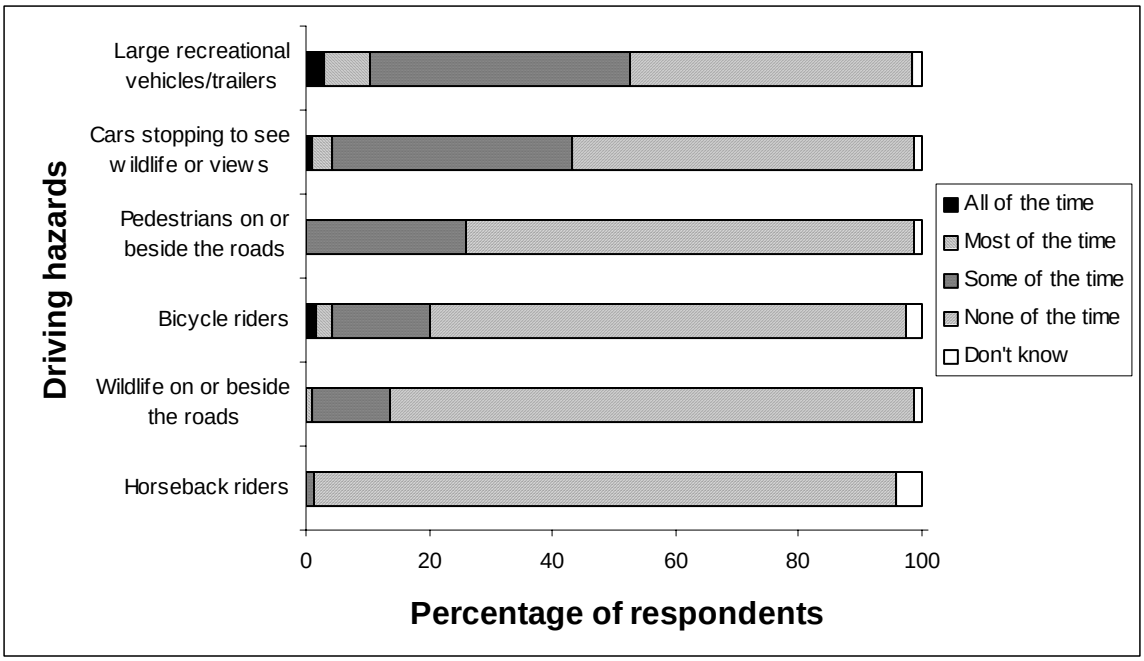

Figure 10.7: How often do these make traveling on roads more hazardous? (N=230-232)

10.6 Management issues:

With regard to the primary activity undertaken during their visit, 45% of respondents believed that safety was entirely the responsibility of the visitor, while 29% believed safety was the responsibility of both the visitor and the park staff (Figure 10.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 10.9 shows that the overwhelming majority (71%) of respondents thought such measures definitely did not detract.

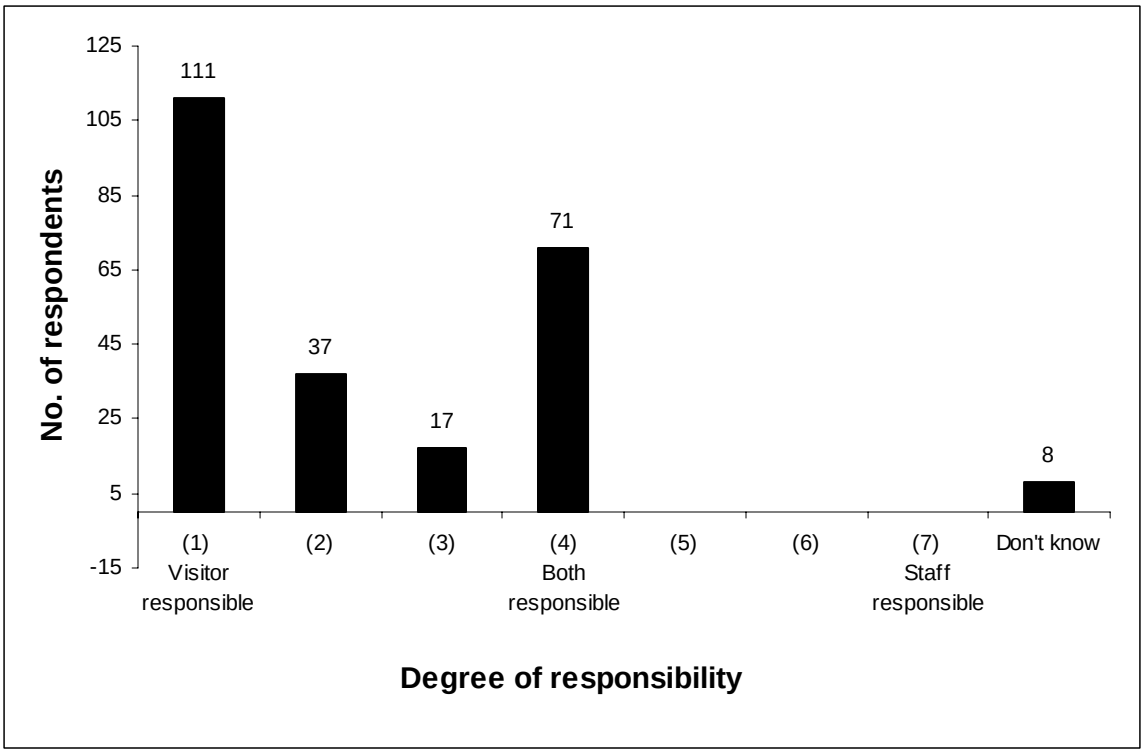

Figure 10.8: Responsibility for safety in chosen primary activity (N=244)

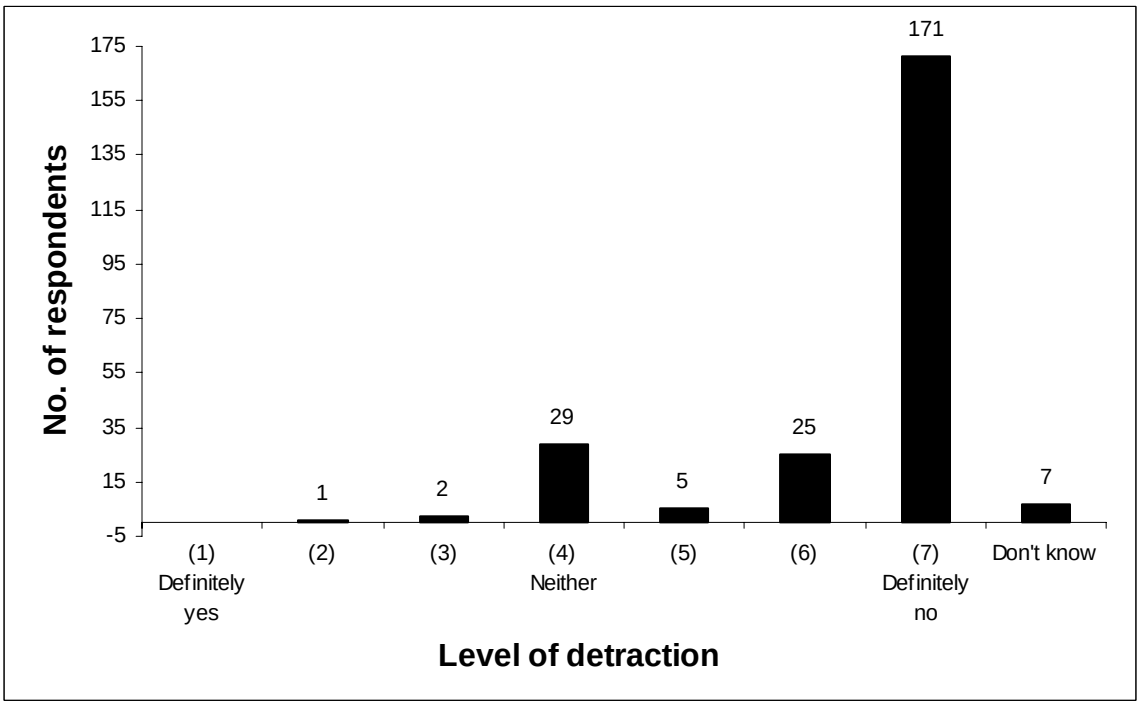

Figure 10.9: Do safety measures detract from visitor enjoyment? (N=240)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-three percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 31% neither agree nor disagree. Twenty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 40% disagree or disagree strongly, and 36% neither agree nor disagree. Thirty percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 27% agree or agree strongly, and 30% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (83%);
- signs warning and advising about hazards (80%);
- brochures and other information warning about hazards (79%);
- restrictions on the number of persons/groups who undertake particular activities (68%);
- park rangers to enforce rules and regulations (68%);
- enforcement of alcoholic beverage restrictions (59%); and,
- safe surfaces on walkways and stairs (83%).

Substantial proportions of respondents, however, believe that there should be more or many more signs warning and advising about hazards (15%), brochures and other information warning about hazards (15%), and rangers to enforce rules and regulations (17%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 25% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 33% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 10.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

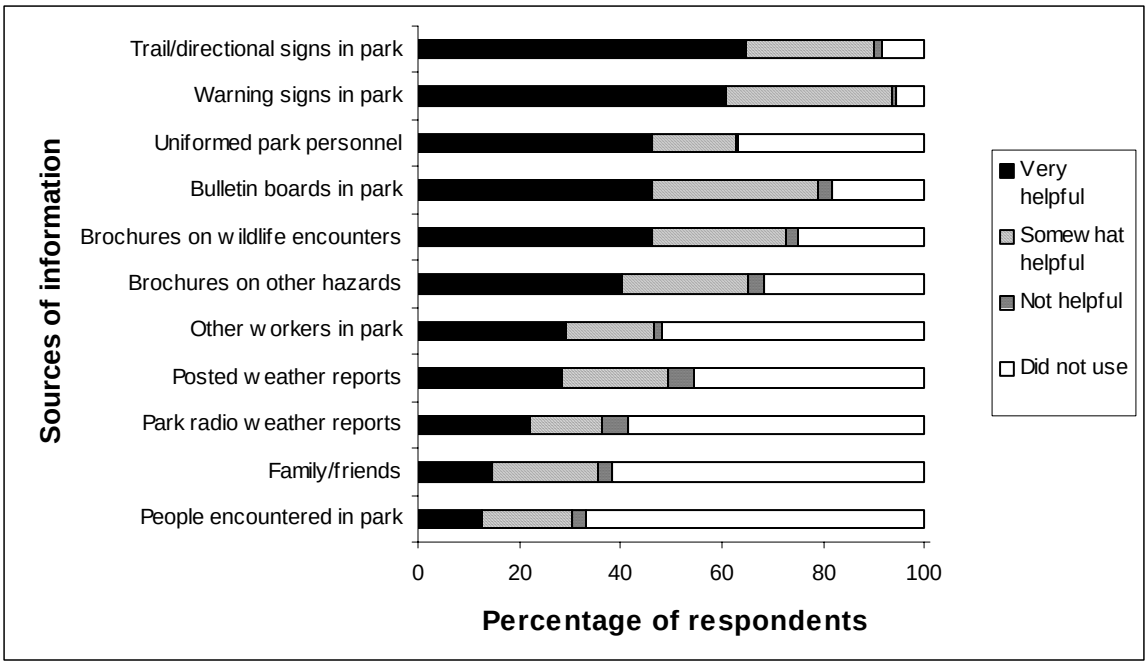

Figure 10.10: How helpful are various sources of safety information (N=140-216)

11.0 Big Bend National Park

11.1 Sample:

At Big Bend National Park, 116 visitor groups were contacted between June 7 and June 12, 2001, and 101 (87%) of these groups accepted questionnaires. Questionnaires were completed and returned by 68 visitor groups, resulting in a 67% response rate for this park.

11.2 Demographics:

Figure 11.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-two percent of respondents were female and 58% male. The overwhelming majority (96%)of respondents were white. Graduate school was the highest level of education attained by 28% of respondents, while an additional 24% classified themselves as college graduates. Sixty-five of the respondents were residents of the US, one was from Germany, and two others were of unknown nationality.

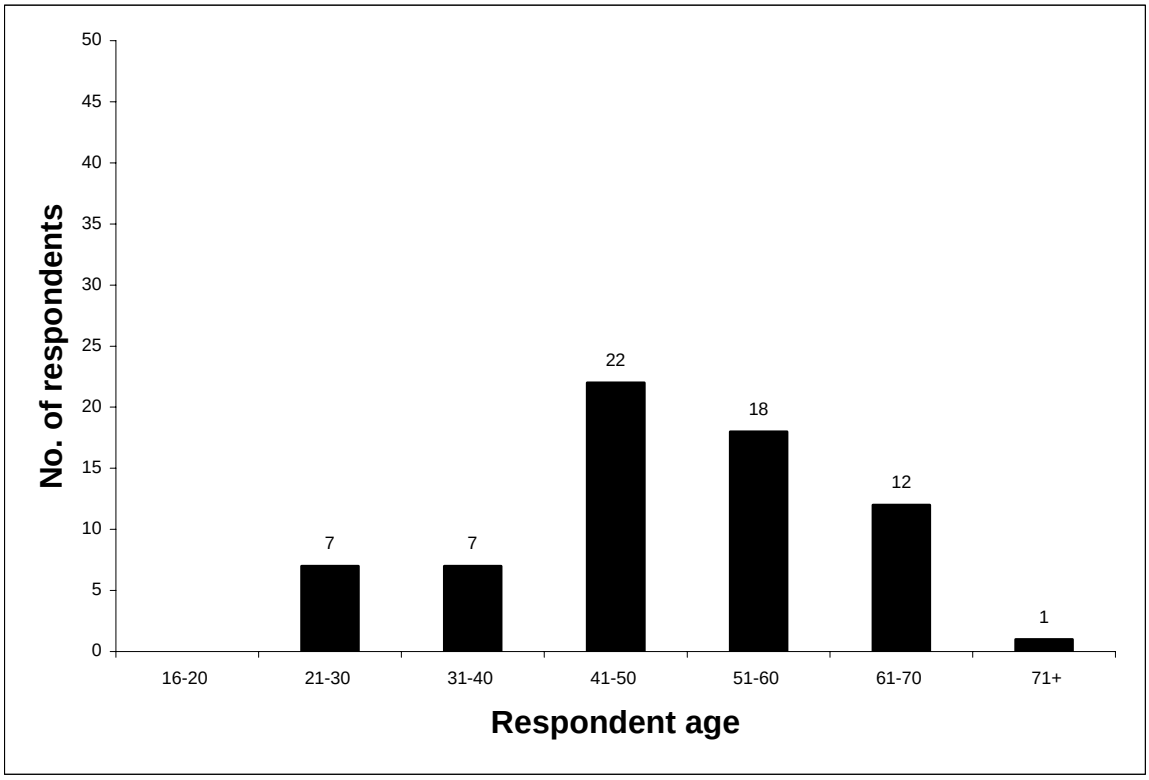

Figure 11.1: Distribution of respondents by age (N=67)

11.3 Visitation

Thirty-seven (54%) respondents indicated this was their first visit to the park. Among those 27 respondents returning to the park, 19% had visited the park twice in the past 10

years (including the current visit), 7% 3-5 times, 9% 6-10 times, and 4% 11 or more times. This visit was the primary destination for 53% of respondents, but one of only several destinations for 41% of respondents. For 6% of respondents this visit was not a planned destination at all. Four percent of the respondents visited the park for a half day or less, 13% visited for up to one day, and 82% visited for more than one day. Ten percent of respondents were visiting the park by themselves, 60% with family members, 21% with friends, and 7% with family members and friends.

11.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 11.2).

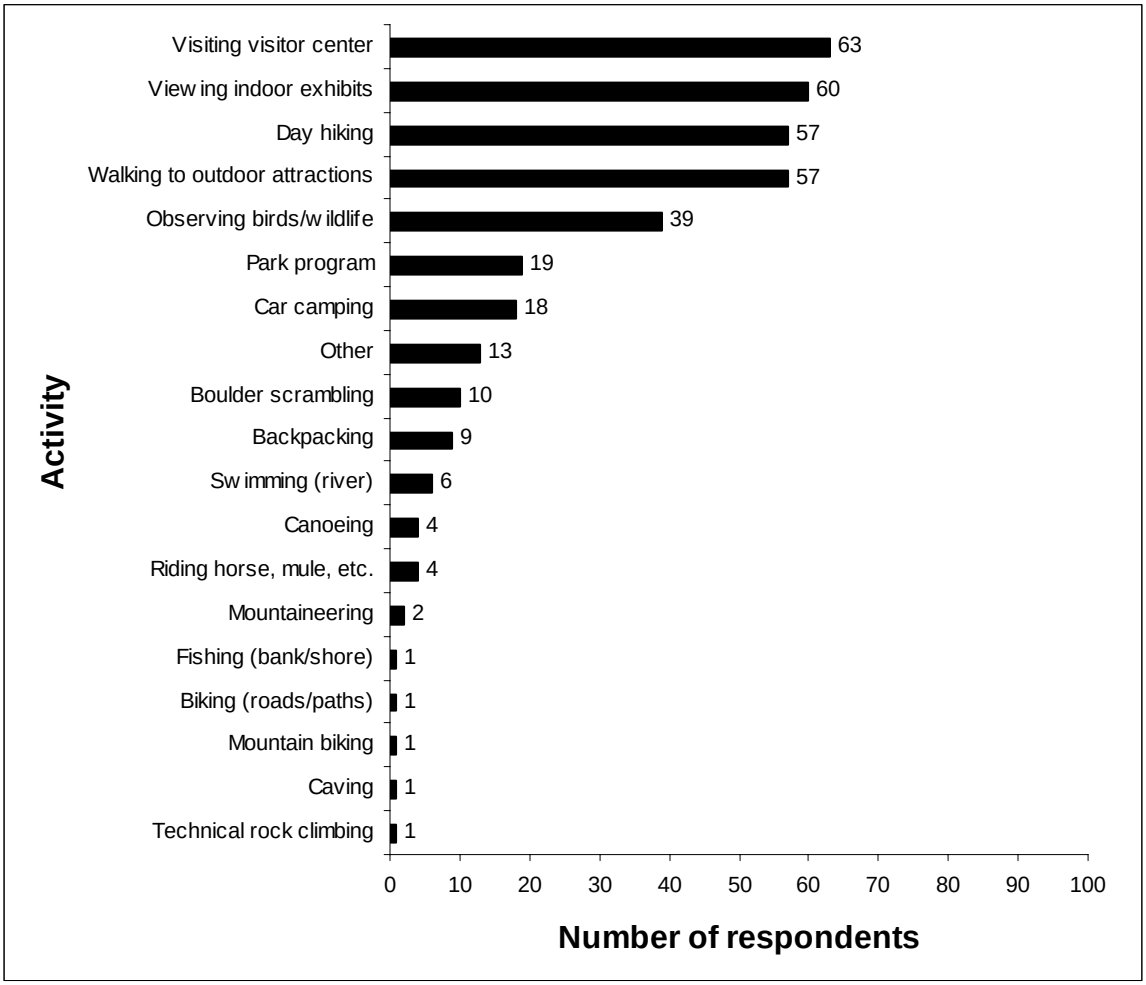

Figure 11.2: Visitor activities (N=68)
(Note: Several respondents listed more than one activity)

Figure 11.2 illustrates that many respondents visited the visitor center (91%) and viewed indoor exhibits (87%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the

activity that engaged them for most of the time during their visit. Figure 11.3 illustrates that day hiking (41%), walking to outdoor attractions (18%), and various other (13%) activities were the most popular primary activities. Most respondents (85%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 11% engaged in these activities alone, and 3% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 11.4). Ratings of personal experience varied little between activities and between males and females. Preparedness is one aspect of experience, and Figure 11.5 shows how prepared respondents were based on the safety items that they had available during their visit.

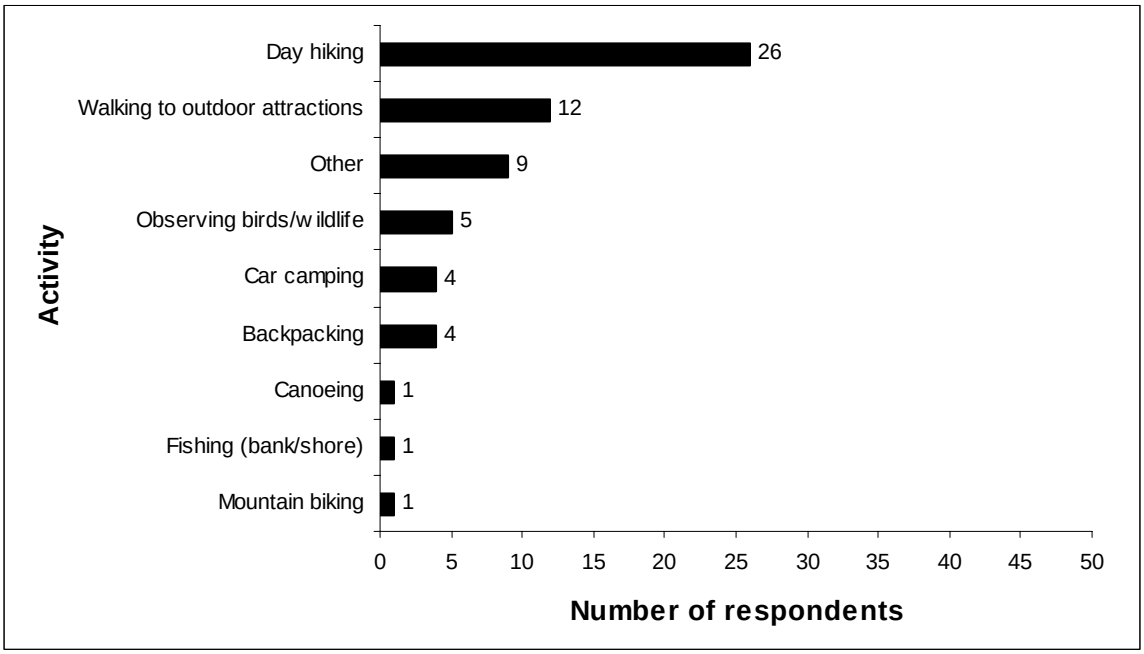

Figure 11.3: Primary visitor activities (N=68)

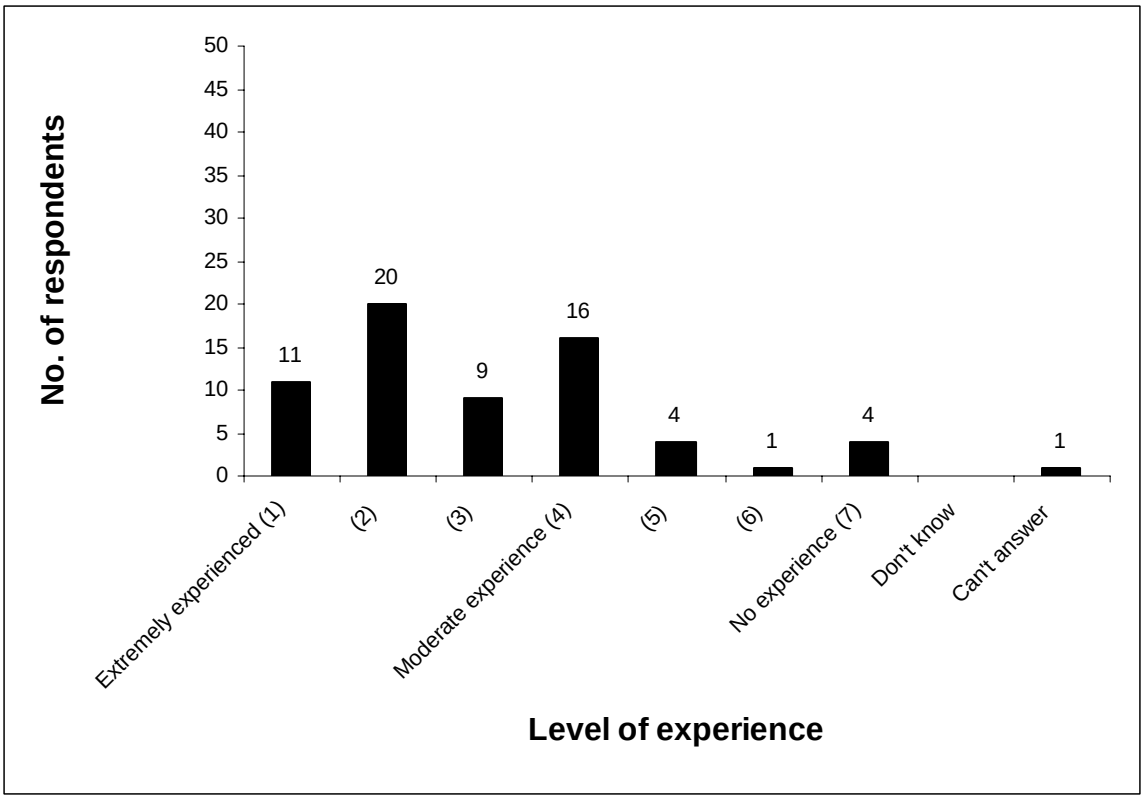

Figure 11.4: Personal level of experience (N=63)

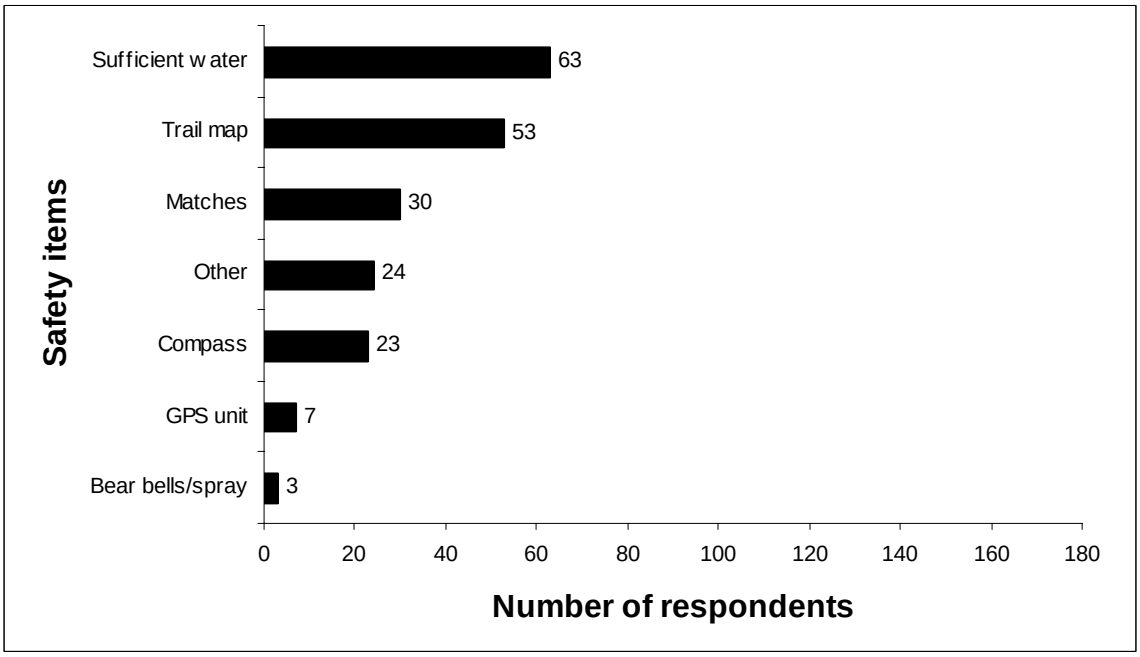

Figure 11.5: Personal safety items (N=63)

A surprisingly high proportion of respondents (48%) expressed some concern about suffering an injury or illness while engaged in their primary activity. Only one person, however, was extremely concerned for most of the time during their visit. Most concerned respondents were only moderately concerned for brief periods during their visit. Without reference to a particular activity, however, Figure 11.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, respondents were most concerned about elemental exposure, falling, insects, and other wildlife.

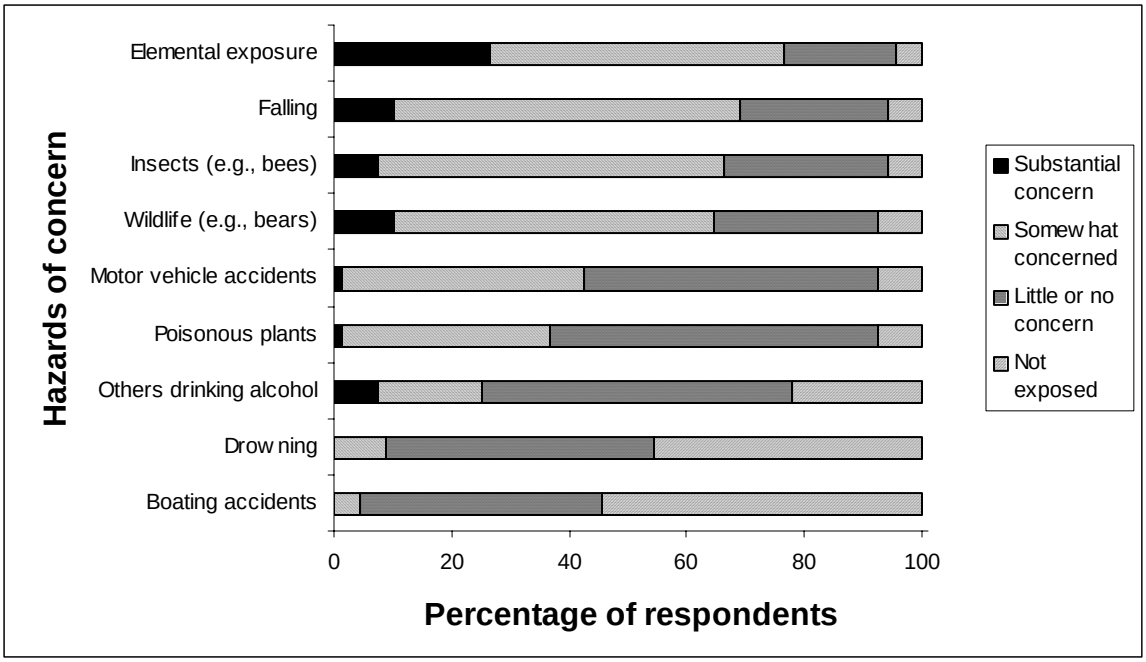

Figure 11.6: Level of concern about various hazards (N=66-68)

11.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. Ninety-two percent of respondents spent all of the time in the front seat, and 8% spent some of the time in the front seat. Of these 65 individuals, 57% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (91%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-seven percent of respondents never encountered cars that were driving too fast, and 34% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 42% of respondents encountered cars that were driving too slowly. Most (97%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time. Figure 11.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, wildlife beside the road, large recreational vehicles,

and cars stopping to see the views or wildlife are the most commonly cited driving hazards, although these pose a hazard only some of the time.

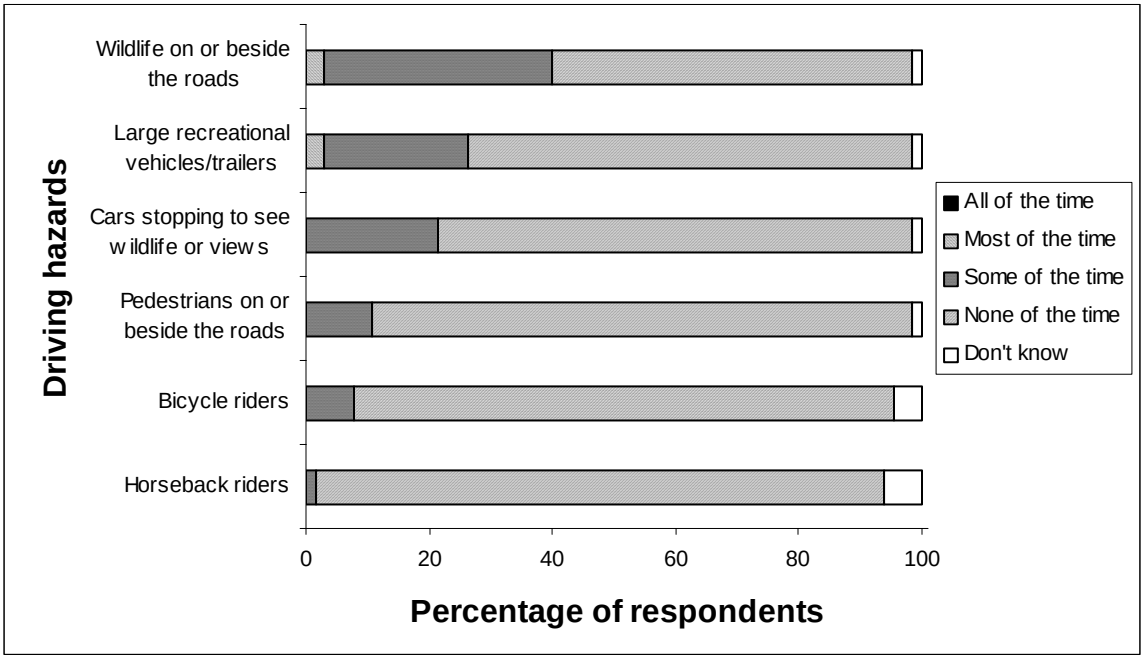

Figure 11.7: How often do these make traveling on roads more hazardous? (N=65)

11.6 Management issues:

With regard to the primary activity undertaken during their visit, 50% of respondents believed that safety was entirely the responsibility of the visitor, while 22% believed safety was the responsibility of both the visitor and the park staff (Figure 11.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 11.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Among the 3 respondents who indicated that the safety measures did detract from their enjoyment to some extent, 2 were involved in day hiking and 1 was a biker.

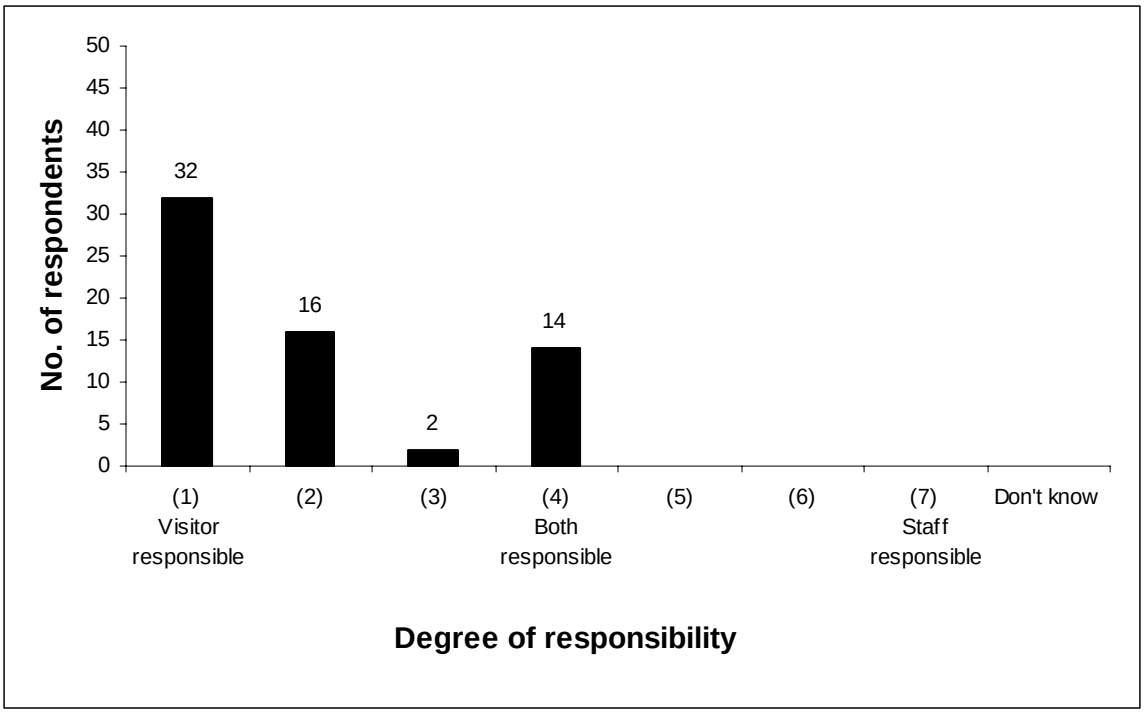

Figure 11.8: Responsibility for safety in chosen primary activity (N=64)

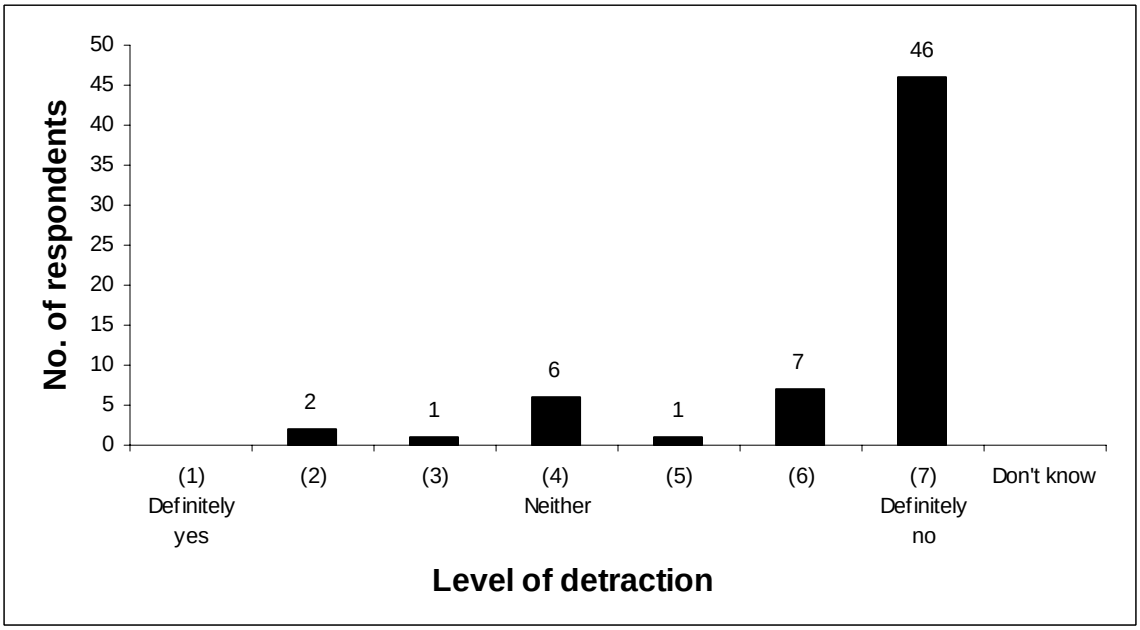

Figure 11.9: Do safety measures detract from visitor enjoyment? (N=63)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Seventy-two percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 6% disagree or disagree strongly, and 21% neither agree nor disagree. Thirteen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 60% disagree or disagree strongly, and 24% neither agree nor disagree. Eighteen percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 43% agree or agree strongly, and 36% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (90%);
- signs warning and advising about hazards (X90X%);
- brochures and other information warning about hazards (87%);
- restrictions on the number of persons/groups who undertake particular activities (79%);
- park rangers to enforce rules and regulations (75%);
- enforcement of alcoholic beverage restrictions (75%); and,
- safe surfaces on walkways and stairs (88%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (15%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 11.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information, which is consistent with other parks, but substantial proportions of respondents also rate brochures on wildlife and other hazards as very helpful.

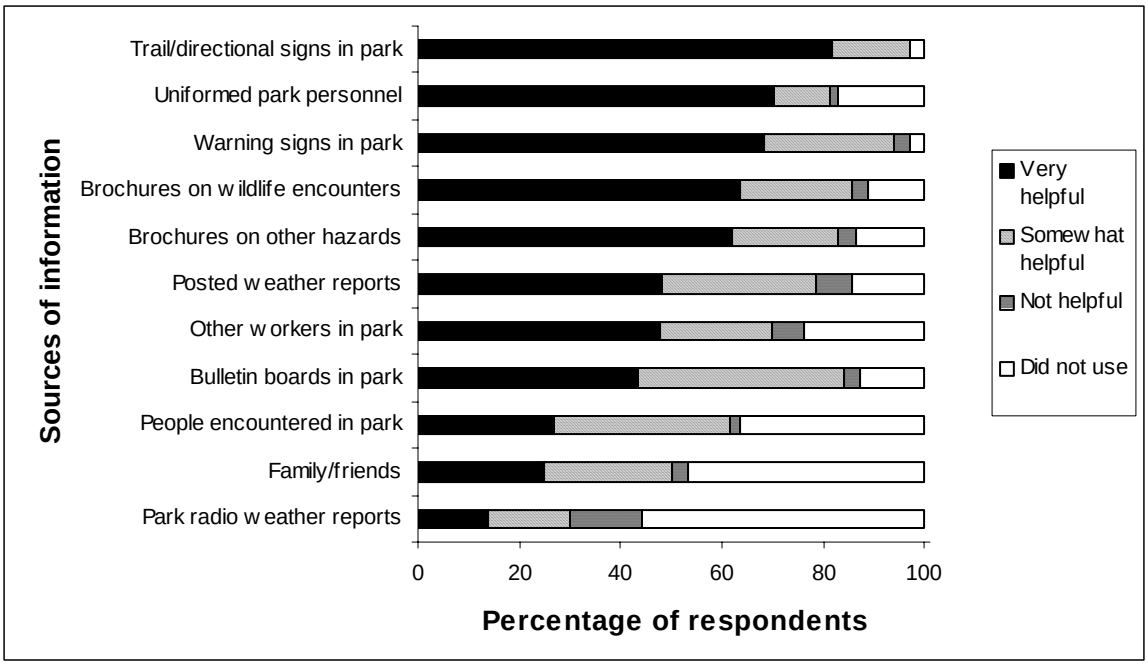

Figure 11.10: How helpful are various sources of safety information (N=50-66)

12.0 Blue Ridge Parkway

12.1 Sample:

At Blue Ridge Parkway, 318 visitor groups were contacted between June 28 and July 3, 2001, and 318 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 211 visitor groups, resulting in a 65.9% response rate for this park.

12.2 Demographics:

Figure 12.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty percent of respondents were female and 50% male. The overwhelming majority (97%)of respondents were white, with 1% African-American, and 1% Asian. Graduate school was the highest level of education attained by 25% of respondents, while an additional 34% classified themselves as college graduates. The majority (98%) of respondents were residents of the US and there was one visitor from the UK and 5 of unknown nationality.

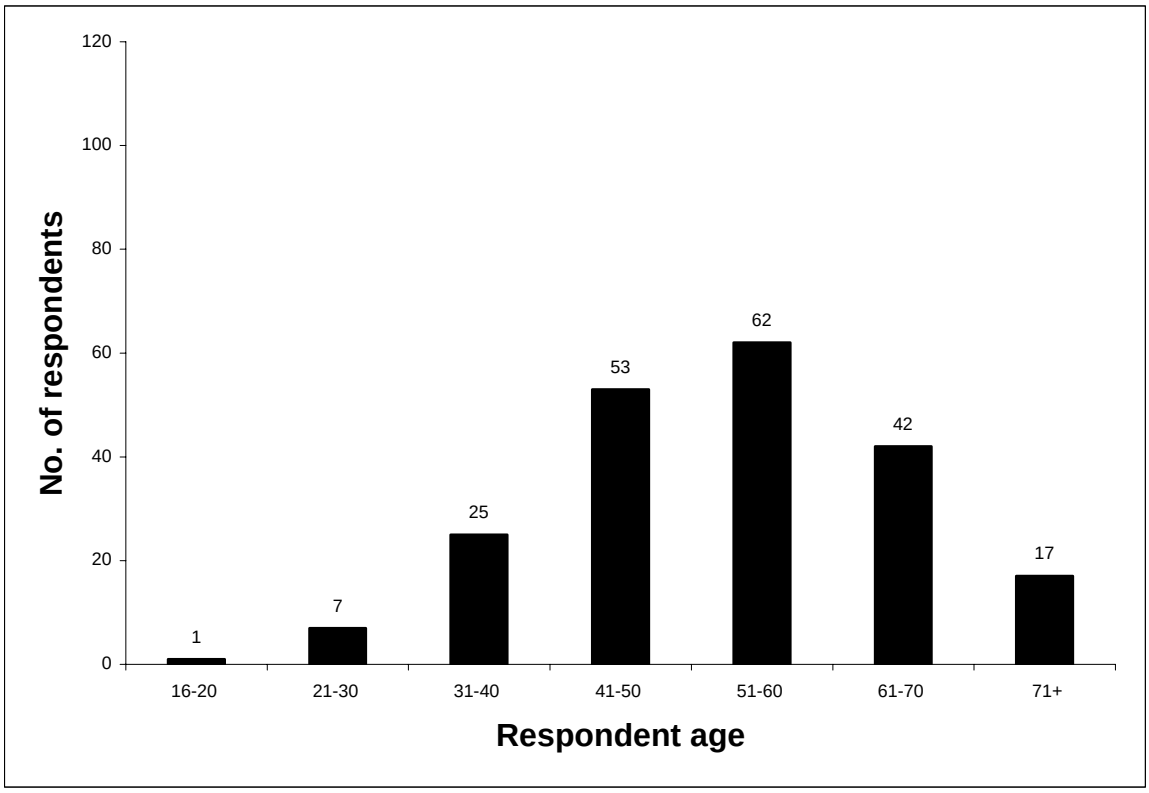

Figure 12.1: Distribution of respondents by age (N=207)

12.3 Visitation

For 25% of respondents, this was their first visit to the park. Among those 149 respondents who indicated they were returning to the park, 20% had visited the park

twice in the past 10 years (including the current visit), 23% 3-5 times, 26% 6-10 times, and 32% 11 or more times. This visit was the primary destination for 25% of respondents, but one of only several destinations for 59% of respondents. For 16% of respondents this visit was not a planned destination at all. Forty-nine percent of the respondents visited the park for a half day or less, 21% visited for up to one day, and 31% visited for more than one day. Five percent of respondents were visiting the park by themselves, 74% with family members, 13% with friends, and 7% with family members and friends.

12.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 12.2).

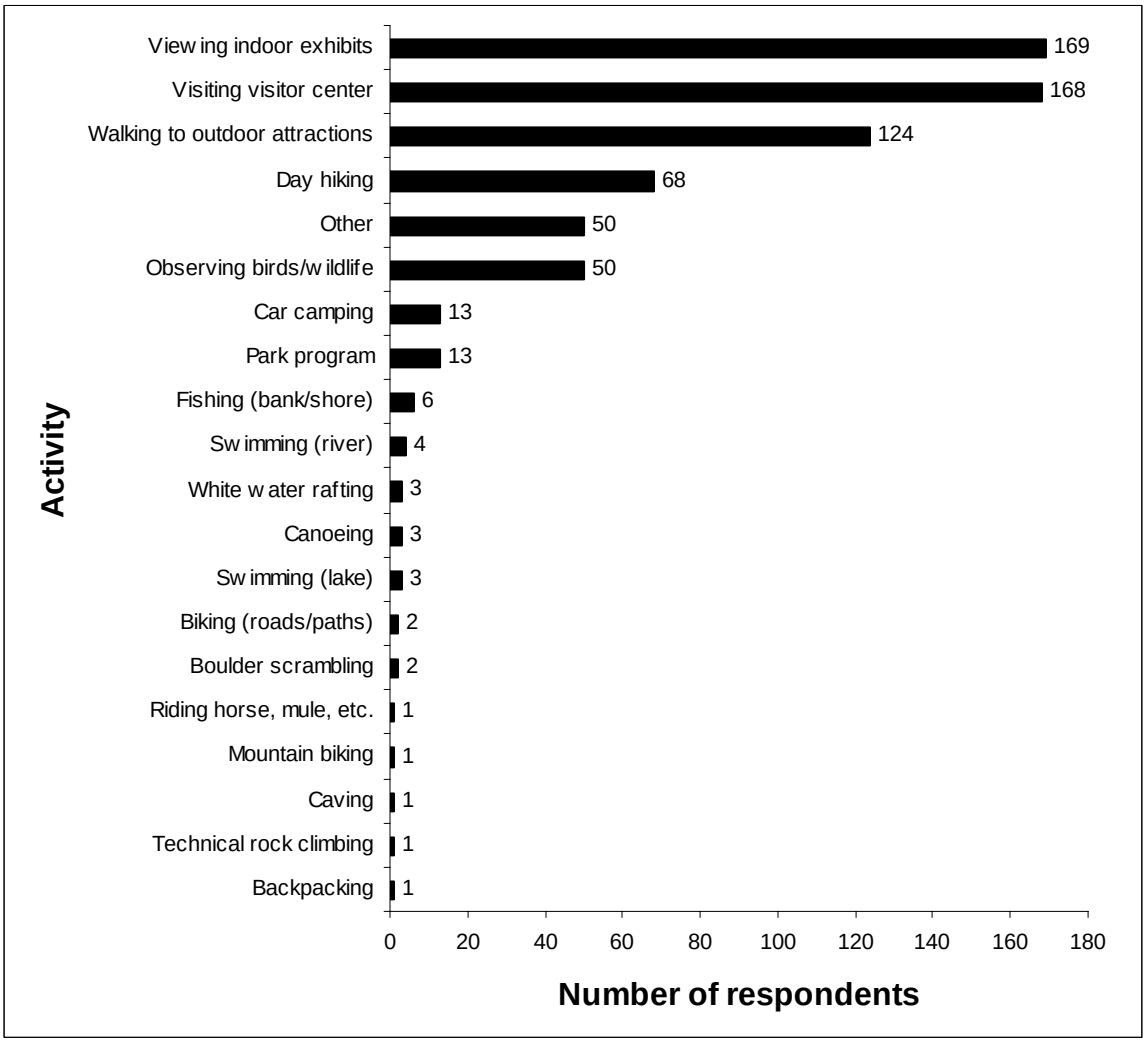

Figure 12.2: Visitor activities (N=211)
(Note: Several respondents listed more than one activity)

Figure 12.2 illustrates that many respondents visited the visitor center (80%) and viewed indoor exhibits (80%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 12.3 illustrates that day hiking (23%), walking to outdoor attractions (20%), viewing indoor exhibits (19%), and various other activities (19%) were the most popular primary activities. Most respondents (89%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, and 1% with people aside from their own personal group.

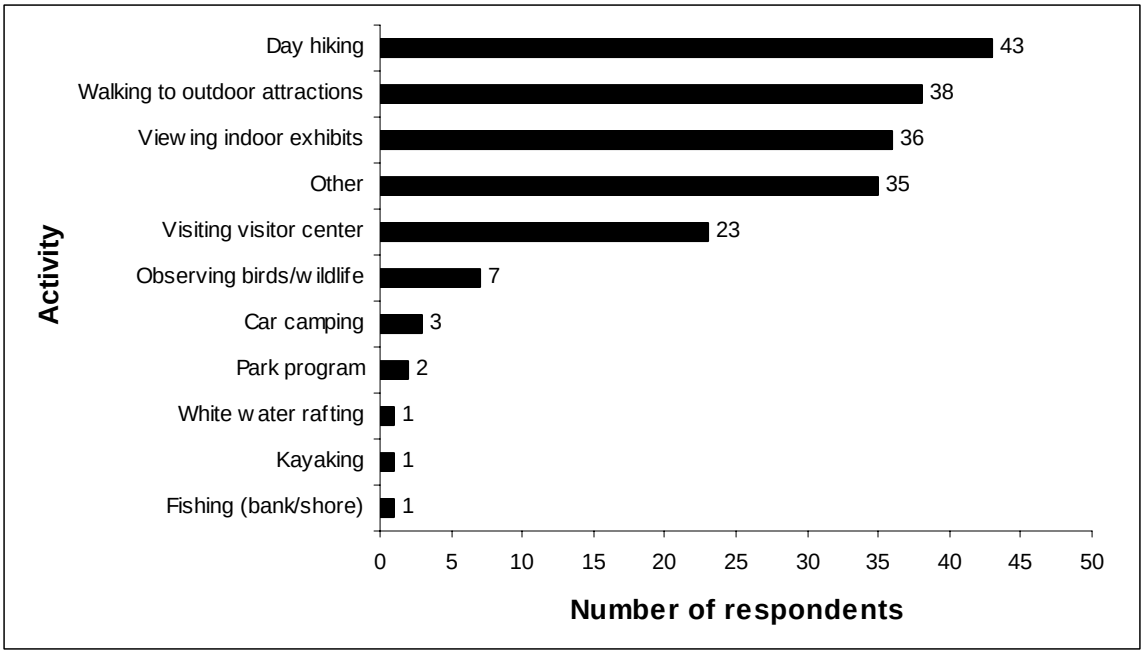

Figure 12.3: Primary visitor activities (N=190)

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 12.4). Ratings of personal experience varied little between activities and between males and females.

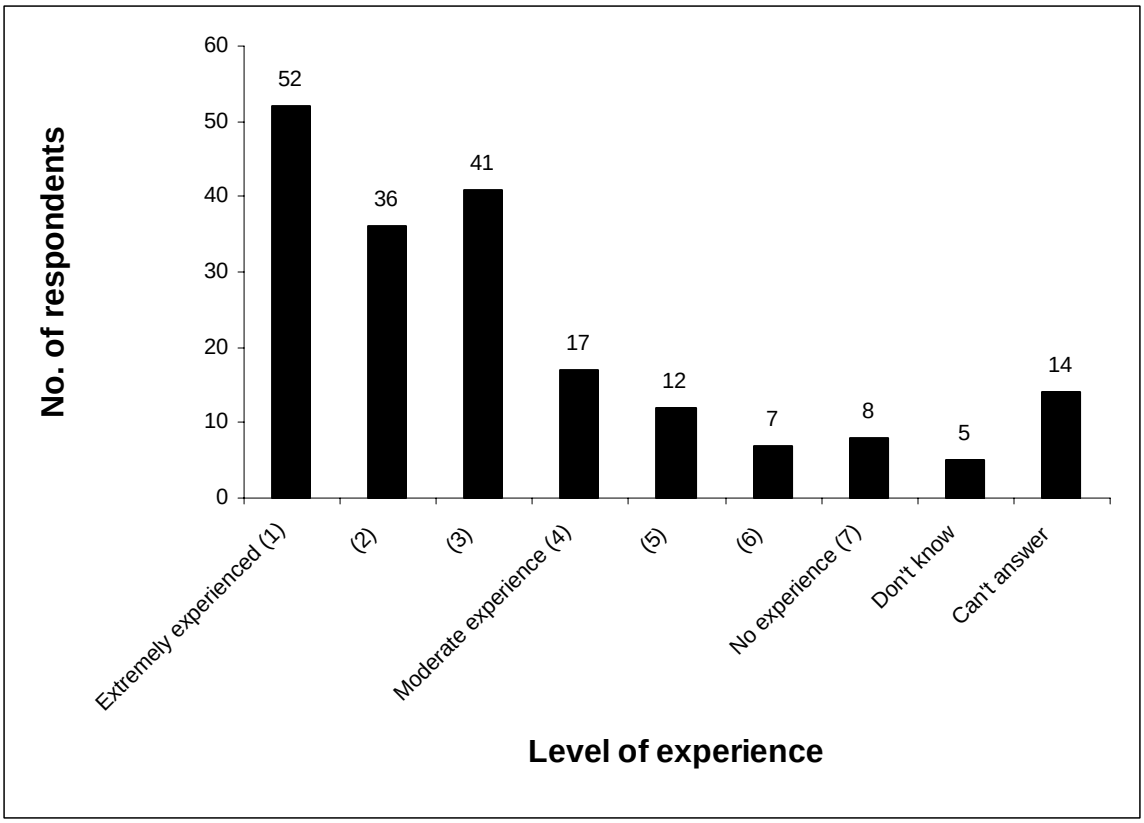

Figure 12.4: Personal level of experience (N=192)

Preparedness is one aspect of experience, and Figure 12.5 shows how prepared respondents were based on the safety items that they had available during their visit.

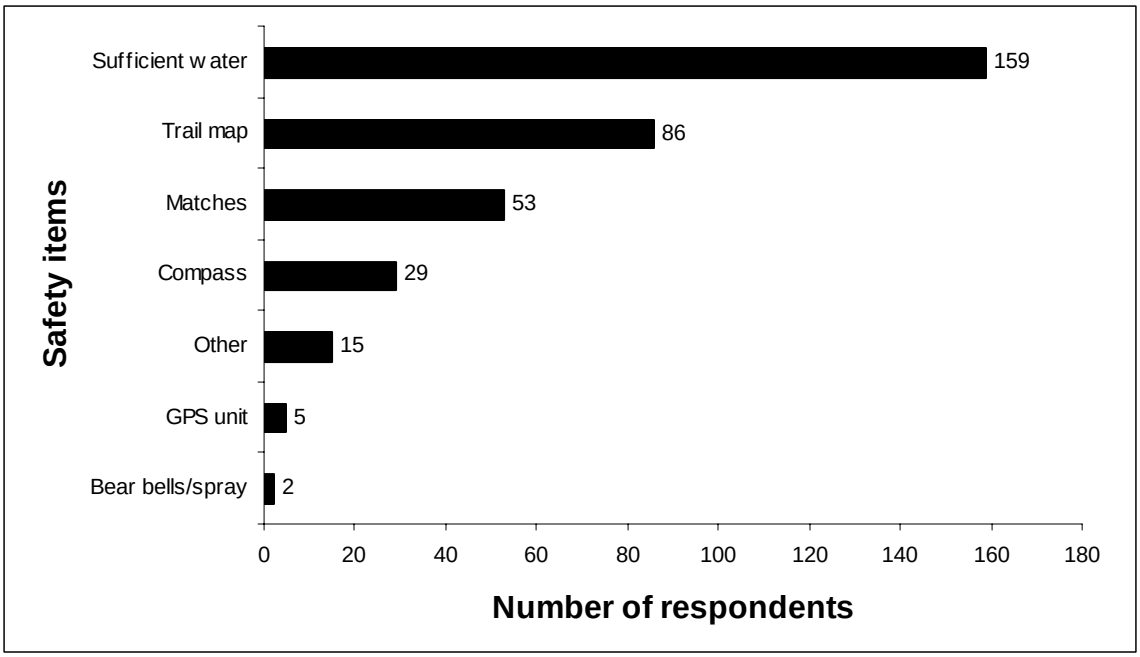

Figure 12.5: Personal safety items (N=159)

Few respondents (8%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 12.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although it is curious why concern about poisonous plants should so high.

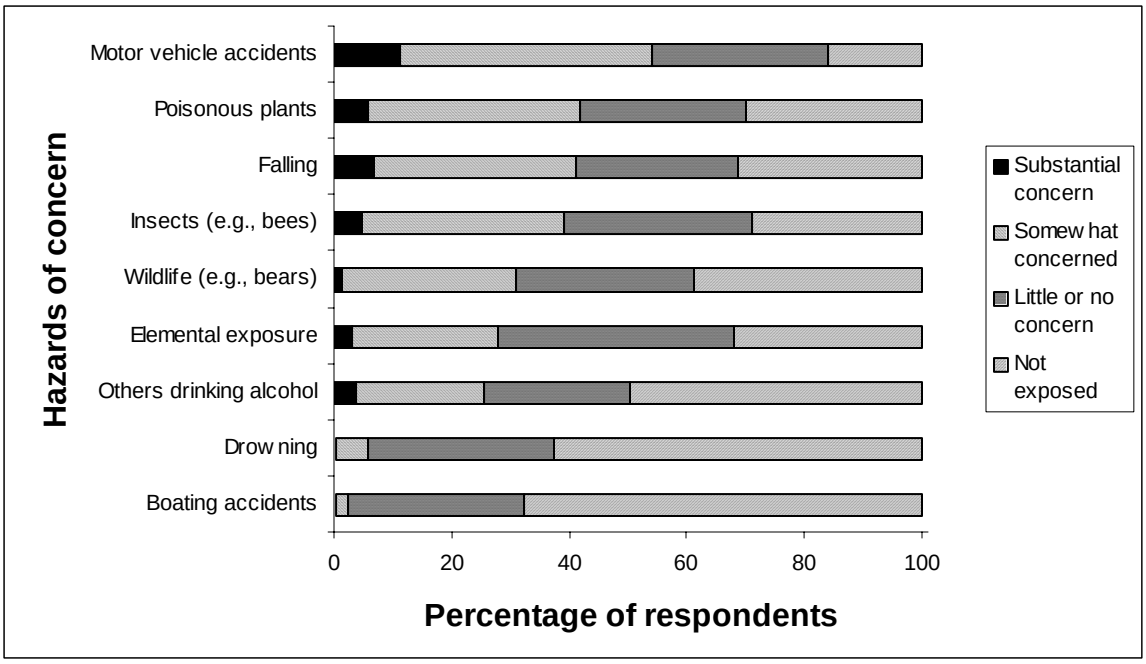

Figure 12.6: Level of concern about various hazards (N=203-207)

12.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 98% of respondents were traveling in privately owned or rented vehicles. Eighty-eight percent of respondents spent all of the time in the front seat, and 6% spent some of the time in the front seat. Of these individuals, 60% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty-nine percent of respondents never encountered cars that were driving too fast, and 57% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 47% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 12.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders and large recreational vehicles are the most commonly cited driving hazards.

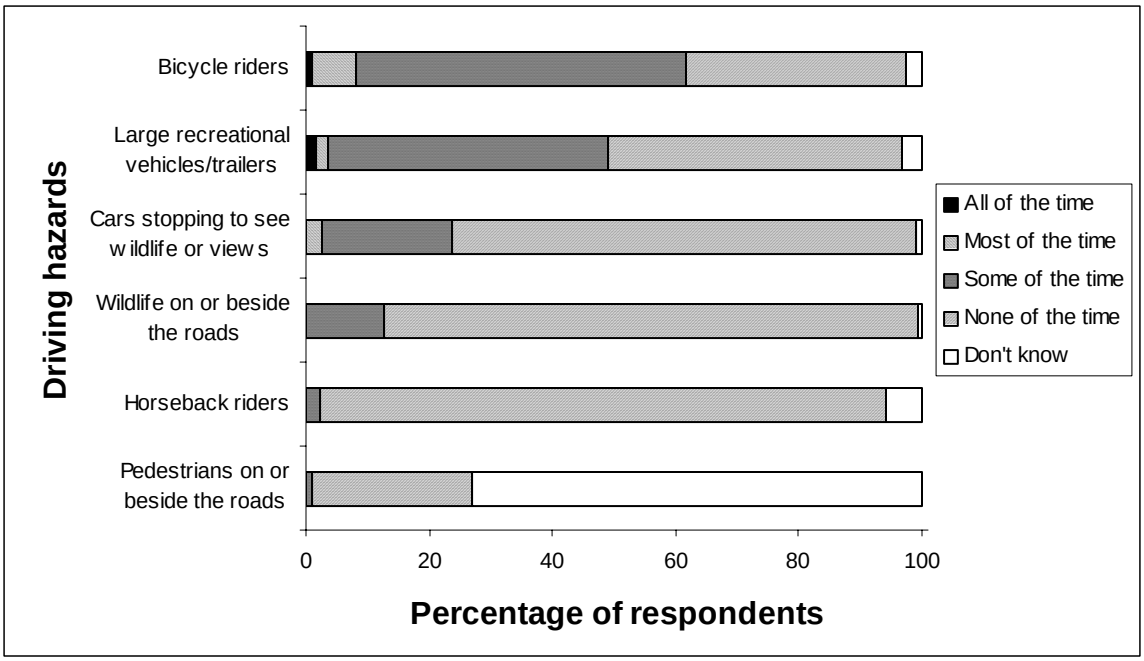

Figure 12.7: How often do these make traveling on roads more hazardous? (N=188-194)

12.6 Management issues:

With regard to the primary activity undertaken during their visit, 27% of respondents believed that safety was entirely the responsibility of the visitor, while 45% believed safety was the responsibility of both the visitor and the park staff (Figure 12.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 12.9 shows that the overwhelming majority (75%) of respondents thought such measures definitely did not detract. The one respondent who indicated that the safety measures definitely did detract from their enjoyment was participating in a park program.

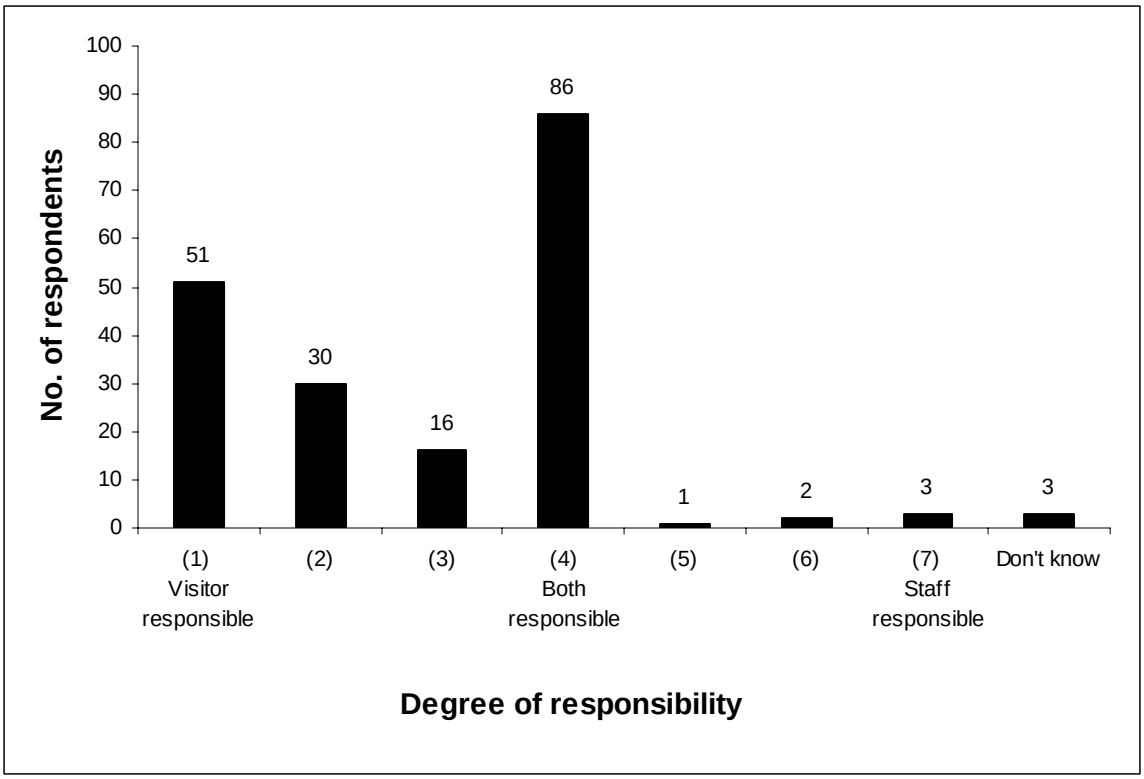

Figure 12.8: Responsibility for safety in chosen primary activity (N=192)

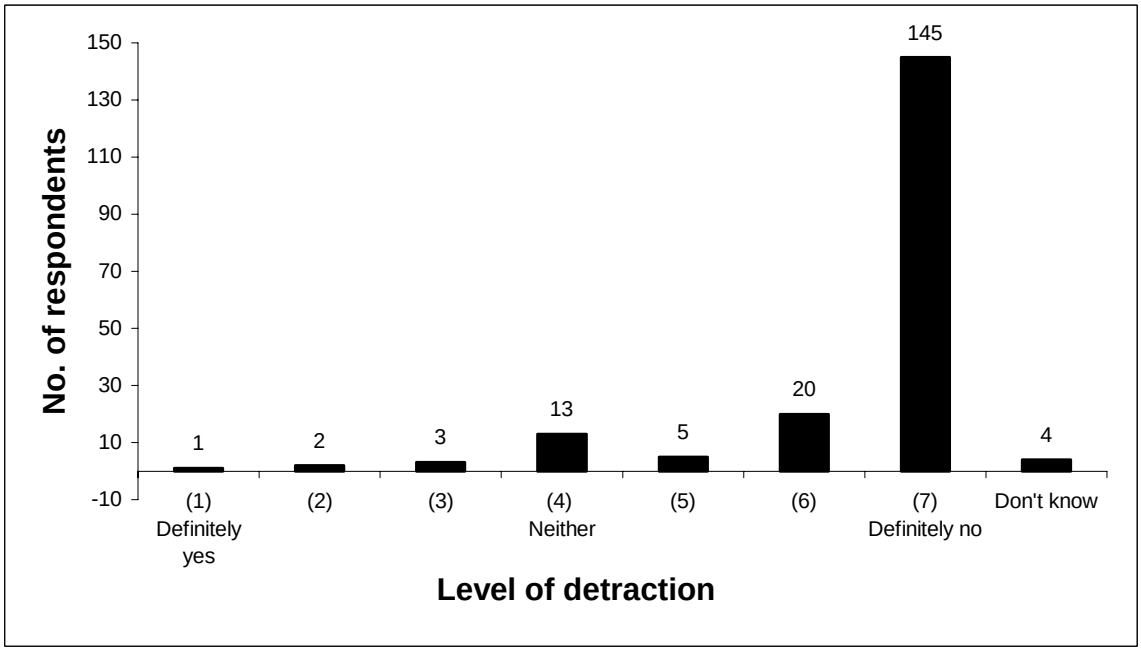

Figure 12.9: Do safety measures detract from visitor enjoyment? (N=193)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 39% neither agree nor disagree. Twenty-six percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 36% disagree or disagree strongly, and 33% neither agree nor disagree. Thirty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 24% agree or agree strongly, and 37% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (79%);
- signs warning and advising about hazards (81%);
- brochures and other information warning about hazards (67%);
- restrictions on the number of persons/groups who undertake particular activities (63%);
- park rangers to enforce rules and regulations (52%);
- enforcement of alcoholic beverage restrictions (55%); and,
- safe surfaces on walkways and stairs (68%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (30%) and more or much more enforcement of alcoholic beverage prohibitions (23%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 25% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 21% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 12.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

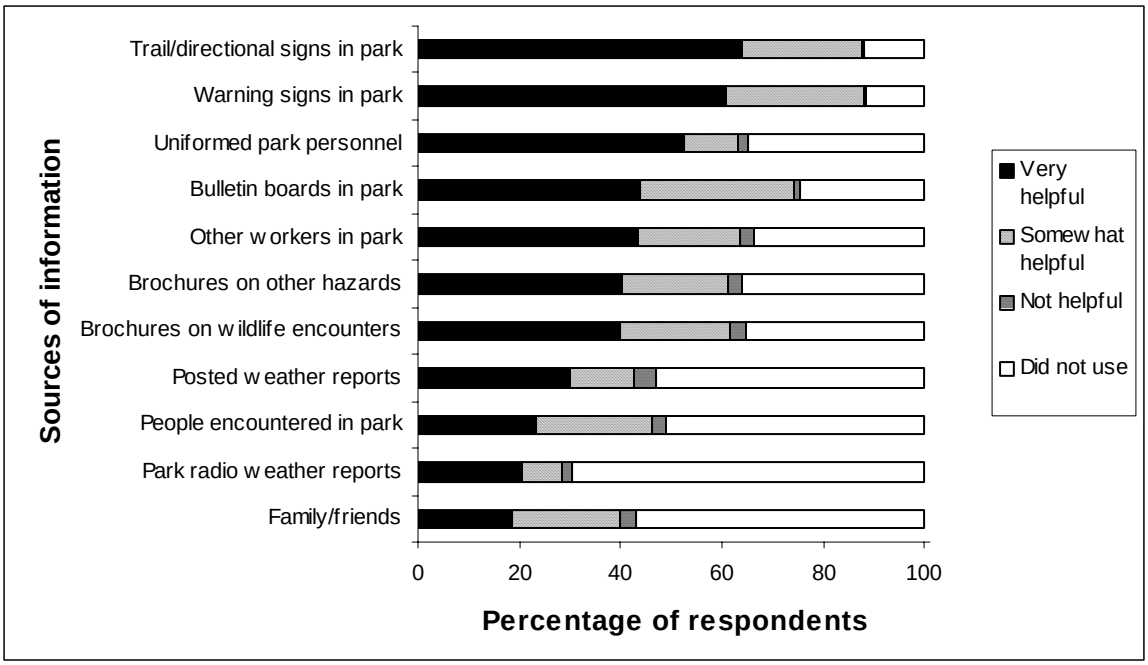

Figure 12.10: How helpful are various sources of safety information (N=102-167)

13.0 Carlsbad Caverns National Park

13.1 Sample:

At Carlsbad Caverns National Park, 405 visitor groups were contacted between June 14 and June 19, 2001, and 393 (97%) of these groups accepted questionnaires. Questionnaires were completed and returned by 221 visitor groups, resulting in a 56.2% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process).

13.2 Demographics:

Figure 13.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-eight percent of respondents were female and 42% male. The overwhelming majority (92%)of respondents were white, with 6% Hispanic. Graduate school was the highest level of education attained by 17% of respondents, while an additional 35% classified themselves as college graduates. The majority (98%) of respondents were residents of the US, with 2% from Canada.

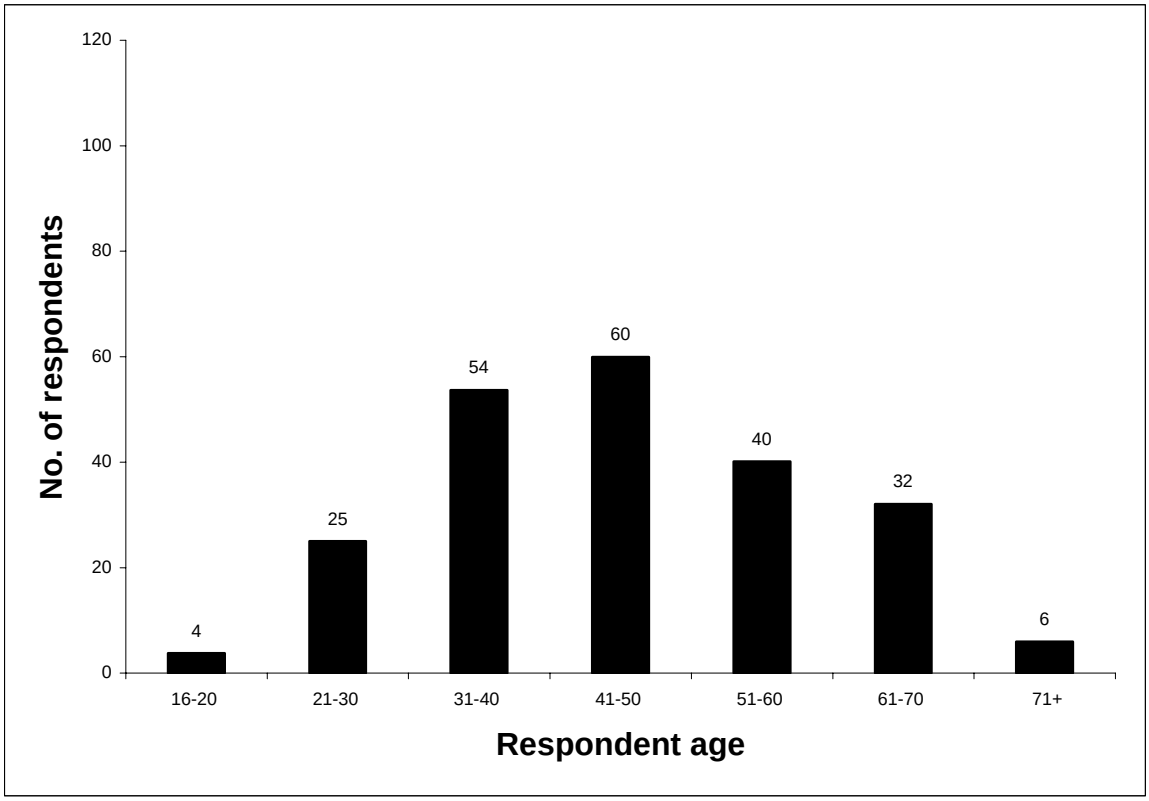

Figure 13.1: Distribution of respondents by age (N=220)

13.3 Visitation

For 68% of respondents, this was their first visit to the park. Among those respondents returning to the park, 72% had visited the park twice in the past 10 years (including the current visit), 20% 3-5 times, 6% 6-10 times, and 2% 11 or more times. This visit was the primary destination for 28% of respondents, but one of only several destinations for 67% of respondents. For 5% of respondents this visit was not a planned destination at all. Forty-nine percent of the respondents visited the park for a half day or less, 33% visited for up to one day, and 18% visited for more than one day. Three percent of respondents were visiting the park by themselves, 80% with family members, 5% with friends, and 8% with family members and friends.

13.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 13.2).

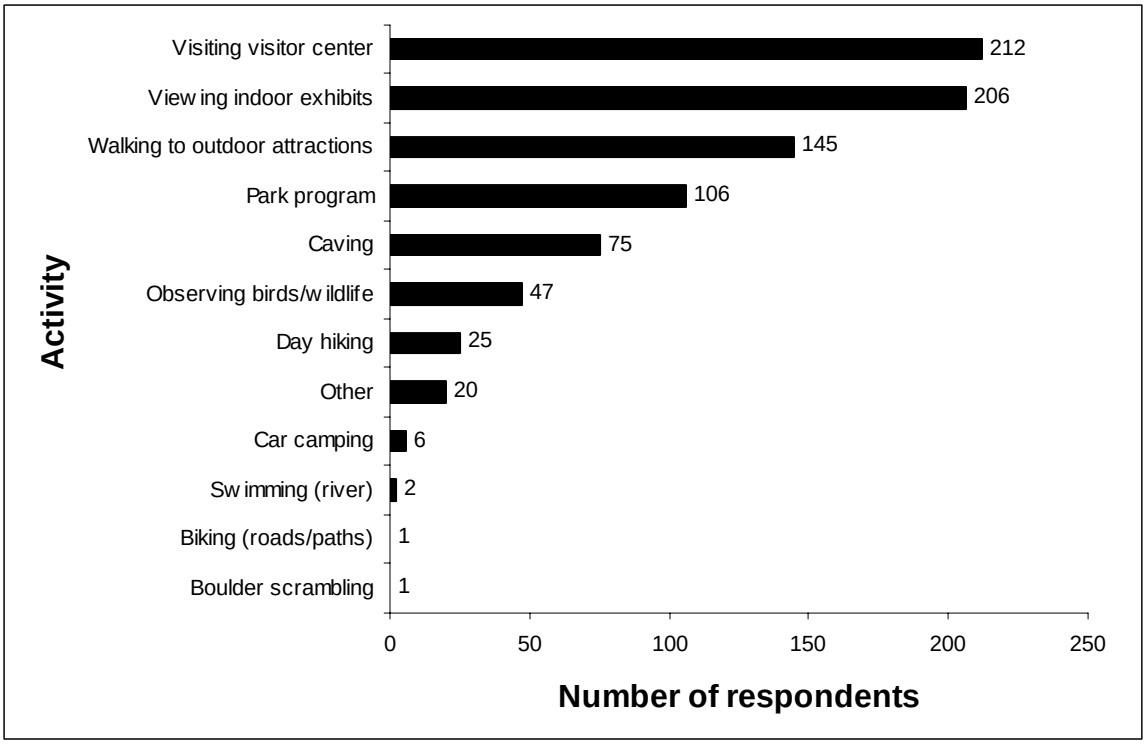

Figure 13.2: Visitor activities (N=220)
(Note: Several respondents listed more than one activity)

Figure 13.2 illustrates that many respondents visited the visitor center (96%) and viewed indoor exhibits (94%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 13.3 illustrates that caving (31%), viewing indoor exhibits (20%), and park programs (17%) were the most popular primary activities. Most respondents (80%) engaged in these activities with

members of their own personal group (i.e., friends and family members), although 6% engaged in these activities alone, less than 10% with people aside from their own personal group, and 4% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity, but in contrast with the findings at many other parks, a relatively large number of respondents rated themselves as having limited or no experience (Figure 13.4). This may reflect the nature of the activities. For example, 29 of the 43 people indicating they had no experience in the activity were engaged in park programs and caving (i.e., guided tours of the caves).

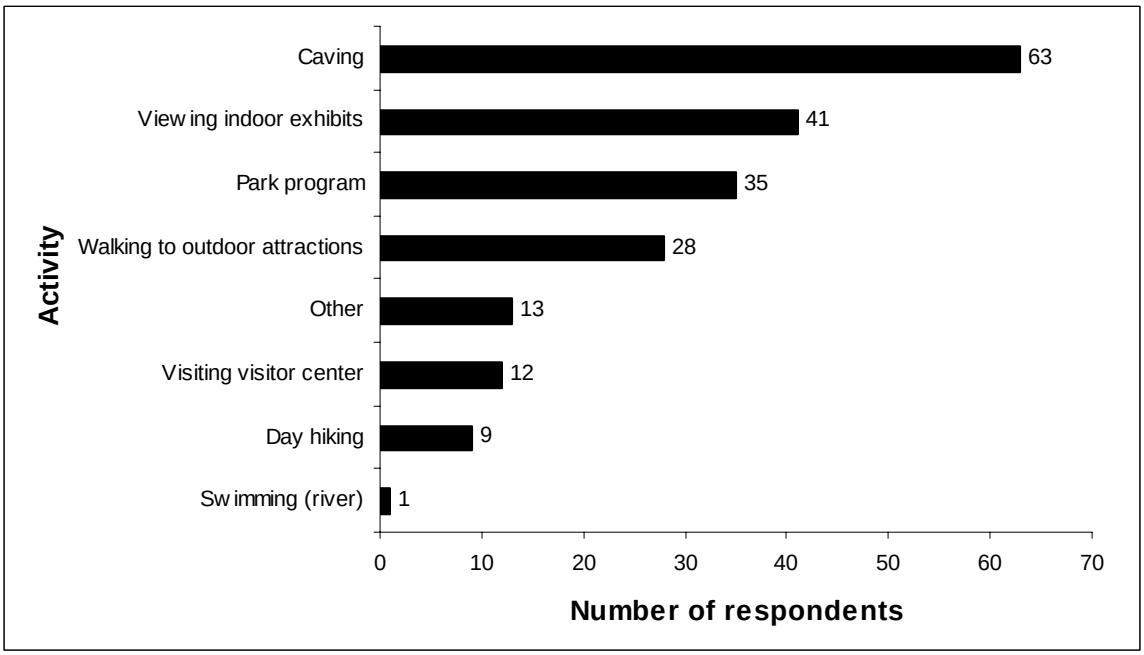

Figure 13.3: Primary visitor activities (N=202)

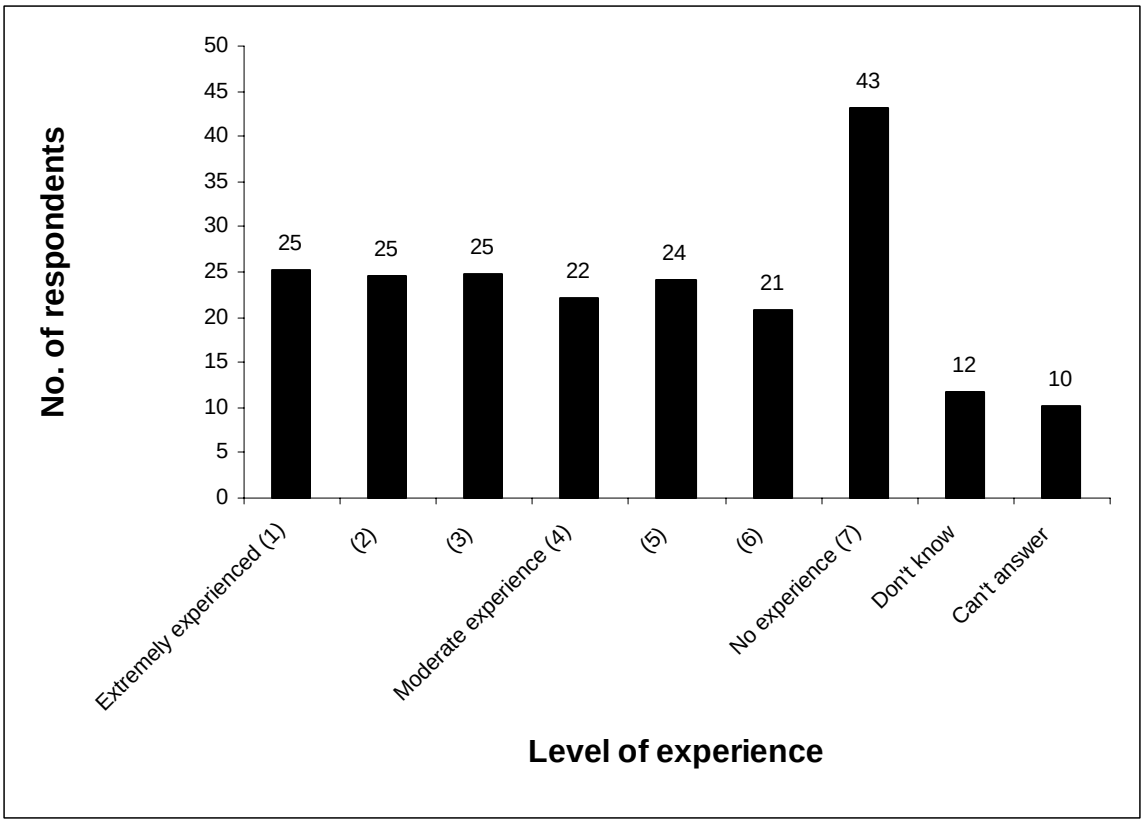

Figure 13.4: Personal level of experience (N=202)

Preparedness is one aspect of experience, and Figure 13.5 shows how prepared respondents were based on the safety items that they had available during their visit.

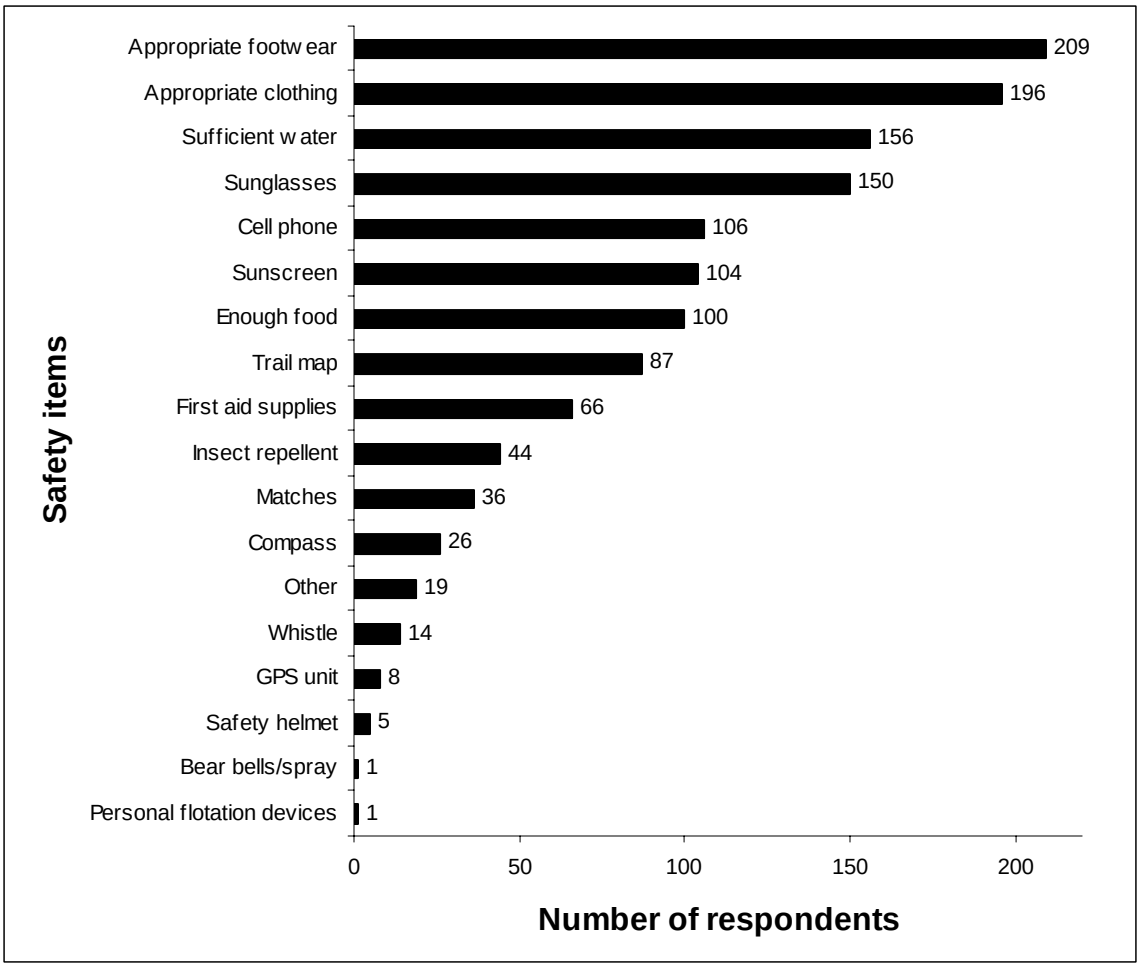

Figure 13.5: Personal safety items (N=209)

Thirteen percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity, although most expressed relatively minor concern for brief periods. Without reference to a particular activity, however, Figure 13.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of the park.

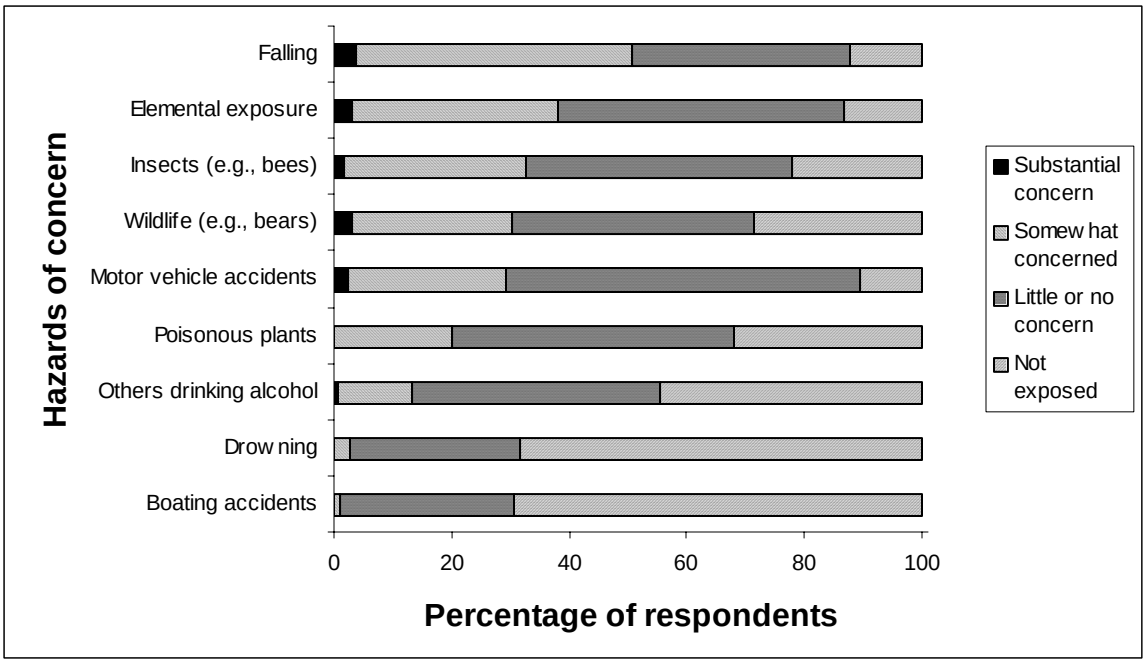

Figure 13.6: Level of concern about various hazards (N=213-216)

13.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 93% of respondents were traveling in privately owned or rented vehicles. Eighty-one percent of respondents spent all of the time in the front seat, and 10% spent some of the time in the front seat. Of these individuals, 50% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-six percent of respondents never encountered cars that were driving too fast, and 37% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 41% of respondents encountered cars that were driving too slowly. Most (97%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time. Figure 13.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards, although these a perceived to be hazards only some of the time.

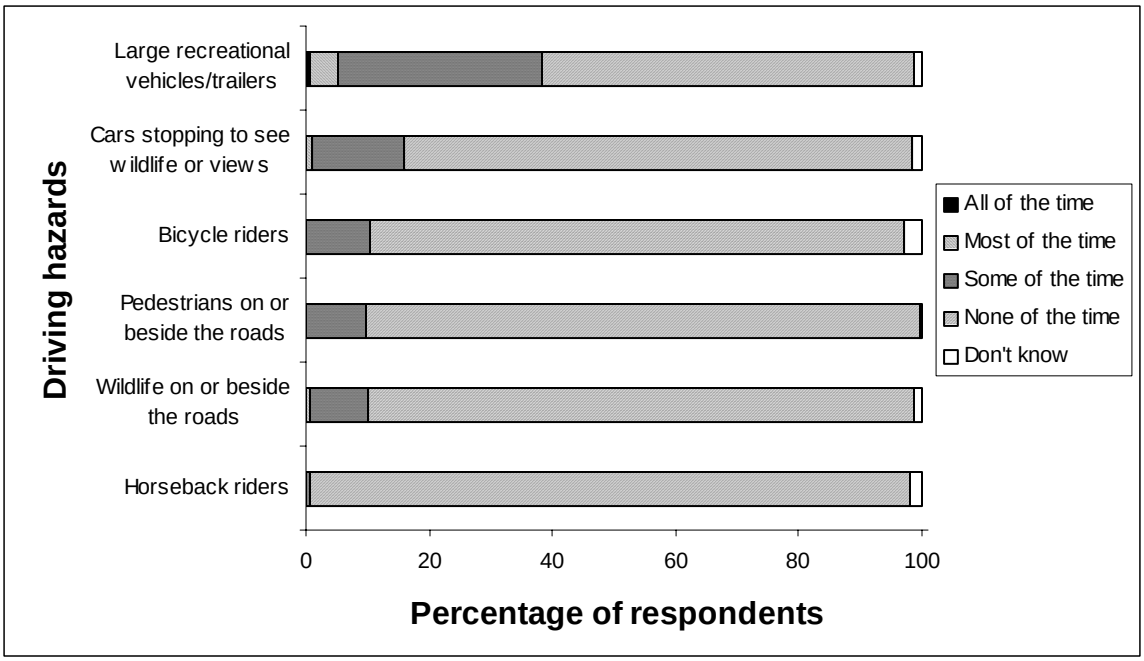

Figure 13.7: How often do these make traveling on roads more hazardous? (N=185)

13.6 Management issues:

With regard to the primary activity undertaken during their visit, 15% of respondents believed that safety was entirely the responsibility of the visitor, while 68% believed safety was the responsibility of both the visitor and the park staff (Figure 13.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 13.9 shows that the overwhelming majority (70%) of respondents thought such measures definitely did not detract.

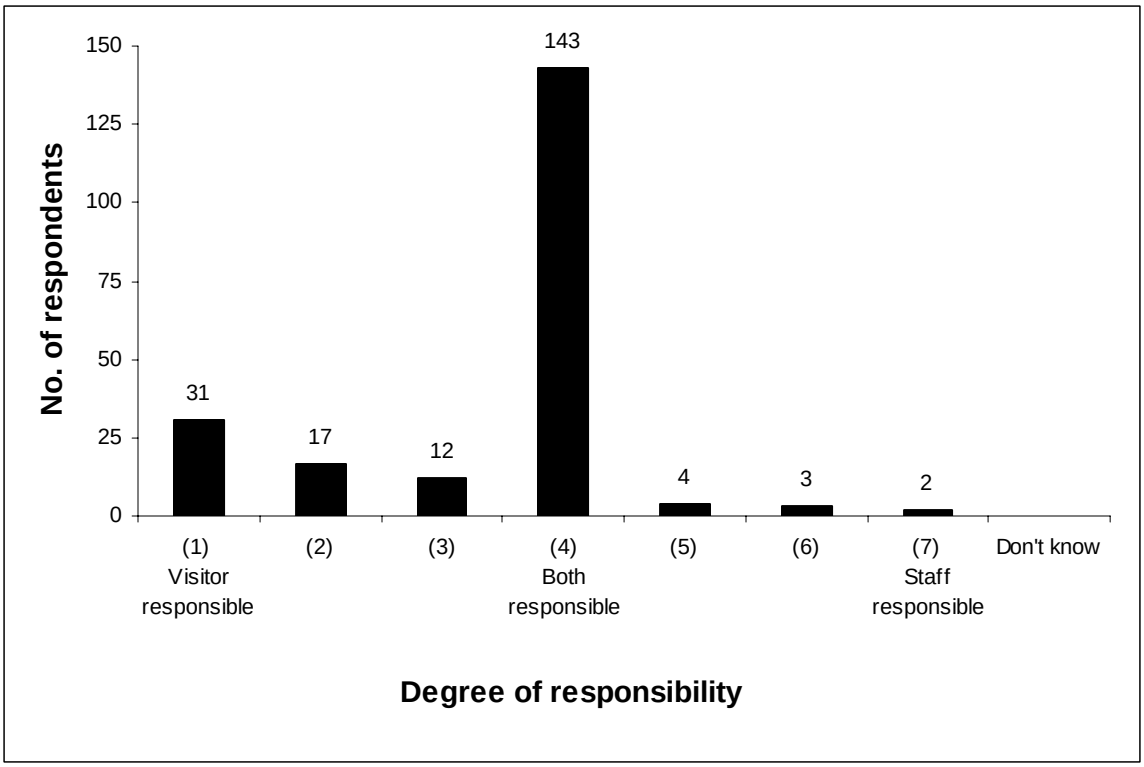

Figure 13.8: Responsibility for safety in chosen primary activity (N=212)

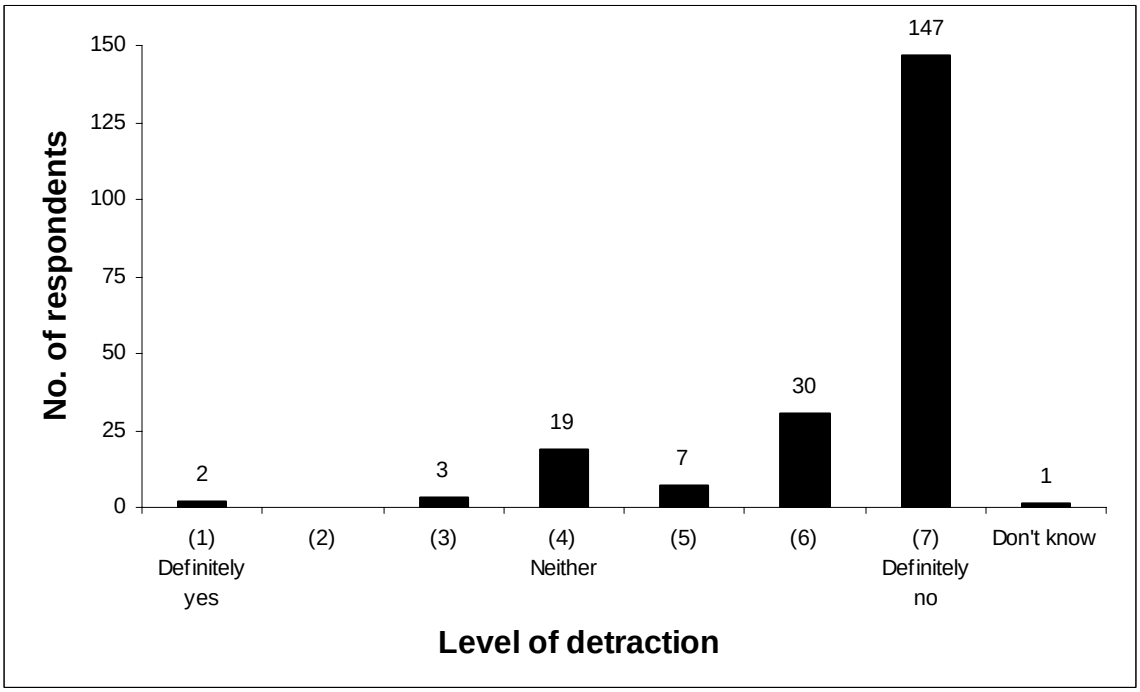

Figure 13.9: Do safety measures detract from visitor enjoyment? (N=209)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 10% disagree or disagree strongly, and 41% neither agree nor disagree. Thirty-one percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 30% disagree or disagree strongly, and 35% neither agree nor disagree. Forty-two percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 22% agree or agree strongly, and 33% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (88%);
- signs warning and advising about hazards (92%);
- brochures and other information warning about hazards (88%);
- restrictions on the number of persons/groups who undertake particular activities (76%);
- park rangers to enforce rules and regulations (80%);
- enforcement of alcoholic beverage restrictions (71%); and,
- safe surfaces on walkways and stairs (86%).

A substantial proportion of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (16%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 13% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 17% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 13.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

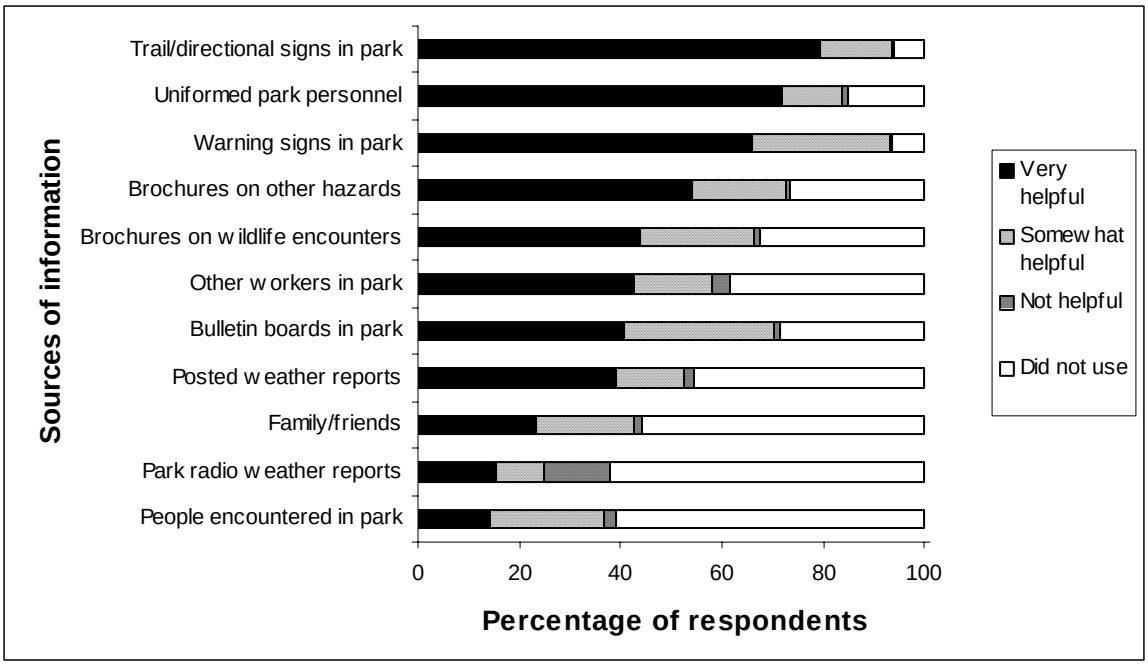

Figure 13.10: How helpful are various sources of safety information (N=128-202)

14.0 Cape Hatteras National Seashore

14.1 Sample:

At Cape Hatteras National Seashore, 411 visitor groups were contacted between July 5 and July 10, 2001, and 366 (89.1%) of these groups accepted questionnaires. Questionnaires were completed and returned by 183 visitor groups, resulting in a 50.0% response rate for this park.

14.2 Demographics:

Figure 14.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-six percent of respondents were female and 44% male. The overwhelming majority (94%)of respondents were white, with 2% American Indian, 1% Hispanic, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 20% of respondents, while an additional 36% classified themselves as college graduates. The majority (98%) of respondents were residents of the US and 2% were international visitors, with one respondent from each of the following countries: Australia, Canada, France, and New Zealand.

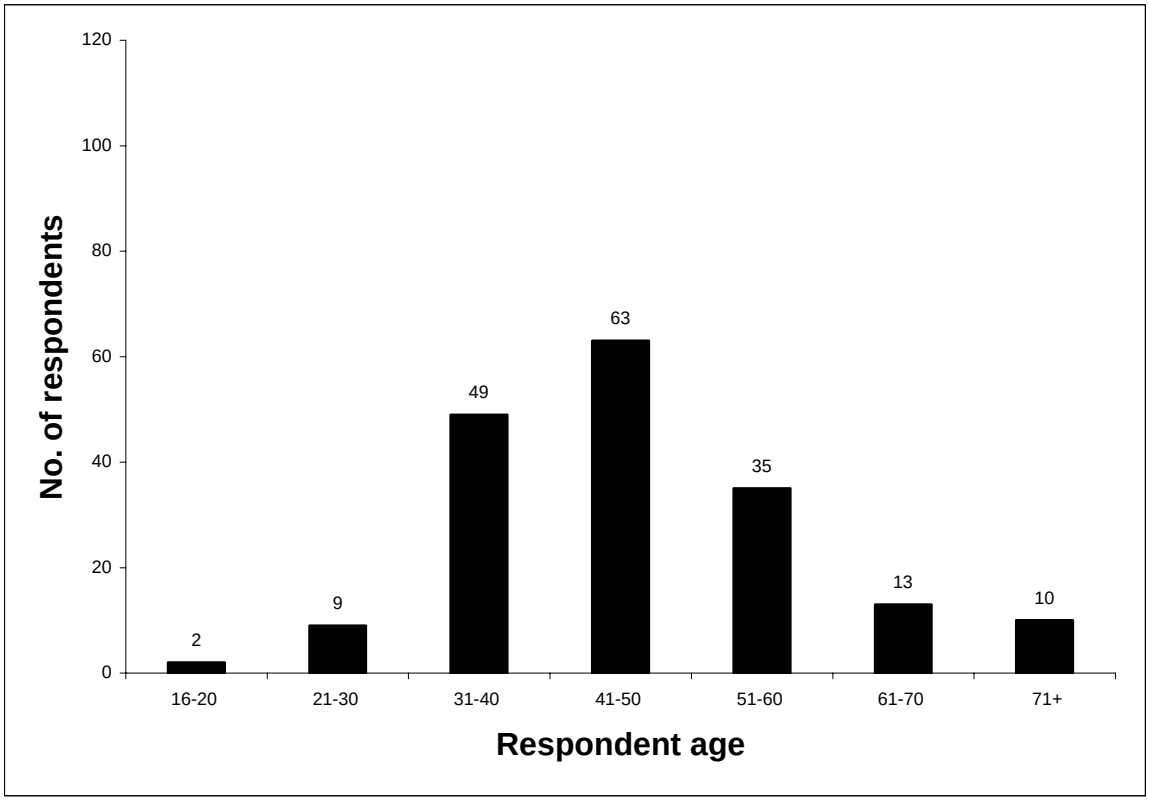

Figure 14.1: Distribution of respondents by age (N=181)

14.3 Visitation

For 65% of respondents, this was their first visit to the park. Among those 63 respondents who indicated they were returning to the park, 41% had visited the park twice in the past 10 years (including the current visit), 32% 3-5 times, 17% 6-10 times, and 10% 11 or more times. This visit was the primary destination for 19% of respondents, but one of only several destinations for 64% of respondents. For 17% of respondents this visit was not a planned destination at all. Sixty-five percent of the respondents visited the park for a half day or less, 14% visited for up to one day, and 21% visited for more than one day. One percent of respondents were visiting the park by themselves, 79% with family members, 9% with friends, and 11% with family members and friends.

14.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 14.2).

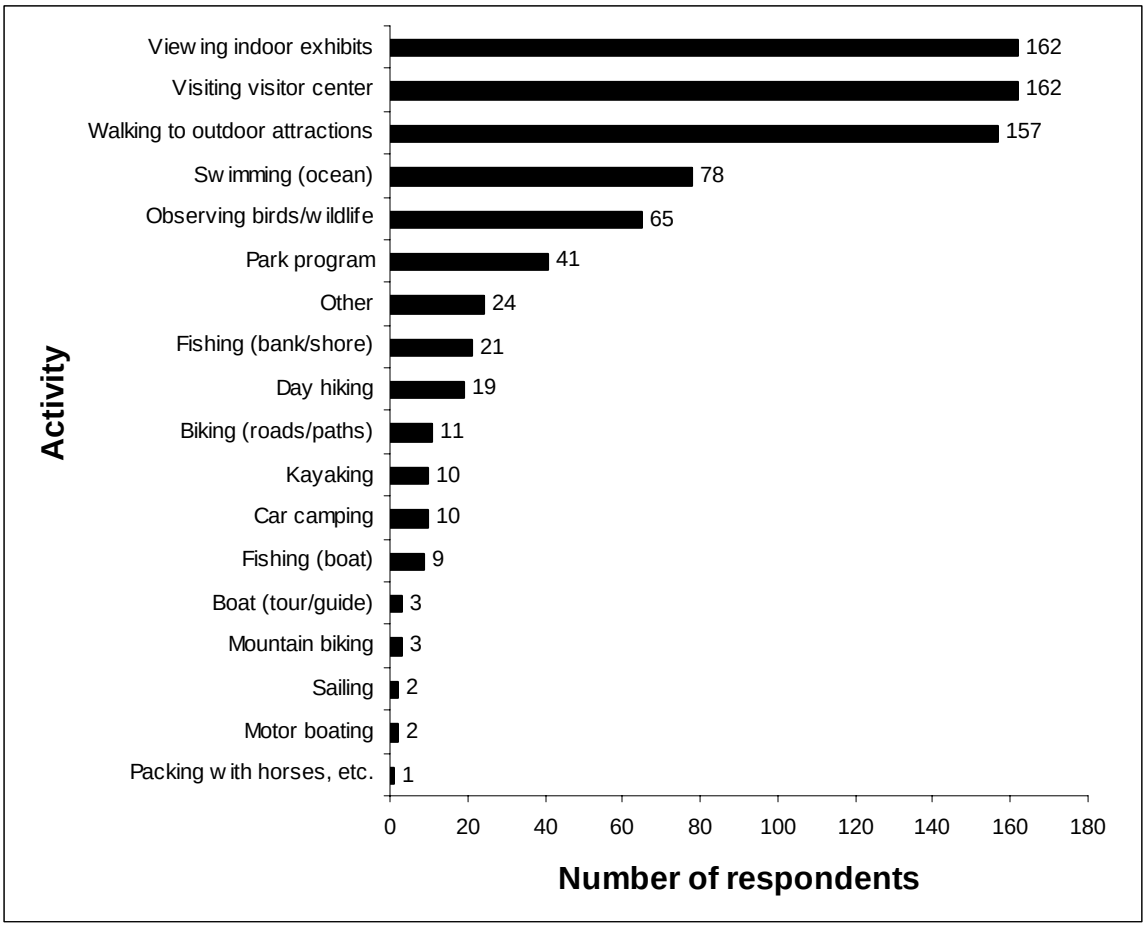

Figure 14.2: Visitor activities (N=184)
(Note: Several respondents listed more than one activity)

Figure 14.2 illustrates that many respondents visited the visitor center (88%) and viewed indoor exhibits (88%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 14.3 illustrates that walking to outdoor attractions (36%), swimming in the ocean (19%), viewing indoor exhibits (17%), and visiting the visitor center (9%) were the most popular primary activities. Most respondents (90%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 2% engaged in these activities alone, 6% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 14.4).

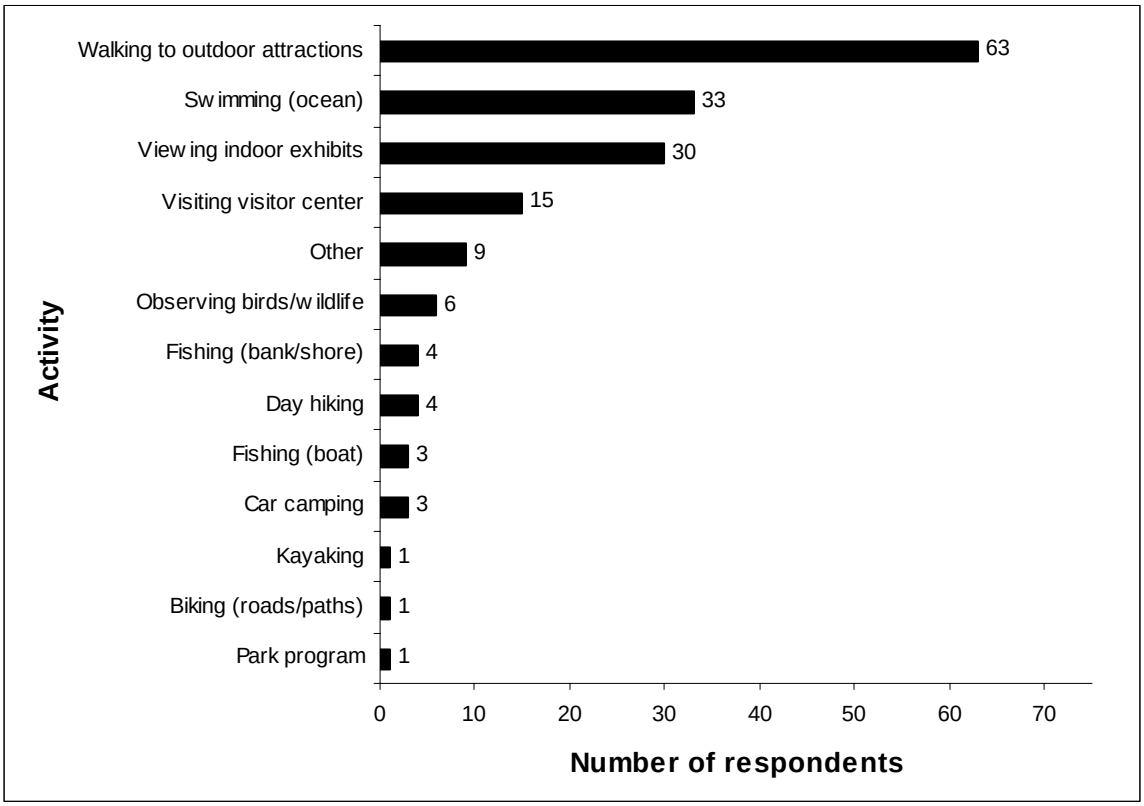

Figure 14.3: Primary visitor activities (N=173)

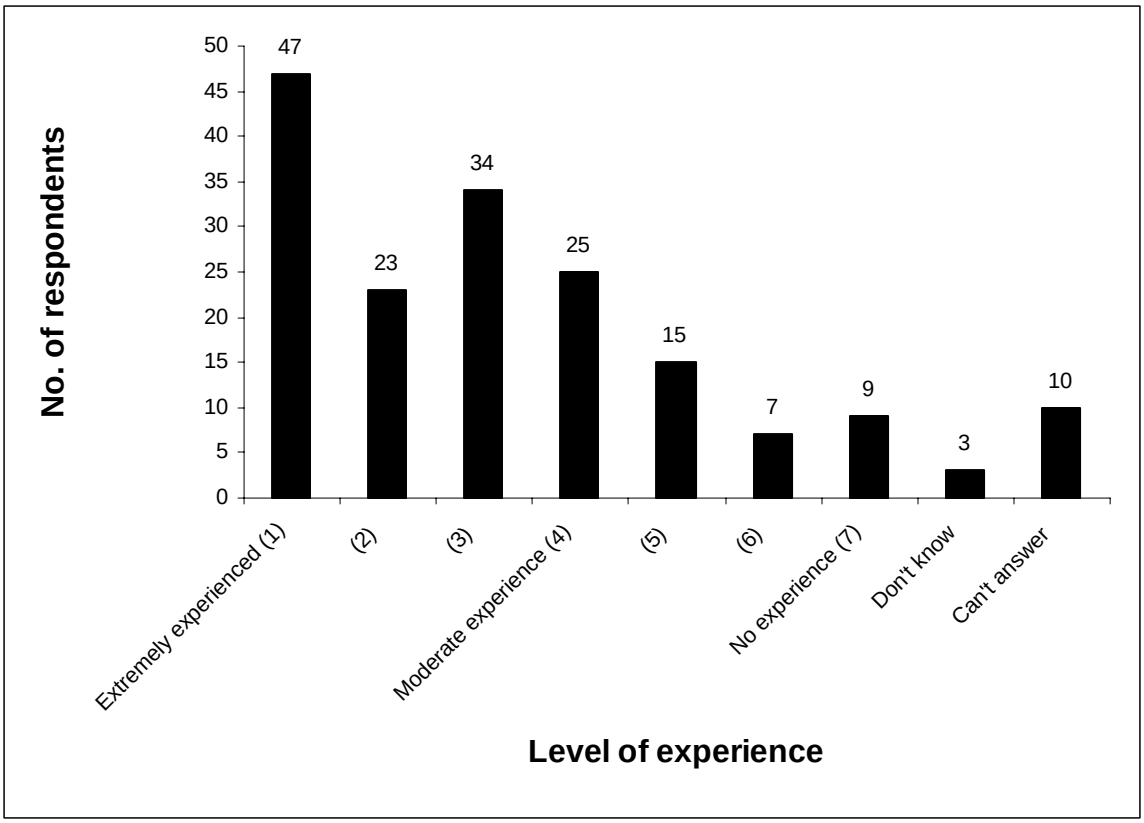

Figure 14.4: Personal level of experience (N=173)

Preparedness is one aspect of experience, and Figure 14.5 shows how prepared respondents were based on the safety items that they had available during their visit.

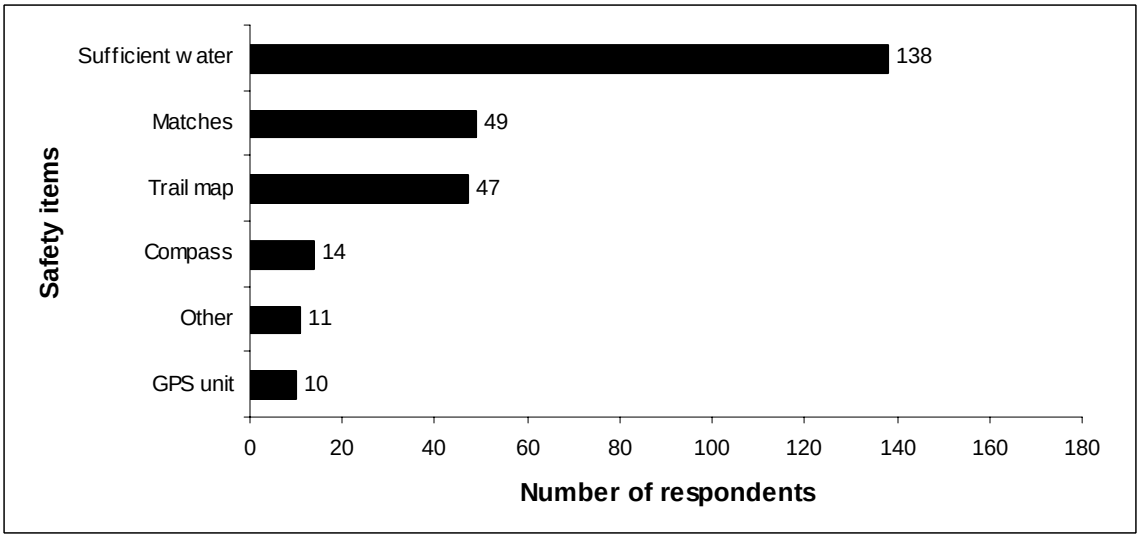

Figure 14.5: Personal safety items (N=138)

Few respondents (9.5%) expressed any concern about suffering an injury or illness while engaged in their primary activity, and 59% of these respondents were concerned only briefly during their visit. Without reference to a particular activity, however, Figure 14.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although one might expect drowning to appear more prominently.

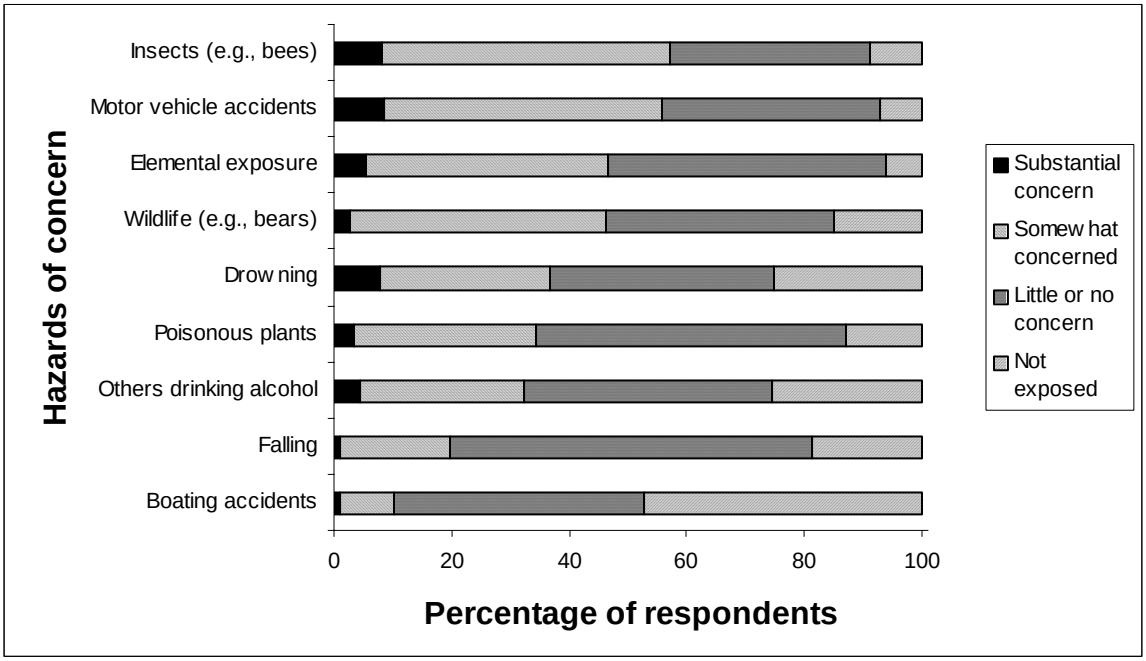

Figure 14.6: Level of concern about various hazards (N=177-180)

14.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 98% of respondents were traveling in privately owned or rented vehicles. Seventy-seven percent of respondents spent all of the time in the front seat, and 10% spent some of the time in the front seat. Of these individuals, 52% were driving for all or most of the time and 96% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty-nine percent of respondents never encountered cars that were driving too fast, and 46% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 41% of respondents encountered cars that were driving too slowly. Most (94%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 90% thought that hazard-warning signs were adequate most or all of the time. Figure 14.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles, bicycle riders, and pedestrians are the most commonly cited driving hazards, although these are considered hazardous for only some of the time.

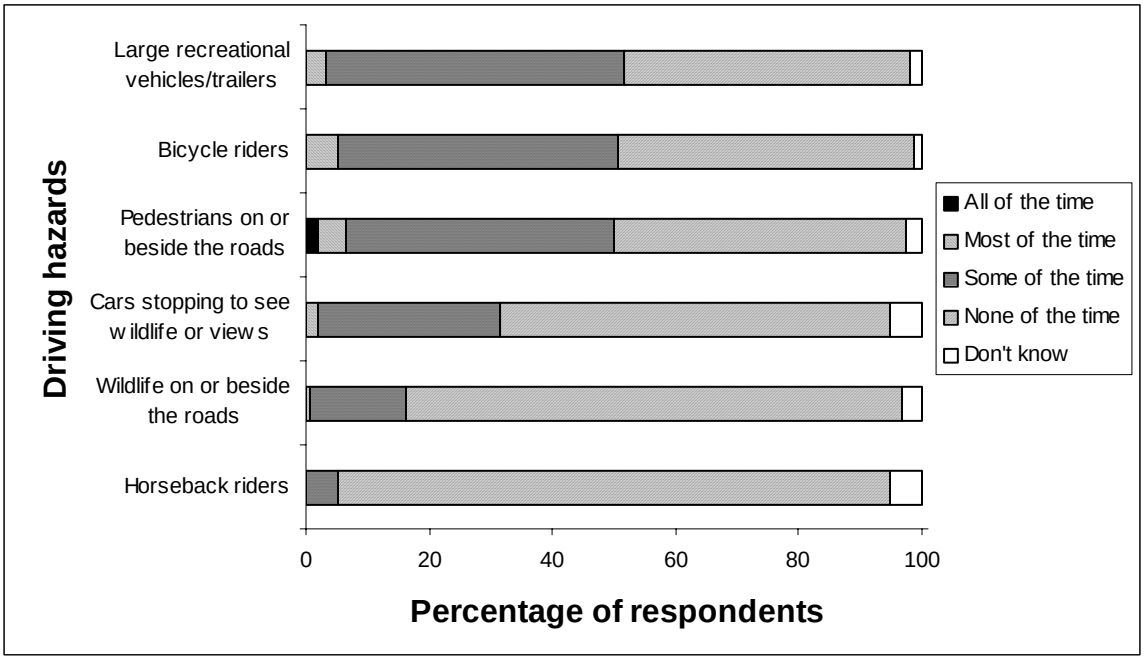

Figure 14.7: How often do these make traveling on roads more hazardous? (N=153-154)

14.6 Management issues:
With regard to the primary activity undertaken during their visit, 35% of respondents believed that safety was entirely the responsibility of the visitor, while 45% believed safety was the responsibility of both the visitor and the park staff (Figure 14.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 14.9 shows that the overwhelming majority (69%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (3%) who indicated that the safety measures did detract from their enjoyment, one was viewing indoor exhibits and three were walking to outdoor exhibits.

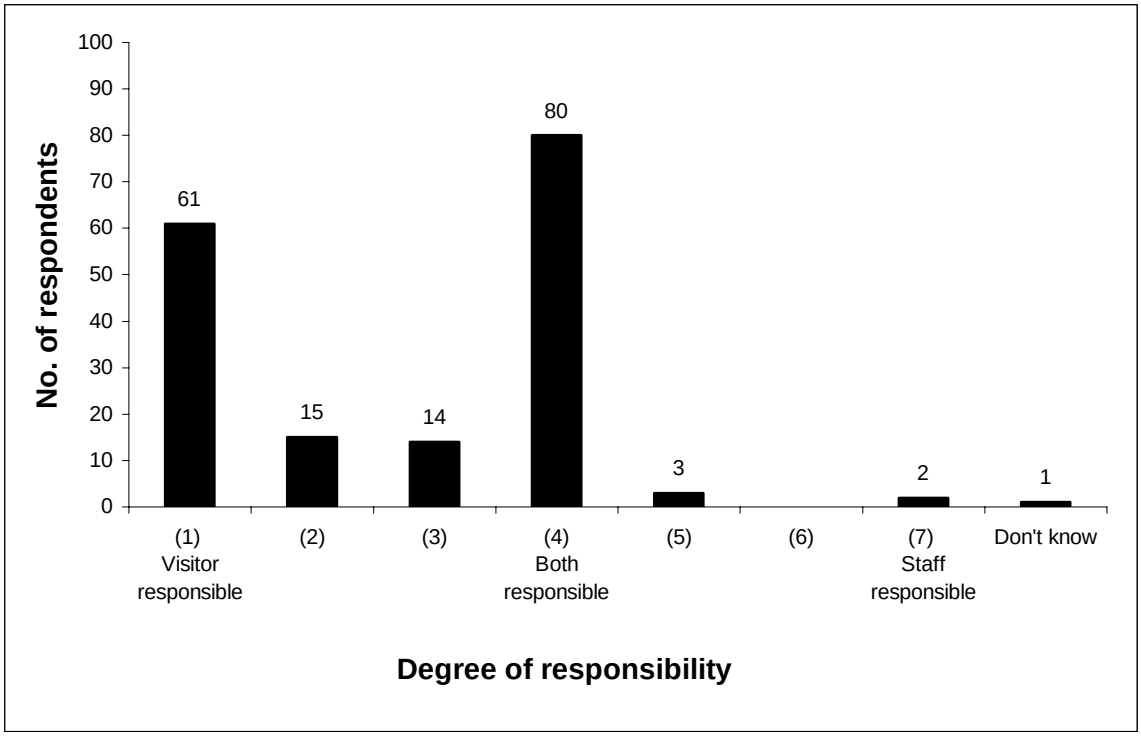

Figure 14.8: Responsibility for safety in chosen primary activity (N=176)

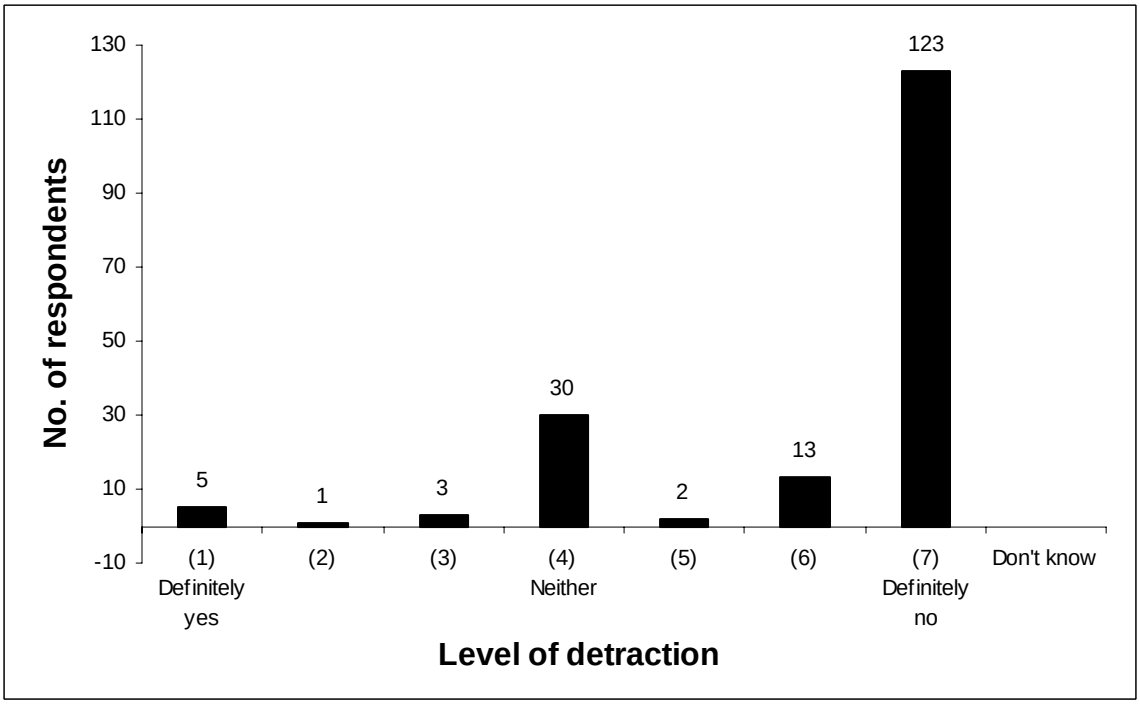

Figure 14.9: Do safety measures detract from visitor enjoyment? (N=177)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-nine percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 6% disagree or disagree strongly, and 38% neither agree nor disagree. Twenty-eight percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 33% disagree or disagree strongly, and 35% neither agree nor disagree. Thirty-nine percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 31% agree or agree strongly, and 28% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (X91X%);
- signs warning and advising about hazards (88%);
- brochures and other information warning about hazards (86%);
- restrictions on the number of persons/groups who undertake particular activities (81%);
- park rangers to enforce rules and regulations (77%);
- enforcement of alcoholic beverage restrictions (60%); and,
- safe surfaces on walkways and stairs (82%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (16%) and more or much more enforcement of alcoholic beverage prohibitions (20%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 13% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 17% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 14.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

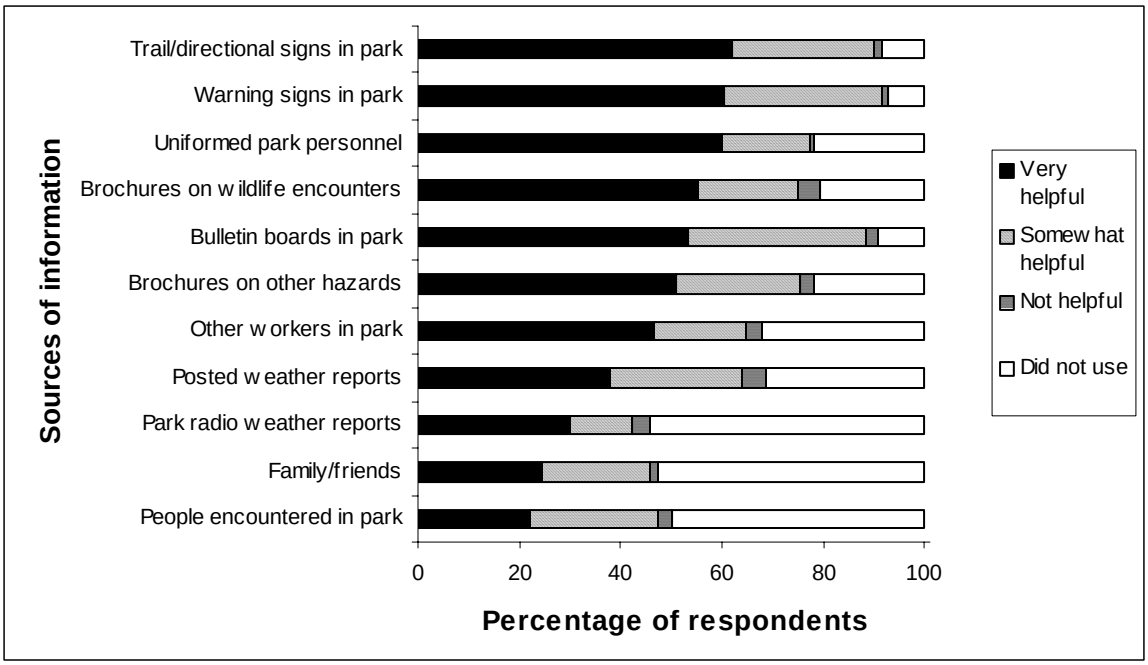

Figure 14.10: How helpful are various sources of safety information (N=83-157)

15.0 Canyonlands National Park

15.1 Sample:

At Canyonlands National Park, 469 visitor groups were contacted between June 21 and June 26, 2001, and 400 (85.3%) of these groups accepted questionnaires. Questionnaires were completed and returned by 273 visitor groups, resulting in a 68.3% response rate.

15.2 Demographics:

Figure 15.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-eight percent of respondents were female and 52% male. The overwhelming majority (94%)of respondents were white, with 3% Asian, and 1% Hispanic. Graduate school was the highest level of education attained by 31% of respondents, while an additional 32% classified themselves as college graduates. The majority (80%) of respondents were residents of the US, 7% were from the UK, 4% from Germany, 3% from the Netherlands, 2% from Canada, and 4% from various other countries.

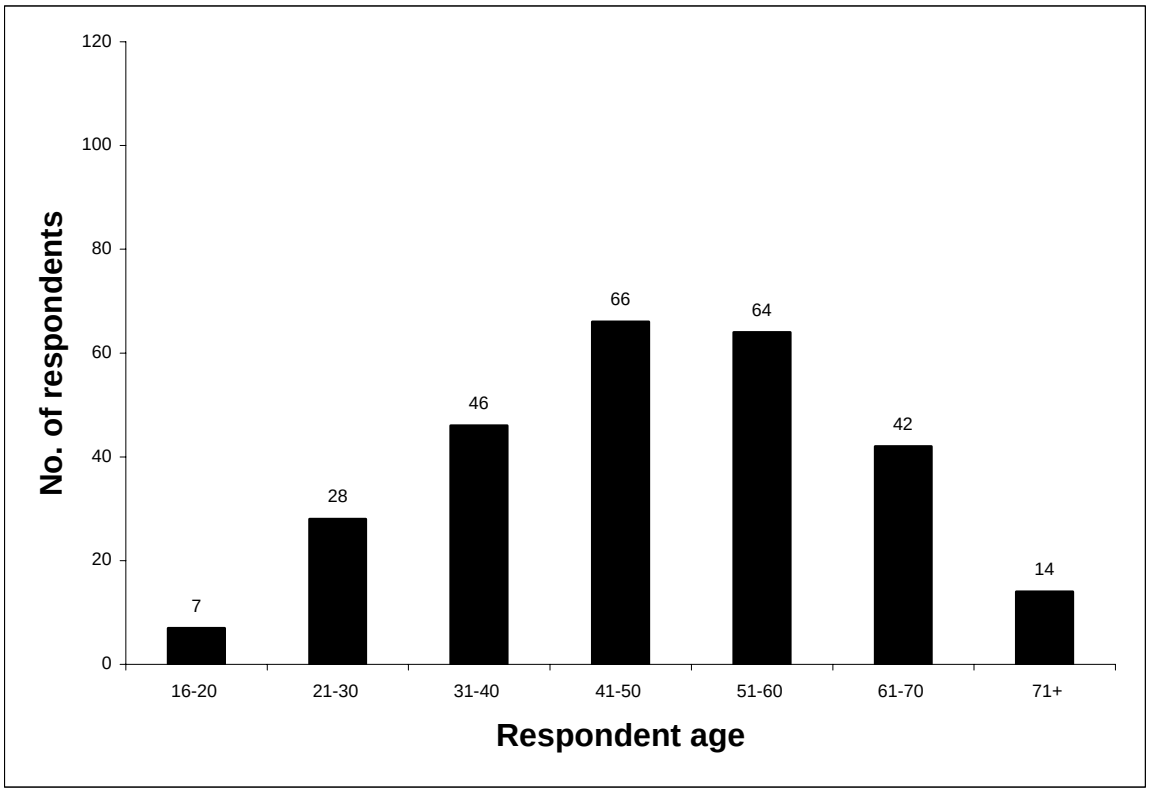

Figure 15.1: Distribution of respondents by age (N=267)

15.3 Visitation

For 222 (82%) respondents, this was their first visit to the park. Ten percent of respondents had visited the park twice in the past 10 years (including the current visit),

6% 3-5 times, 1% 6-10 times, and 1% 11 or more times. This visit was the primary destination for 5% of respondents, but one of only several destinations for 88% of respondents. For 7% of respondents this visit was not a planned destination at all. Fifty-four percent of the respondents visited the park for a half day or less, 35% visited for up to one day, and 11% visited for more than one day. Six percent of respondents were visiting the park by themselves, 70% with family members, 13% with friends, and 8% with family members and friends.

15.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 15.2).

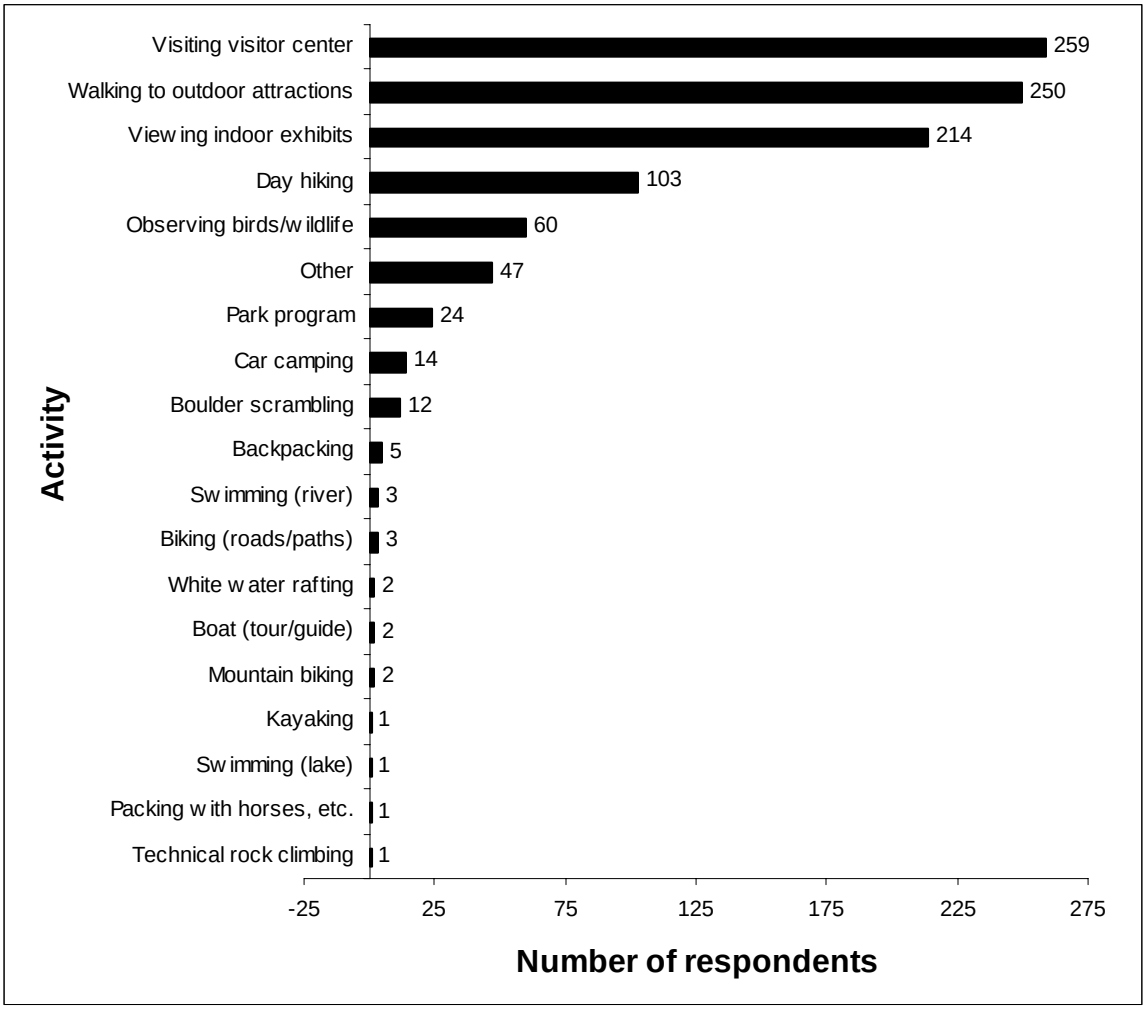

Figure 15.2: Visitor activities (N=273)
(Note: Several respondents listed more than one activity)

Figure 15.2 illustrates that many respondents visited the visitor center (95%), walked to outdoor attractions (92%), and viewed indoor exhibits (78%), but these are often only

adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 15.3 illustrates that walking to outdoor attractions (58%), day hiking (22%), and various other activities (11%) were the most popular primary activities. Most respondents (88%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, and less than 4% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 15.4). Ratings of personal experience varied little between activities and between males and females.

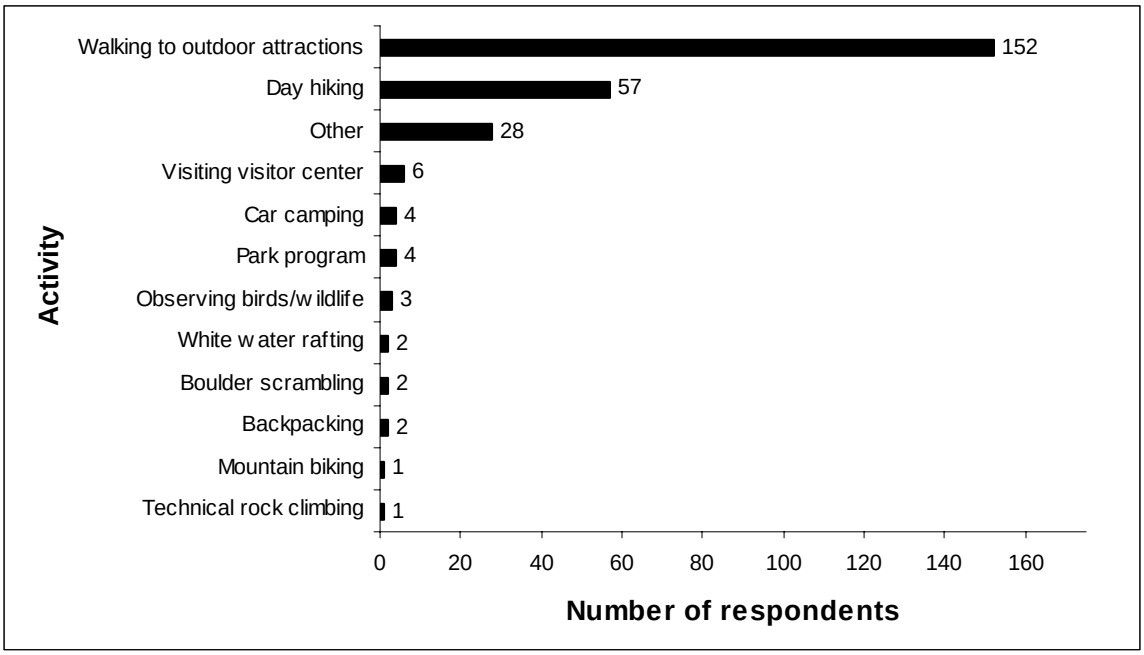

Figure 15.3: Primary visitor activities (N=262)

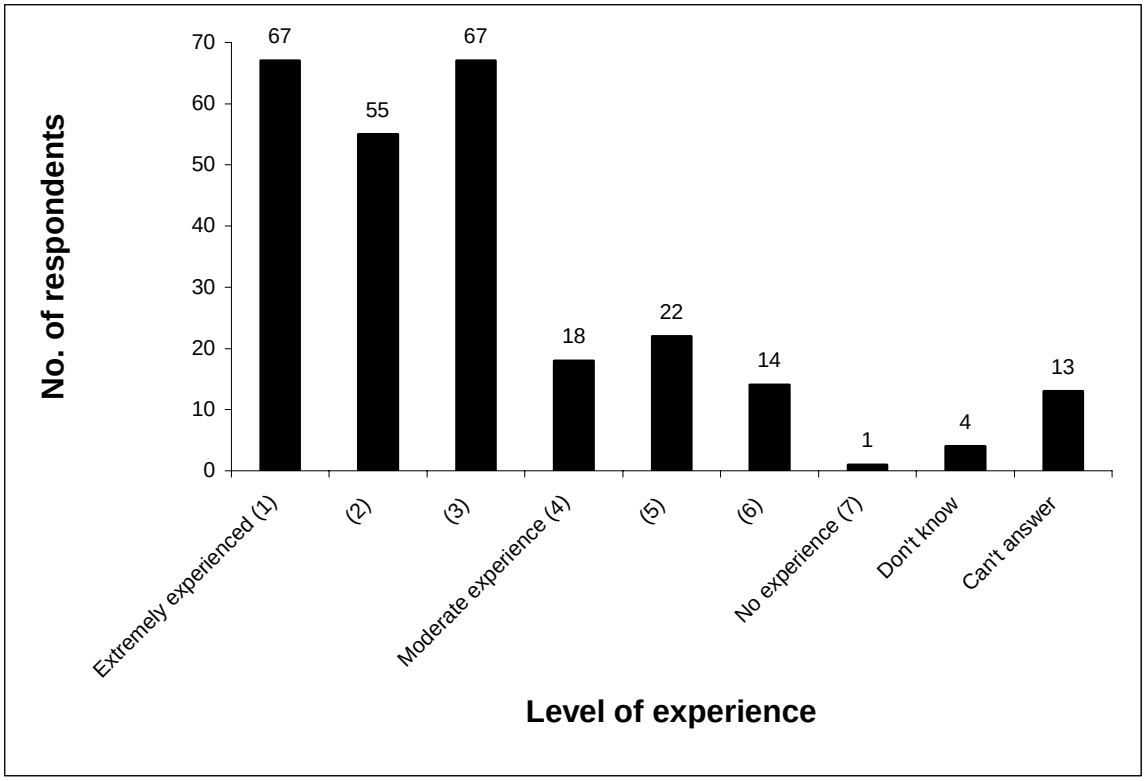

Figure 15.4: Personal level of experience (N=262)

Preparedness is one aspect of experience, and Figure 15.5 shows how prepared respondents were based on the safety items that they had available during their visit.

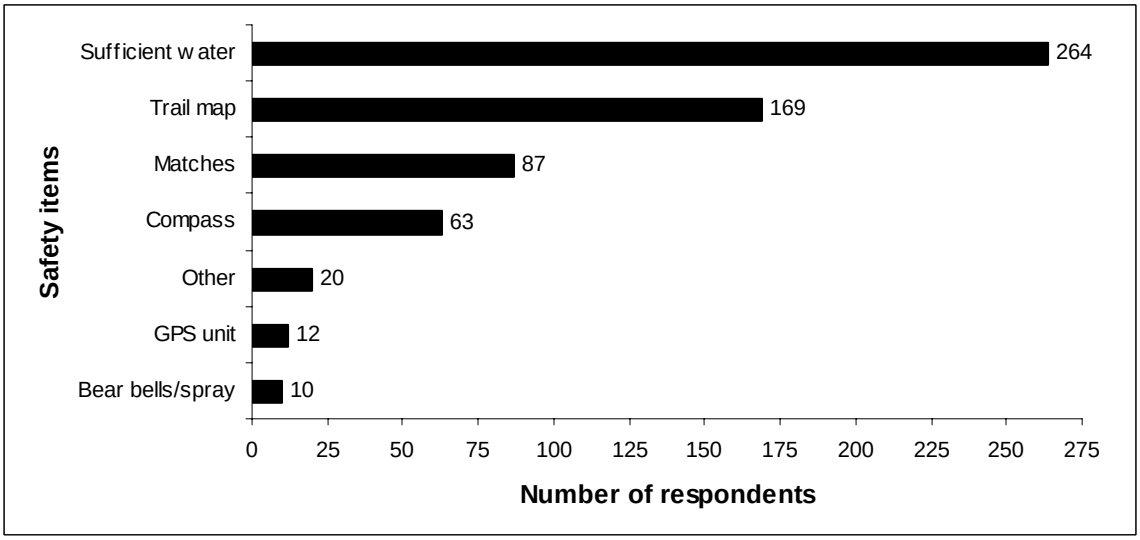

Figure 15.5: Personal safety items (N=264)

Sixteen percent of respondents expressed some concern about suffering an injury or illness while engaged in their primary activity, although most of these individuals were only minimally concerned for limited periods of time. Only one person was concerned for much of the time during their visit, and 4 people reported being quite or very concerned at sometime.

Without reference to a particular activity, Figure 15.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of the park.

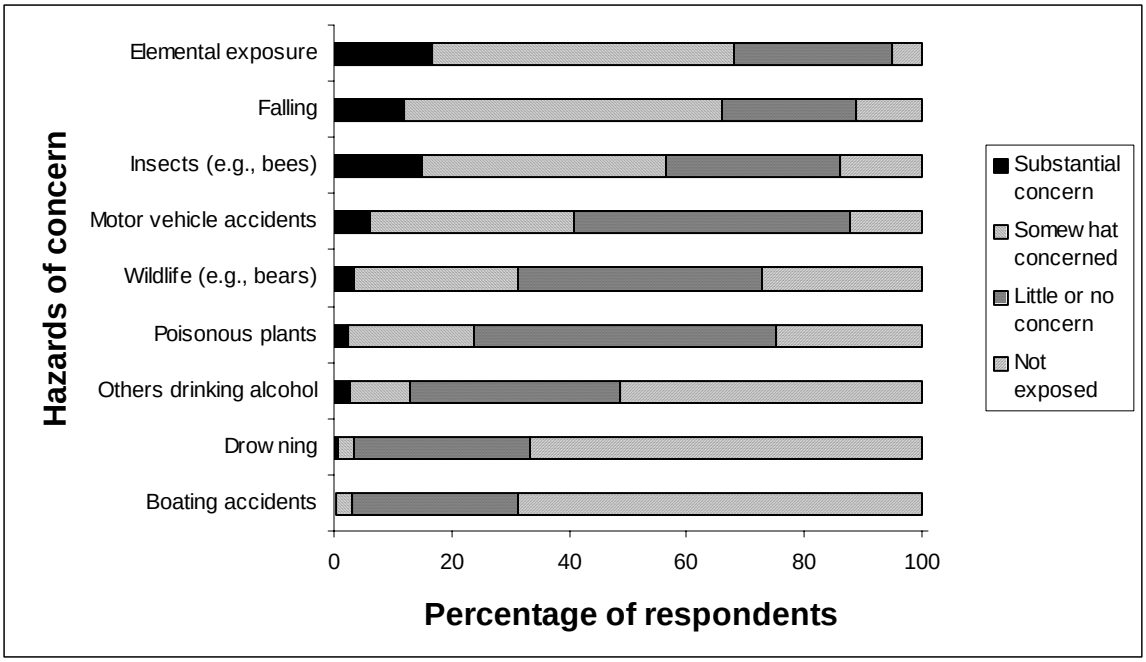

Figure 15.6: Level of concern about various hazards (N=262-270)

15.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 95% of respondents were traveling in privately owned or rented vehicles. Eighty-eight percent of respondents spent all of the time in the front seat, and 9% spent some of the time in the front seat. Of these individuals, 60% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (93%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-eight percent of respondents never encountered cars that were driving too fast, and 44% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 43% of respondents encountered cars that were driving too slowly. Most (93%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 15.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, relatively few respondents had significant concerns

about driving hazards in the park, although large recreational vehicles and cars stopping to see the views or wildlife were believed to be hazards some of the time by substantial numbers of respondents.

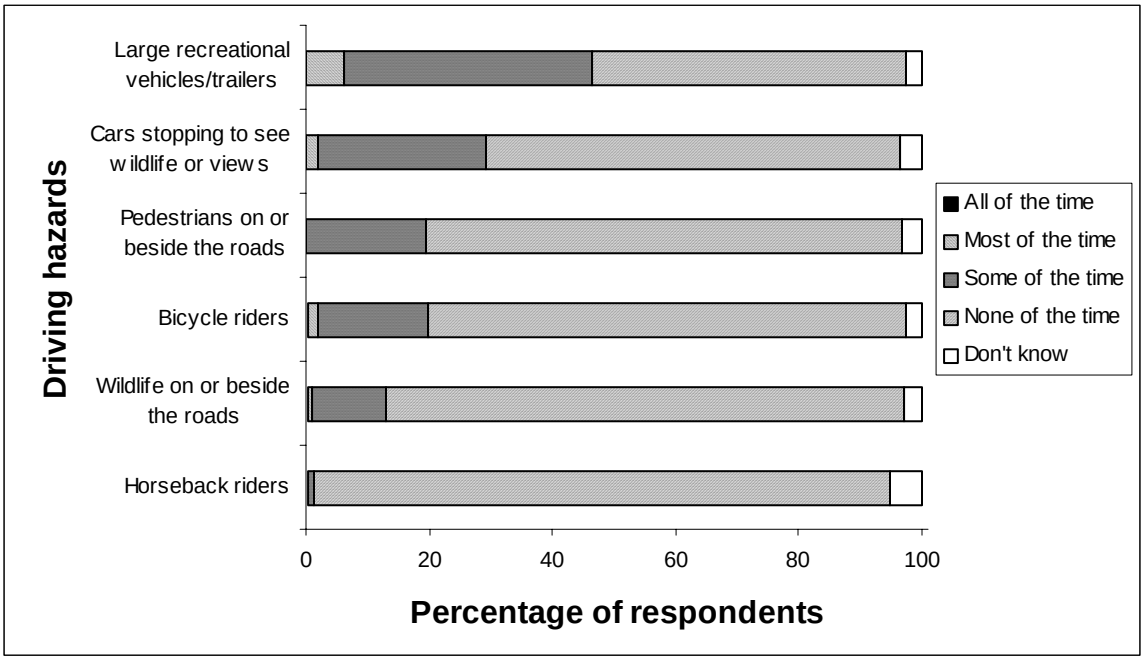

Figure 15.7: How often do these make traveling on roads more hazardous? (N=245-247)

15.6 Management issues:

With regard to the primary activity undertaken during their visit, 43% of respondents believed that safety was entirely the responsibility of the visitor, while 31% believed safety was the responsibility of both the visitor and the park staff (Figure 15.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 15.9 shows that the overwhelming majority (75%) of respondents thought such measures definitely did not detract. Only one respondent, who was primarily engaged in walking to outdoor attractions, indicated that the safety measures definitely did detract from their enjoyment.

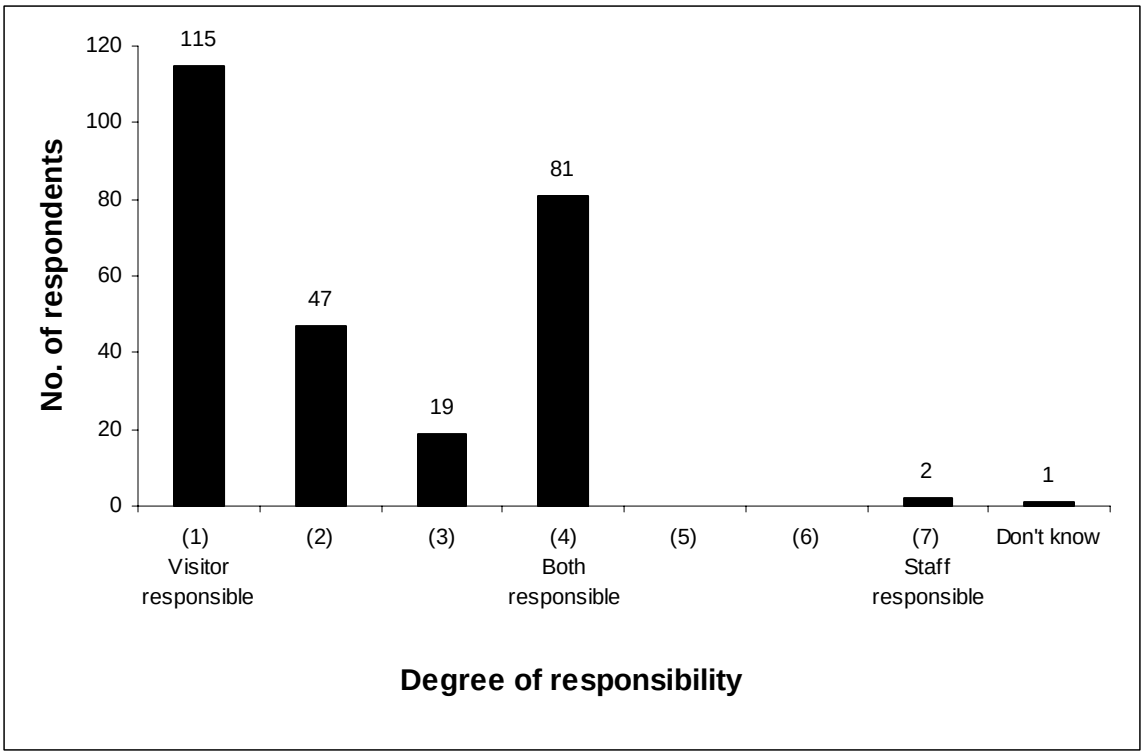

Figure 15.8: Responsibility for safety in chosen primary activity (N=265)

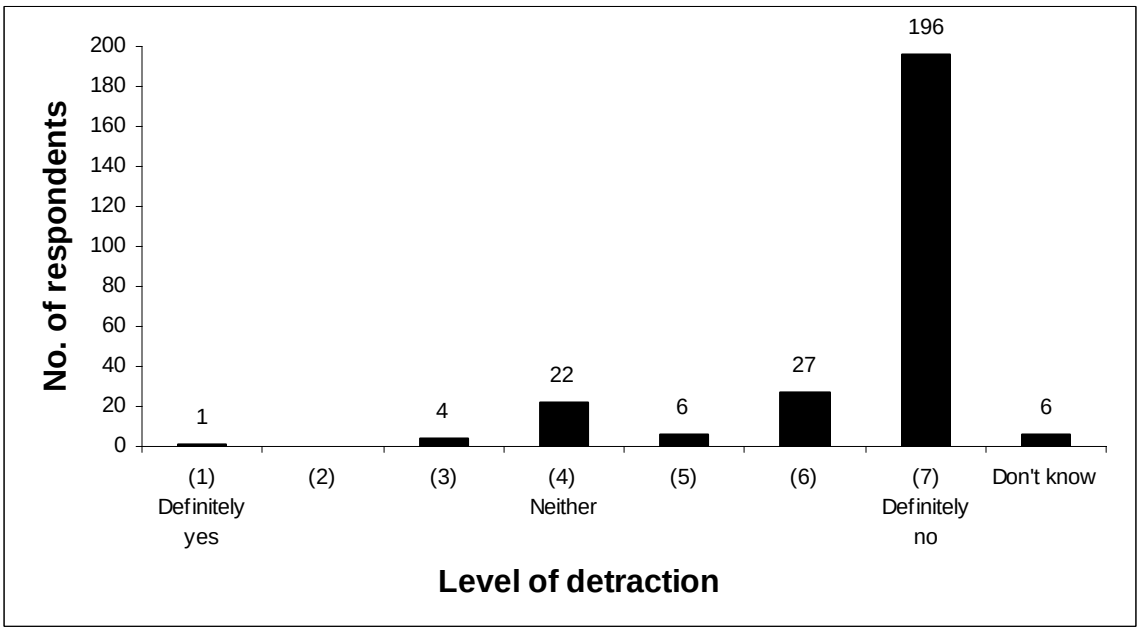

Figure 15.9: Do safety measures detract from visitor enjoyment? (N=262)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-five percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 33% neither agree nor disagree. Twenty-three percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 44% disagree or disagree strongly, and X31X% neither agree nor disagree. Twenty-eight percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 37% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (84%);
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (78%);
- restrictions on the number of persons/groups who undertake particular activities (60%);
- park rangers to enforce rules and regulations (65%);
- enforcement of alcoholic beverage restrictions (53%); and,
- safe surfaces on walkways and stairs (77%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (17%), more or much more enforcement of alcoholic beverage prohibitions (14%), more or many more brochures and other information warning about hazards (14%), and safer or much safer surfaces on walkways and stairs (14%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 28% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 31% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 15.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

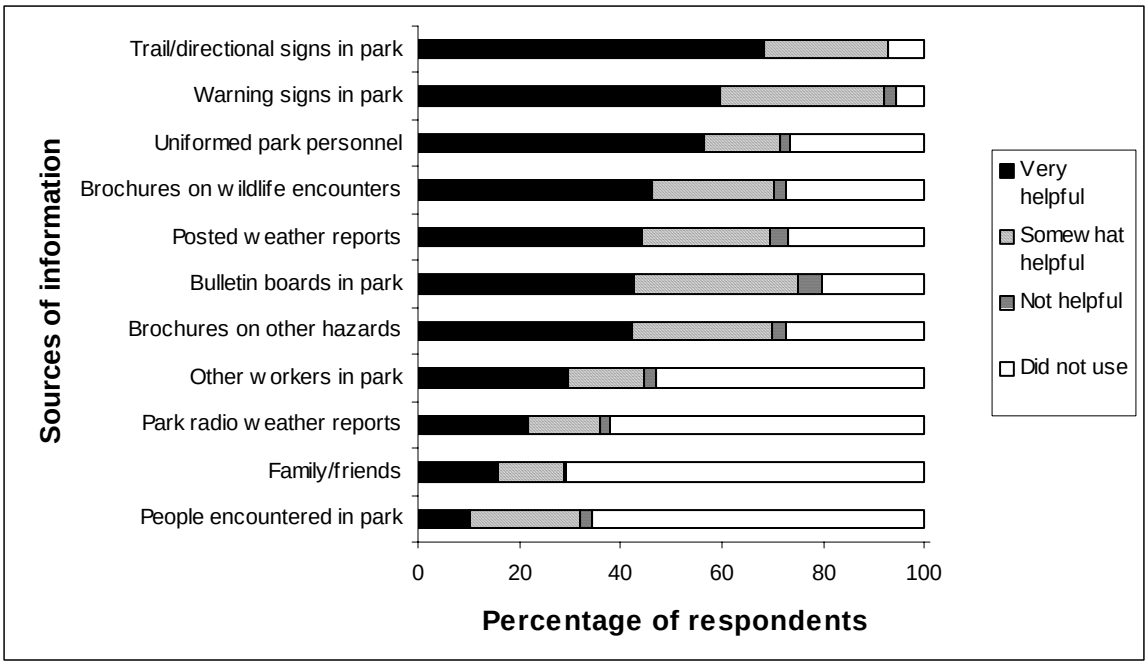

Figure 15.10: How helpful are various sources of safety information (N=161-245)

16.0 Curecanti National Recreation Area

16.1 Sample:

At Curecanti National Recreation Area, 204 visitor groups were contacted between June 7 and June 12, 2001, and 204 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 129 visitor groups, resulting in a 63.2% response rate for this park.

16.2 Demographics:

Figure 16.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-four percent of respondents were female and 56% male. The overwhelming majority (94%)of respondents were white, with 3% Hispanic, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 16% of respondents, while an additional 22% classified themselves as college graduates. All of the respondents were US residents.

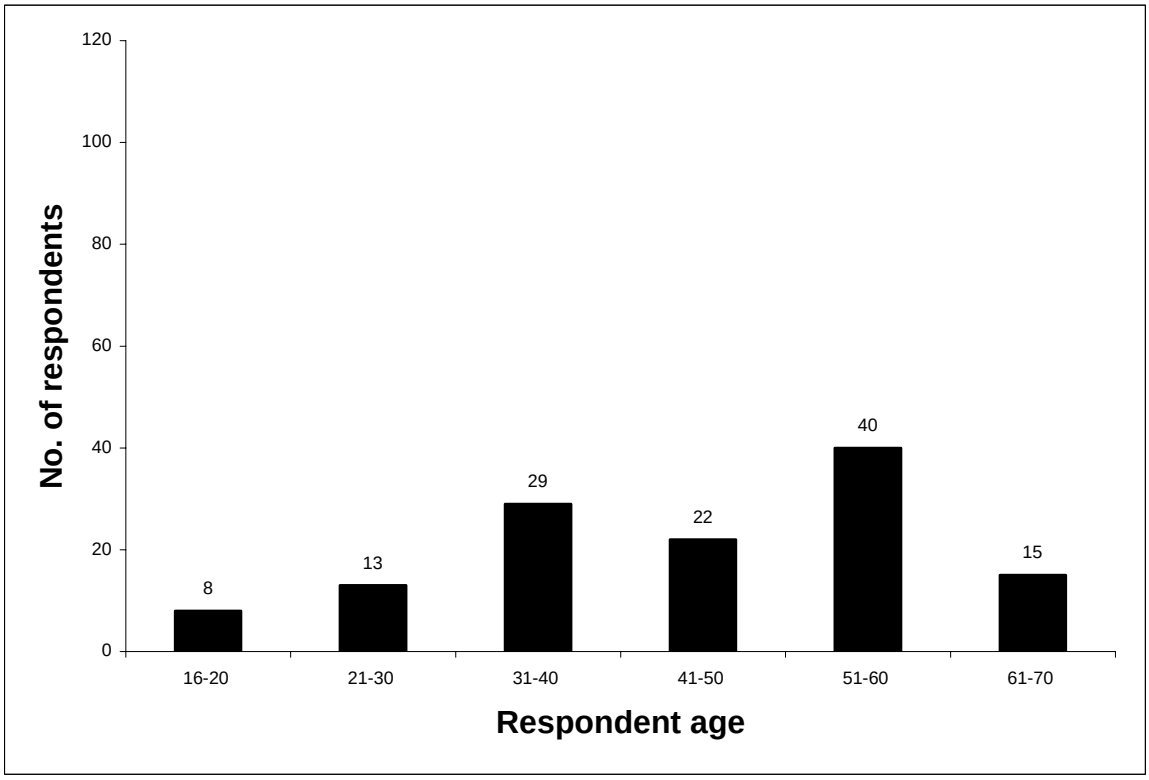

Figure 16.1: Distribution of respondents by age (N=127)

16.3 Visitation

For 16% of respondents, this was their first visit to the park. Among those 107 respondents returning to the park, 5% had visited the park twice in the past 10 years (including the current visit), 15% 3-5 times, 25% 6-10 times, and 55% 11 or more times. This visit was the primary destination for 74% of respondents, but one of only several destinations for 17% of respondents. For 9% of respondents this visit was not a planned destination at all. Twenty-two percent of the respondents visited the park for a half day or less, 14% visited for up to one day, and 64% visited for more than one day. Five percent of respondents were visiting the park by themselves, 59% with family members, 14% with friends, and 22% with family members and friends.

16.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 16.2). Figure 16.2 illustrates that compared with many other parks, relatively few respondents visited the visitor center (31%), walked to outdoor attractions (22%), or viewed indoor exhibits (19%). Instead, fishing from boats (65%), motor boating (50%), and fishing from a riverbank or lakeshore (43%) are the most common activities reported.

The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 16.3 illustrates that the same three activities dominate, although motor boating drops to third place. Most respondents (85%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, and 7% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 16.4). Forty-five percent of males rated themselves as extremely experienced in their primary activity, compared with 24% of women, but the proportions of men and women who rated themselves from 1 (extremely experienced) to 3 (quite experienced) are very similar (80% vs. 77% respectively).

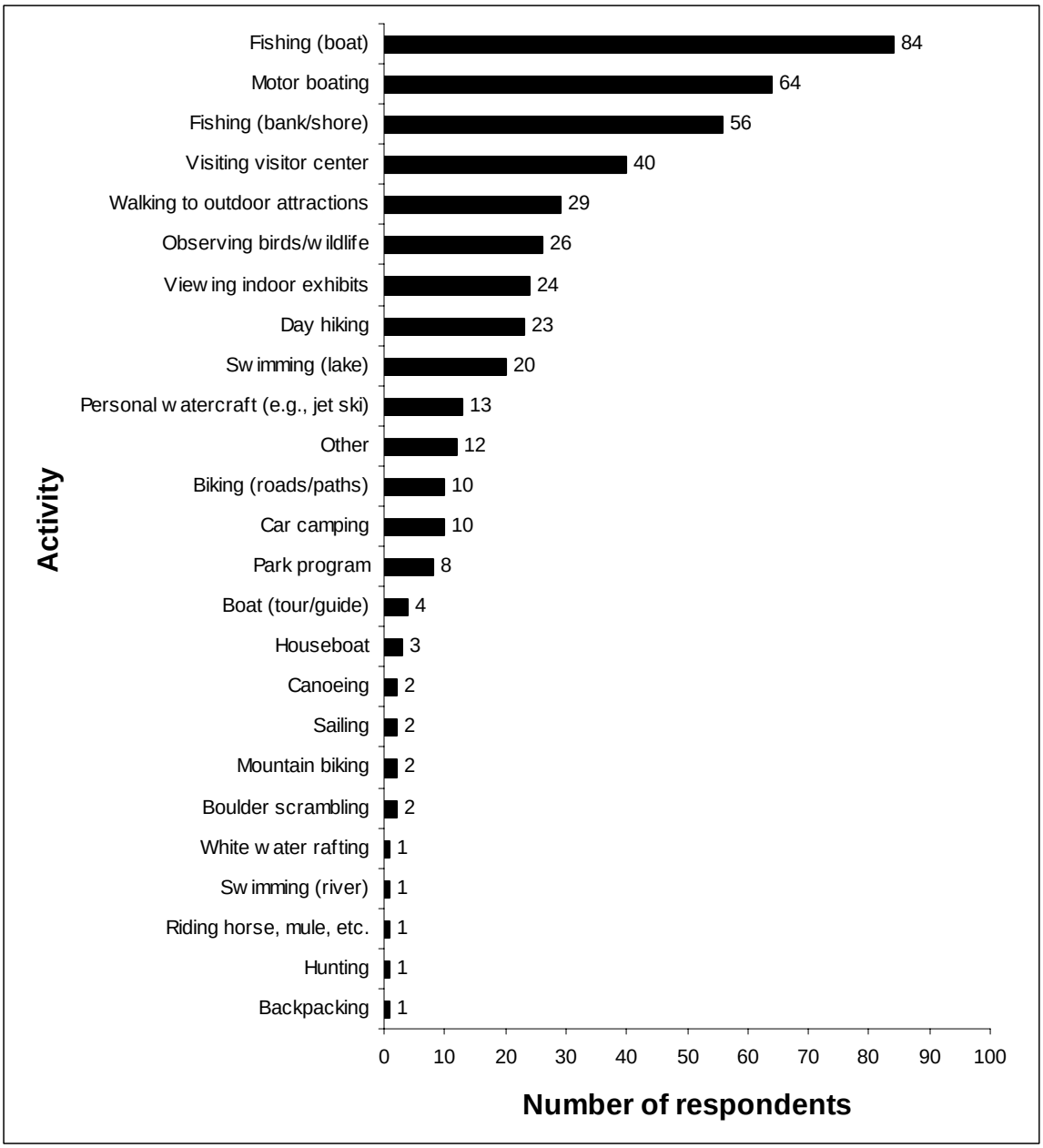

Figure 16.2: Visitor activities (N=129)
(Note: Several respondents listed more than one activity)

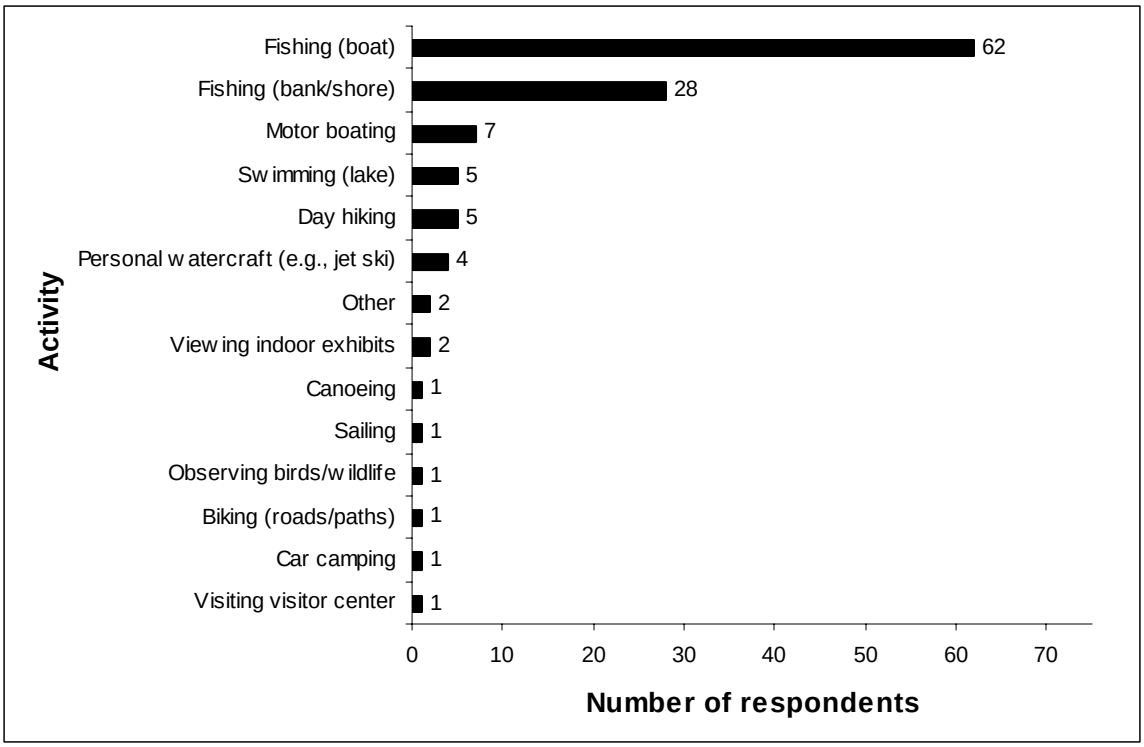

Figure 16.3: Primary visitor activities (N=121)

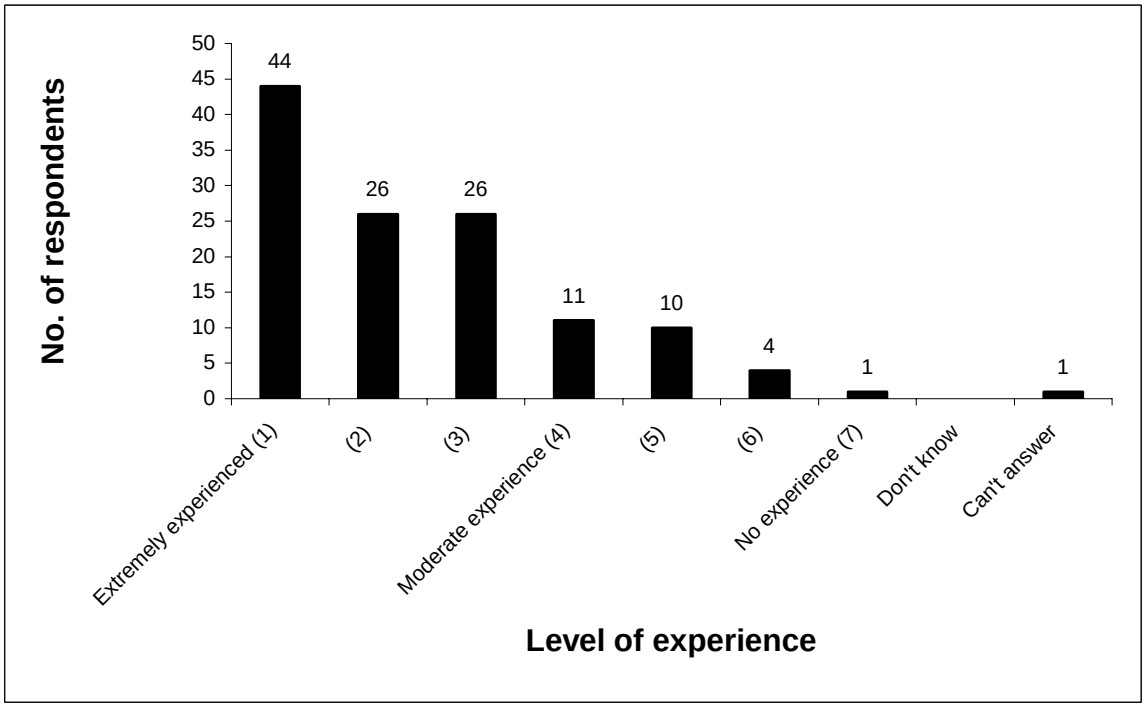

Figure 16.4: Personal level of experience (N=123)

Preparedness is one aspect of experience, and Figure 16.5 shows how prepared respondents were based on the safety items that they had available during their visit.

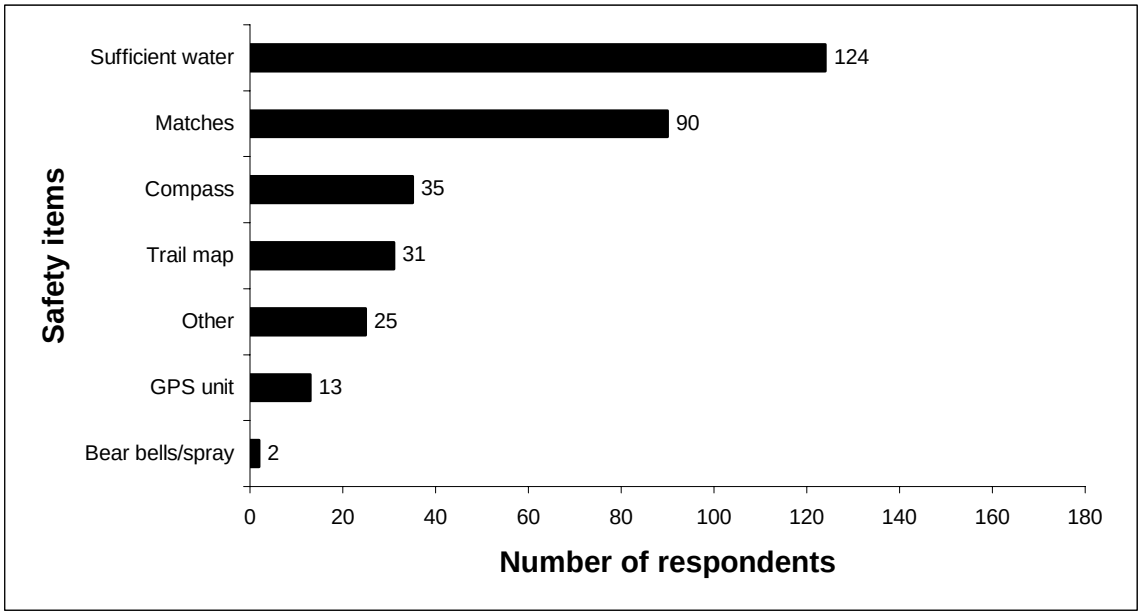

Figure 16.5: Personal safety items (N=124)

Few respondents (5%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 16.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

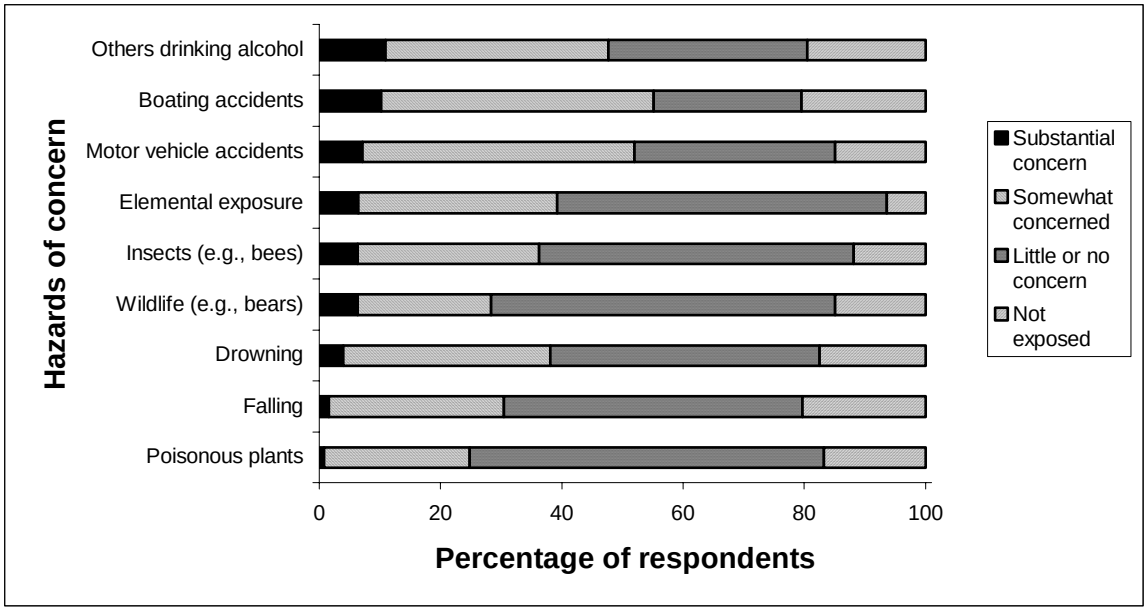

Figure 16.6: Level of concern about various hazards (N=125-128)

16.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 91% of respondents were traveling in privately owned or rented vehicles. Eighty-five percent of respondents spent all of the time in the front seat, and 14% spent some of the time in the front seat. Of these individuals, 61% were driving for all or most of the time and 91% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-one percent of respondents never encountered cars that were driving too fast, and 47% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 32% of respondents encountered cars that were driving too slowly. Most (87%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 97% thought that hazard-warning signs were adequate most or all of the time. Figure 16.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, more than one third of our respondents believe that large recreational vehicles and bicycle riders pose hazards for driving some or all of the time.

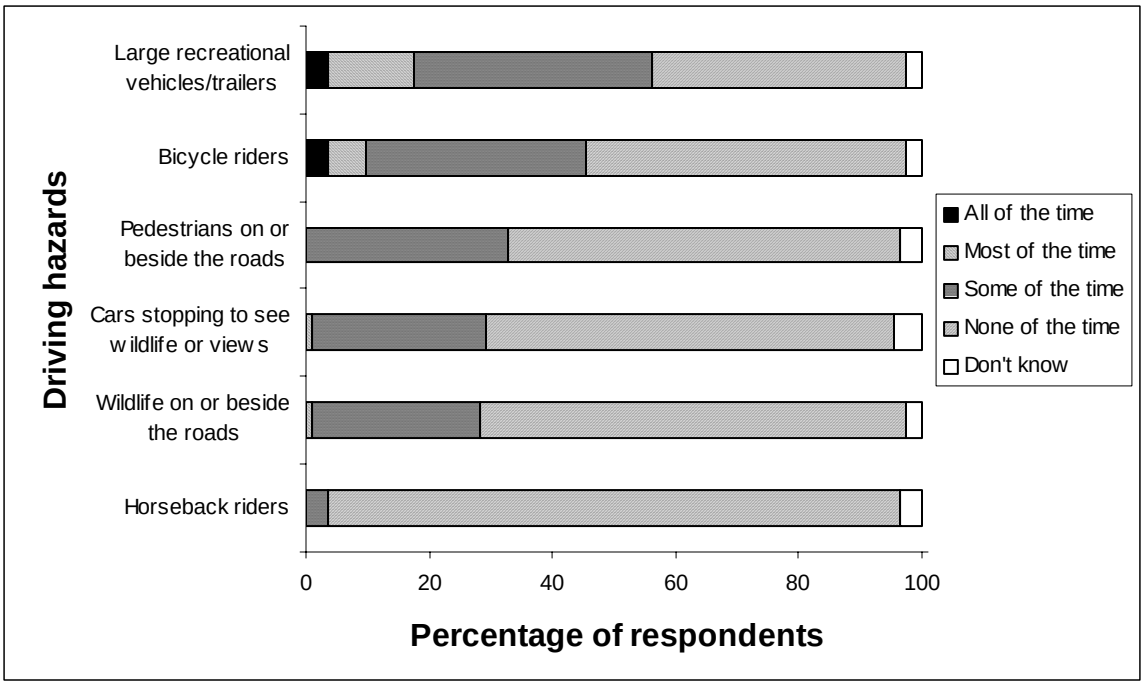

Figure 16.7: How often do these make traveling on roads more hazardous? (N=114)

16.6 Management issues:

With regard to the primary activity undertaken during their visit, 58% of respondents believed that safety was entirely the responsibility of the visitor, while 25% believed safety was the responsibility of both the visitor and the park staff (Figure 16.8).

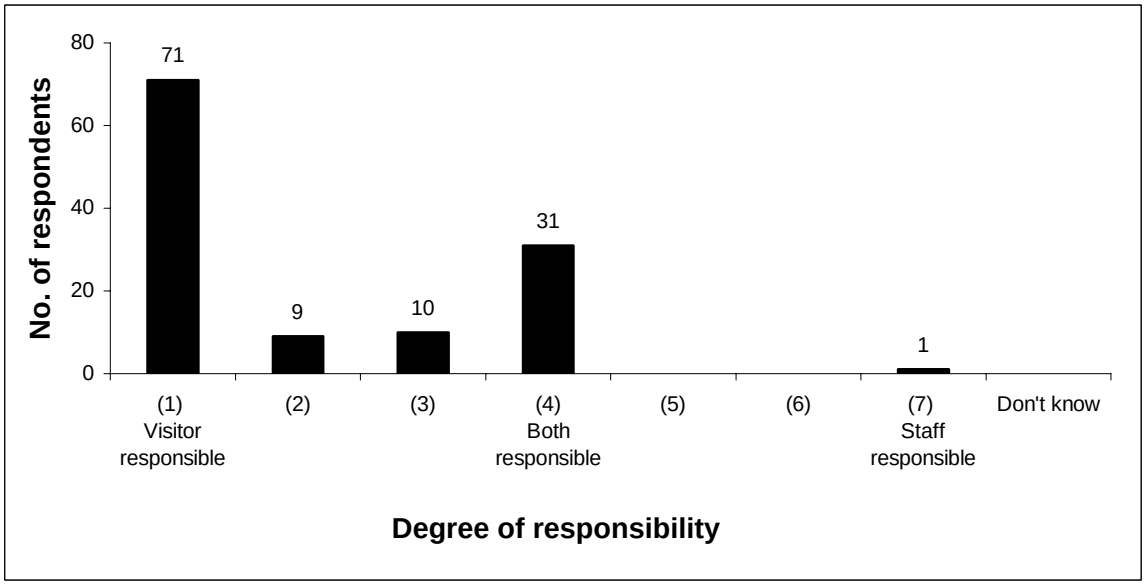

Figure 16.8: Responsibility for safety in chosen primary activity (N=122)

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 16.9 shows that the overwhelming majority (70%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (7%) who indicated that the safety measures definitely did detract from their enjoyment, 3 were riding jet skis, 1 was fishing from the bank/shore, 1 was fishing from a boat, 1 was riding/driving a motor boat, and 2 were engaged in various other unspecified activities.

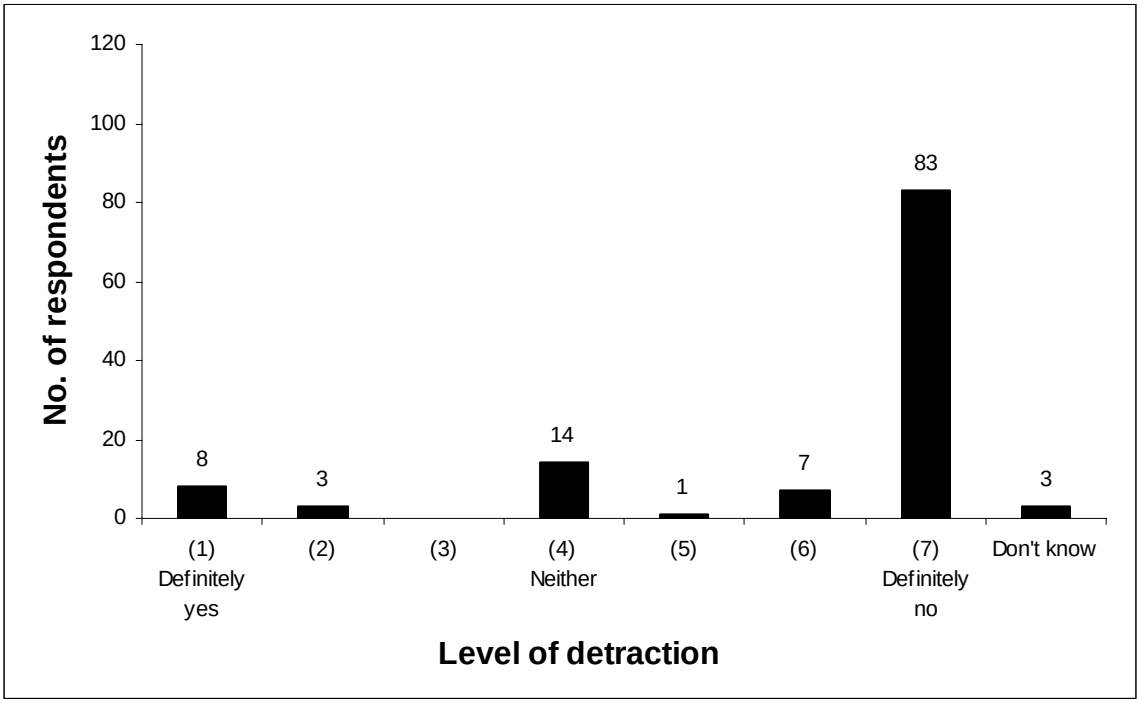

Figure 16.9: Do safety measures detract from visitor enjoyment? (N=119)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 10% disagree or disagree strongly, and 37% neither agree nor disagree. Twenty-three percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 37% disagree or disagree strongly, and 34% neither agree nor disagree. Thirty-nine percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 26% agree or agree strongly, and 28% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (80%);
- signs warning and advising about hazards (81%);
- brochures and other information warning about hazards (78%);

- restrictions on the number of persons/groups who undertake particular activities (70%);
- park rangers to enforce rules and regulations (71%);
- enforcement of alcoholic beverage restrictions (70%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (17%) and more or much more enforcement of alcoholic beverage prohibitions (21%). A substantial proportion of respondents were more ambivalent about one item, however, and 18% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities.

Among those respondents who were aware of the various sources of safety information in the park, Figure 16.10 indicates the level of helpfulness provided by each source of information. As in many of the other park units, respondents indicate that uniformed park personnel and directional and warning signs are some of the most helpful sources of safety information. Curecanti is unusual, however, in that "other workers" also rate very highly as sources of safety information.

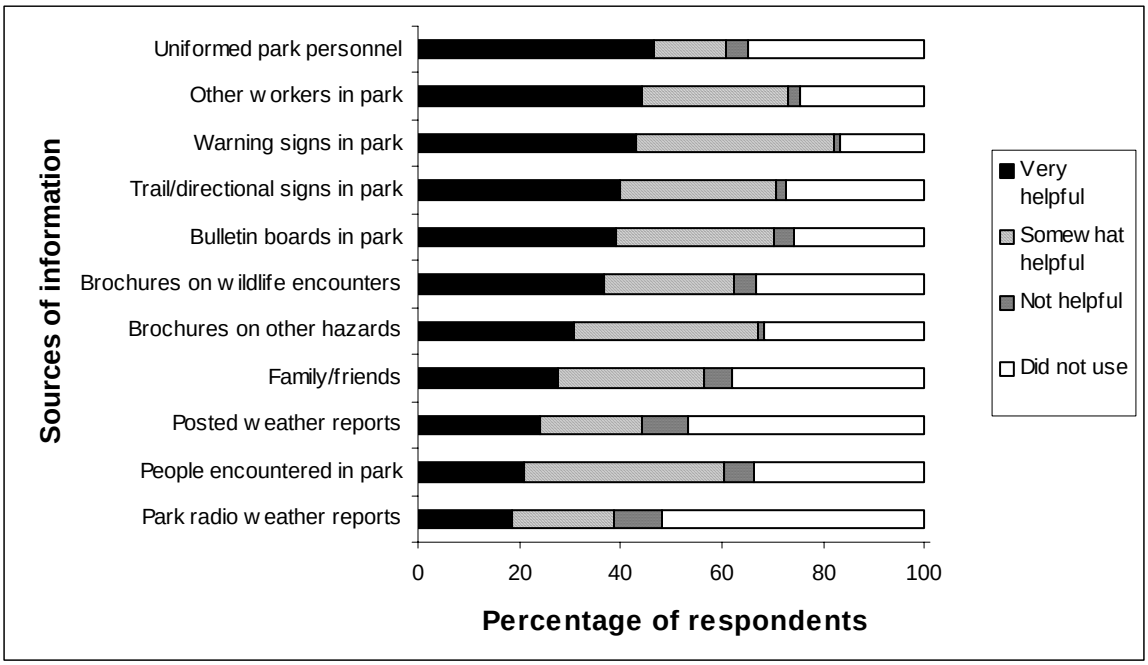

Figure 16.10: How helpful are various sources of safety information (N=75-97)

17.0 Cuyahoga Valley National Recreation Area

17.1 Sample:

At Cuyahoga Valley National Recreation Area, 432 visitor groups were contacted between July 17 and July 17, 2001, and 400 (92.6%) of these groups accepted questionnaires. Questionnaires were completed and returned by 289 visitor groups, resulting in a 73.3% response rate for this park.

17.2 Demographics:

Figure 17.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-one percent of respondents were female and 49% male. The overwhelming majority (97%)of respondents were white, with 1 Hispanic, 1 Asian, and American Indian respondent. Graduate school was the highest level of education attained by 24% of respondents, while an additional 40% classified themselves as college graduates. Two hundred eighty-eight respondents were residents of the US and one was from Canada.

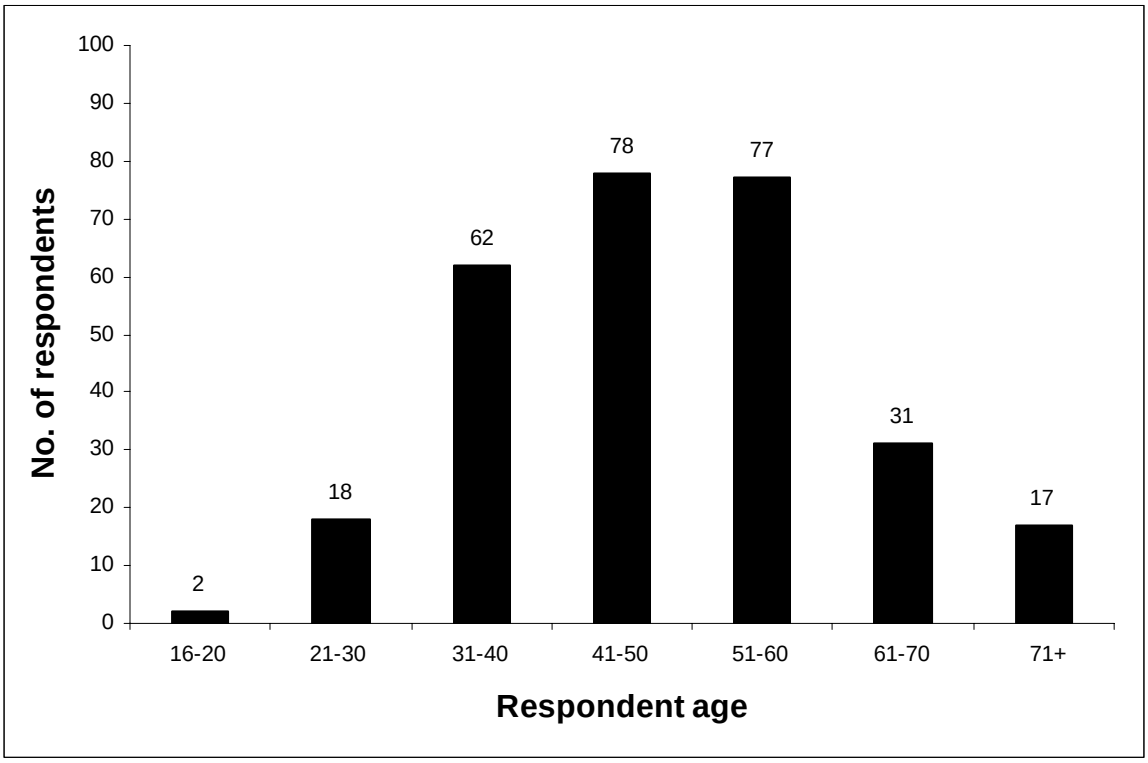

Figure 17.1: Distribution of respondents by age (N=285)

17.3 Visitation

For 15% of respondents, this was their first visit to the park. Among those 241 respondents who indicated they were returning to the park, 2% had visited the park twice

in the past 10 years (including the current visit), 7% 3-5 times, 12% 6-10 times, and 78% 11 or more times. This visit was the primary destination for 83% of respondents, but one of only several destinations for 9% of respondents. For 8% of respondents this visit was not a planned destination at all. Eighty-five percent of the respondents visited the park for a half day or less, 13% visited for up to one day, and 2% visited for more than one day. Twenty-five percent of respondents were visiting the park by themselves, 50% with family members, 18% with friends, and 7% with family members and friends.

17.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 17.2).

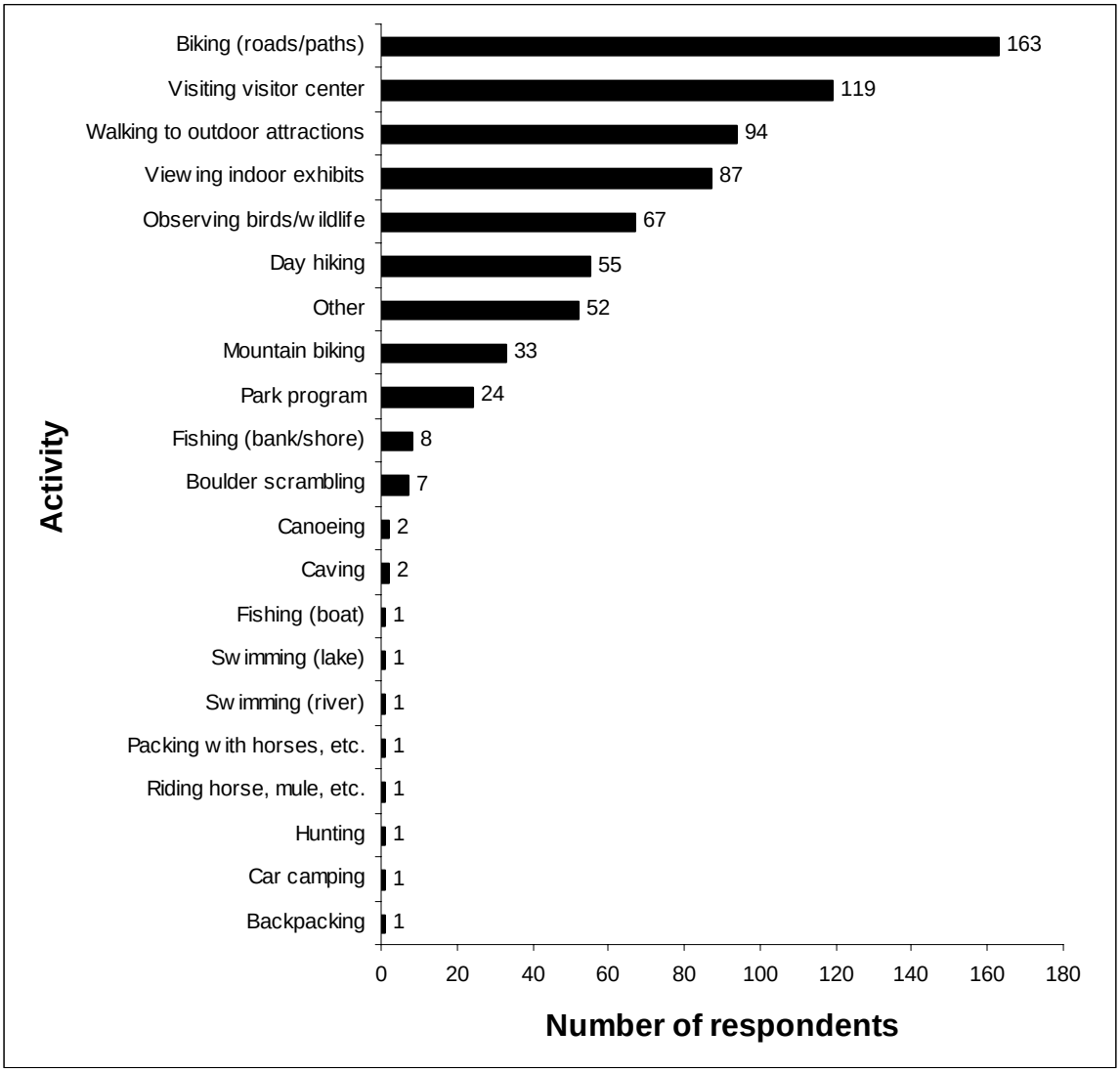

Figure 17.2: Visitor activities (N=289)
(Note: Several respondents listed more than one activity)

Figure 17.2 illustrates that many respondents visited the visitor center (41%) and viewed indoor exhibits (30%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 17.3 illustrates that biking (54%), day hiking (12%), walking to outdoor attractions (8%), and various other activities (11%) were the most popular primary activities. Most respondents (68%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 25% engaged in these activities alone, 6% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 17.4). Ratings of personal experience varied little between activities and between males and females.

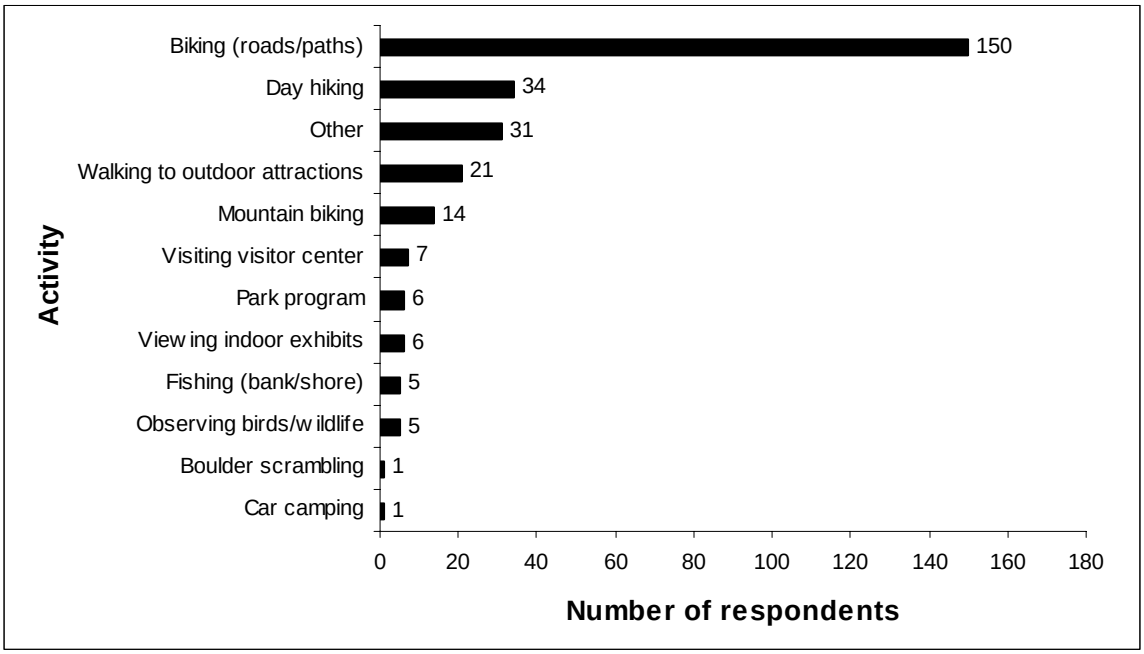

Figure 17.3: Primary visitor activities (N=280)

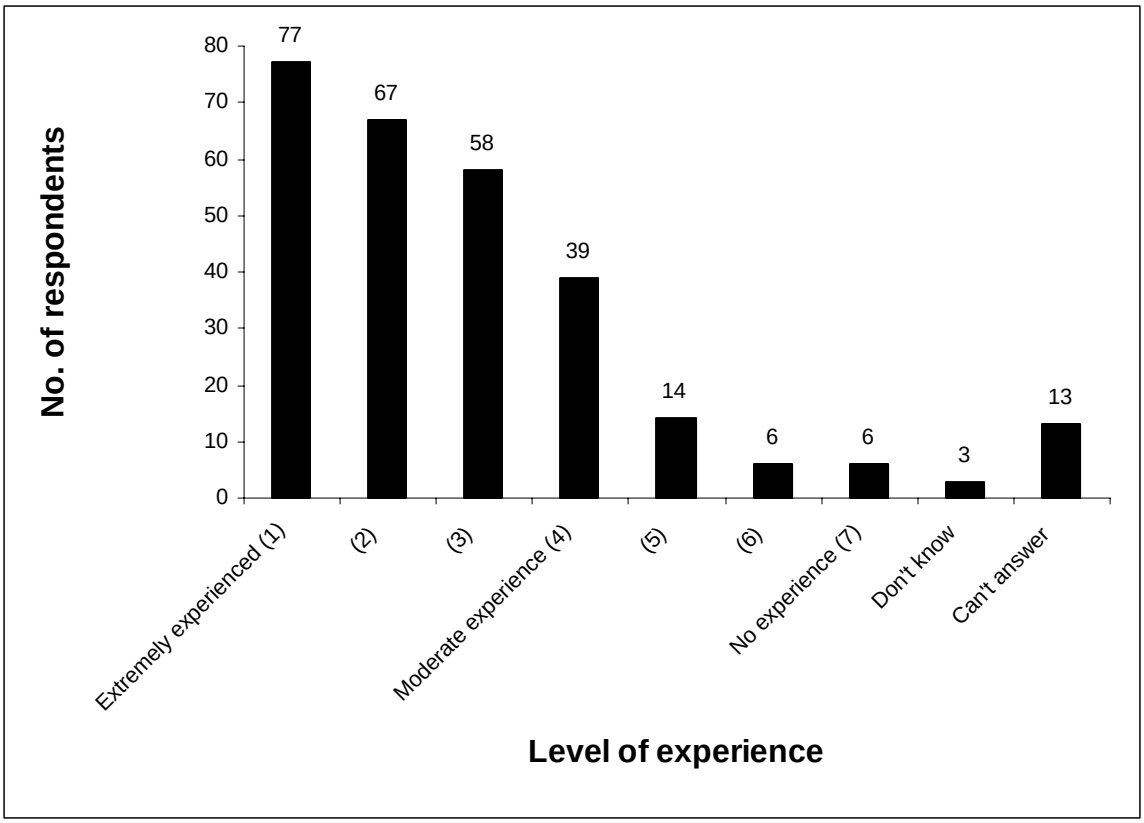

Figure 17.4: Personal level of experience (N=283)

Preparedness is one aspect of experience, and Figure 17.5 shows how prepared respondents were based on the safety items that they had available during their visit. Unlike many other parks, respondents assiduously listed many items, including appropriate clothing and footwear.

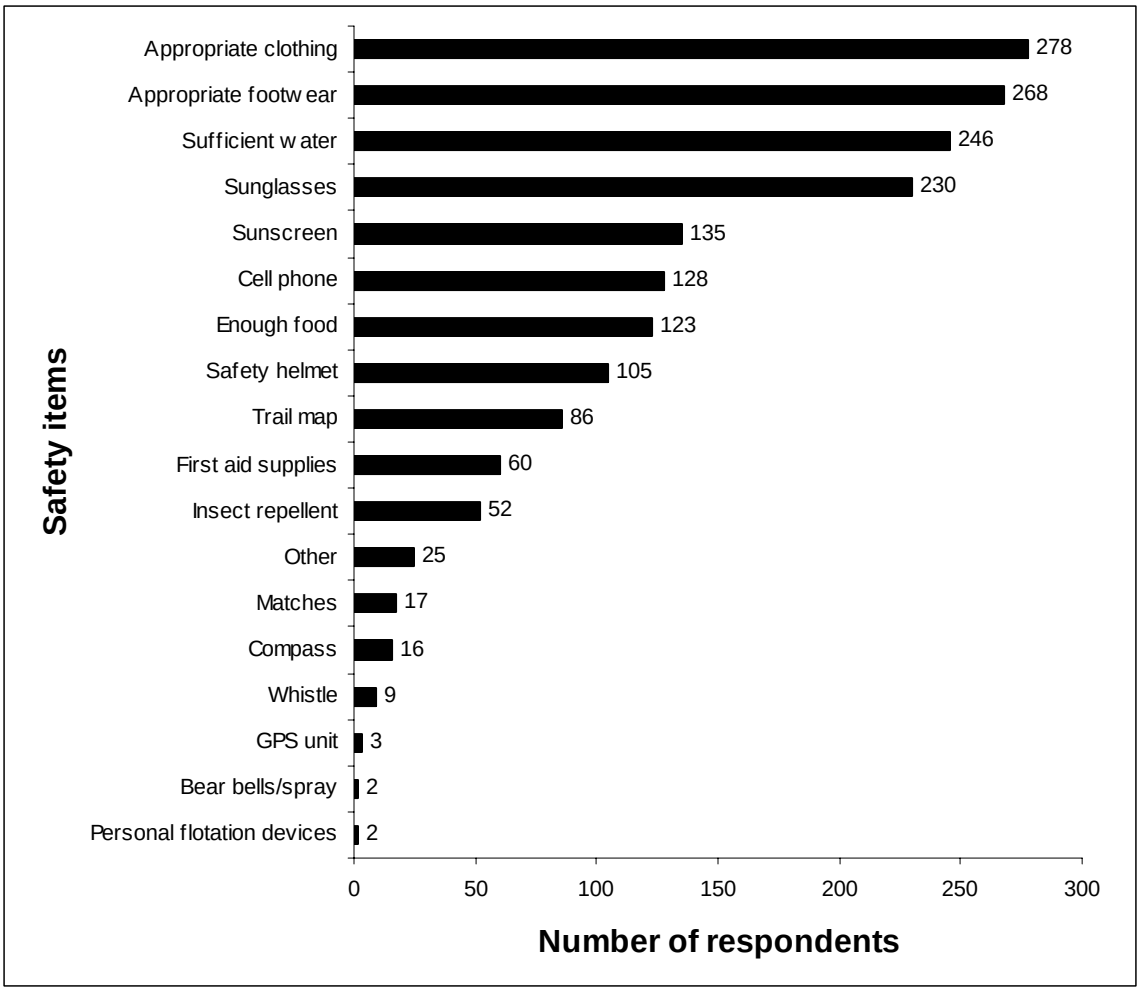

Figure 17.5: Personal safety items (N=278)

Few respondents (7%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 17.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

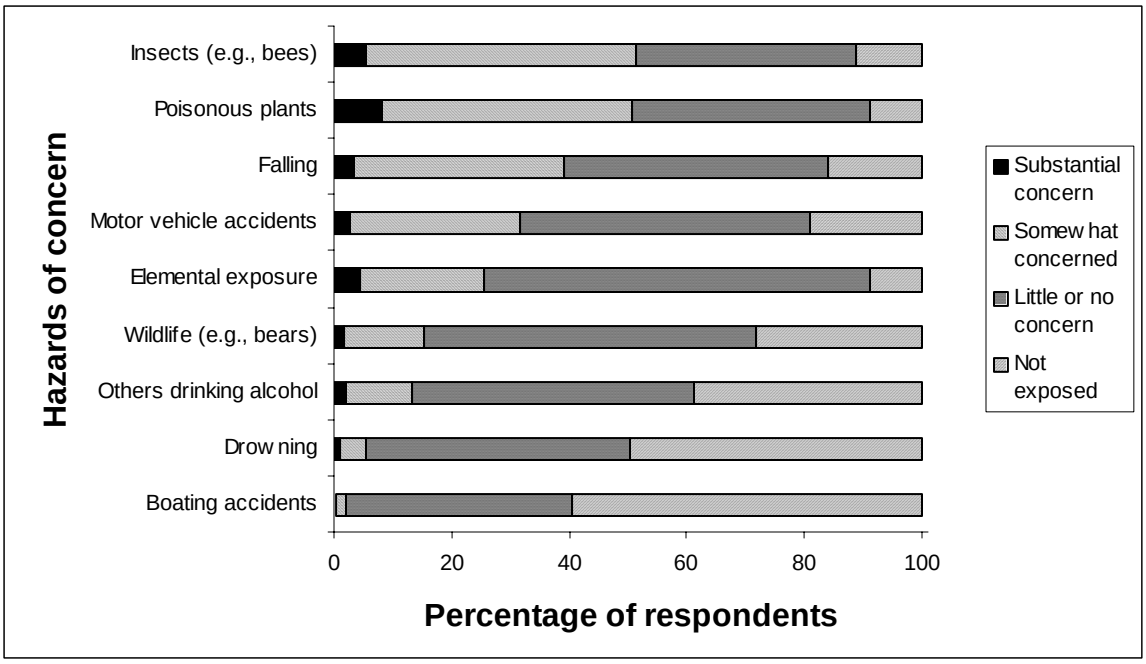

Figure 17.6: Level of concern about various hazards (N=281-283)

17.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 87% of respondents were traveling in privately owned or rented vehicles. Ninety-three percent of respondents spent all of the time in the front seat, and 5% spent some of the time in the front seat. Of these individuals, 74% were driving for all or most of the time and 96% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-one percent of respondents never encountered cars that were driving too fast, and 40% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 27% of respondents encountered cars that were driving too slowly. Most (94%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 97% thought that hazard-warning signs were adequate most or all of the time. Figure 17.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders and pedestrians are the most commonly cited driving hazards.

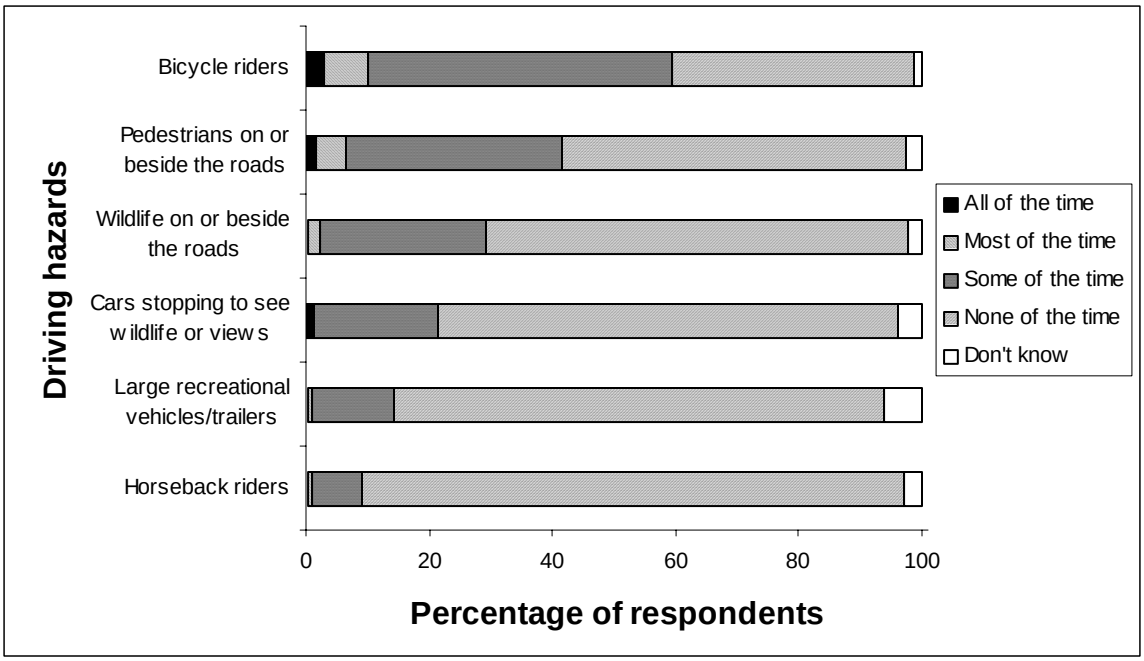

Figure 17.7: How often do these make traveling on roads more hazardous? (N=228-232)

17.6 Management issues:

With regard to the primary activity undertaken during their visit, 34% of respondents believed that safety was entirely the responsibility of the visitor, while 37% believed safety was the responsibility of both the visitor and the park staff (Figure 17.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 17.9 shows that the overwhelming majority (76%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (1%) who indicated that the safety measures definitely did detract from their enjoyment, 2 were walking to outdoor attractions and one was observing birds/wildlife.

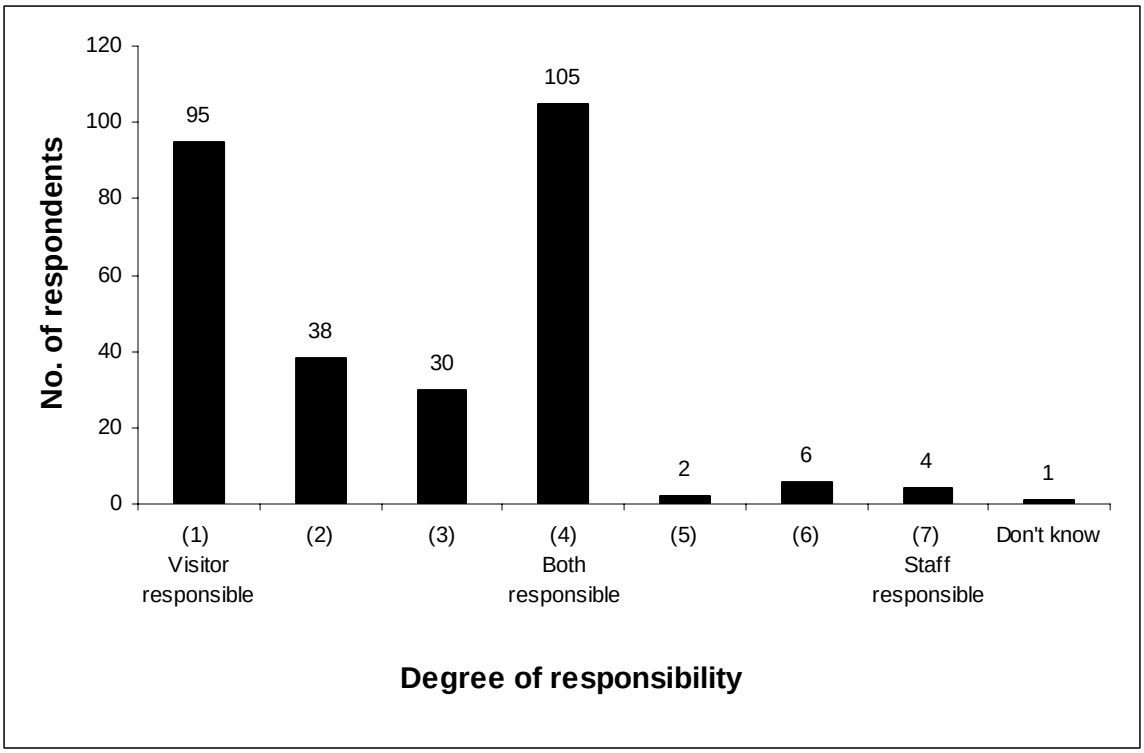

Figure 17.8: Responsibility for safety in chosen primary activity (N=281)

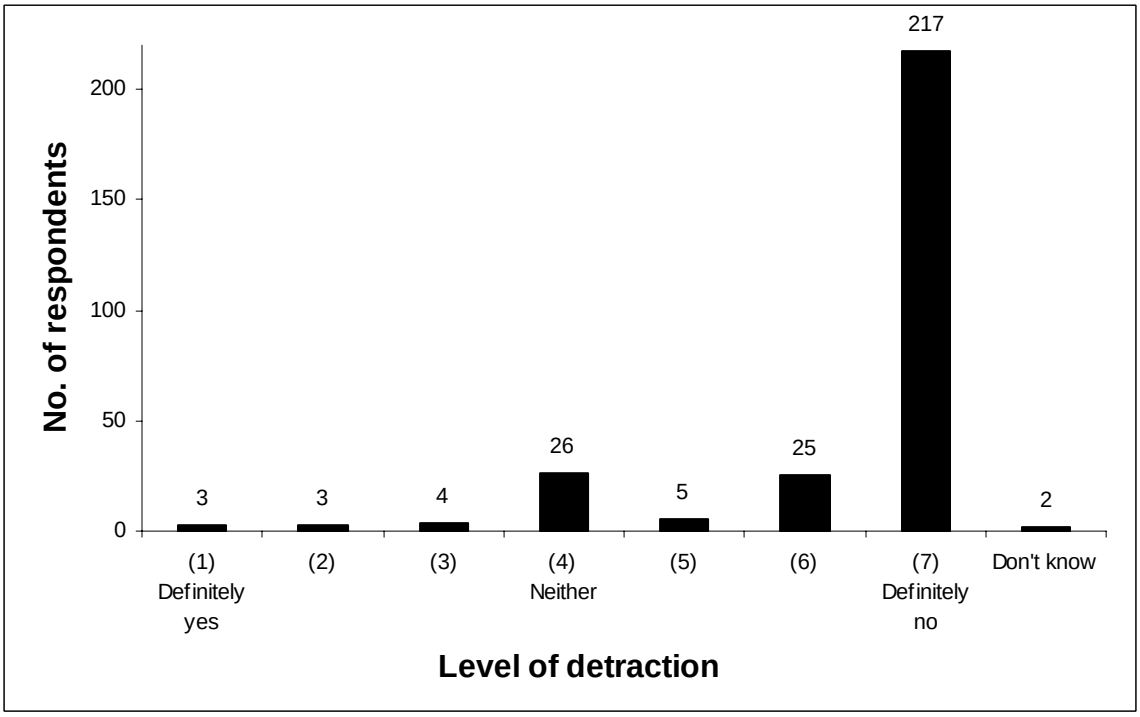

Figure 17.9: Do safety measures detract from visitor enjoyment? (N=285)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 44% neither agree nor disagree. Twenty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 35% disagree or disagree strongly, and 41% neither agree nor disagree. Thirty-six percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 22% agree or agree strongly, and 38% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (76%);
- signs warning and advising about hazards (80%);
- brochures and other information warning about hazards (78%);
- restrictions on the number of persons/groups who undertake particular activities (71%);
- park rangers to enforce rules and regulations (69%);
- enforcement of alcoholic beverage restrictions (69%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (21%) and more or much more rules and regulations about what visitors should and should not do (14%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 20% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 15% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 17.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that directional and warning signs and bulletin boards are the most helpful sources of safety information.

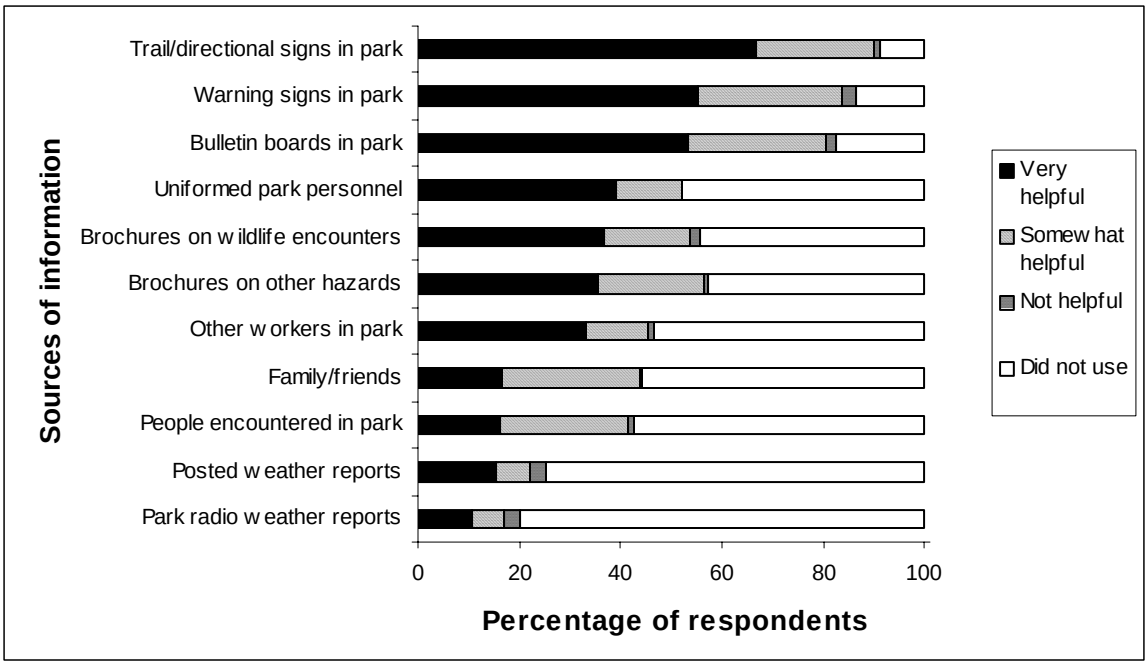

Figure 17.10: How helpful are various sources of safety information (N=105-265)

18.0 Denali National Park and Preserve

18.1 Sample:

At Denali National Park and Preserve, 327 visitor groups were contacted between July 13 and July 18, 2001, and 242 (74%) groups accepted questionnaires. Questionnaires were completed and returned by 149 visitor groups, resulting in a 61.6% response rate.

18.2 Demographics:

Figure 18.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-five percent of respondents were female and 55% male. The overwhelming majority (96%)of respondents were white, with 1% African-American, 1% Hispanic, 1% Hawaiian, and 1% Asian. Graduate school was the highest level of education attained by 29% of respondents, while an additional 25% classified themselves as college graduates. The majority (96.6%) of respondents were residents of the US and 4% were international visitors, including one respondent from each of the following countries: Austria, Germany, Haiti, Switzerland, and the UK.

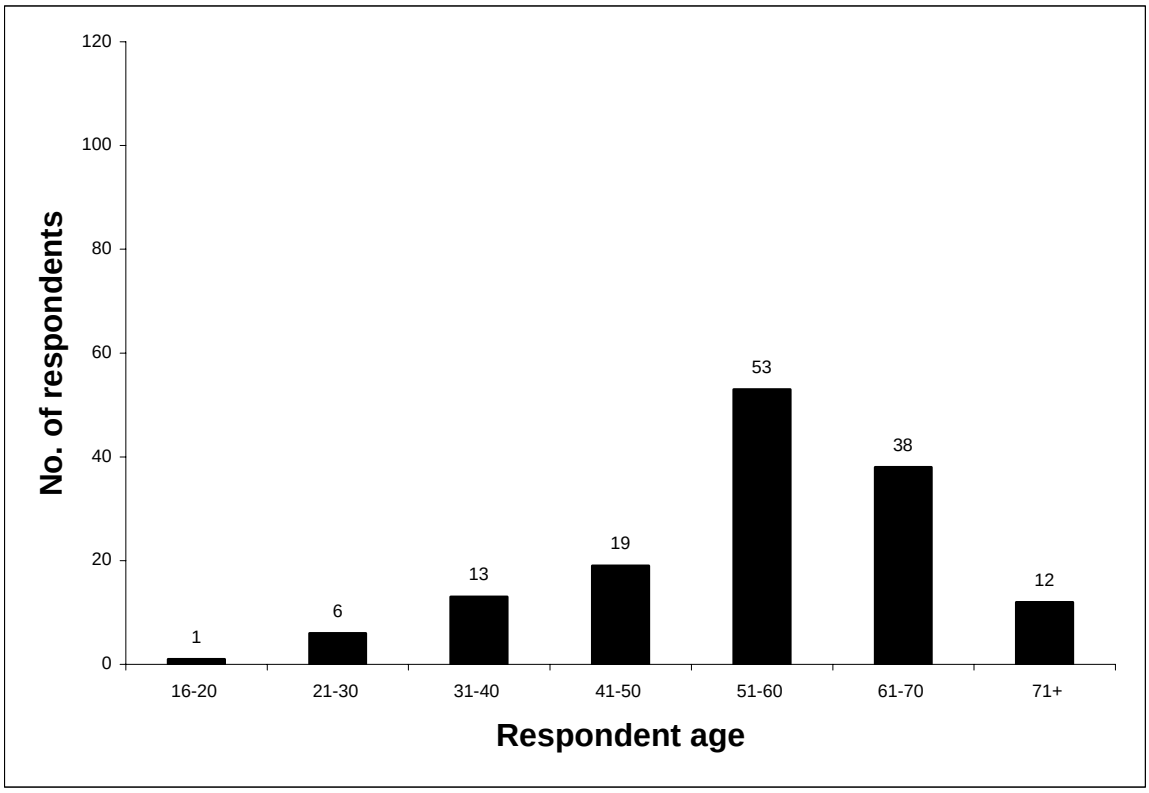

Figure 18.1: Distribution of respondents by age (N=142)

18.3 Visitation

For 78% of respondents, this was their first visit to the park. Among those 34 respondents who indicated they were returning to the park, 56% had visited the park

twice in the past 10 years (including the current visit), 26% 3-5 times, 9% 6-10 times, and 9% 11 or more times. This visit was the primary destination for 15% of respondents, but one of only several destinations for 85% of respondents. For 1% of respondents this visit was not a planned destination at all. Seven percent of the respondents visited the park for a half day or less, 32% visited for up to one day, and 61% visited for more than one day. Four percent of respondents were visiting the park by themselves, 62% with family members, 18% with friends, and 13% with family members and friends.

18.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 18.2).

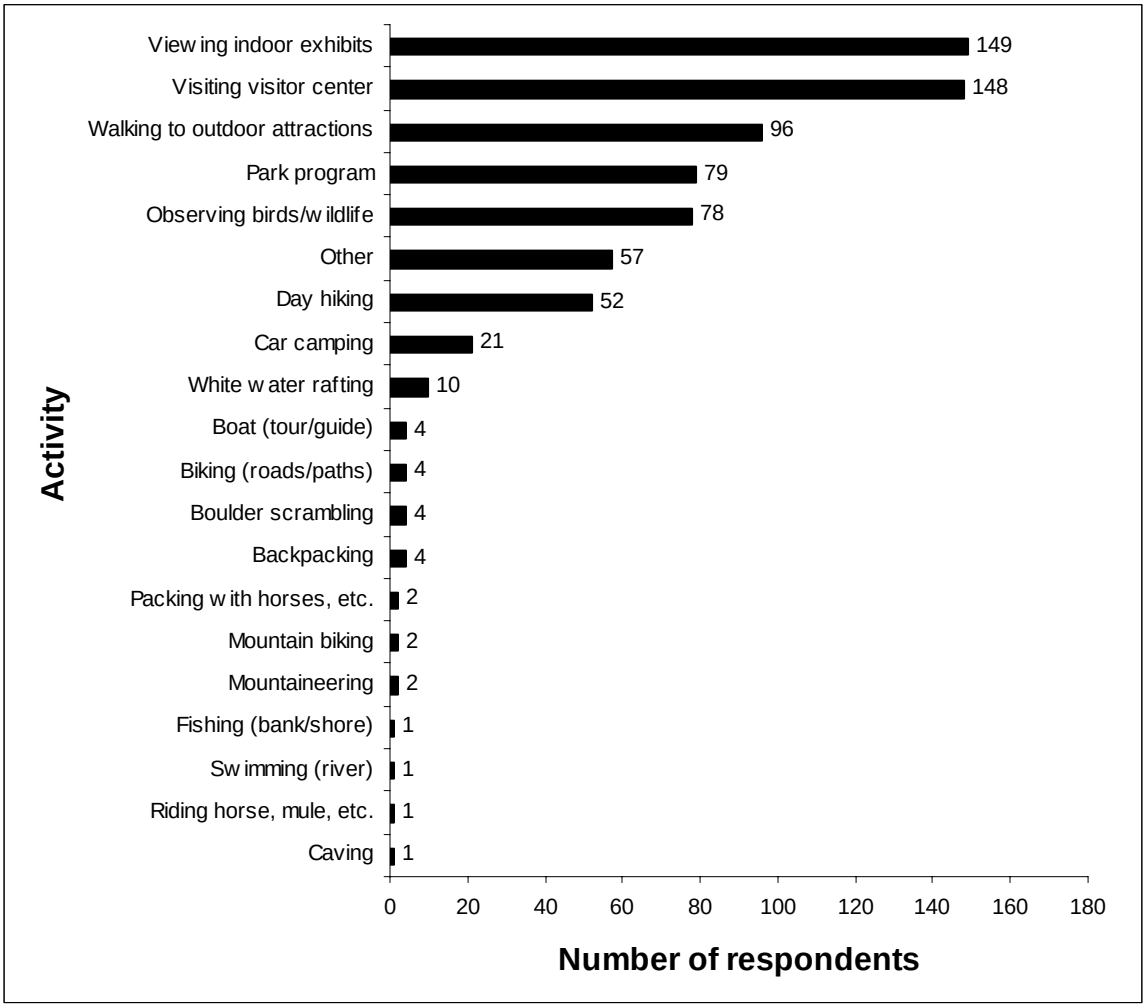

Figure 18.2: Visitor activities (N=149)
(Note: Several respondents listed more than one activity)

Figure 18.2 illustrates that many respondents visited the visitor center (99%) and viewed indoor exhibits (100%), but these are often only adjunct activities and not the primary

purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 18.3 illustrates that park programs (23%), observing birds and other wildlife (18%), and various other unspecified activities (31%) were the most popular primary activities. Most respondents (58%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 5% engaged in these activities alone, 24% with people aside from their own personal group, and 10% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity (Figure 18.4). The number of respondents indicating limited experience is higher than at some other parks, and this probably reflects the nature of the activities (e.g., park programs) for which it is difficult to give a rating. Ratings of personal experience varied little between males and females.

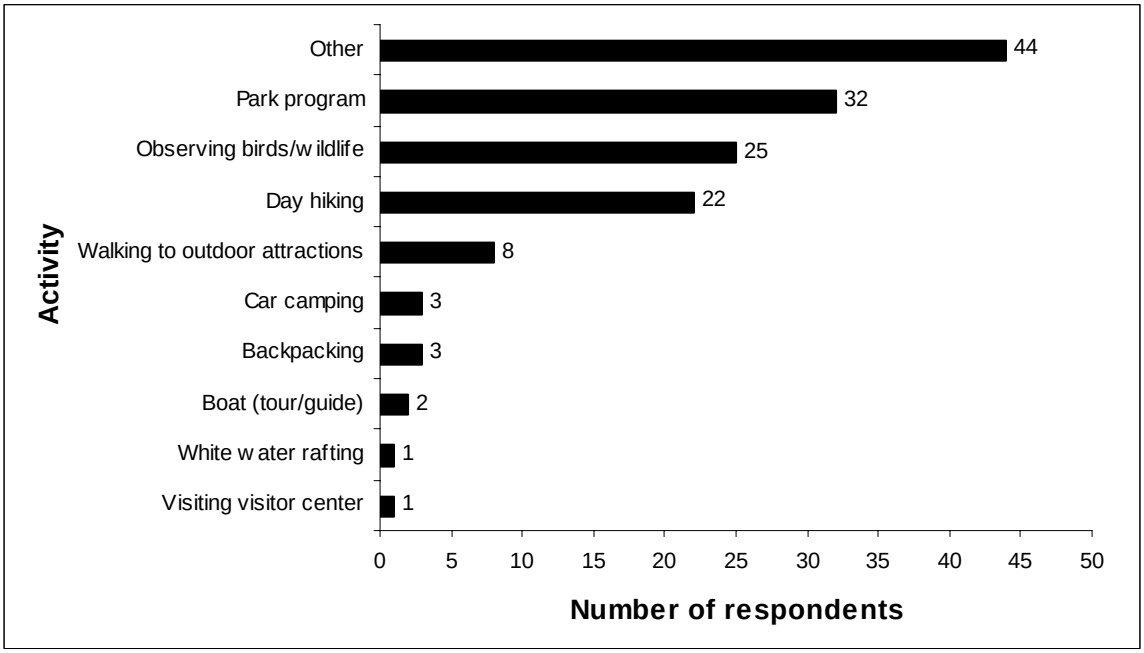

Figure 18.3: Primary visitor activities (N=141)

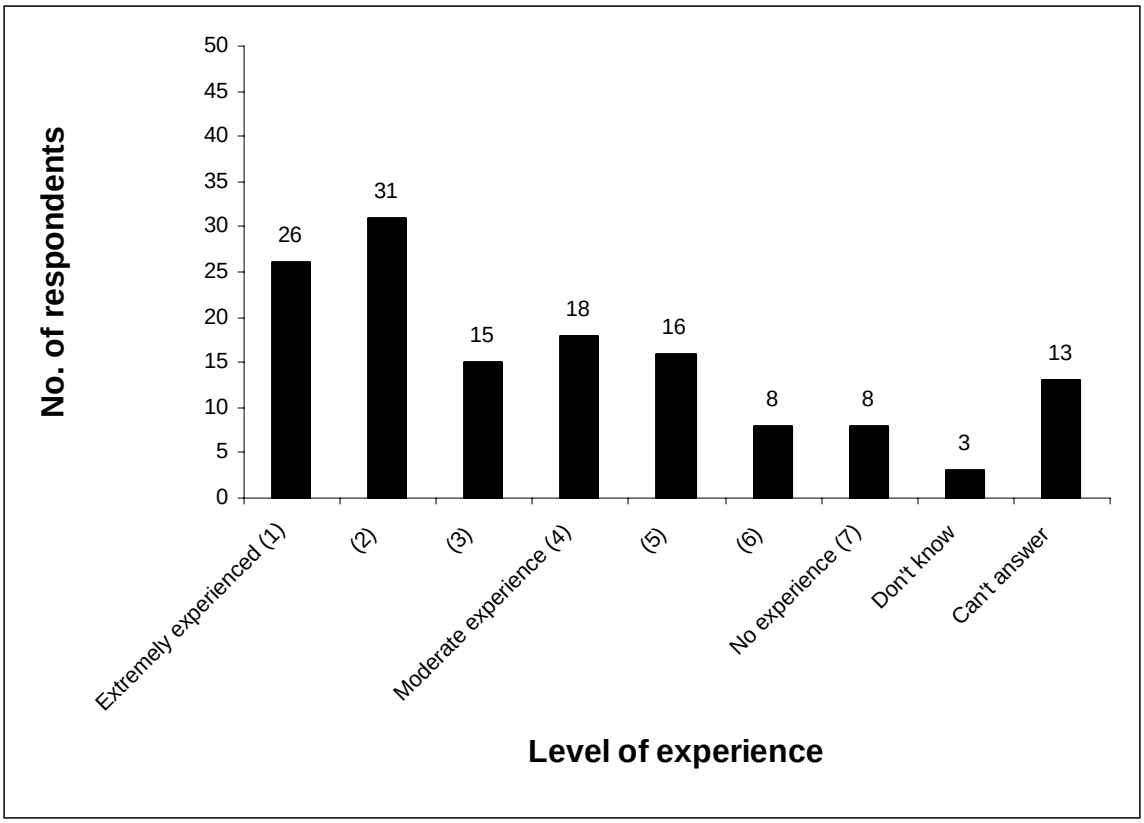

Figure 18.4: Personal level of experience (N=138)

Preparedness is one aspect of experience, and Figure 18.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given respondents' concerns (see Figure 18.6), it is surprising that no one checked off appropriate clothing and footwear and insect repellents.

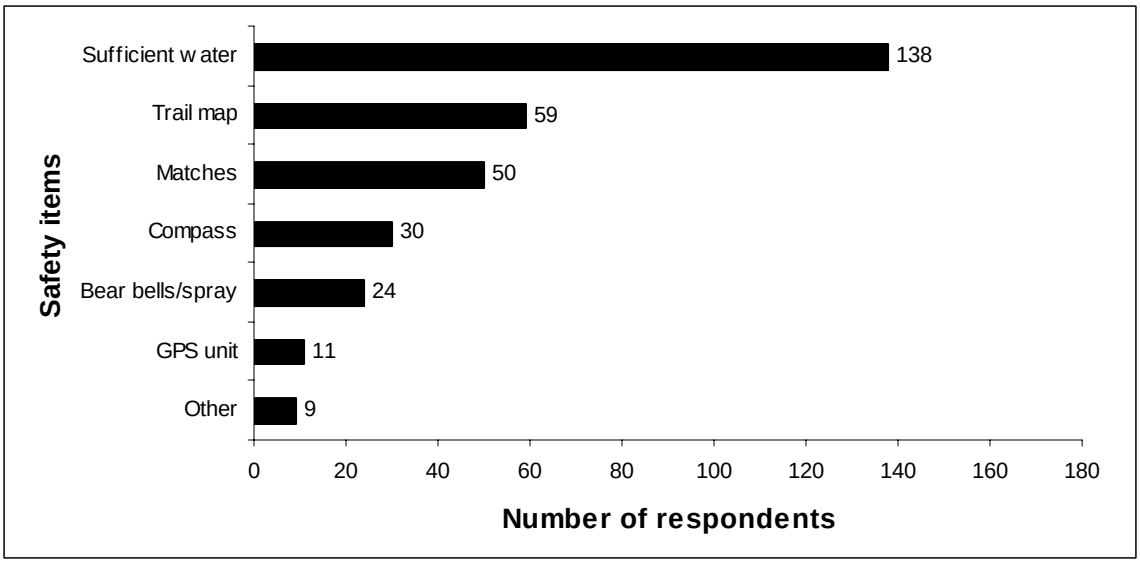

Figure 18.5: Personal safety items (N=138)

Few respondents (7%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 18.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be generally consistent with the nature of accidents reported in the park, except falls and elemental exposure are underrated and wildlife attacks are overestimated as causes of concern.

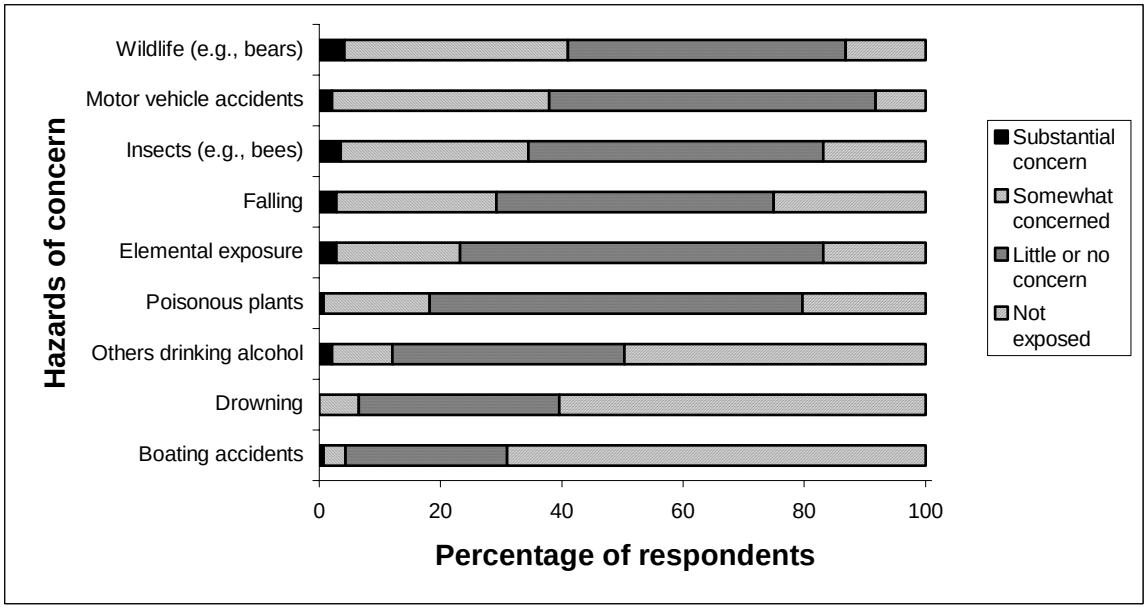

Figure 18.6: Level of concern about various hazards (N=139-145)

18.5 Motor vehicles:
Looking at motor vehicles in more detail, we find that 66% of respondents were traveling in privately owned or rented vehicles. Sixty-eight percent of respondents spent all of the time in the front seat, and 15% spent some of the time in the front seat. Of these 58 individuals, 54% were driving for all or most of the time and 81% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-three percent of respondents never encountered cars that were driving too fast, and 44% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 35% of respondents encountered cars that were driving too slowly. Most (95%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 98% thought that hazard-warning signs were adequate most or all of the time. Figure 18.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and bicycle riders are the most commonly cited driving hazards, although these are cited as problems some of the time by relatively few respondents.

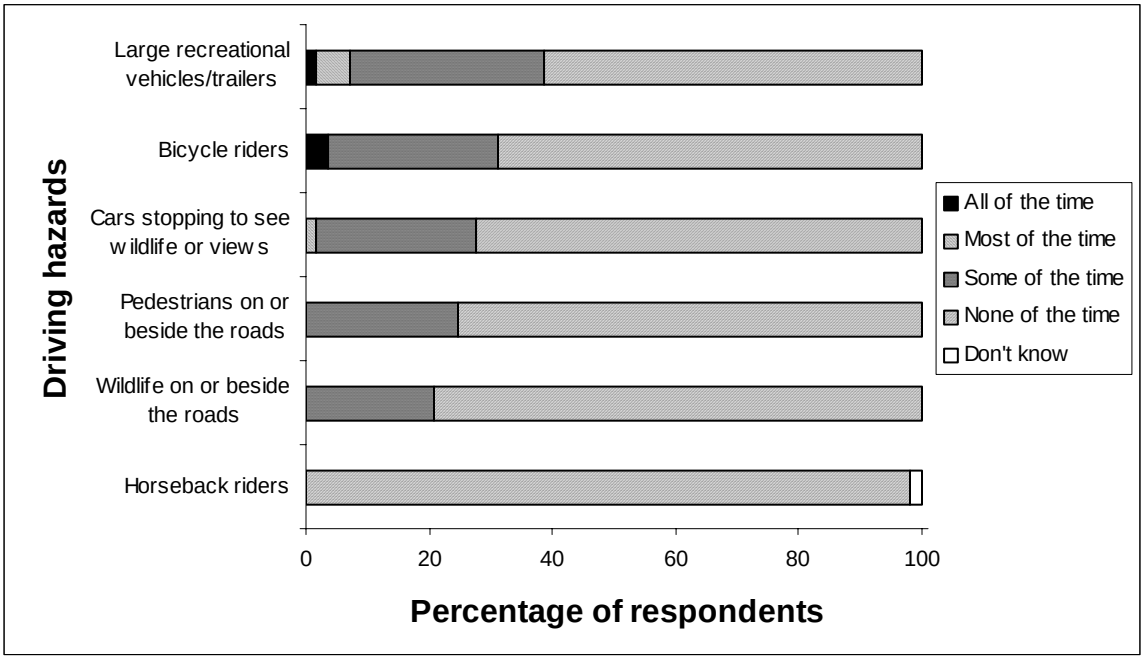

Figure 18.7: How often do these make traveling on roads more hazardous? (N=56-58)

18.6 Management issues:
With regard to the primary activity undertaken during their visit, 23% of respondents believed that safety was entirely the responsibility of the visitor, while 54% believed safety was the responsibility of both the visitor and the park staff (Figure 18.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 18.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Of the two respondents (1%) who indicated that the safety measures definitely did detract from their enjoyment, one was observing birds and wildlife, and one was engaged in a park program.

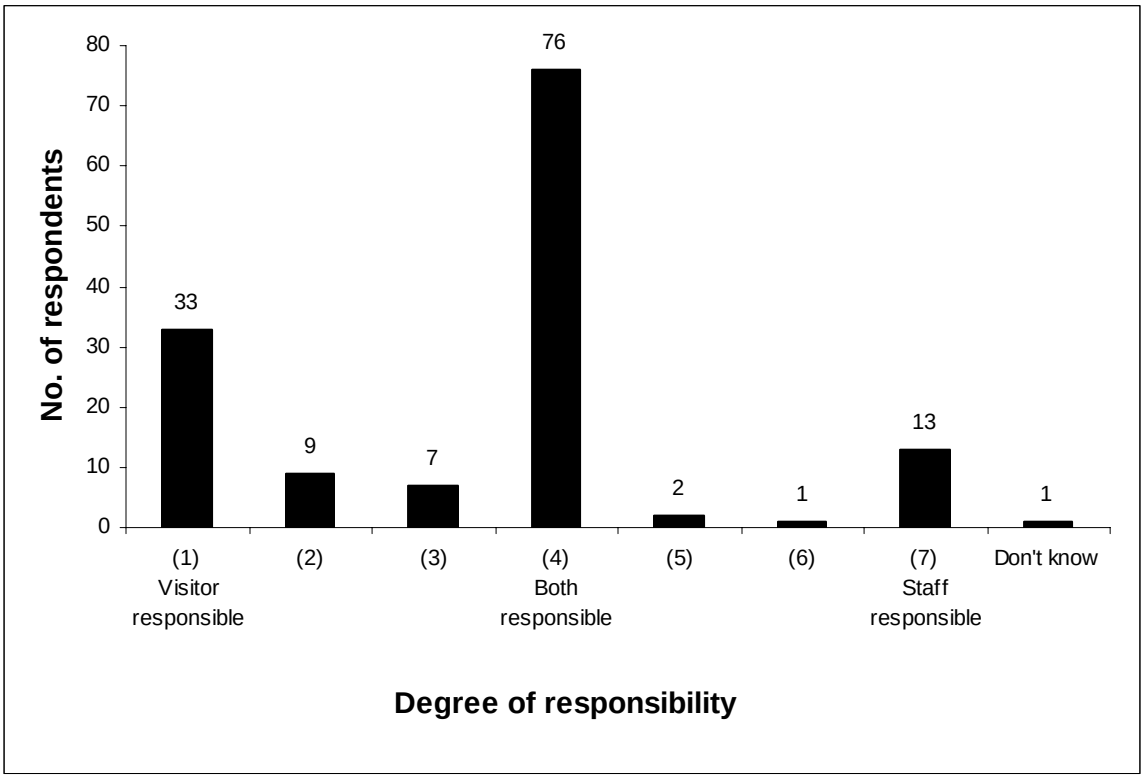

Figure 18.8: Responsibility for safety in chosen primary activity (N=142)

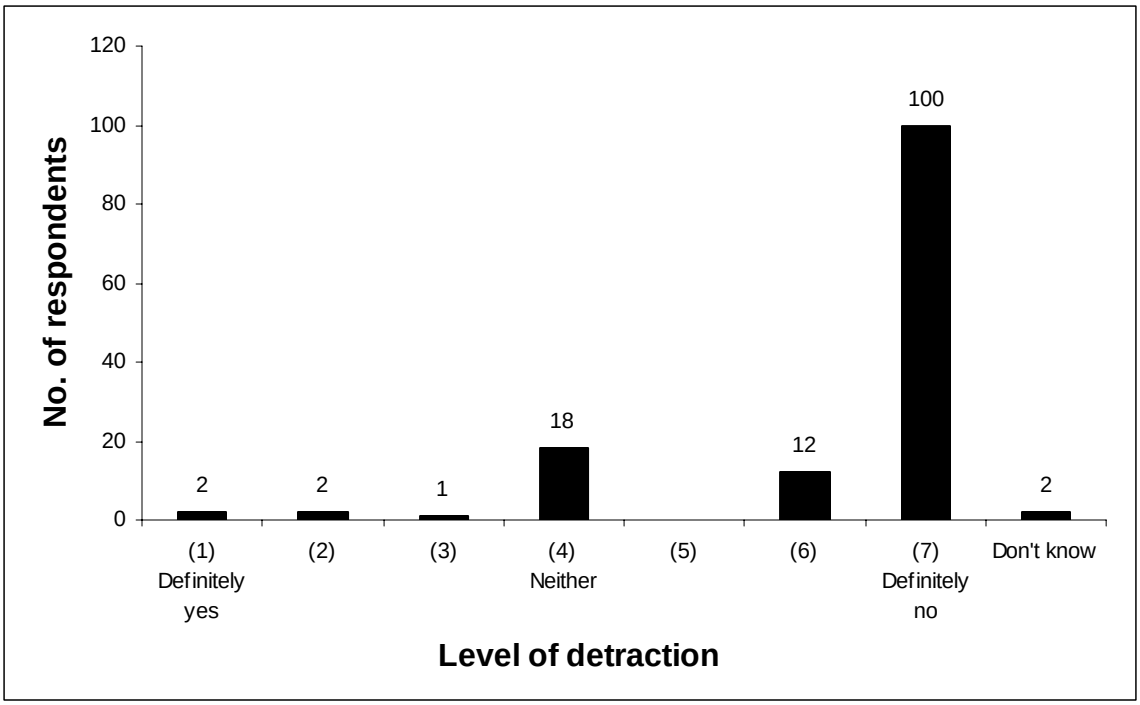

Figure 18.9: Do safety measures detract from visitor enjoyment? (N=137)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 8% disagree or disagree strongly, and 33% neither agree nor disagree. Twenty-four percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 40% disagree or disagree strongly, and 33% neither agree nor disagree. Thirty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 33% agree or agree strongly, and 28% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (86%);
- signs warning and advising about hazards (82%);
- brochures and other information warning about hazards (85%);
- restrictions on the number of persons/groups who undertake particular activities (67%);
- park rangers to enforce rules and regulations (64%);
- enforcement of alcoholic beverage restrictions (67%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (18%). A substantial proportion of

respondents were more ambivalent about a couple of items, however, and 19% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 21% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 18.10 indicates the level of helpfulness provided by each source of information. As at many other parks, respondents indicated that uniformed park personnel and directional and warning signs are among the most helpful sources of safety information, but respondents at Denali also rated brochures on wildlife encounters very highly.

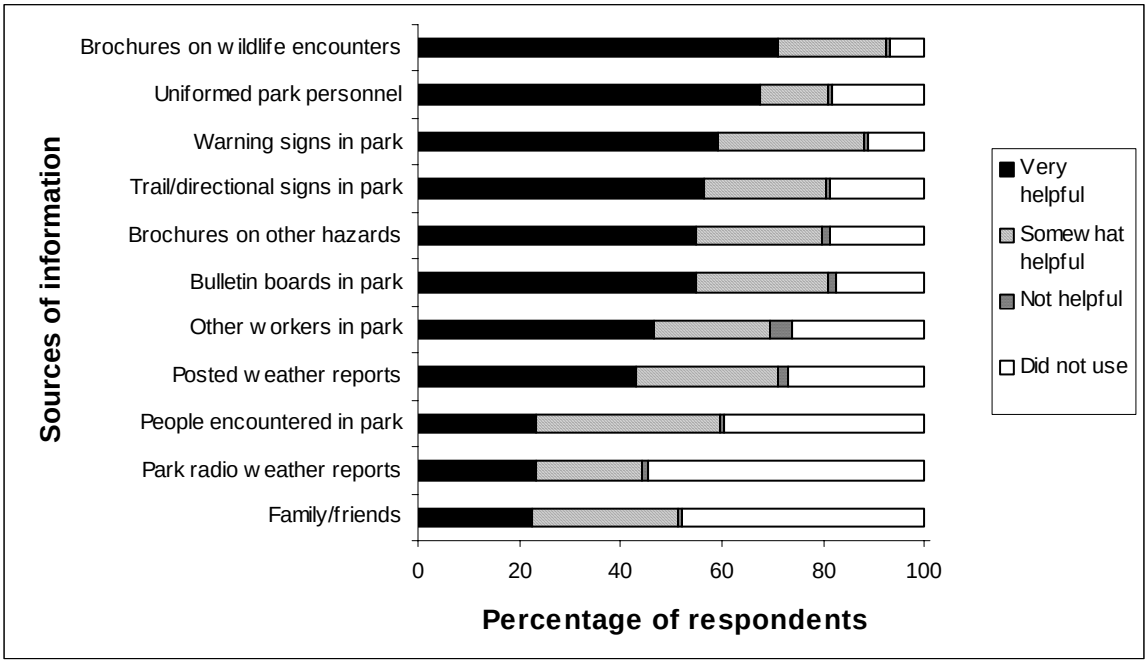

Figure 18.10: How helpful are various sources of safety information (N=95-132)

19.0 Delaware Water Gap National Recreation Area

19.1 Sample:

At Delaware Water Gap National Recreation Area, 240 visitor groups were contacted between August 2 and August 7, 2001, and 177 (73.8%) of these groups accepted questionnaires. Questionnaires were completed and returned by only 57 visitor groups, resulting in a disappointing 32.2% response rate for this park. The low response rate may be related to the characteristics of the park visitors and the nature of their activities, but it may also reflect the fact that the survey was conducted late in the summer and completed surveys were still coming in at the time of the analysis.

19.2 Demographics:

Figure 19.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Thirty-six percent of respondents were female and 64% male. The overwhelming majority (91%)of respondents were white, with 4% Hispanic, and 4% Asian. Graduate school was the highest level of education attained by 29% of respondents, while an additional 33% classified themselves as college graduates. The majority (93%) of respondents were residents of the US and 7% were international visitors, with one respondent from each of the following countries: Canada, New Zealand, Russia, and the Netherlands.

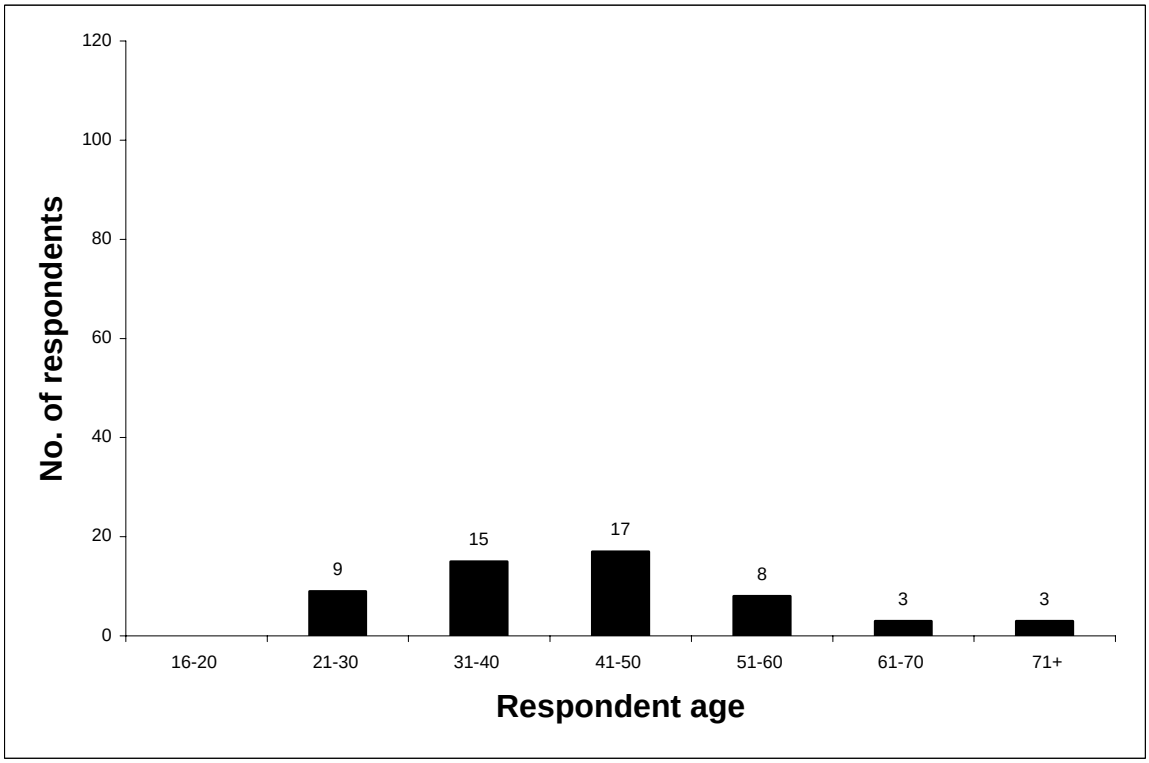

Figure 19.1: Distribution of respondents by age (N=55)

19.3 Visitation

For 38% of respondents, this was their first visit to the park. Among those 33 respondents who indicated they were returning to the park, 15% had visited the park twice in the past 10 years (including the current visit), 33% 3-5 times, 21% 6-10 times, and 30% 11 or more times. This visit was the primary destination for 48% of respondents, but one of only several destinations for 34% of respondents. For 18% of respondents this visit was not a planned destination at all. SIxty-three percent of the respondents visited the park for a half day or less, 23% visited for up to one day, and 14% visited for more than one day. Sixteen percent of respondents were visiting the park by themselves, 50% with family, 20% with friends, and 9% with family and friends.

19.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 19.2).

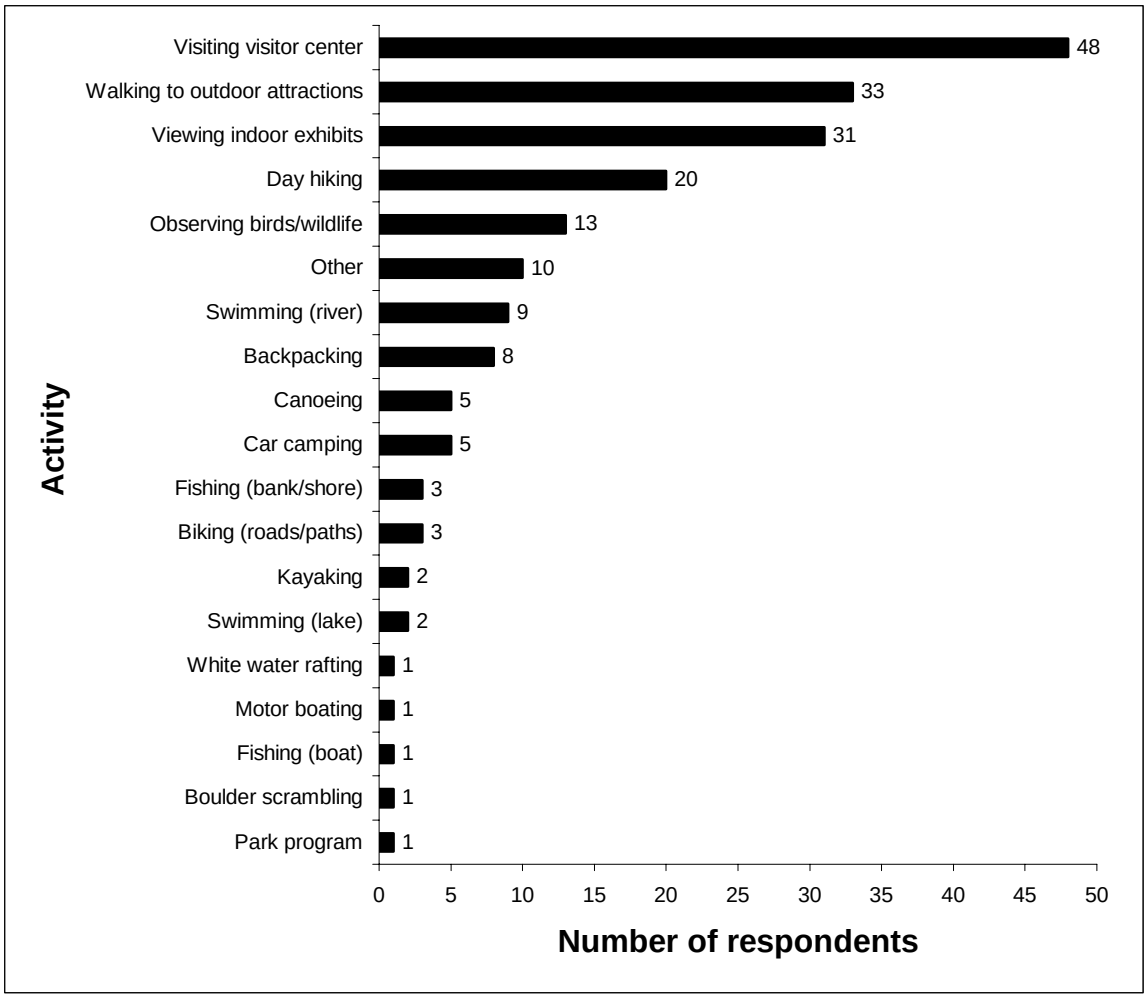

Figure 19.2: Visitor activities (N=57)
(Note: Several respondents listed more than one activity)

Figure 19.2 illustrates that many respondents visited the visitor center (84%) and viewed indoor exhibits (54%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 19.3 illustrates that day hiking (29%), walking to outdoor attractions (18%), and visiting the visitor center (12%) were the most popular primary activities. Most respondents (77%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 15% engaged in these activities alone, and 2% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 19.4).

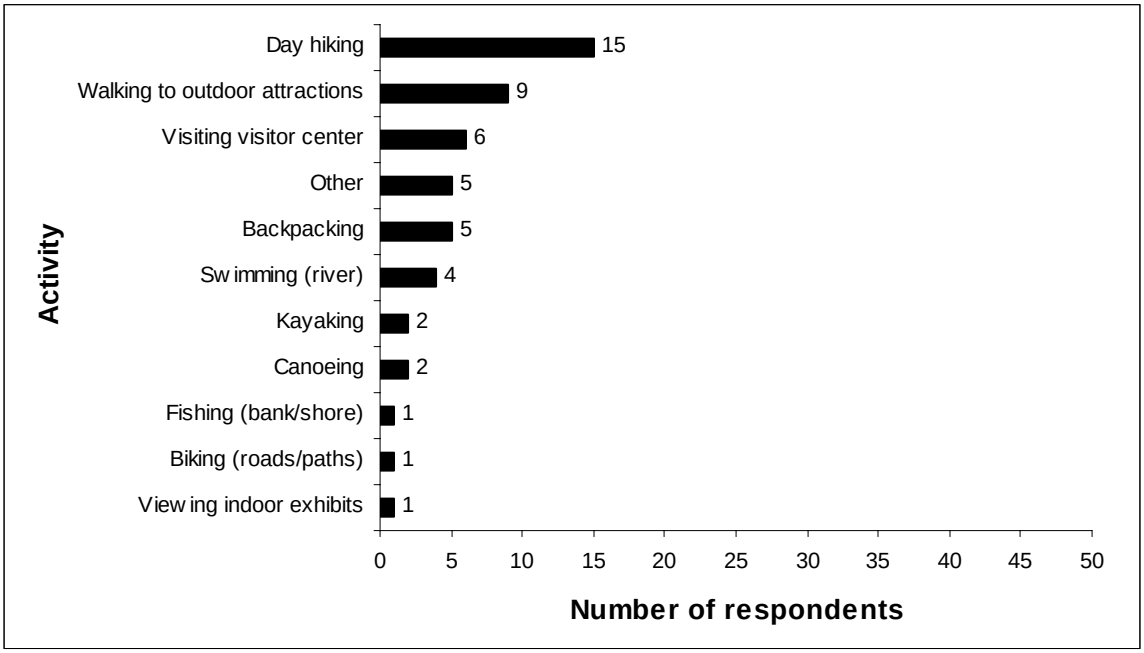

Figure 19.3: Primary visitor activities (N=51)

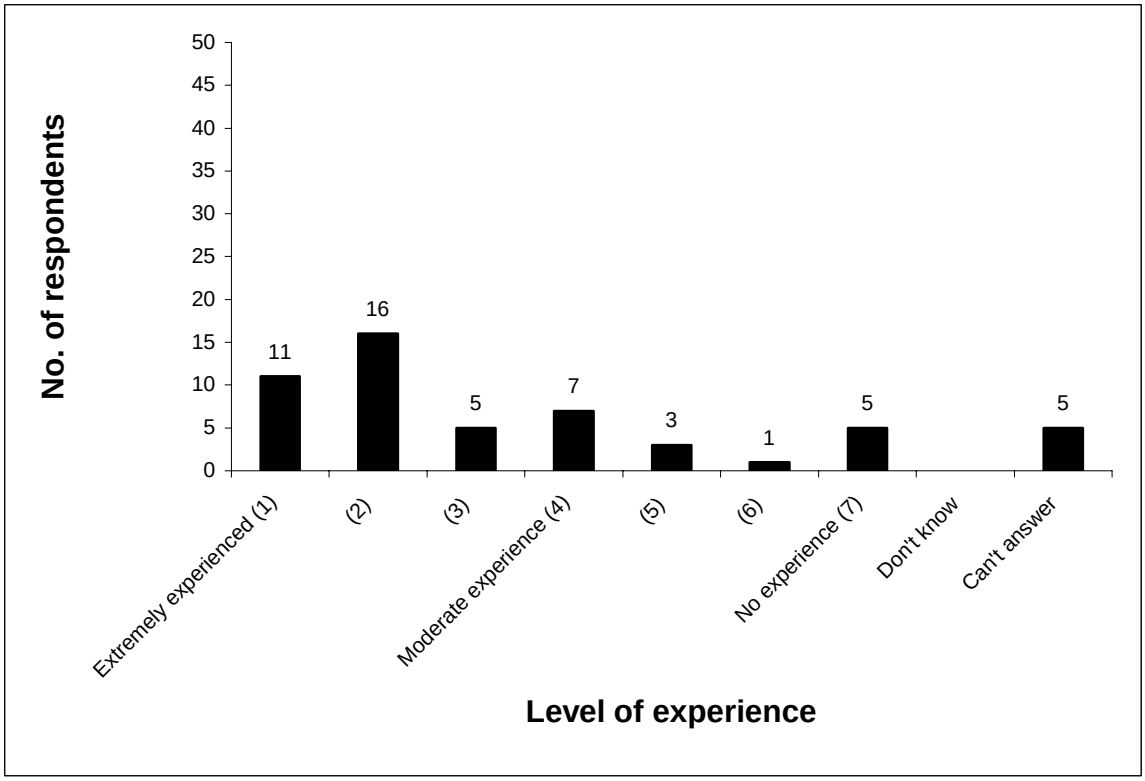

Figure 19.4: Personal level of experience (N=53)

Preparedness is one aspect of experience, and Figure 19.5 shows how prepared respondents were based on the safety items that they had available during their visit.

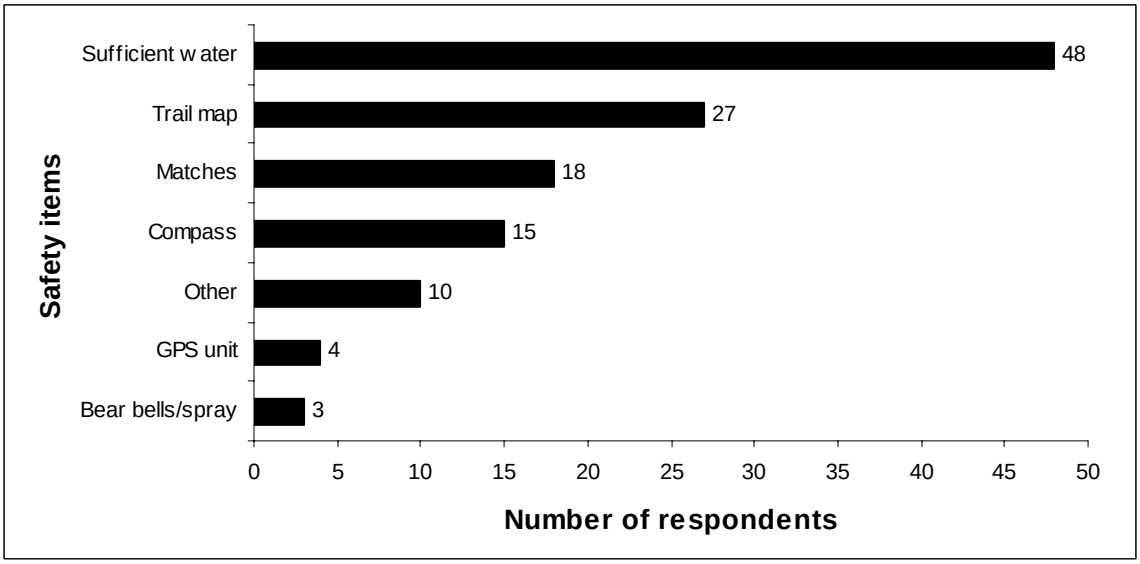

Figure 19.5: Personal safety items (N=48)

A surprisingly high proportion of respondents (15%) expressed concern about suffering an injury or illness while engaged in their primary activity, although the small number of respondents expressing such concerns limits further analysis. Without reference to a particular activity, however, Figure 19.6 shows how concerned respondents were about various hazards that might be encountered in the park.

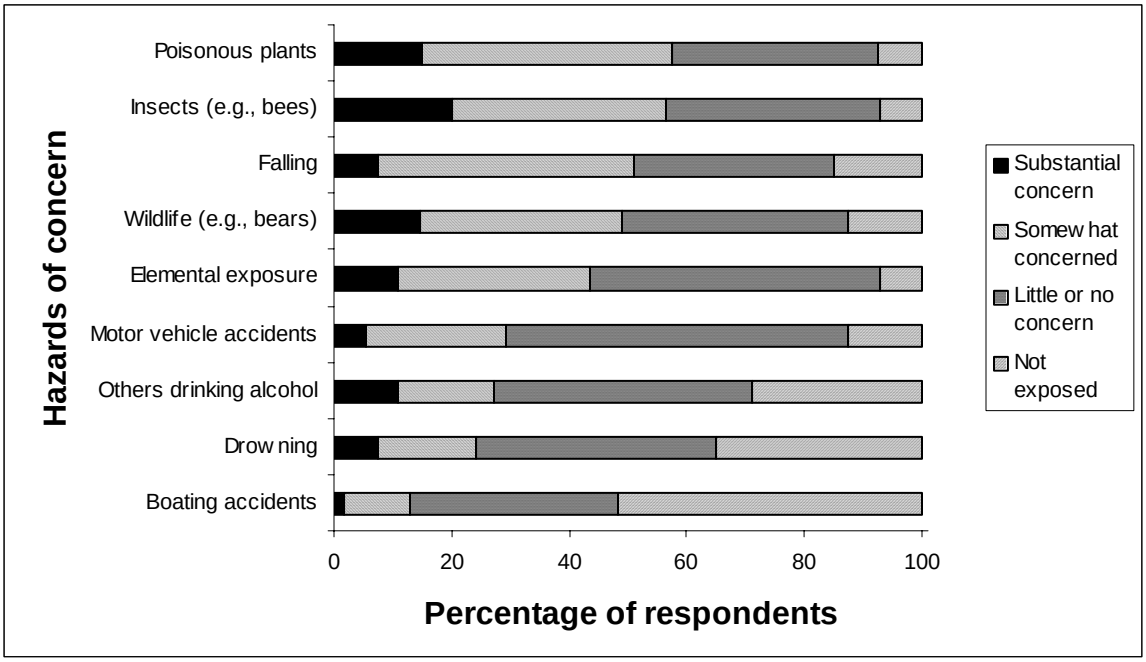

Figure 19.6: Level of concern about various hazards (N=53-55)

19.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 89% of respondents were traveling in privately owned or rented vehicles. Eighty-eight percent of respondents spent all of the time in the front seat, and 8% spent some of the time in the front seat. Of these individuals, 65% were driving for all or most of the time and 100% were wearing seatbelts all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-three percent of respondents never encountered cars that were driving too fast, and 38% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 30% of respondents encountered cars that were driving too slowly. Most (83%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 85% thought that hazard-warning signs were adequate most or all of the time. Figure 19.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and wildlife on or beside the roads are the most commonly cited driving hazards, although these are hazards only some of the time for most respondents.

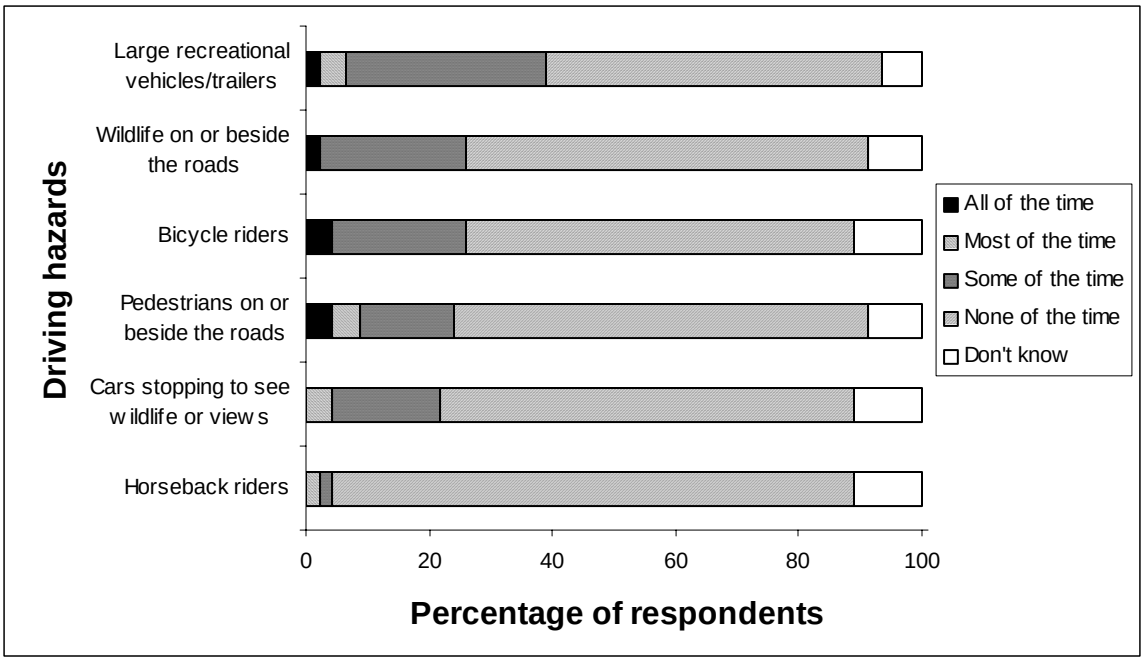

Figure 19.7: How often do these make traveling on roads more hazardous? (N=46)

19.6 Management issues:
With regard to the primary activity undertaken during their visit, 43% of respondents believed that safety was entirely the responsibility of the visitor, while 30% believed safety was the responsibility of both the visitor and the park staff (Figure 19.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 19.9 shows that the overwhelming majority (64%) of respondents thought such measures definitely did not detract.

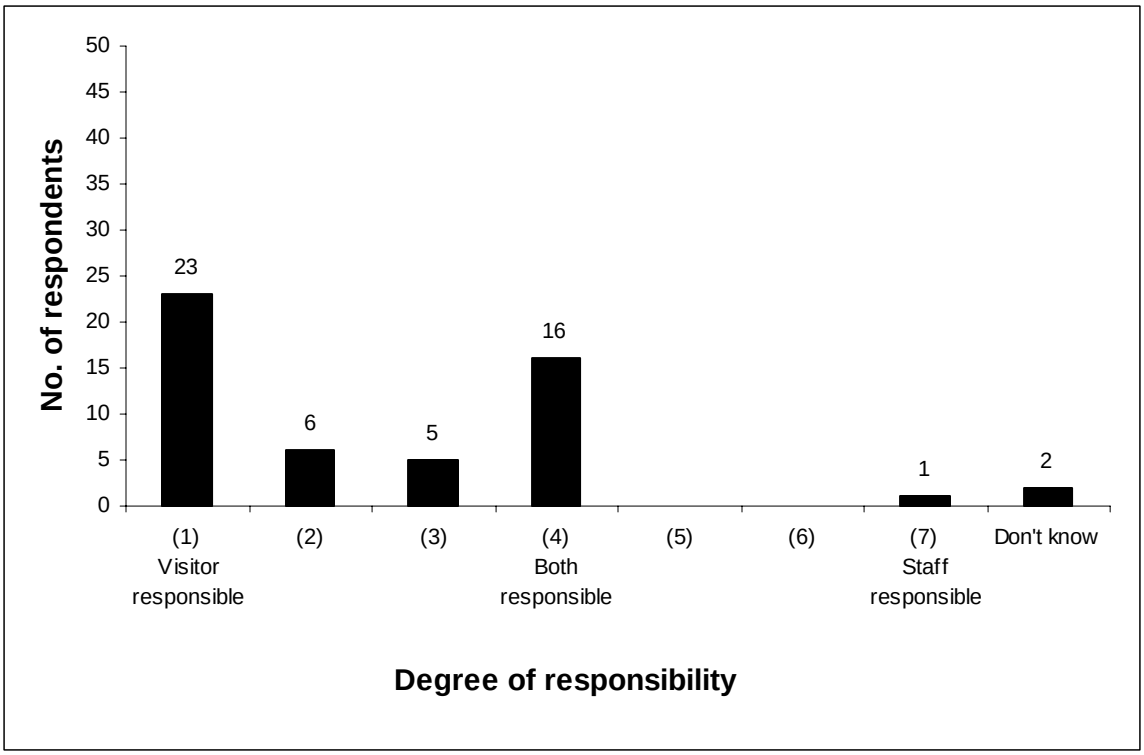

Figure 19.8: Responsibility for safety in chosen primary activity (N=53)

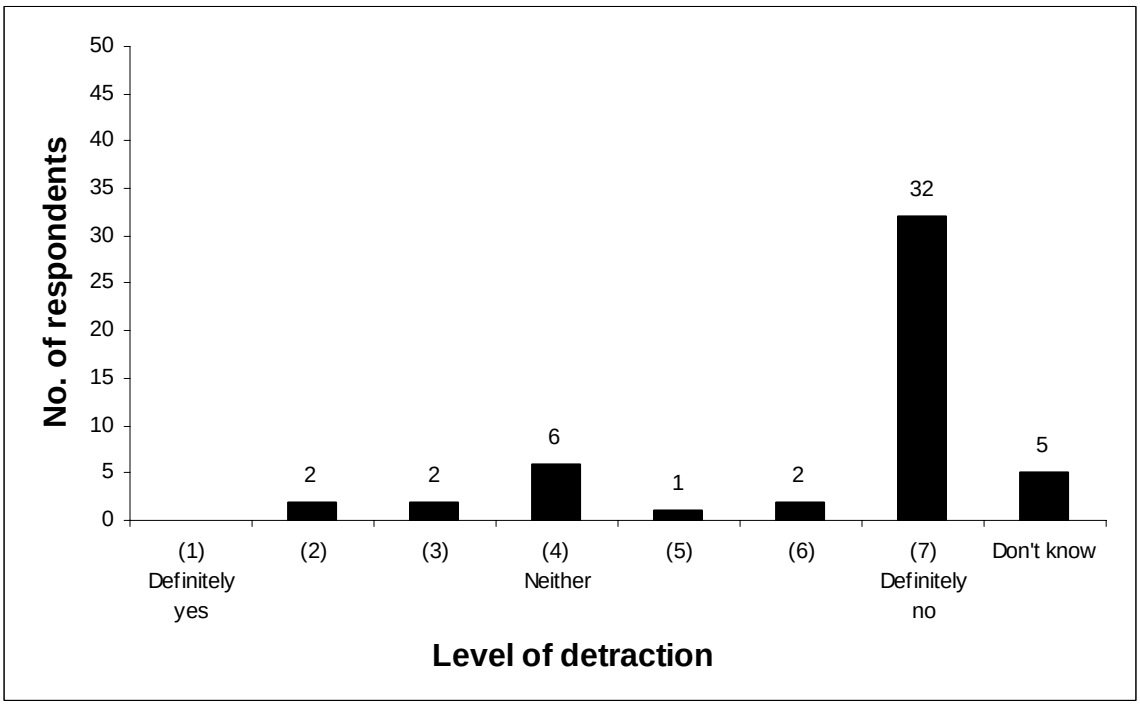

Figure 19.9: Do safety measures detract from visitor enjoyment? (N=50)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 36% neither agree nor disagree. Eighteen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 48% disagree or disagree strongly, and 32% neither agree nor disagree. Thirty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 43% agree or agree strongly, and 21% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (68%);
- signs warning and advising about hazards (79%);
- brochures and other information warning about hazards (73%);
- restrictions on the number of persons/groups who undertake particular activities (65%);
- park rangers to enforce rules and regulations (62%);
- enforcement of alcoholic beverage restrictions (53%); and,
- safe surfaces on walkways and stairs (64%).

Fourteen percent of respondents believe that there should be fewer rules and regulations about what visitors should and should not do. Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (22%) and more or much more enforcement of alcoholic beverage prohibitions (24%). Twenty-two percent of respondents also believe there should be safer surfaces on walkways and stairs. A substantial proportion of respondents were more ambivalent about a couple of items, however, and 24% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 20% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 19.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional signs are the most helpful sources of safety information. Brochures and bulletin boards were also rated highly. Warning signs are “used” by a lot of respondents, but it appears that their helpfulness could be improved.

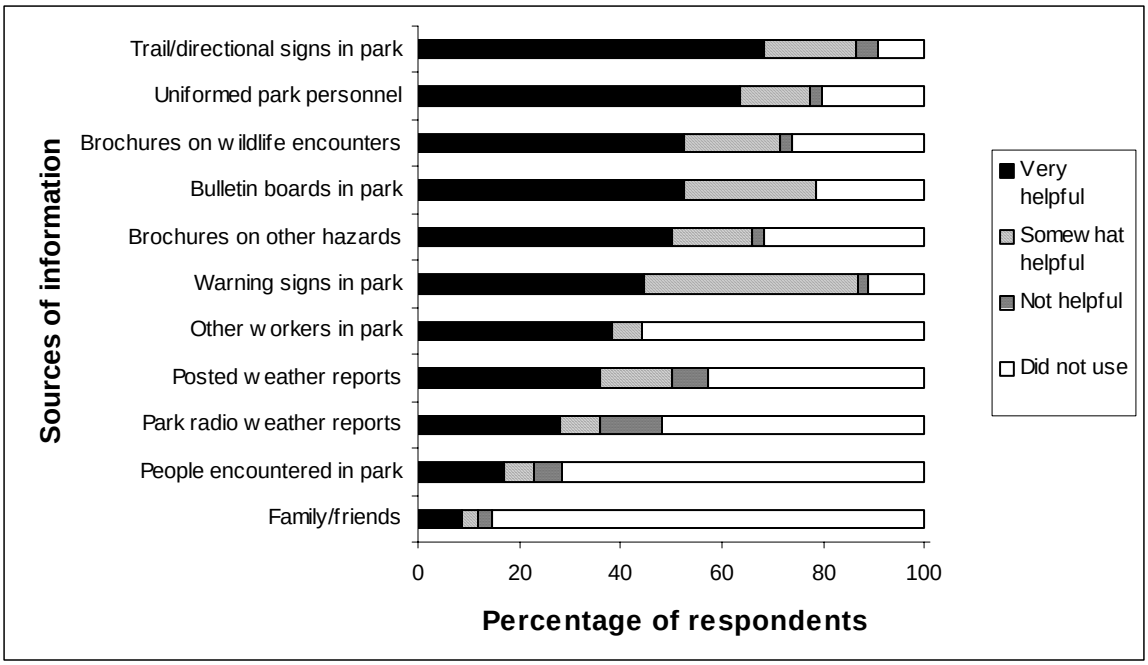

Figure 19.10: How helpful are various sources of safety information (N=25-45)

20.0 Everglades National Park

20.1 Sample:

At Everglades National Park, 271visitor groups were contacted between June 14 and June 20, 2001, and 249 (91.9%) of these groups accepted questionnaires. Questionnaires were completed and returned by 137 visitor groups, resulting in a 55% response rate for this park.

20.2 Demographics:

Figure 20.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (90%)of respondents were white, with 3% Hispanic, 1% African-American, 1% Asian, and 1% American Indian. Graduate school was the highest level of education attained by 27% of respondents, while an additional 34% classified themselves as college graduates. The majority (88%) of respondents were residents of the US and 12% were international visitors, with respondents from the following countries: Austria (1), Belgium (1), Bolivia (1), Canada (1), France (1), Germany (2), Greenland (1), Luxembourg (1), Netherlands (3), Norway (1), Sweden (1), Switzerland (1), and the UK (2).

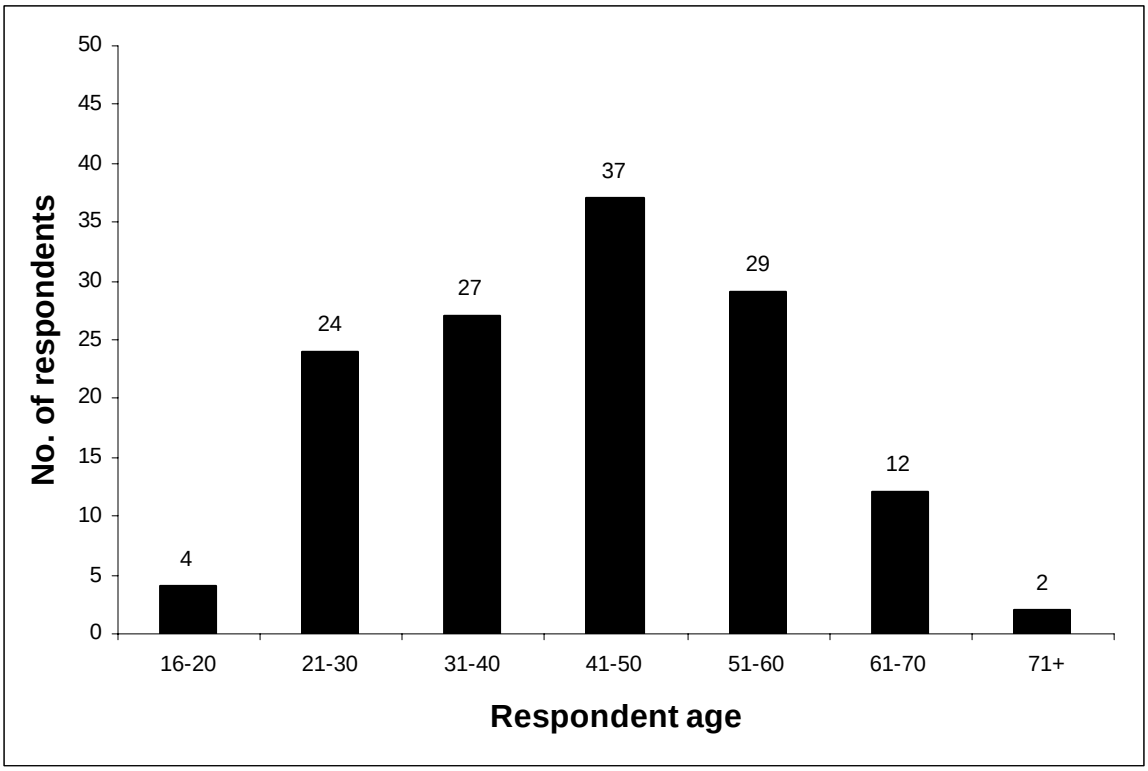

Figure 20.1: Distribution of respondents by age (N=135)

20.3 Visitation

For 67% of respondents, this was their first visit to the park. Among those 45respondents who indicated they were returning to the park, 51% had visited the park twice in the past 10 years (including the current visit), 24% 3-5 times, 16% 6-10 times, and 9% 11 or more times. This visit was the primary destination for 17% of respondents, but one of only several destinations for 76% of respondents. For 7% of respondents this visit was not a planned destination at all. Forty-seven percent of the respondents visited the park for a half day or less, 36% visited for up to one day, and 16% visited for more than one day. Four percent of respondents were visiting the park by themselves, 75% with family members, 13% with friends, and 4% with family members and friends.

20.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 20.2).

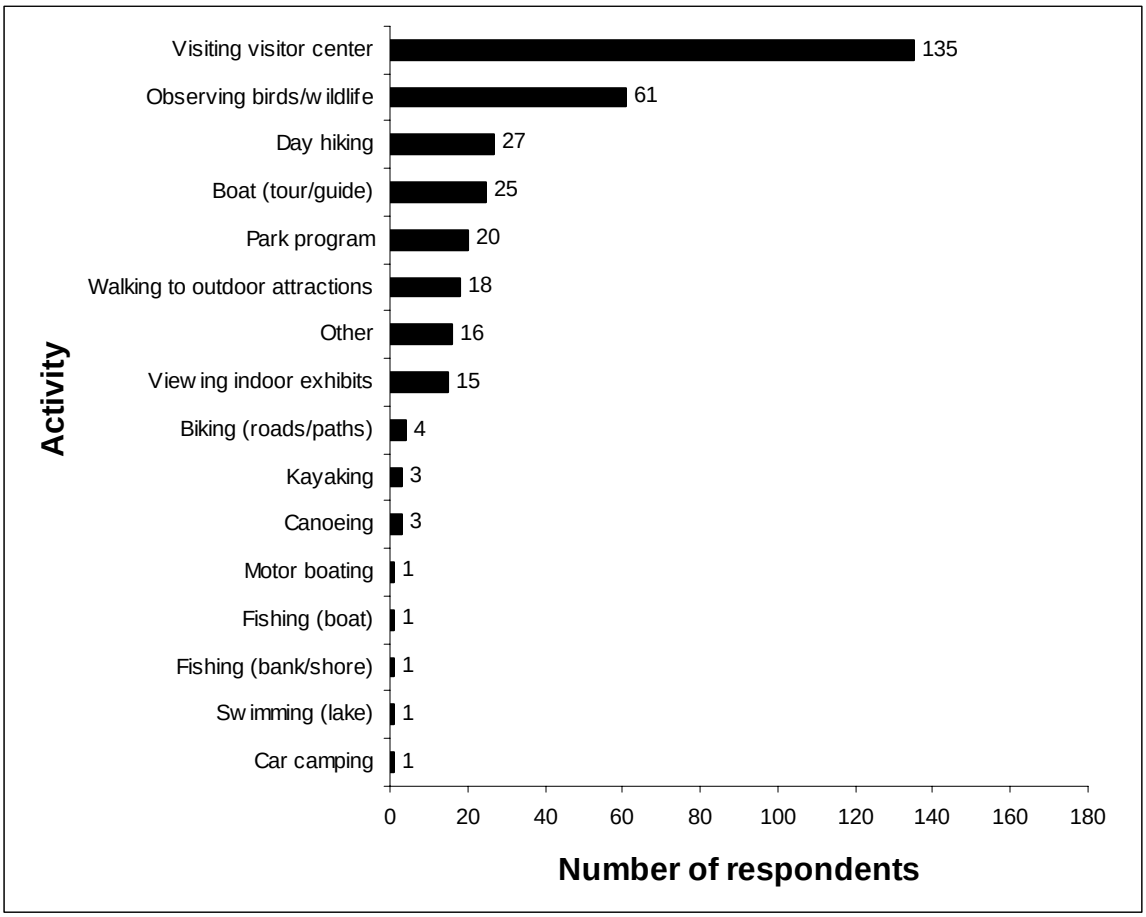

Figure 20.2: Visitor activities (N=137)
(Note: Several respondents listed more than one activity)

Figure 20.2 illustrates that many respondents visited the visitor center (99%) but this is often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most

of the time during their visit. Figure 20.3 illustrates that walking to outdoor attractions (47%), observing birds/wildlife (20%), and day hiking (8%) were the most popular primary activities. Most respondents (85%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, 7% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 20.4). Ratings of personal experience varied little between activities and between males and females.

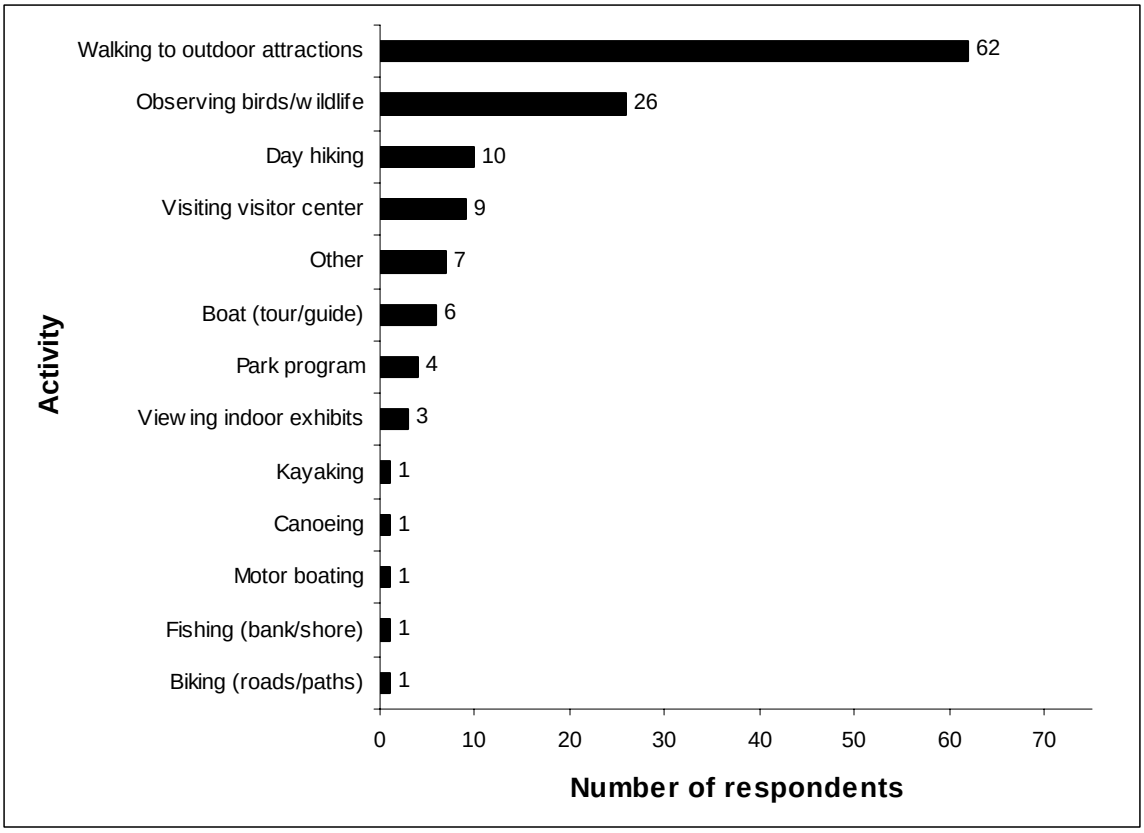

Figure 20.3: Primary visitor activities (N=332)

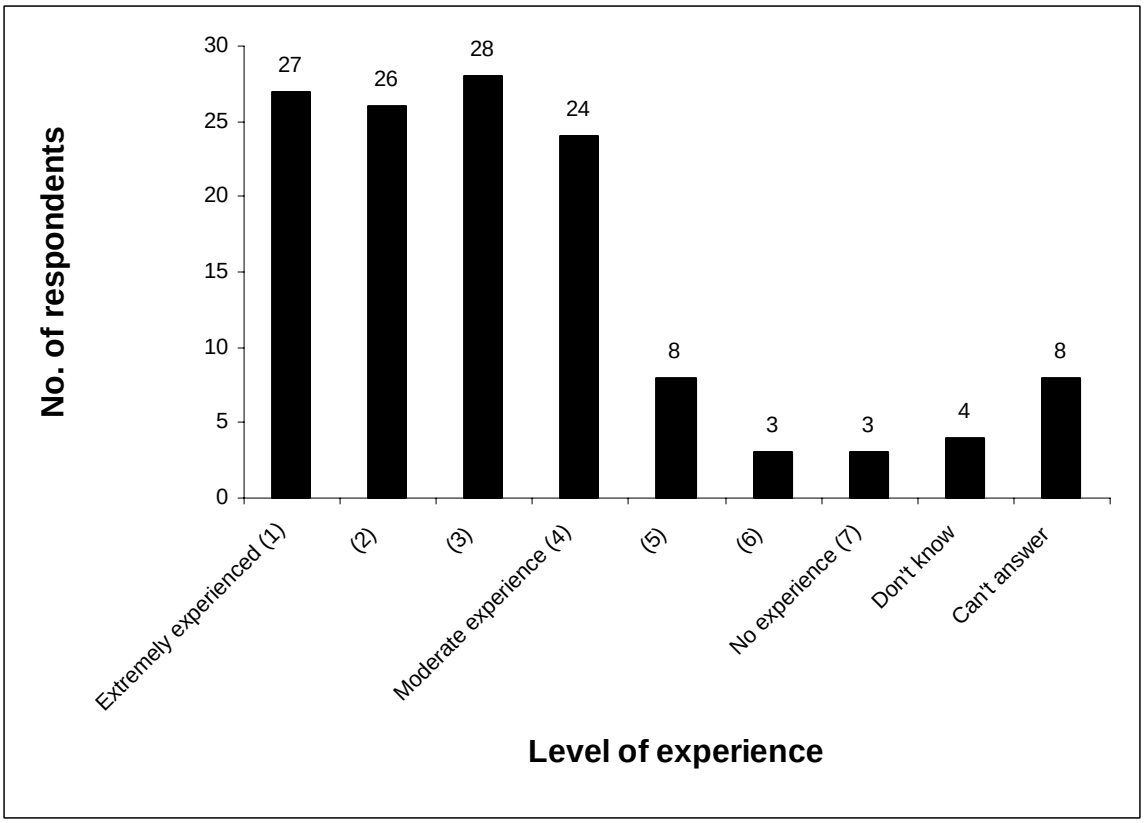

Figure 20.4: Personal level of experience (N=131)

Preparedness is one aspect of experience, and Figure 20.5 shows how prepared respondents were based on the safety items that they had available during their visit. Unlike respondents at many other parks, visitors to Everglades National Park included appropriate clothing and footwear in their list of safety items.

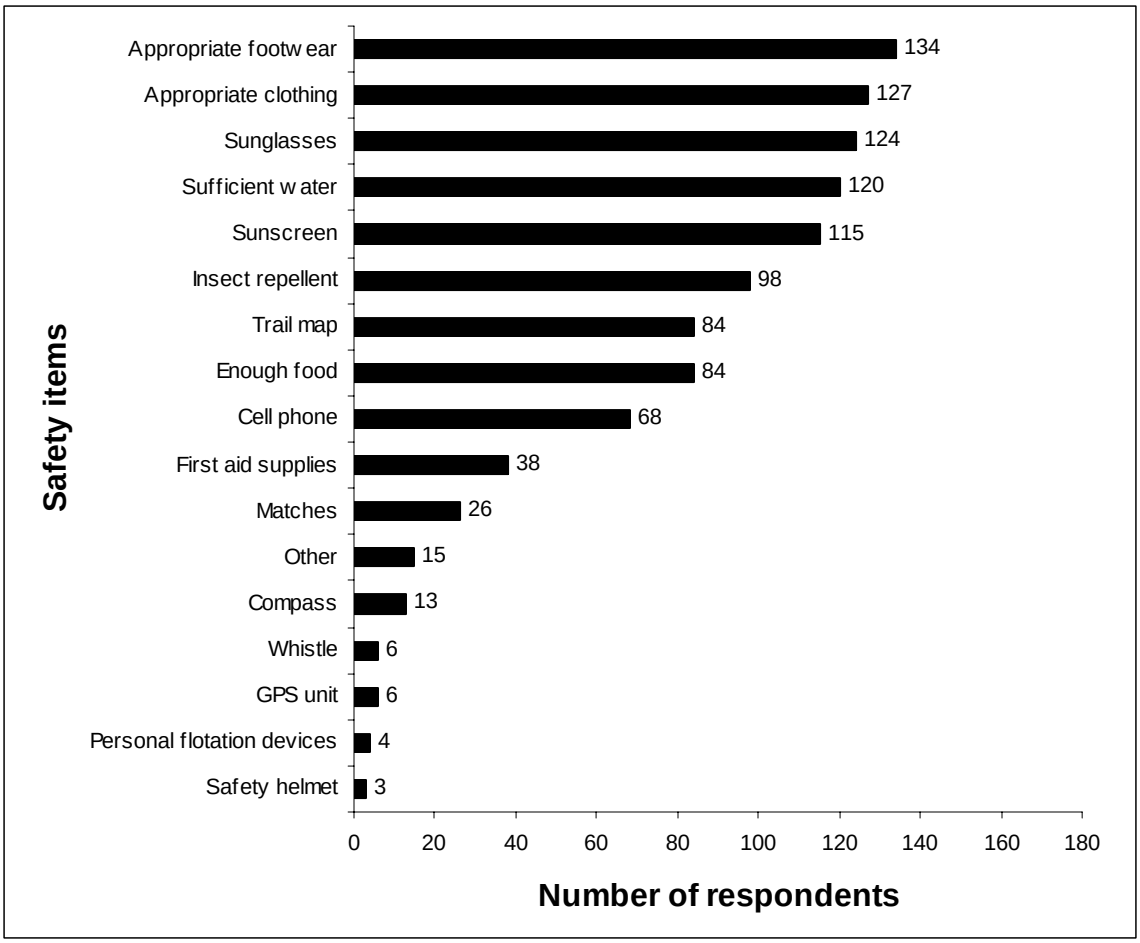

Figure 20.5: Personal safety items (N=134)

Few respondents (10%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 20.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, except there is probably undue concern about plant and elemental exposure and too little concern about falls.

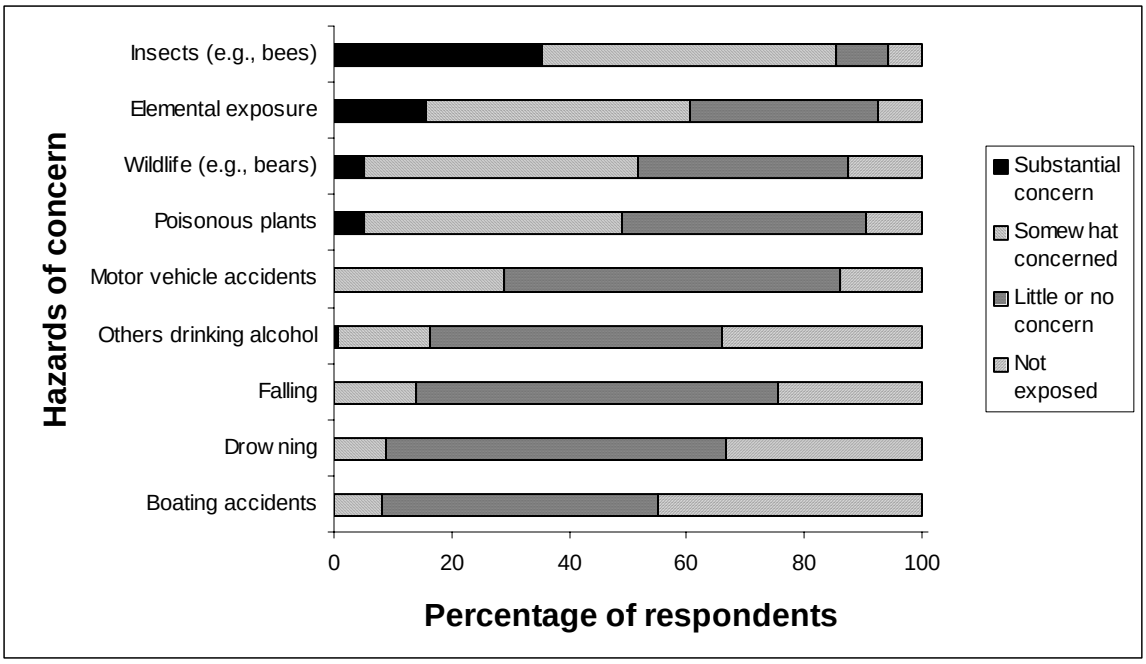

Figure 20.6: Level of concern about various hazards (N=134-136)

20.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. 86 percent of respondents spent all of the time in the front seat, and 7% spent some of the time in the front seat. Of these individuals, 58% were driving for all or most of the time and 96% were wearing seatbelts most or all of the time. The majority (94%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-eight percent of respondents never encountered cars that were driving too fast, and 37% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 31% of respondents encountered cars that were driving too slowly. Most (89%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 96% thought that hazard-warning signs were adequate most or all of the time. Figure 20.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Relatively few respondents were concerned about driving hazards, although more than 20% of respondents thought that wildlife on the roads and large recreational vehicles presented driving hazards some of the time.

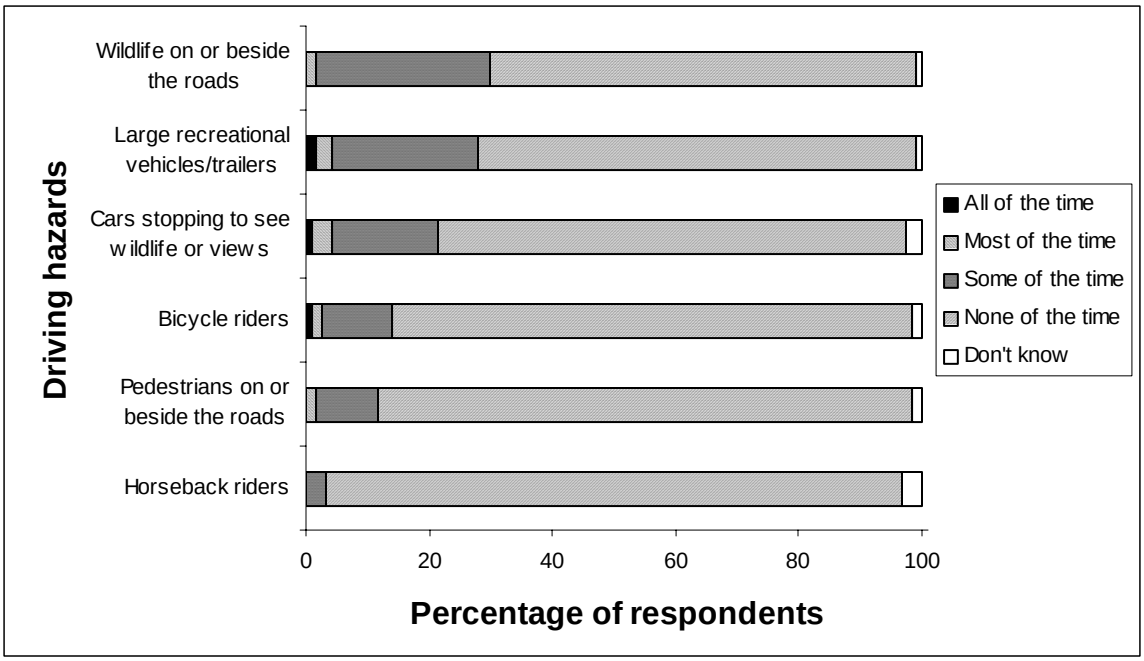

Figure 20.7: How often do these make traveling on roads more hazardous? (N=121-122)

20.6 Management issues:

With regard to the primary activity undertaken during their visit, 24% of respondents believed that safety was entirely the responsibility of the visitor, while 49% believed safety was the responsibility of both the visitor and the park staff (Figure 20.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 20.9 shows that the overwhelming majority (64%) of respondents thought such measures definitely did not detract. The two respondents (2%) who indicated that the safety measures definitely did detract from their enjoyment were both walking to outdoor attractions.

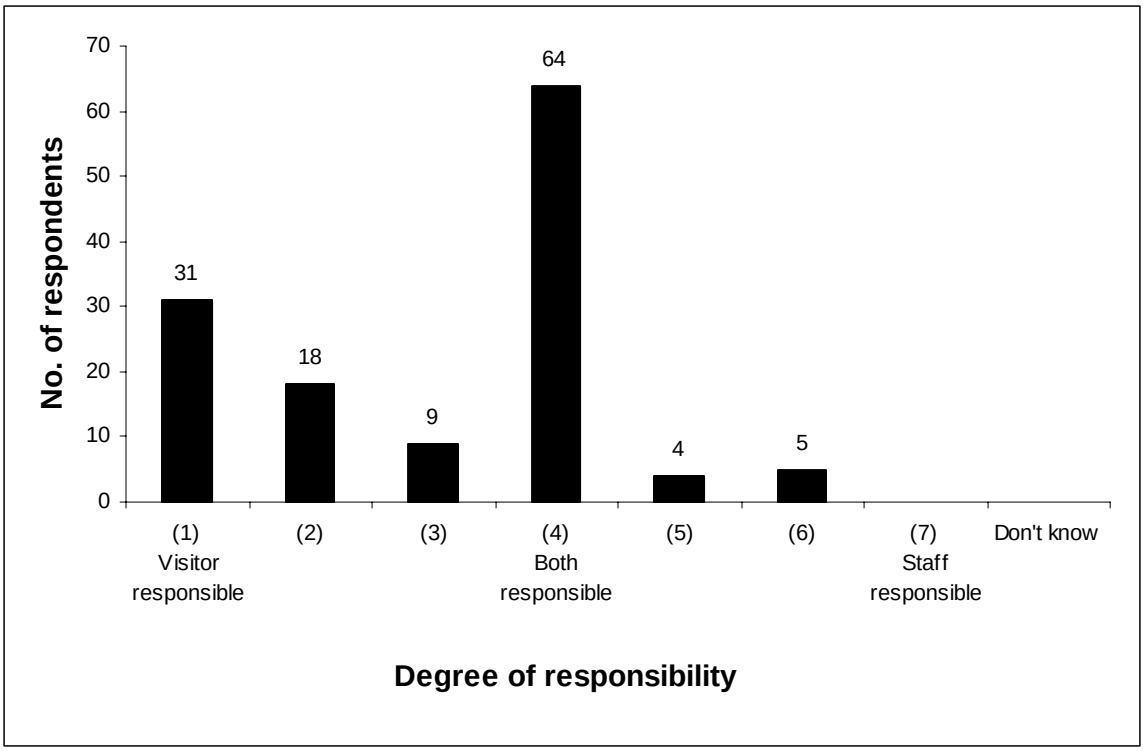

Figure 20.8: Responsibility for safety in chosen primary activity (N=131)

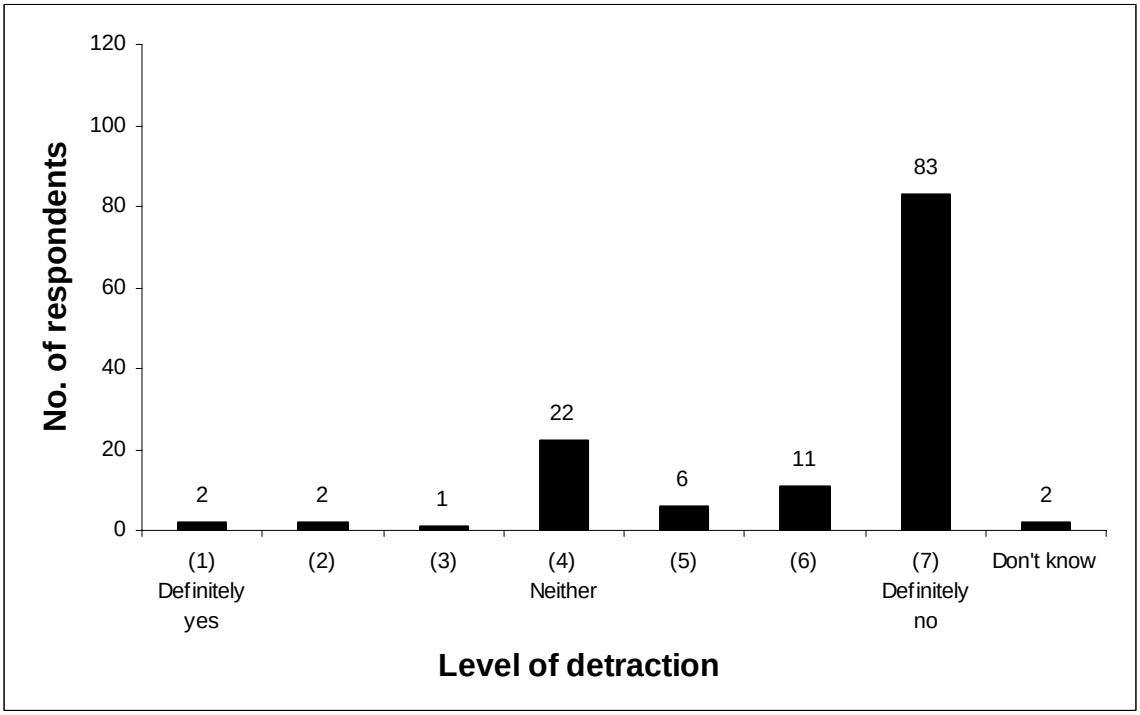

Figure 20.9: Do safety measures detract from visitor enjoyment? (N=129)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-three percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 45% neither agree nor disagree. Twenty-five percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 32% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty-nine percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 19% agree or agree strongly, and 39% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (81%);
- signs warning and advising about hazards (80%);
- brochures and other information warning about hazards (69%);
- restrictions on the number of persons/groups who undertake particular activities (73%);
- park rangers to enforce rules and regulations (69%);
- enforcement of alcoholic beverage restrictions (61%); and,
- safe surfaces on walkways and stairs (86%).

Substantial proportions of respondents, however, believe that there should be more or many more:

- signs warning and advising about hazards (15%);
- brochures and other information warning about hazards (26%);
- park rangers to enforce rules and regulations (16%); and,
- greater enforcement of alcoholic beverage restrictions (14%).

A substantial proportion of respondents were more ambivalent about a couple of items, however, and 21% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 20% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 20.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel, and directional and warning signs are the most helpful sources of safety information.

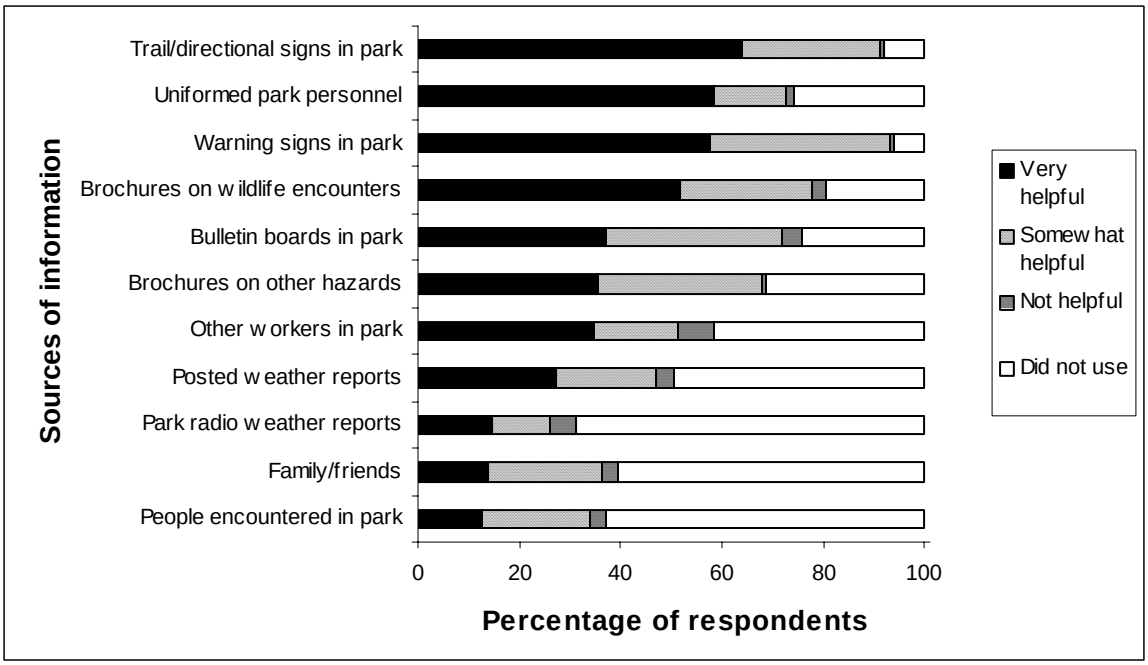

Figure 20.10: How helpful are various sources of safety information (N=61-125)

21.0 Fort Sumter National Monument

21.1 Sample:

At Fort Sumter National Monument, 435 visitor groups were contacted between June 7 and June 12, 2001, and 398 (92%) of these groups accepted questionnaires. Questionnaires were completed and returned by 184 visitor groups, resulting in a 46.2% response rate for this park.

21.2 Demographics:

Figure 21.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-five percent of respondents were female and 45% male. The overwhelming majority (97%)of respondents were white, with 1% African-American, and 2% Hispani. Graduate school was the highest level of education attained by 24% of respondents, while an additional 35% classified themselves as college graduates. The majority (178) of respondents were residents of the US, one was from England, and the nationality of 5 was unknown.

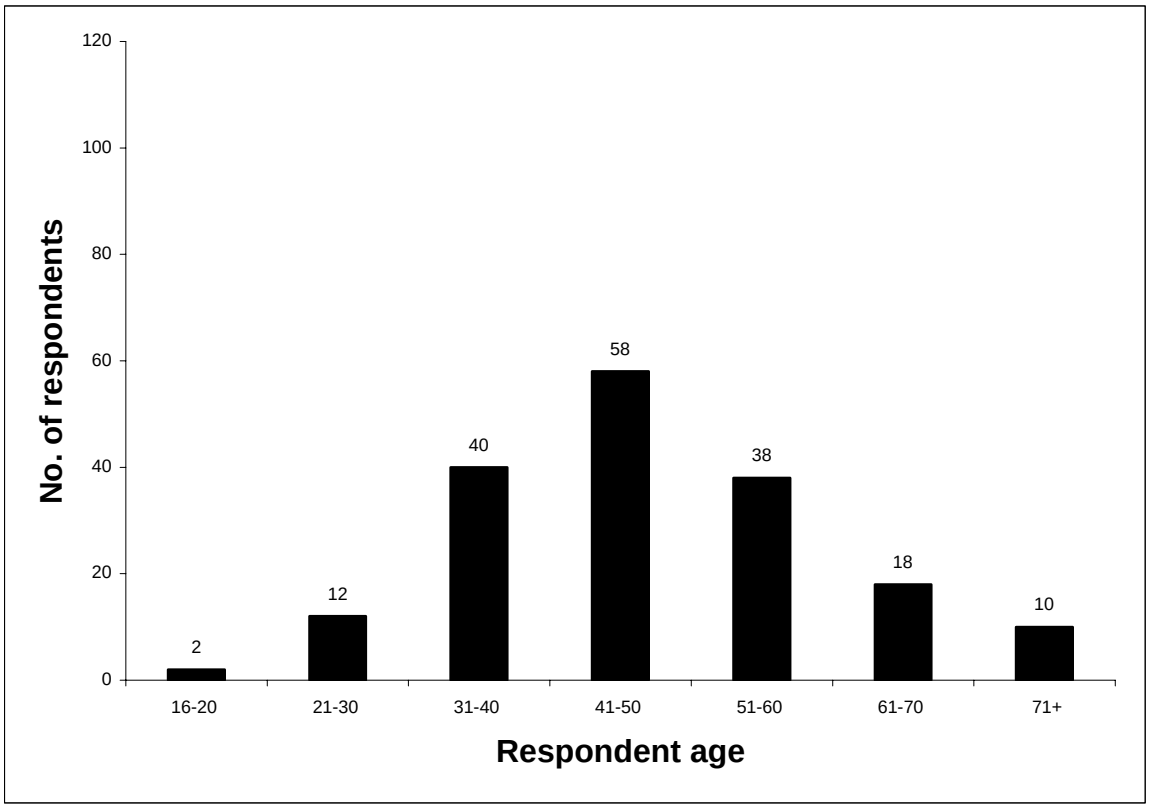

Figure 21.1: Distribution of respondents by age (N=X178X)

21.3 Visitation

For 70% of respondents, this was their first visit to the park. Among those 50 respondents returning to the park, 64% had visited the park twice in the past 10 years

(including the current visit), 22% 3-5 times, 10% 6-10 times, and 4% 11 or more times. This visit was the primary destination for 14% of respondents, but one of only several destinations for 71% of respondents. For 15% of respondents this visit was not a planned destination at all. Ninety-seven percent of the respondents visited the park for a half day or less, and 3% visited for up to one day. Two percent of respondents were visiting the park by themselves, 67% with family members, 11% with friends, and 14% with family members and friends.

21.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 21.2).

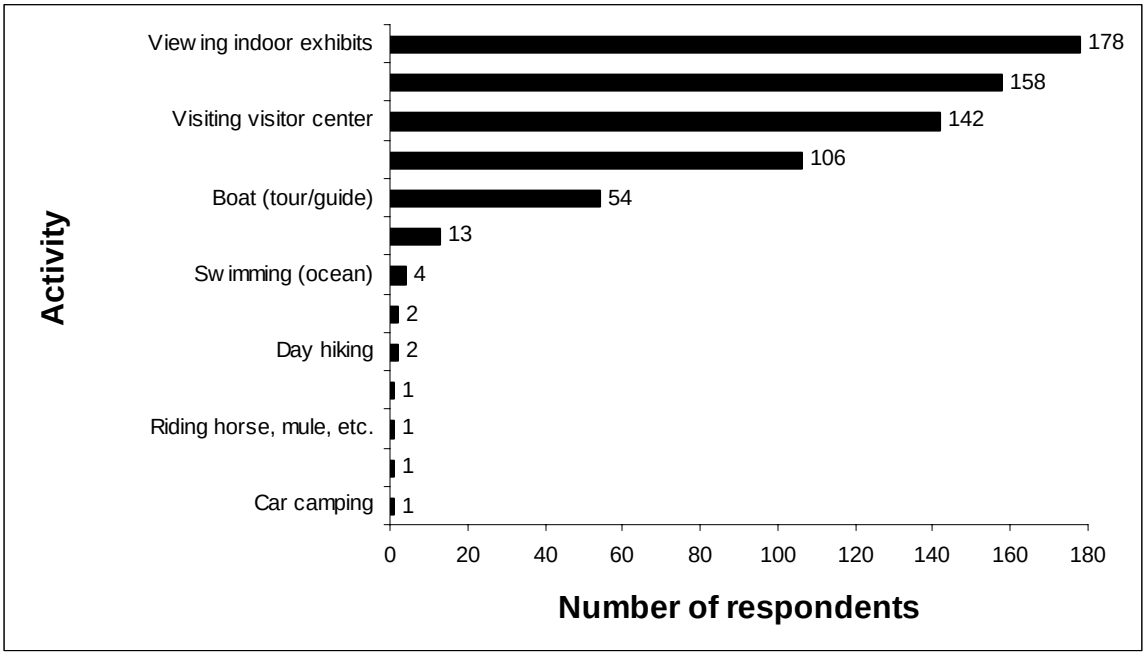

Figure 21.2: Visitor activities (N=184)
(Note: Several respondents listed more than one activity)

Figure 21.2 illustrates that many respondents viewed indoor exhibits (97%), walked to outdoor exhibits (86%), and visited the visitor center (77%). At many other parks, these are often only adjunct activities, but at Fort Sumter these were the primary activities, as illustrated in Figure 21.3. Most respondents (78%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 5% engaged in these activities alone, less than 13% with people aside from their own personal group, and 5% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in

their chosen activity and very few considered themselves to have little or no experience (Figure 21.4). Rating one's level of experience in activities such as viewing indoor exhibits is difficult, however, which may help to explain the relatively large number of people saying they don't know or can't answer.

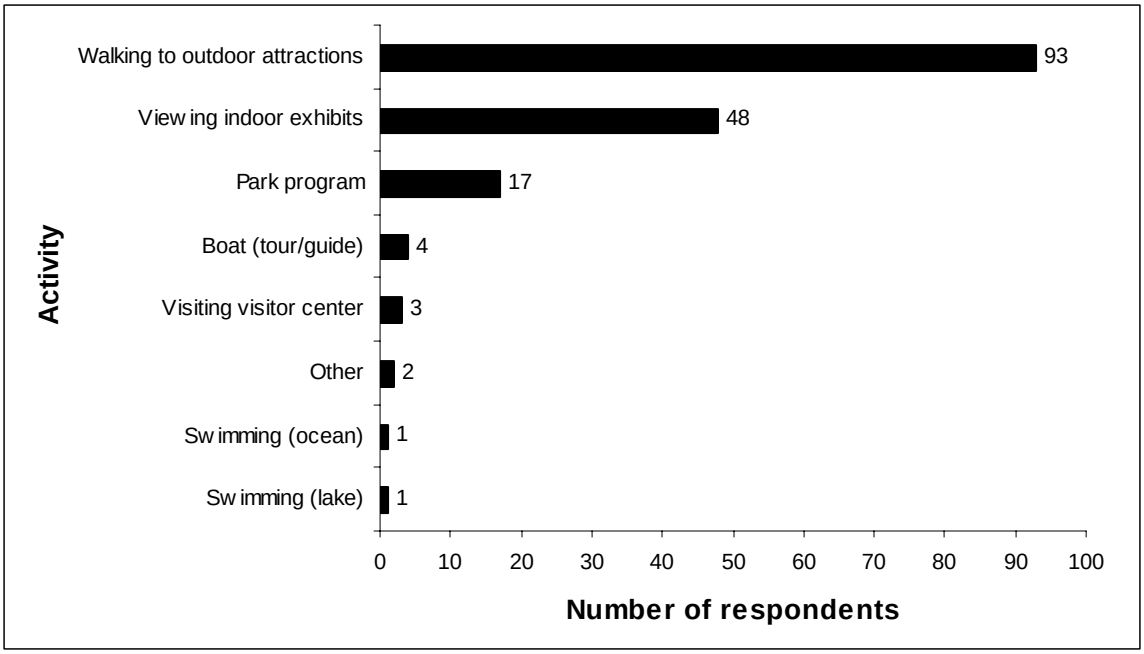

Figure 21.3: Primary visitor activities (N=169)

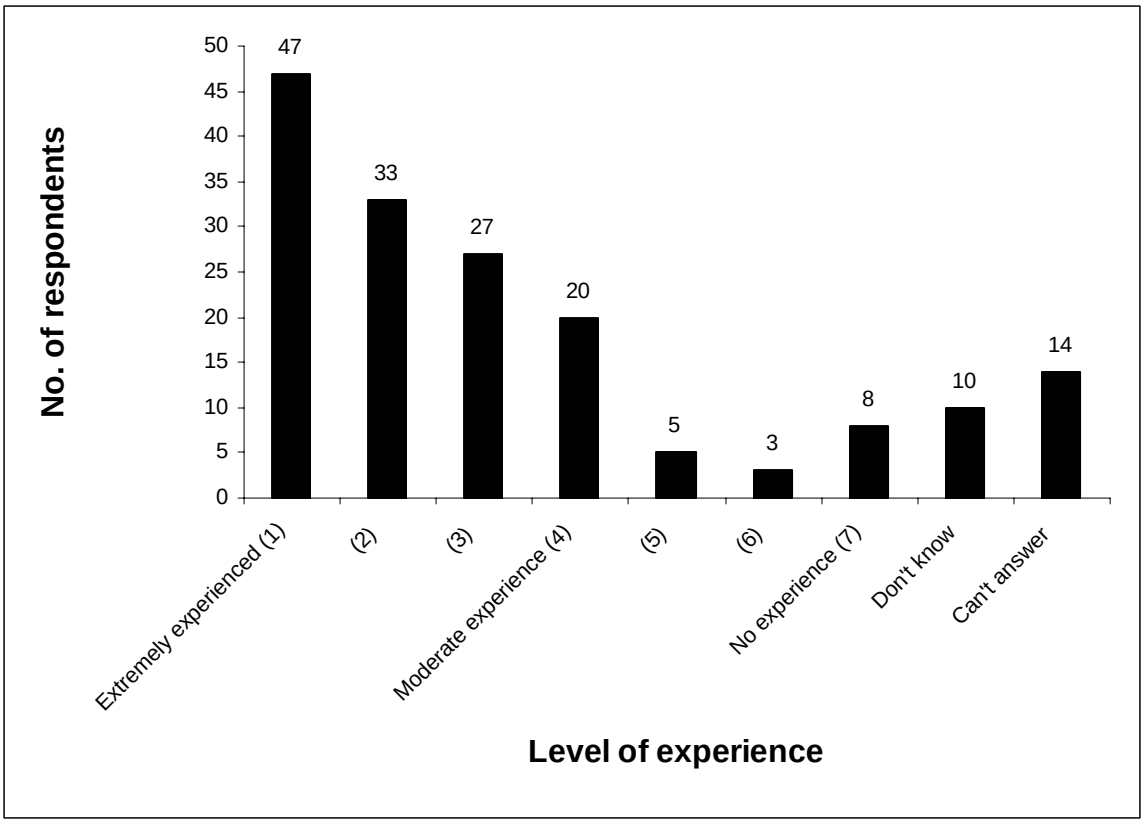

Figure 21.4: Personal level of experience (N=169)

Preparedness is one aspect of experience, and Figure 21.5 shows how prepared respondents were based on the safety items that they had available during their visit.

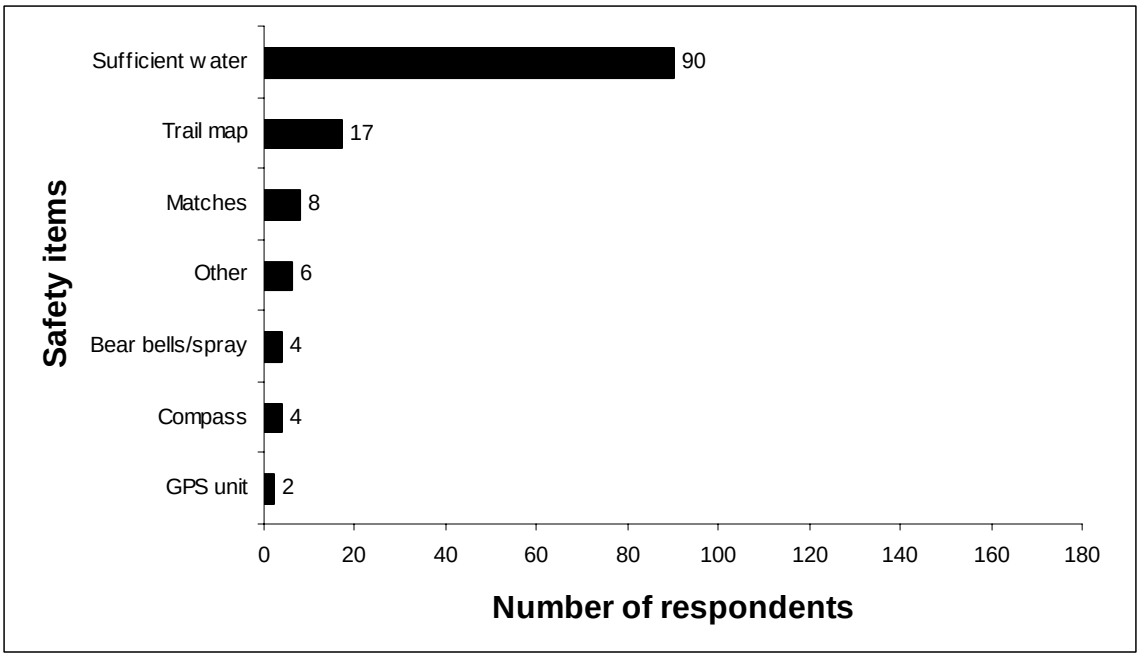

Figure 21.5: Personal safety items (N=90)

Few respondents (3%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 21.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, very few people have substantial concerns. Given the nature of the park, it is not surprising that the most prominent concerns are falling and exposure to the weather.

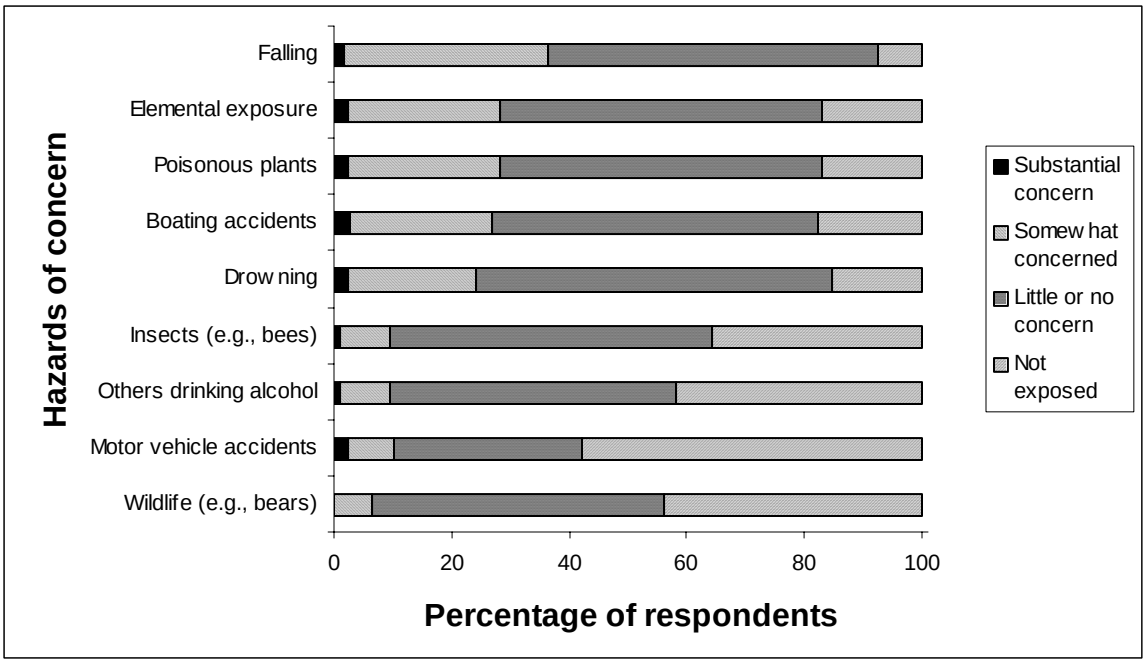

Figure 21.6: Level of concern about various hazards (N=168-175)

21.5 Motor vehicles:
Many respondents answered the battery of questions pertaining to motor vehicle safety. Unfortunately, the responses must refer to driving to and from the park, since visitors are not allowed to drive in the park. Consequently, we have excluded these responses.

21.6 Management issues:
With regard to the primary activity undertaken during their visit, 22% of respondents believed that safety was entirely the responsibility of the visitor, while 57% believed safety was the responsibility of both the visitor and the park staff (Figure 21.7).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 21.8 shows that the overwhelming majority (71%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents who indicated that the safety measures did detract from their enjoyment, 8 were involved in walking to outdoor exhibits, 1 in viewing indoor exhibits, and 1 in other activities.

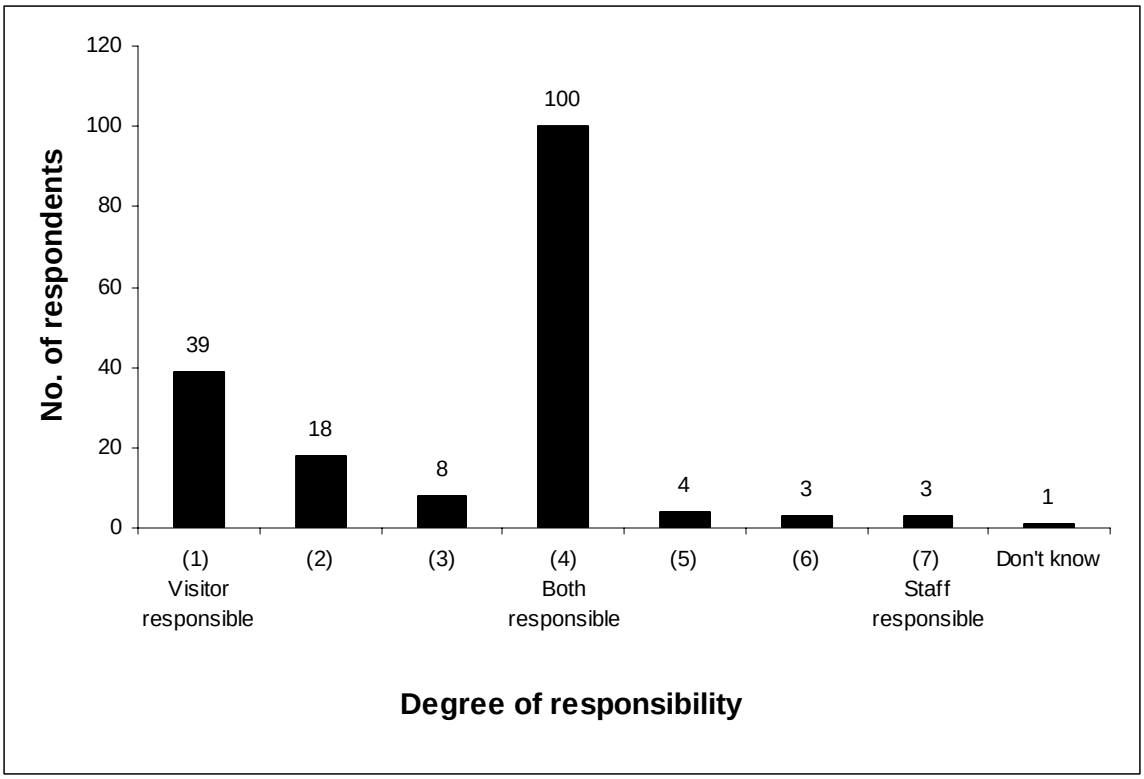

Figure 21.7: Responsibility for safety in chosen primary activity (N=176)

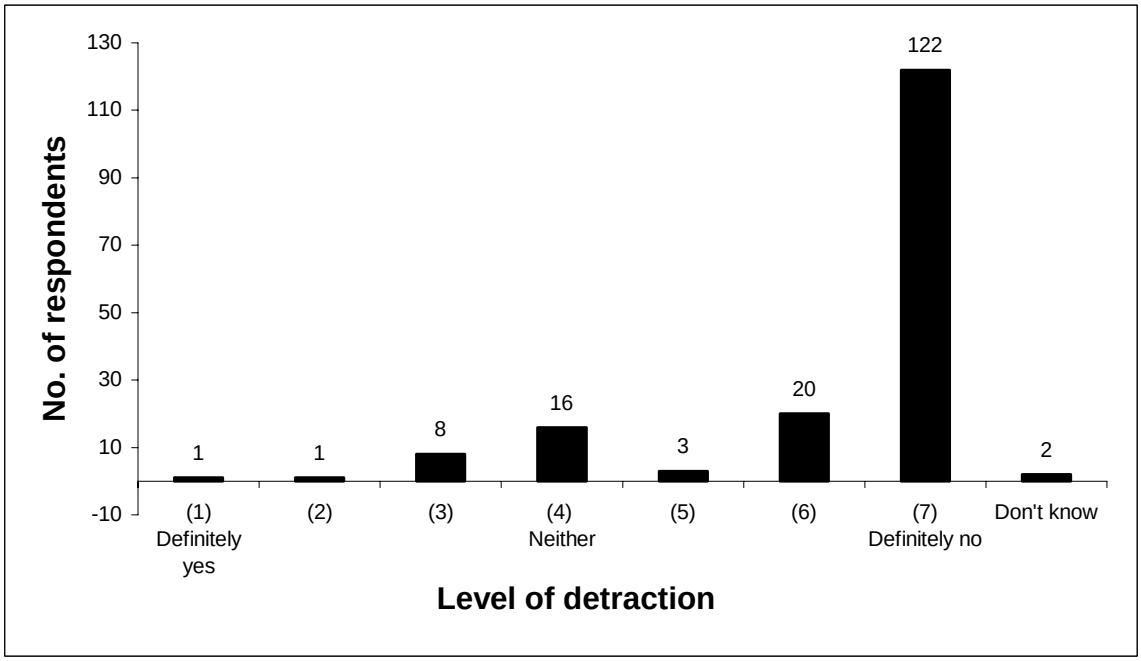

Figure 21.8: Do safety measures detract from visitor enjoyment? (N=173)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-five percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 38% neither agree nor disagree. Thirty-five percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 29% disagree or disagree strongly, and 31% neither agree nor disagree. Fifty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 19% agree or agree strongly, and 21% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (89%);
- signs warning and advising about hazards (89%);
- brochures and other information warning about hazards (89%);
- restrictions on the number of persons/groups who undertake particular activities (87%);
- park rangers to enforce rules and regulations (86%);
- enforcement of alcoholic beverage restrictions (80%); and,
- safe surfaces on walkways and stairs (84%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 21.9 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

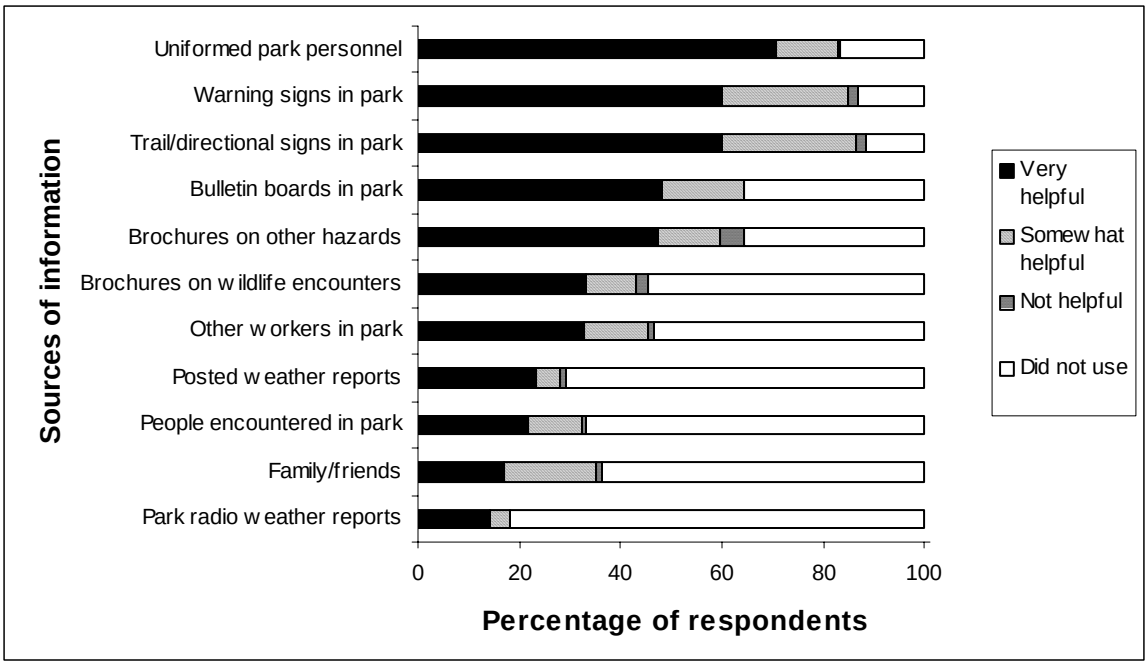

Figure 21.9: How helpful are various sources of safety information (N=71-150)

22.0 Gettysburg National Military Park

22.1 Sample:

At Gettysburg National Military Park, 430 visitor groups were contacted between June 28 and July 3, 2001, and 400 (93%) of these groups accepted questionnaires. Questionnaires were completed and returned by 262 visitor groups, resulting in a 65.5% response rate.

22.2 Demographics:

Figure 22.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-six percent of respondents were female and 54% male. The overwhelming majority (94%)of respondents were white, with 2% African-American, 2% Hispanic, 1% Asian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 22% of respondents, while an additional 35% classified themselves as college graduates. The majority (98.5%) of respondents were residents of the US. The three international respondents were from Canada, Cameroon, and Germany.

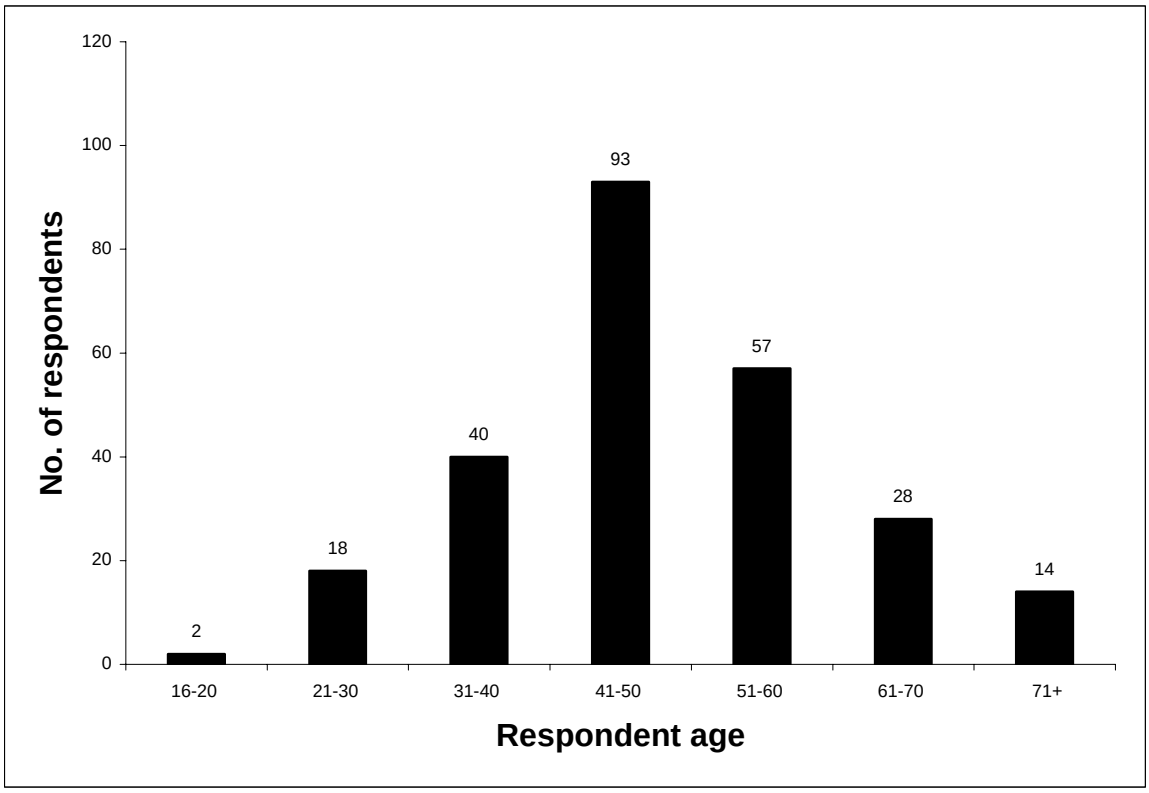

Figure 22.1: Distribution of respondents by age (N=252)

22.3 Visitation

For 56% of respondents, this was their first visit to the park. Among those respondents returning to the park, 42% had visited the park twice in the past 10 years (including the

current visit), 31% 3-5 times, 16% 6-10 times, and 10% 11 or more times. This visit was the primary destination for 40% of respondents, but one of only several destinations for 54% of respondents. For 5% of respondents this visit was not a planned destination at all. Thirty percent of the respondents visited the park for a half day or less, 44% visited for up to one day, and 26% visited for more than one day. Four percent of respondents were visiting the park by themselves, 68% with family members, 10% with friends, and 12% with family members and friends.

22.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities. Figure 22.2 illustrates that most respondents visited the visitor center (97%), viewed indoor exhibits (97%), and walked to outdoor attractions (90%).

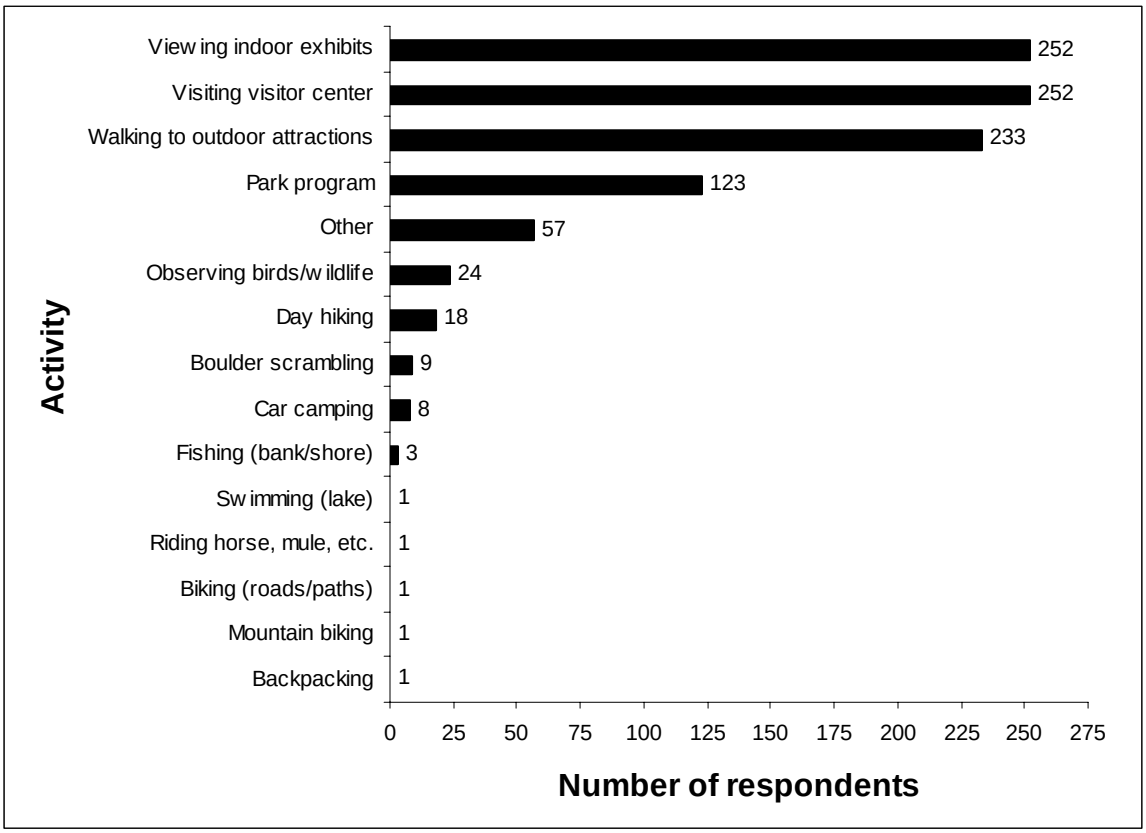

Figure 22.2: Visitor activities (N=260)
(Note: Several respondents listed more than one activity)

The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 22.3 illustrates that walking to outdoor attractions (45%), attending a park program (19%), and various other activities (15%) were the most popular primary activities. Most respondents (79%) engaged in these activities with members of their own personal group (i.e., friends and family members),

although 5% engaged in these activities alone, 10% with people aside from their own personal group, and 5% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 22.4). It is difficult to give meaningful ratings of personal experience for the kinds of activities undertaken at Gettysburg, and this may explain why the proportions of respondents indicating "don't know" or "can't answer" are higher than at other parks.

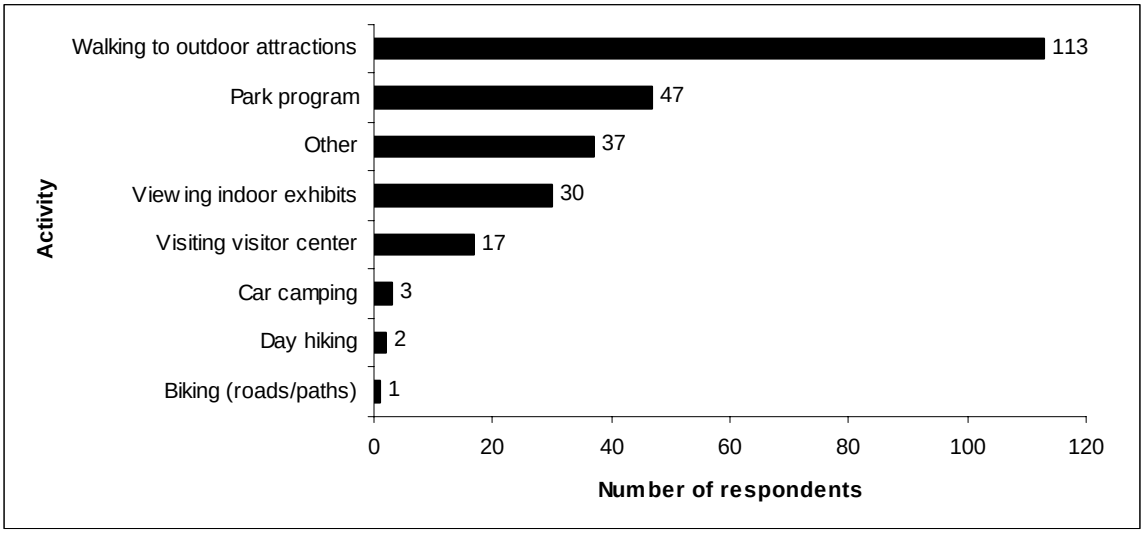

Figure 22.3: Primary visitor activities (N=250)

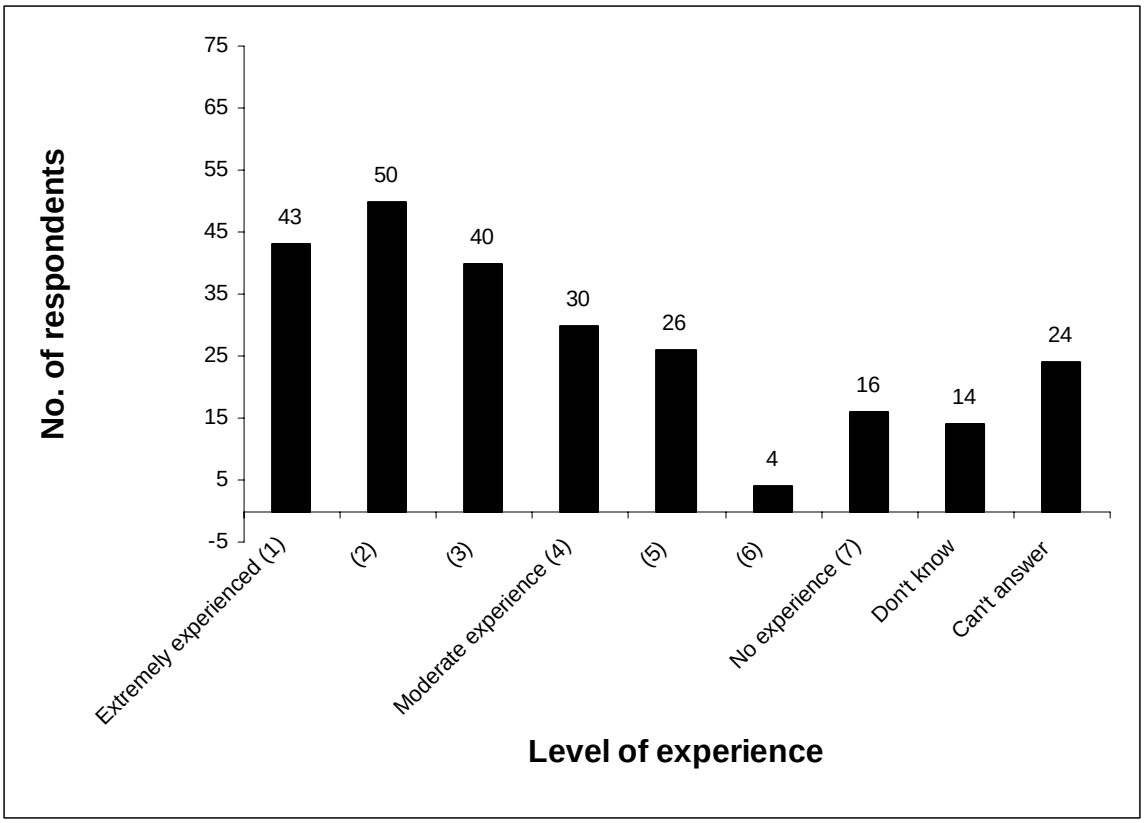

Figure 22.4: Personal level of experience (N=247)

Preparedness is one aspect of experience, and Figure 22.5 shows how prepared respondents were based on the safety items that they had available during their visit. It is notable that no one checked off appropriate clothing or footwear, since trips and falls are a common type of accident at Gettysburg.

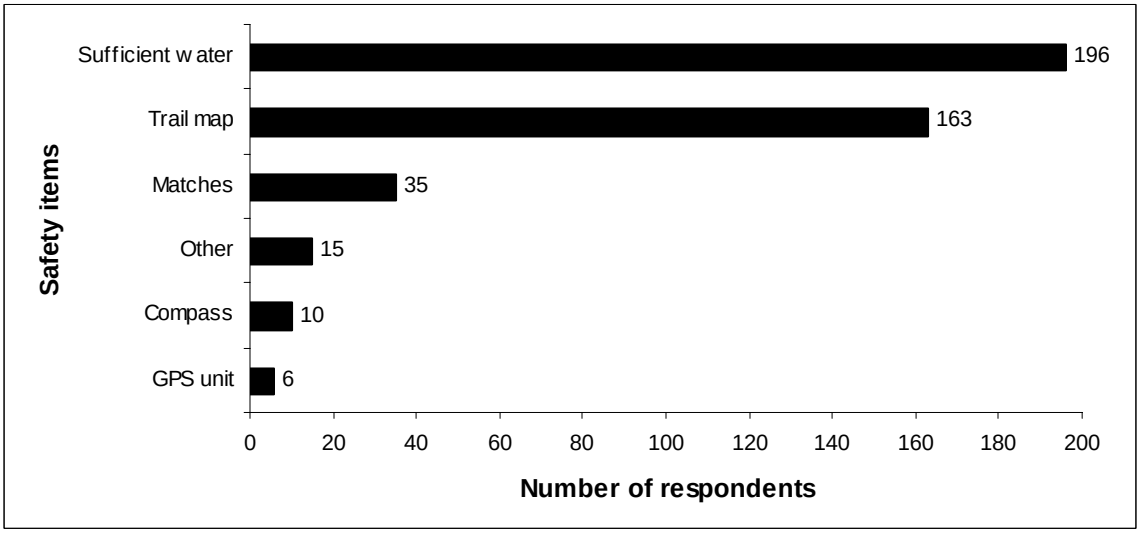

Figure 22.5: Personal safety items (N=196)

Few respondents (8%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Of these 20 respondents, 2 indicated that they were very or extremely concerned and 4 indicated that they were concerned all or much of the time.

Without reference to a particular activity, however, Figure 22.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

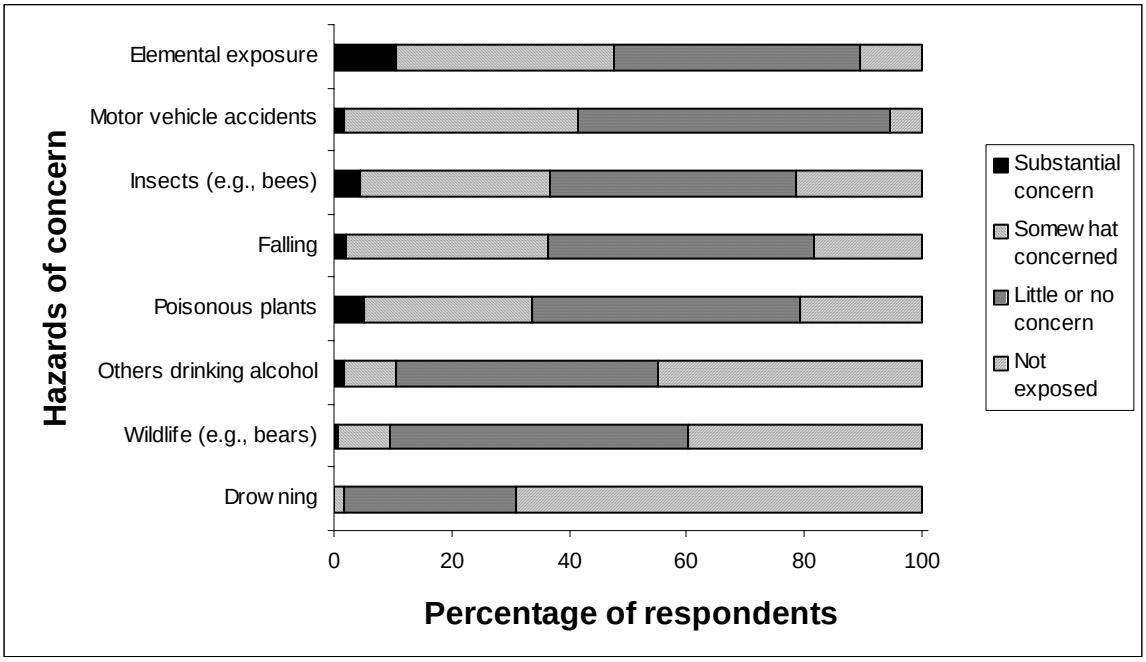

Figure 22.6: Level of concern about various hazards (N=249-253)

22.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 85% of respondents were traveling in privately owned or rented vehicles. Seventy-eight percent of respondents spent all of the time in the front seat, and 9% spent some of the time in the front seat. Of these individuals, 51% were driving for all or most of the time and 91% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-five percent of respondents never encountered cars that were driving too fast, and 37% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 52% of respondents encountered cars that were driving too slowly. Most (98%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 88% thought that hazard-warning signs were adequate most or all of the time.

Figure 22.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, many respondents thought that pedestrians and cars stopping to see the views or wildlife presented a hazard for driving some of the time.

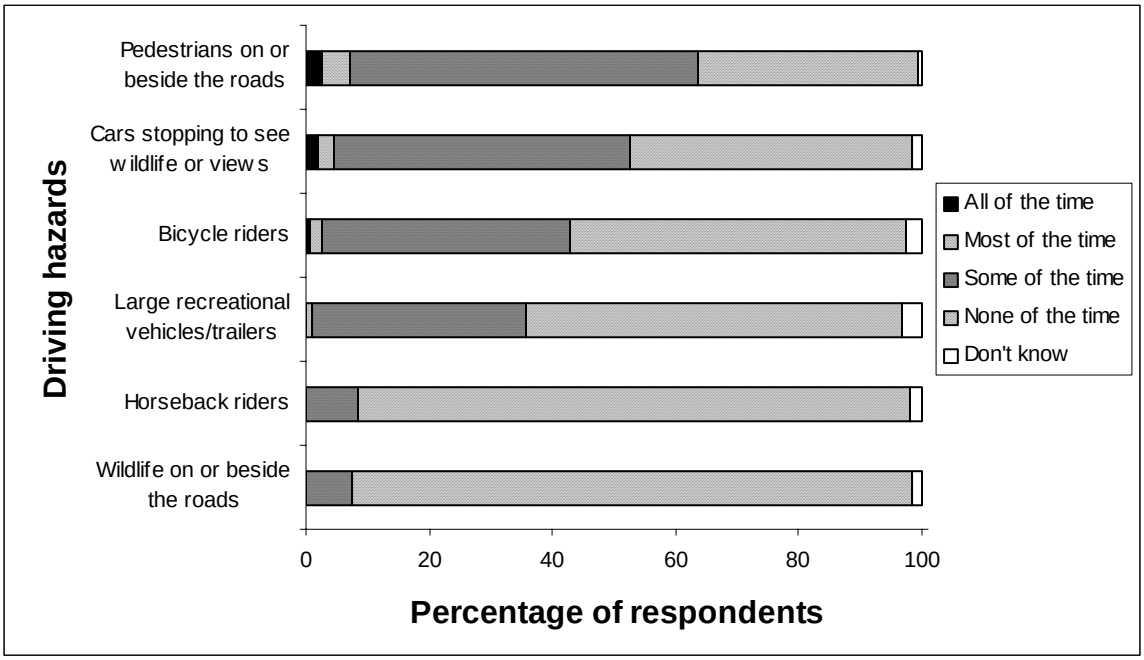

Figure 22.7: How often do these make traveling on roads more hazardous? (N=188-193)

22.6 Management issues:

With regard to the primary activity undertaken during their visit, 29% of respondents believed that safety was entirely the responsibility of the visitor, while 51% believed safety was the responsibility of both the visitor and the park staff (Figure 22.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 22.9 shows that the overwhelming majority (74%) of respondents thought such measures definitely did not detract. The one respondents who indicated that the safety measures did detract from their enjoyment was engaged in walking to outdoor attractions.

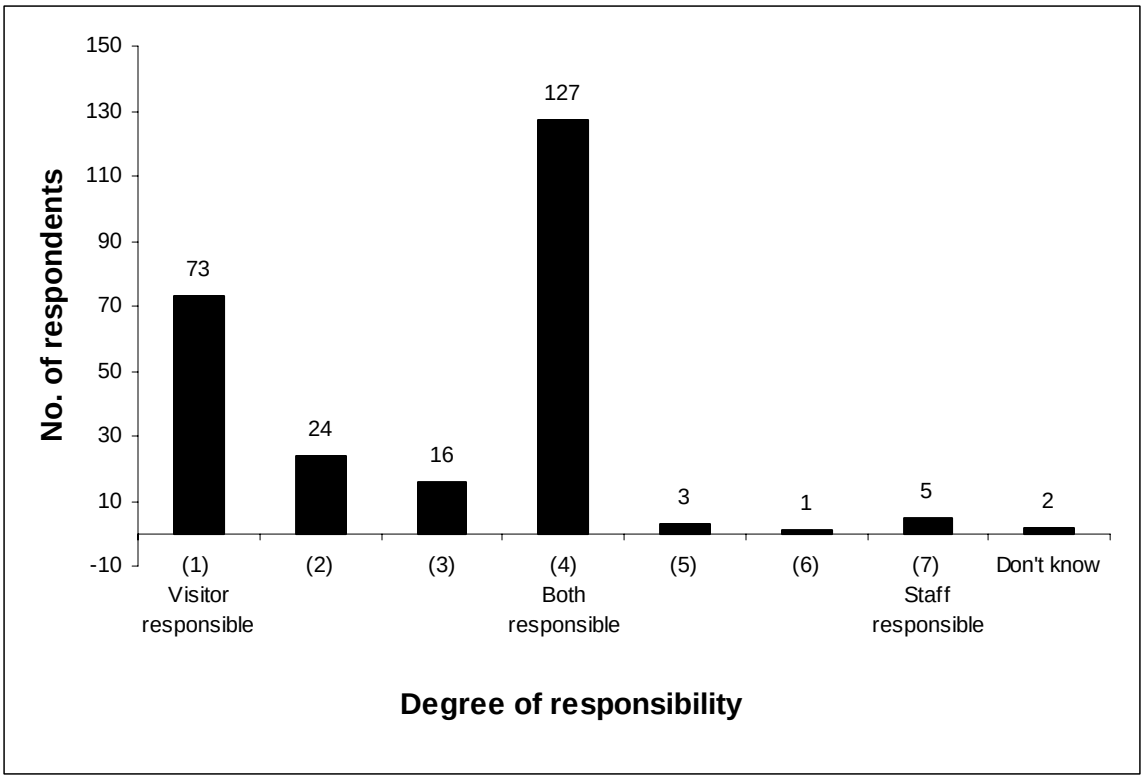

Figure 22.8: Responsibility for safety in chosen primary activity (N=251)

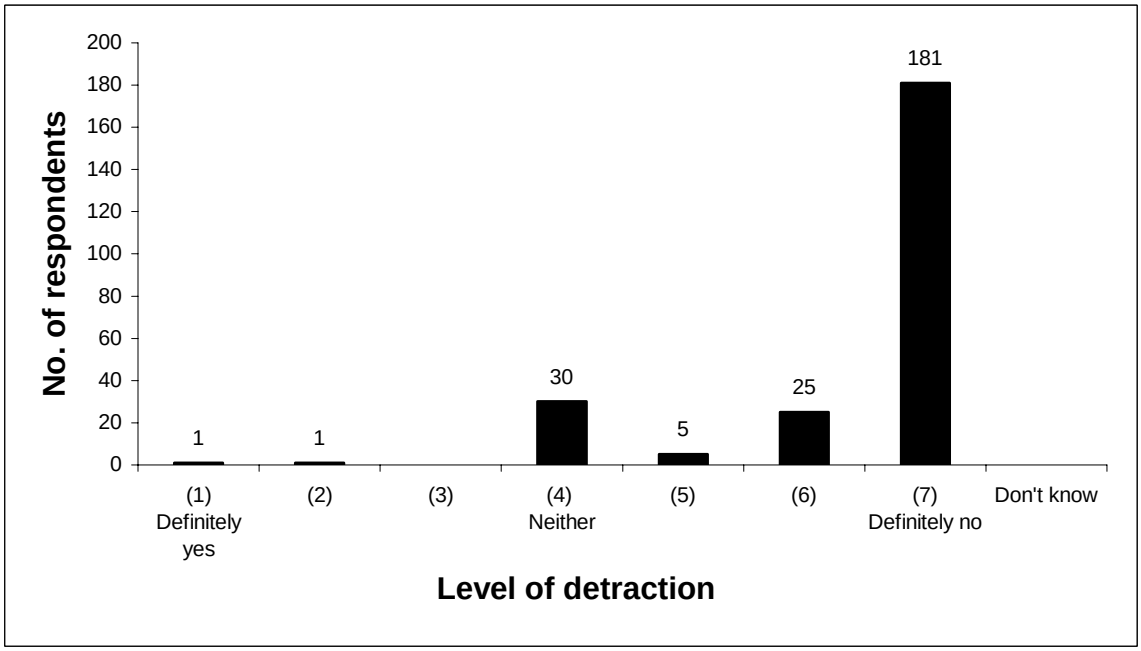

Figure 22.9: Do safety measures detract from visitor enjoyment? (N=243)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-one percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 43% neither agree nor disagree. Twenty-seven percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 31% disagree or disagree strongly, and 40% neither agree nor disagree. Forty-one percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 20% agree or agree strongly, and 36% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (88%);
- signs warning and advising about hazards (87%);
- brochures and other information warning about hazards (83%);
- restrictions on the number of persons/groups who undertake particular activities (78%);
- park rangers to enforce rules and regulations (74%);
- enforcement of alcoholic beverage restrictions (67%); and,
- safe surfaces on walkways and stairs (83%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (17%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 16% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 20% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 22.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information. It is also notable that many respondents indicated that “other workers” are a very helpful source of safety information.

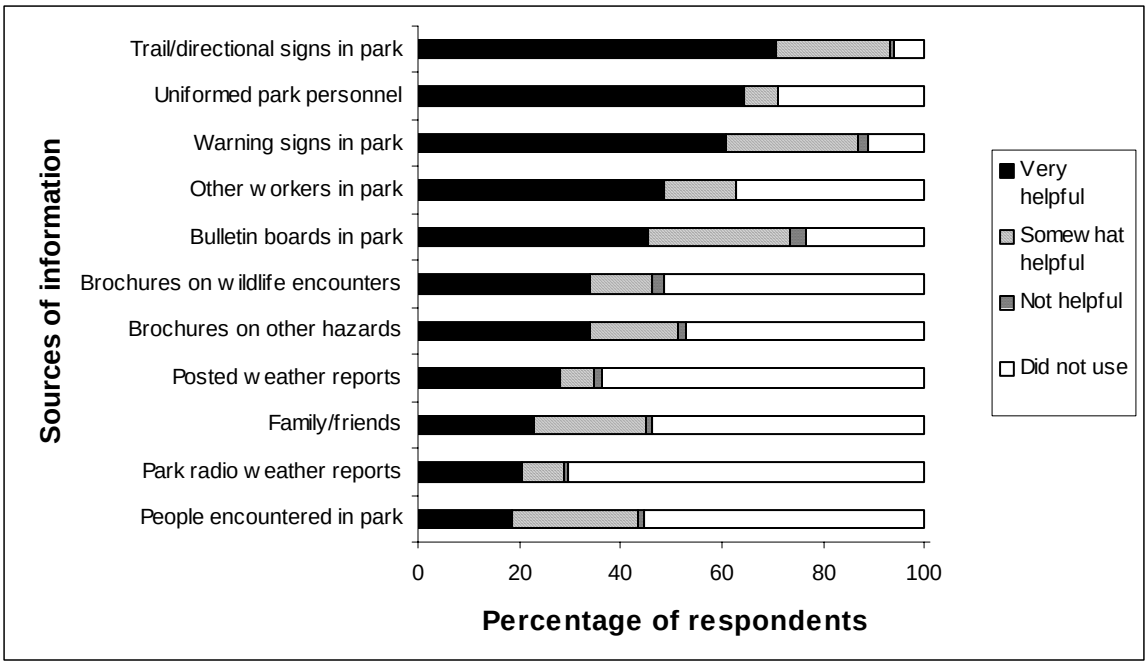

Figure 22.10: How helpful are various sources of safety information (N=108-227)

23.0 Grand Teton National Park

23.1 Sample:

At Grand Teton National Park, 501 visitor groups were contacted between August 2 and August 7, 2001, and 400 (79.8%) of these groups accepted questionnaires. Questionnaires were completed and returned by 216 visitor groups, resulting in a 54% response rate for this park.

23.2 Demographics:

Figure 23.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-six percent of respondents were female and 44% male. The overwhelming majority (95%)of respondents were white, with 2% Asian, and 3% of unknown race/ethnicity. Graduate school was the highest level of education attained by 32% of respondents, while an additional 36% classified themselves as college graduates. The majority (91%) of respondents were residents of the US and 9% were international visitors, with respondents from the following countries: Belgium (1), France (1), Germany (1), Hong Kong (1), India (1), Israel (2), Japan (1), the Netherlands (2), Portugal (1), and the UK (8).

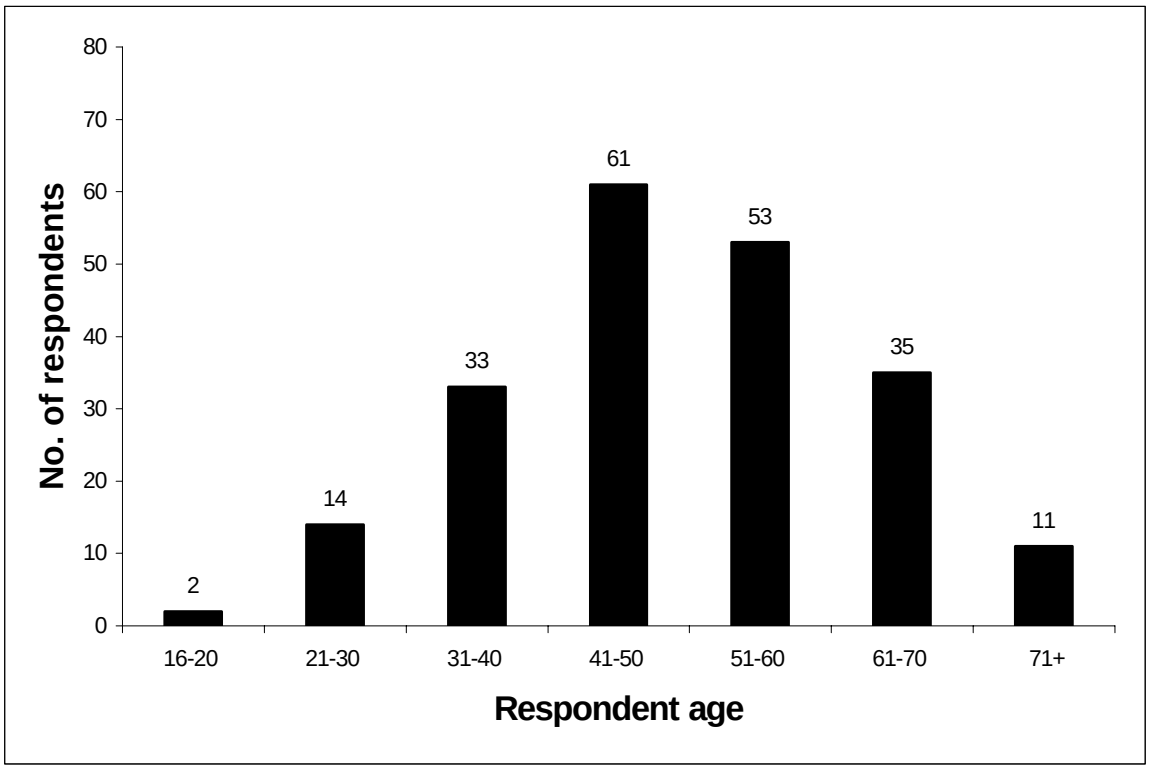

Figure 23.1: Distribution of respondents by age (N=209)

23.3 Visitation

For 45% of respondents, this was their first visit to the park. Among those 111 respondents who indicated they were returning to the park, 44% had visited the park twice in the past 10 years (including the current visit), 35% 3-5 times, 9% 6-10 times, and 12% 11 or more times. This visit was the primary destination for 23% of respondents, but one of only several destinations for 72% of respondents. For 5% of respondents this visit was not a planned destination at all. Sixteen percent of the respondents visited the park for a half day or less, 26% visited for up to one day, and 58% visited for more than one day. Four percent of respondents were visiting the park by themselves, 71% with family members, 10% with friends, and 11% with family members and friends.

23.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 23.2).

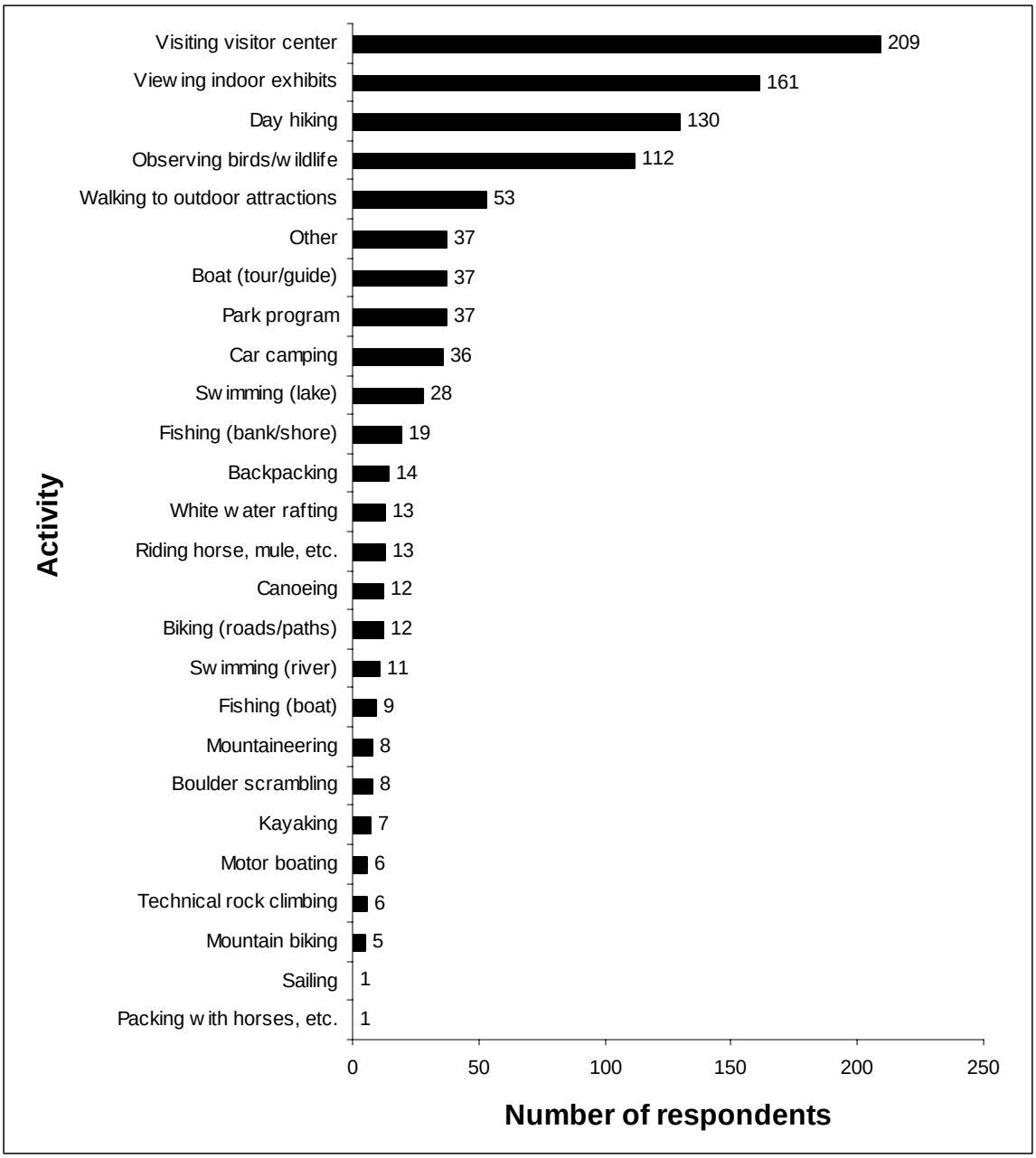

Figure 23.2: Visitor activities (N=216)
(Note: Several respondents listed more than one activity)

Figure 23.2 illustrates that many respondents visited the visitor center (97%) and viewed indoor exhibits (75%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 23.3 illustrates that day hiking (33%), walking to outdoor attractions (23%), observing birds/wildlife (10%), and various other activities (9%) were the most popular primary activities. Most respondents (87%) engaged in these activities with members of their own personal group

(i.e., friends and family members), although 5% engaged in these activities alone, 4% with people aside from their own personal group, and 2% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 23.4). Ratings of personal experience varied little between activities and between males and females.

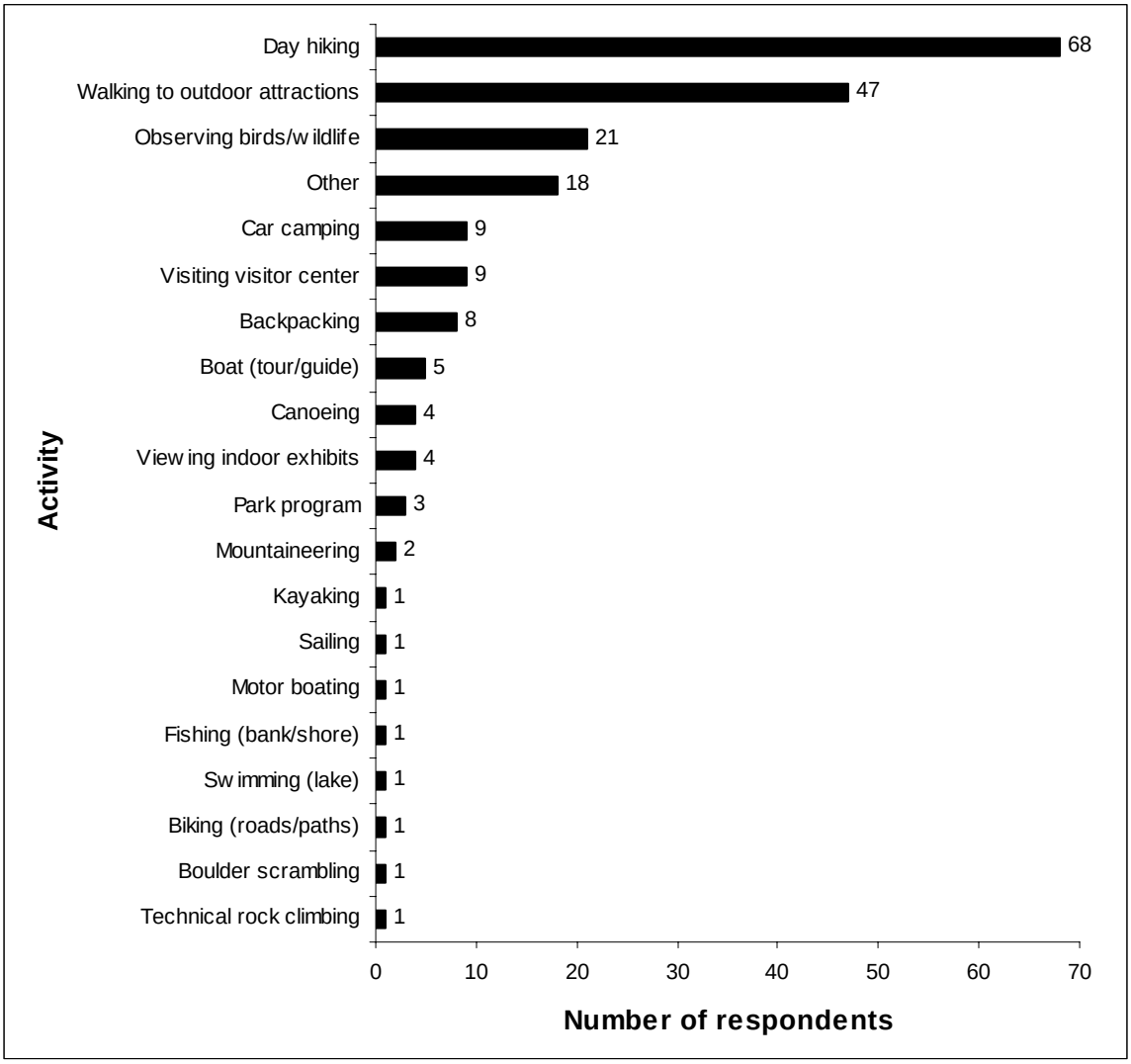

Figure 23.3: Primary visitor activities (N=206)

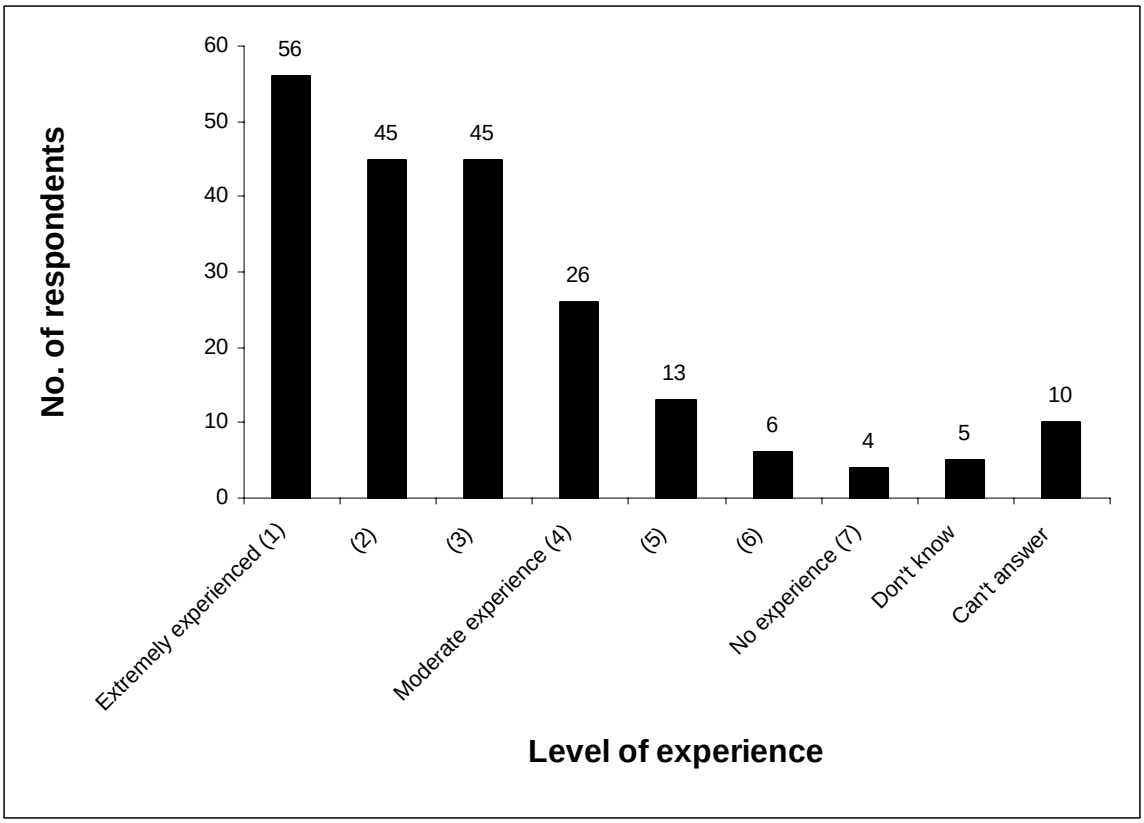

Figure 23.4: Personal level of experience (N=210)

Preparedness is one aspect of experience, and Figure 23.5 shows how prepared respondents were based on the safety items that they had available during their visit.

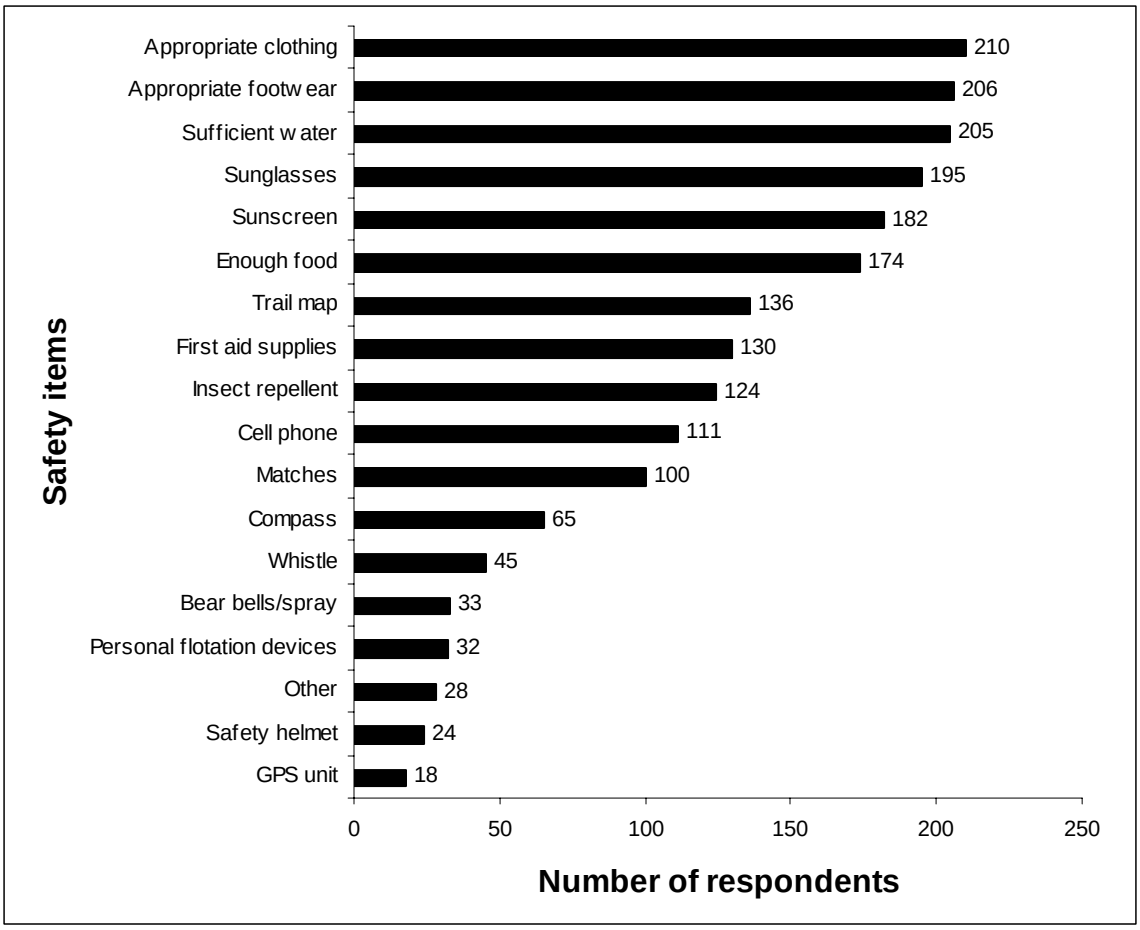

Figure 23.5: Personal safety items (N=210)

Seventeen percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity. Three respondents (9% of those expressing concern) were very or extremely concerned for their own safety and that of others in the group for much or all of the time. Most of those expressing concern, were somewhat concerned for some of the time during their visit.

Without reference to a particular activity, however, Figure 23.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although concern about wildlife encounters is probably exaggerated.

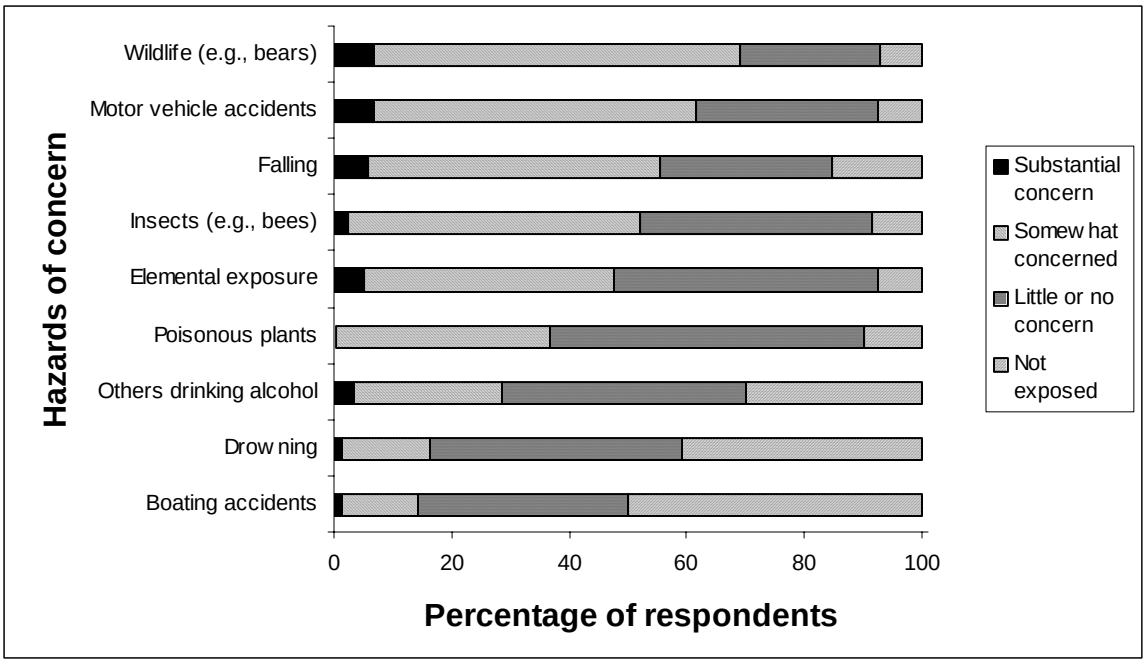

Figure 23.6: Level of concern about various hazards (N=209-211)

23.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 92% of respondents were traveling in privately owned or rented vehicles. Eighty-two percent of respondents spent all of the time in the front seat, and 14% spent some of the time in the front seat. Of these individuals, 50% were driving for all or most of the time and 94% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Twenty-six percent of respondents never encountered cars that were driving too fast, and 72% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 64% of respondents encountered cars that were driving too slowly. Most (90%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 94% thought that hazard-warning signs were adequate most or all of the time. Figure 23.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

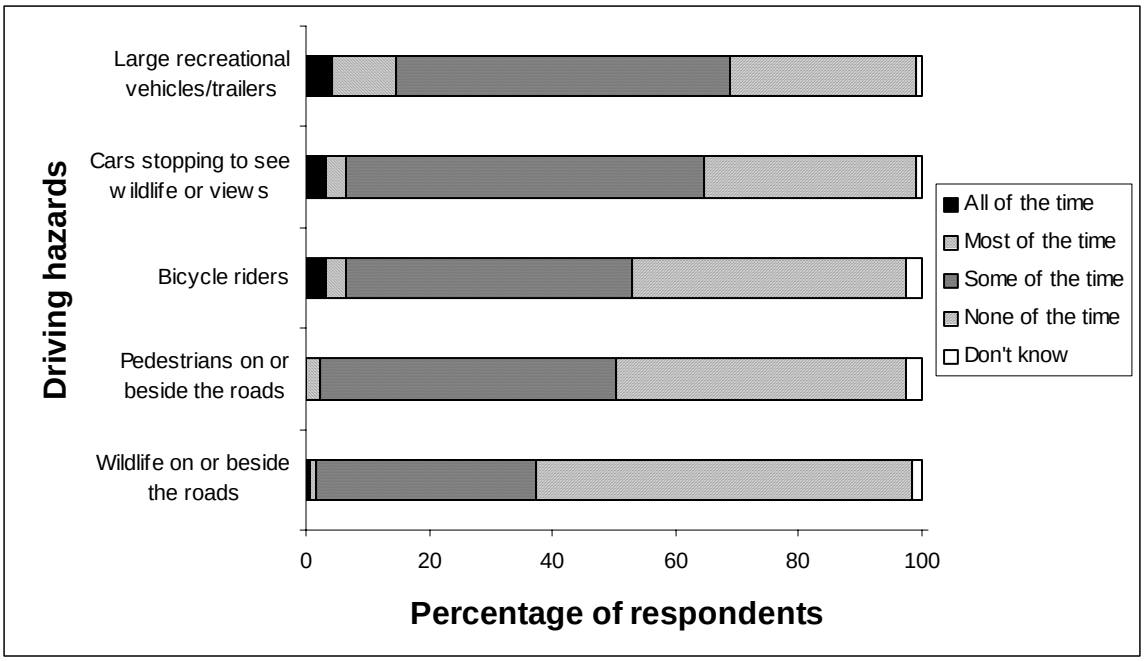

Figure 23.7: How often do these make traveling on roads more hazardous? (N=185-187)

23.6 Management issues:

With regard to the primary activity undertaken during their visit, 43% of respondents believed that safety was entirely the responsibility of the visitor, while 27% believed safety was the responsibility of both the visitor and the park staff (Figure 23.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 23.9 shows that the overwhelming majority (76%) of respondents thought such measures definitely did not detract.

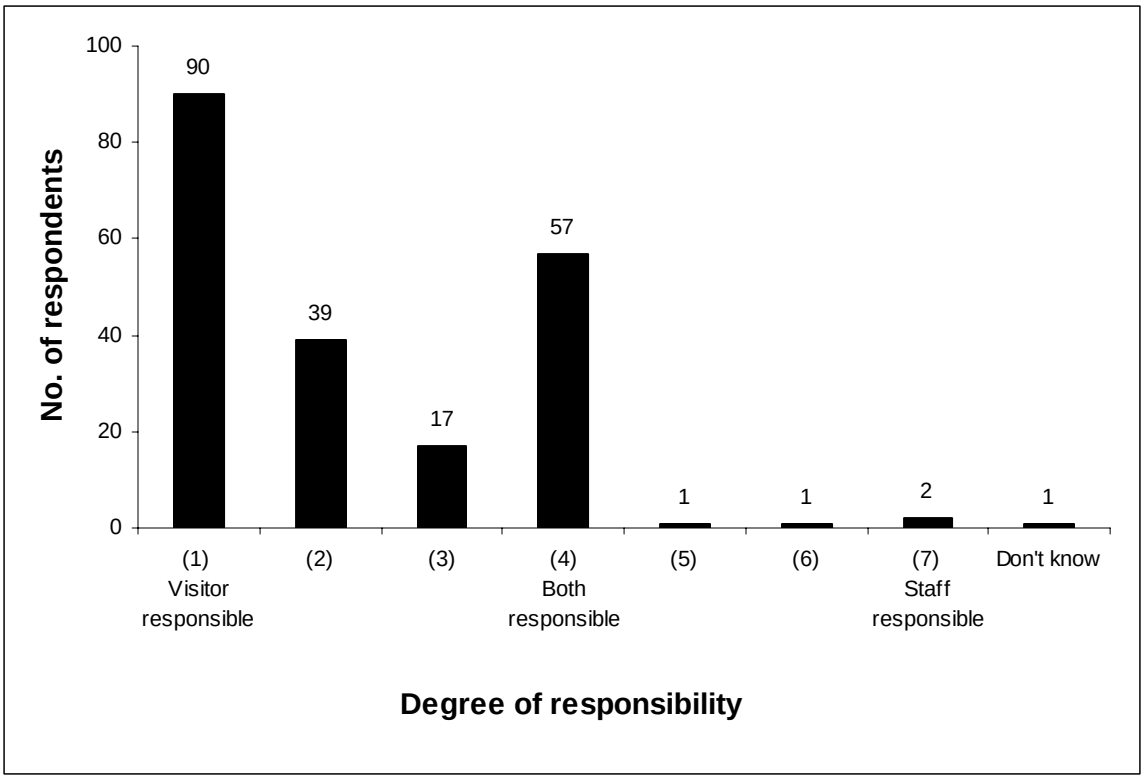

Figure 23.8: Responsibility for safety in chosen primary activity (N=208)

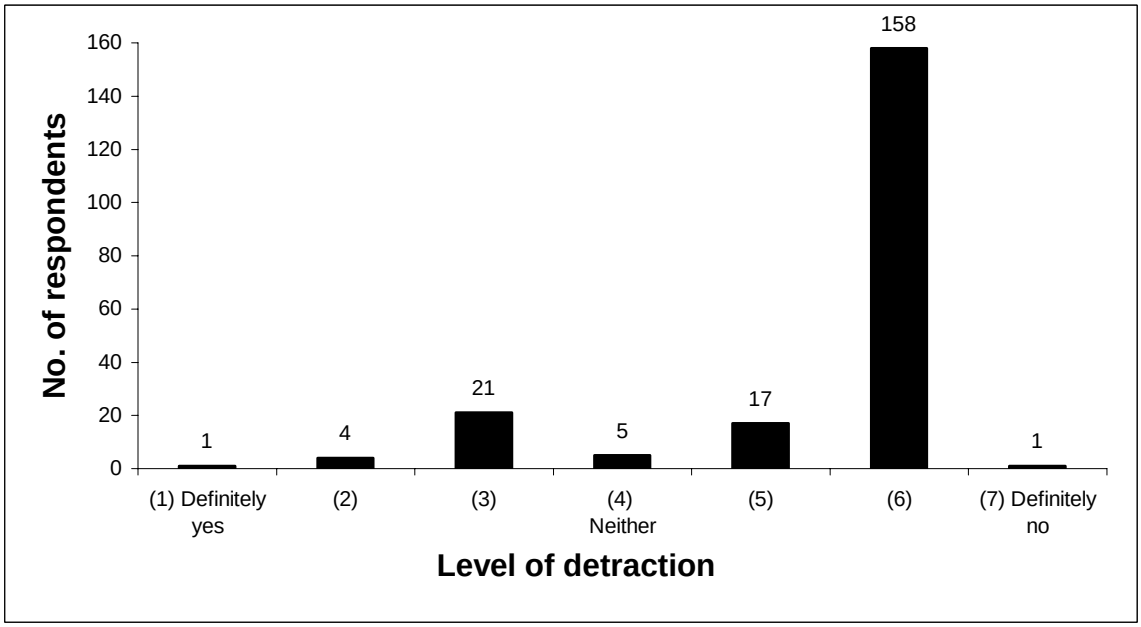

Figure 23.9: Do safety measures detract from visitor enjoyment? (N=207)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-seven percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 33% neither agree nor disagree. Seventeen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 47% disagree or disagree strongly, and 32% neither agree nor disagree. Twenty-nine percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 36% agree or agree strongly, and 31% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (87%);
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (83%);
- restrictions on the number of persons/groups who undertake particular activities (72%);
- park rangers to enforce rules and regulations (63%);
- enforcement of alcoholic beverage restrictions (60%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (27%) and more or much more enforcement of alcoholic beverage prohibitions (14%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 16% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 23% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 23.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that directional and warning signs, brochures, and uniformed park personnel are the most helpful sources of safety information.

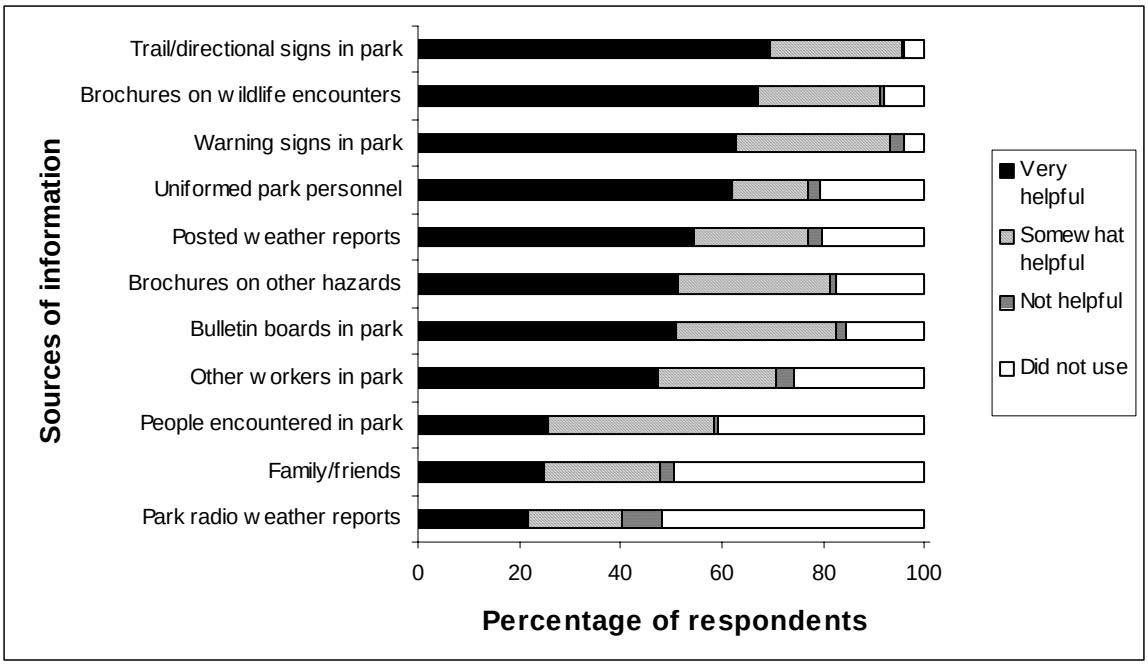

Figure 23.10: How helpful are various sources of safety information (N=141-200)

24.0 Lake Mead National Recreation Area

24.1 Sample:

At Lake Mead National Recreation Area, 296 visitor groups were contacted between June 28 and July 3, 2001, and 159 (53.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 71 visitor groups, resulting in a 44.7% response rate for this park.

24.2 Demographics:

Figure 24.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-seven percent of respondents were female and 43% male. The overwhelming majority (94%)of respondents were white, with 3% African-American, 1% Hispanic, and 1% Asian. Graduate school was the highest level of education attained by 15% of respondents, while an additional 25% classified themselves as college graduates. Seventy of the respondents were residents of the US and one was from Canada.

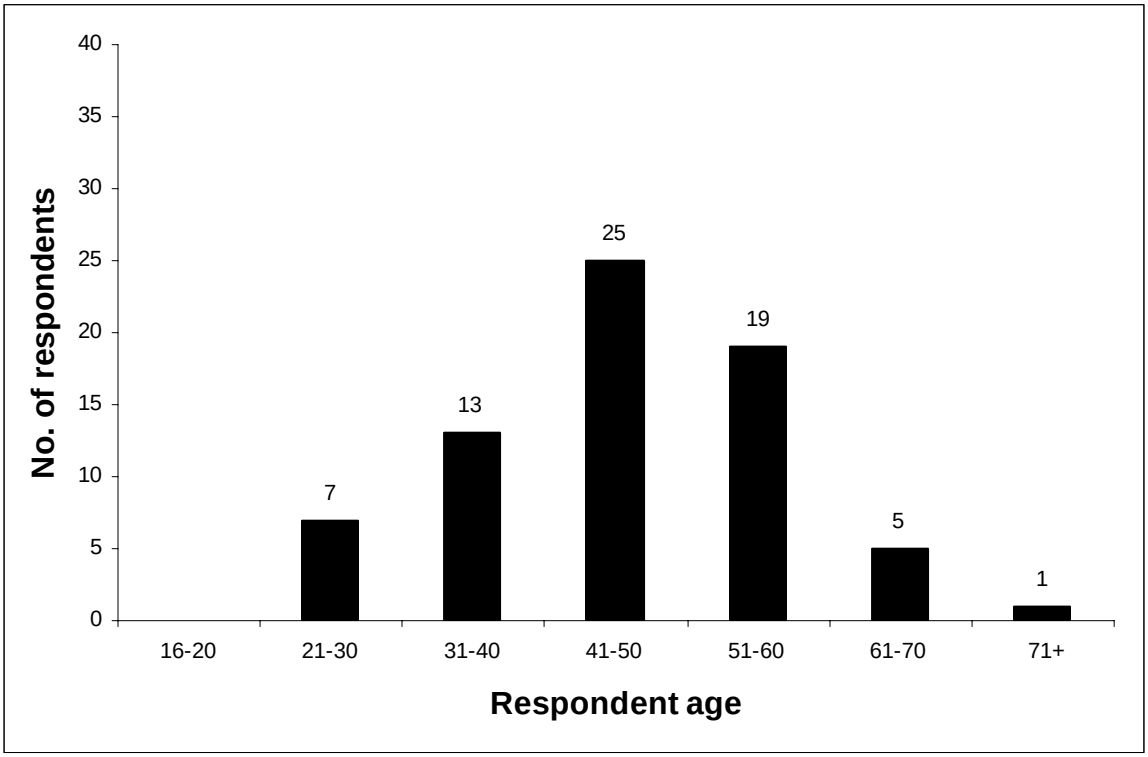

Figure 24.1: Distribution of respondents by age (N=70)

24.3 Visitation

For 62% of respondents, this was their first visit to the park. Among those 26 respondents who indicated they were returning to the park, 38% had visited the park twice in the past 10 years (including the current visit), 8% 3-5 times, 15% 6-10 times, and

38% 11 or more times. This visit was the primary destination for 27% of respondents, but one of only several destinations for 48% of respondents. For 24% of respondents this visit was not a planned destination at all. Sixty-three percent of the respondents visited the park for a half day or less, 20% visited for up to one day, and 17% visited for more than one day. 3 percent of respondents were visiting the park by themselves, 73% with family members, 10% with friends, and 13% with family members and friends.

24.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 24.2).

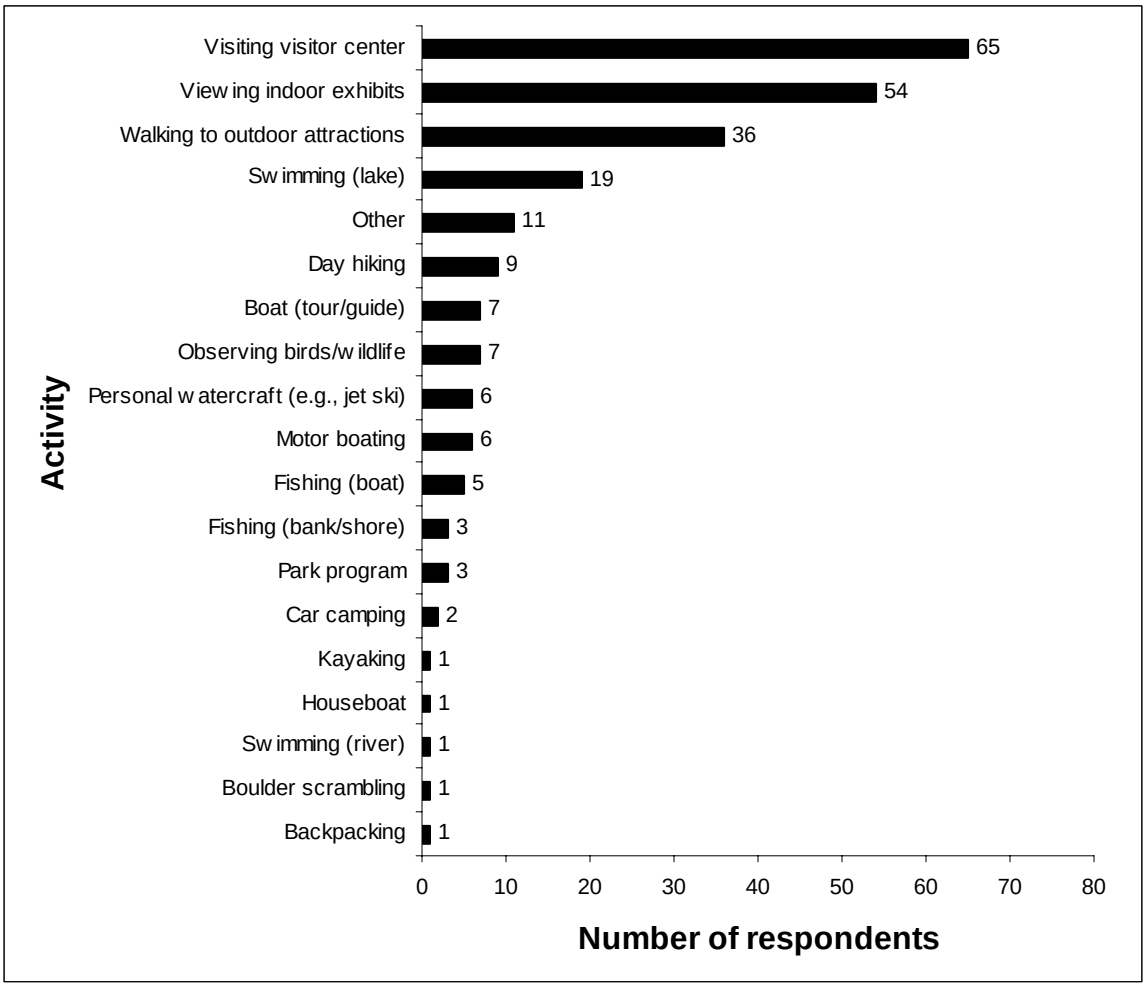

Figure 24.2: Visitor activities (N=71)
(Note: Several respondents listed more than one activity)

Figure 24.2 illustrates that many respondents visited the visitor center (92%) and viewed indoor exhibits (76%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 24.3 illustrates

that visiting the visitor center (20%), swimming in lakes (14%), and walking to outdoor attractions (14%) were the most popular primary activities. Most respondents (84%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 6% engaged in these activities alone, 4% with people aside from their own personal group, and 4% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 24.4). Ratings of personal experience varied little between activities and between males and females.

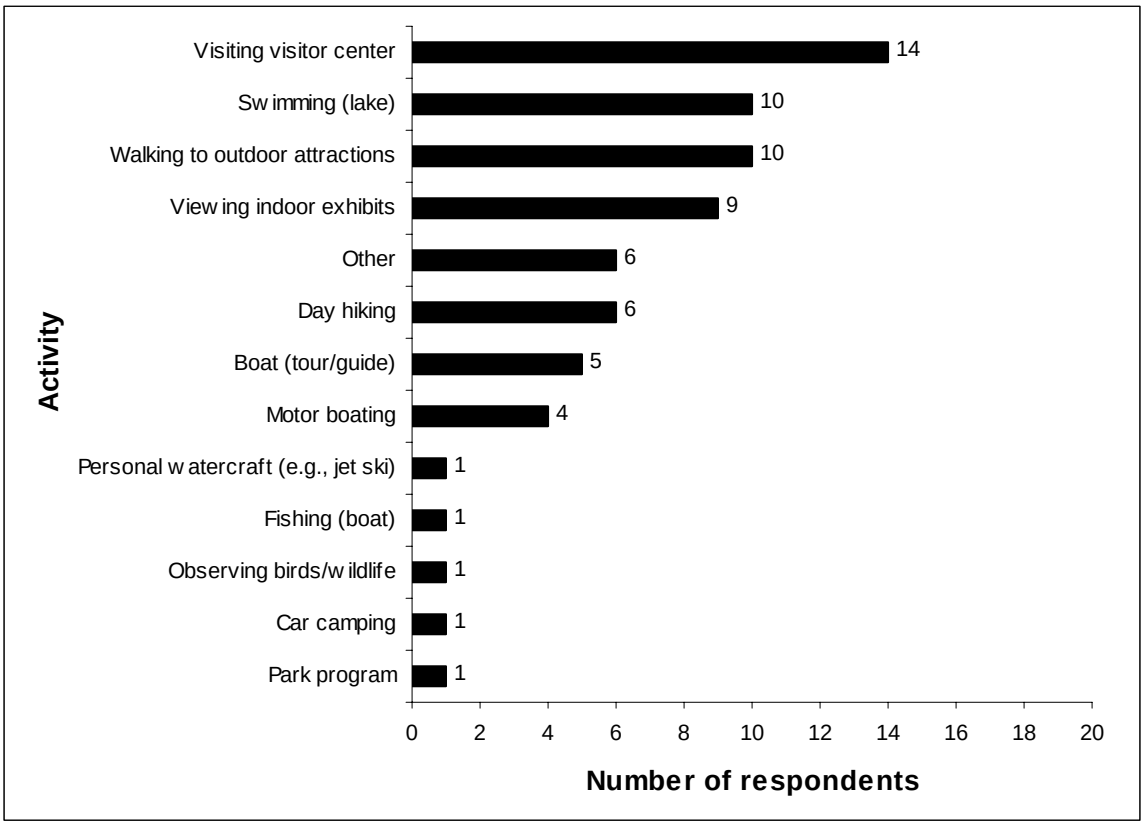

Figure 24.3: Primary visitor activities (N=69)

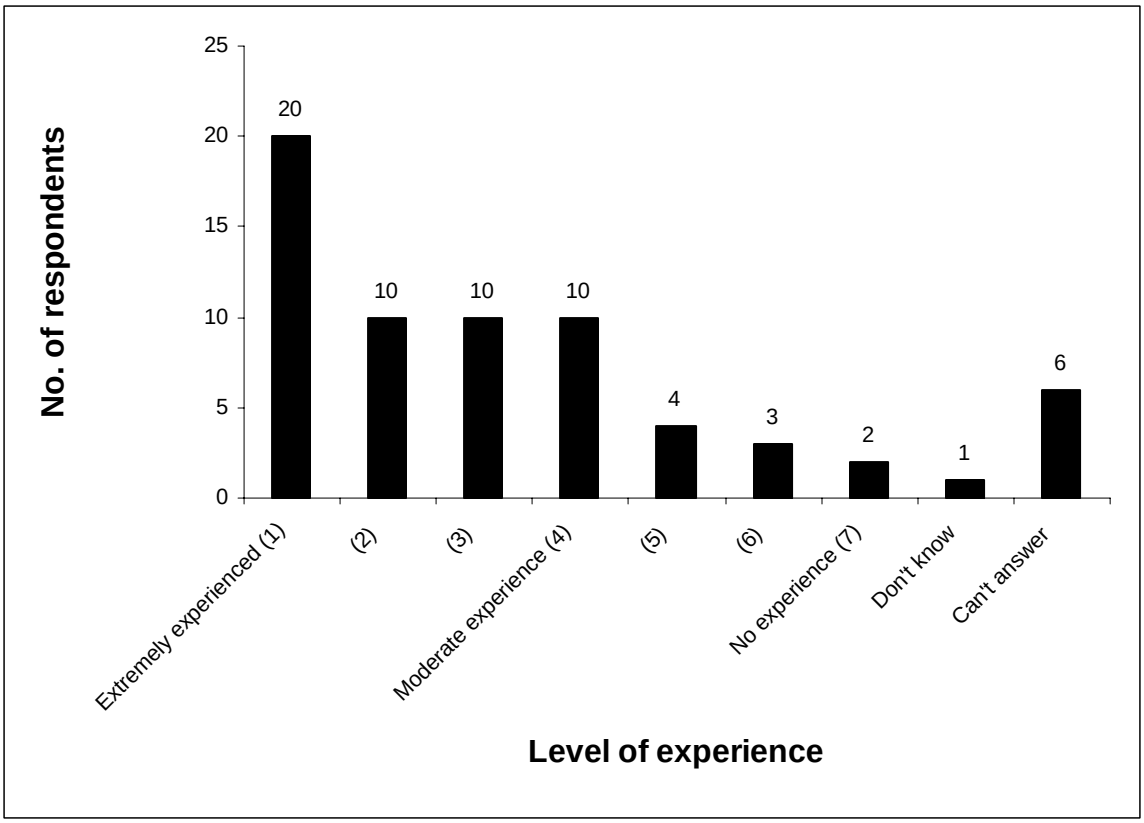

Figure 24.4: Personal level of experience (N=66)

Preparedness is one aspect of experience, and Figure 24.5 shows how prepared respondents were based on the safety items that they had available during their visit.

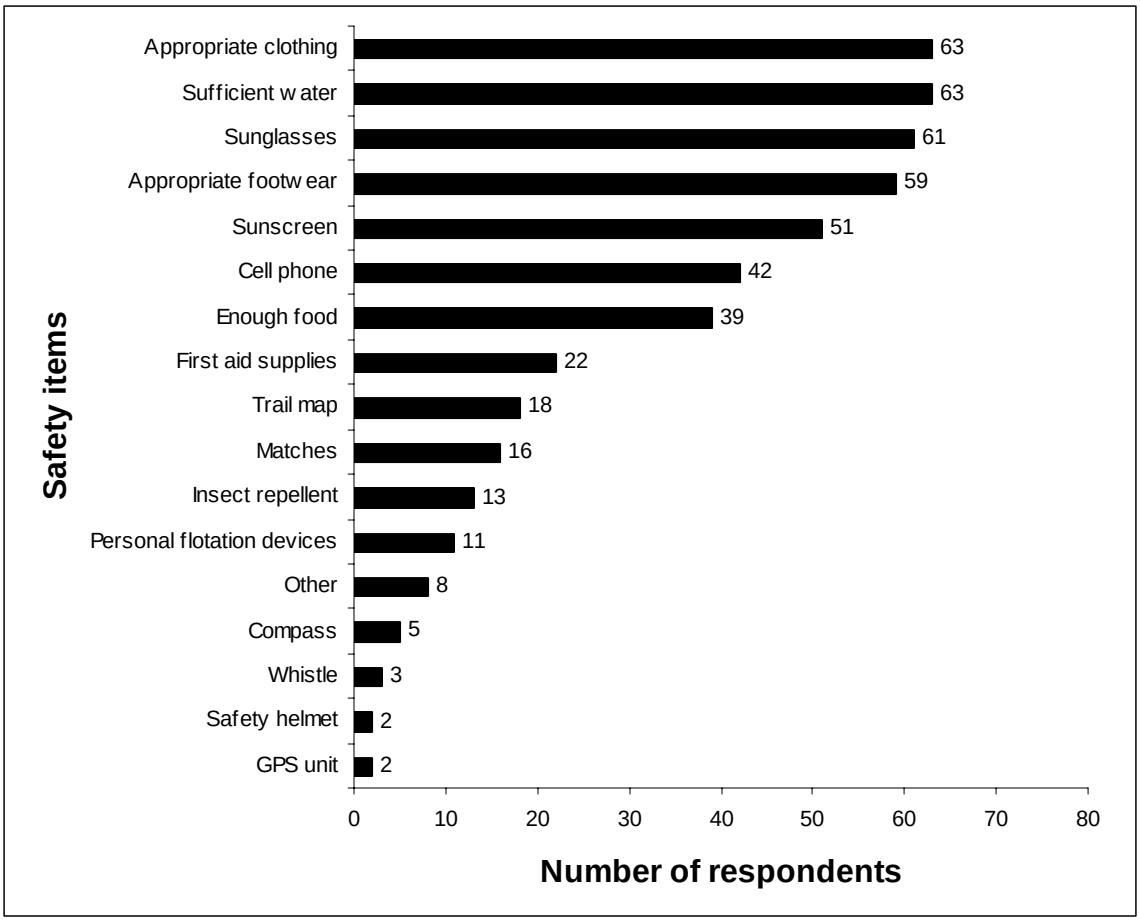

Figure 24.5: Personal safety items (N=63)

Few respondents (13%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 24.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, except that water-related hazards (drowning and boating accidents) are underrated. This may reflect the fact that the sample had few respondents who were engaged in boating, or it may reflect the overconfidence that boaters and swimmers have in their abilities.

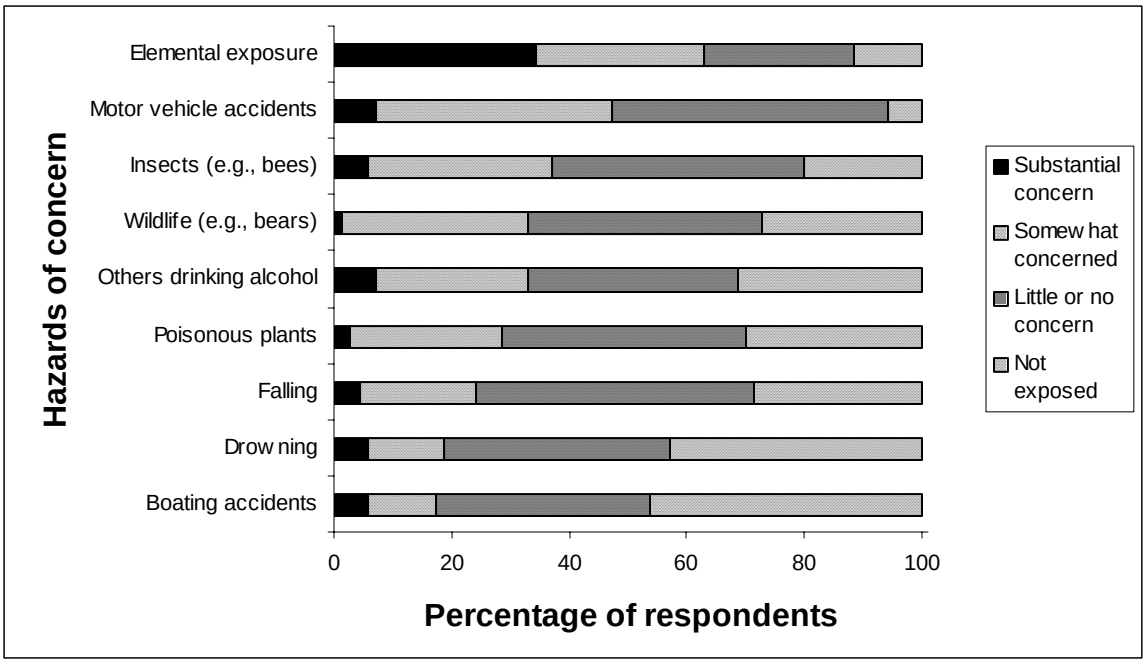

Figure 24.6: Level of concern about various hazards (N=69-70)

24.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 94% of respondents were traveling in privately owned or rented vehicles. 85 percent of respondents spent all of the time in the front seat, and 5% spent some of the time in the front seat. Of these individuals, 47% were driving for all or most of the time and 98% were wearing seatbelts most or all of the time. The majority (92%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-seven percent of respondents never encountered cars that were driving too fast, and 37% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 47% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 92% thought that hazard-warning signs were adequate most or all of the time. Figure 24.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

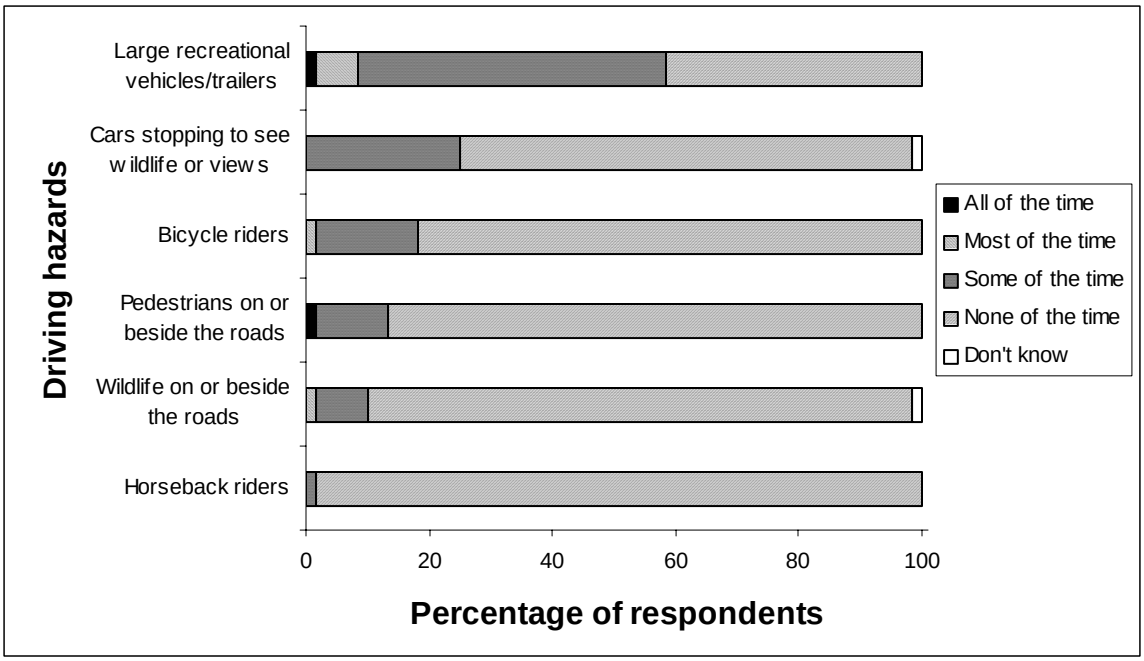

Figure 24.7: How often do these make traveling on roads more hazardous? (N=59-60)

24.6 Management issues:

With regard to the primary activity undertaken during their visit, 40% of respondents believed that safety was entirely the responsibility of the visitor, while 45% believed safety was the responsibility of both the visitor and the park staff (Figure 24.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 24.9 shows that the overwhelming majority (68%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (3%) who indicated that the safety measures did detract from their enjoyment, one was walking to outdoor attractions and one was hiking.

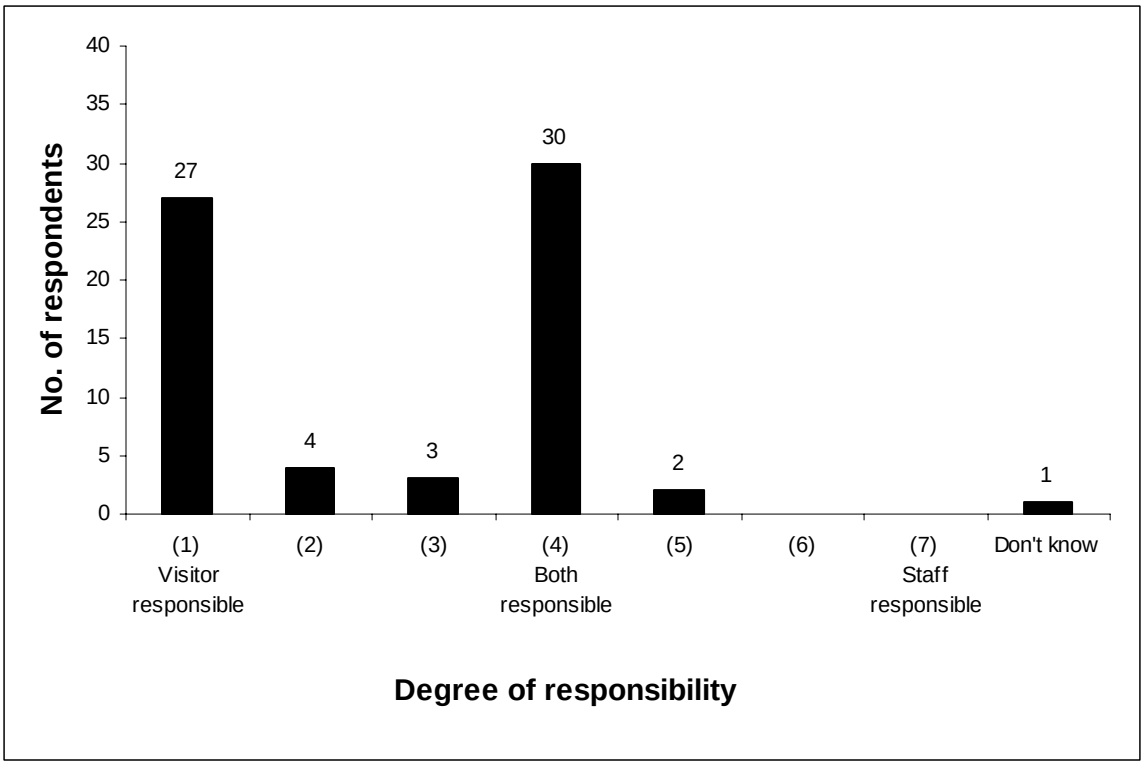

Figure 24.8: Responsibility for safety in chosen primary activity (N=67)

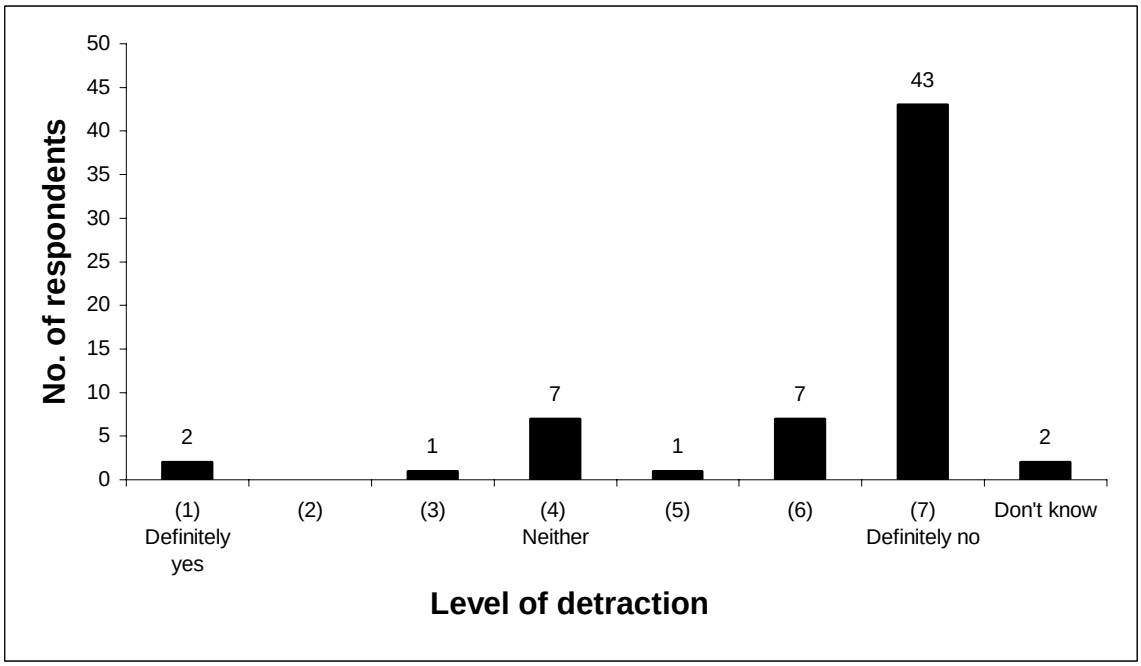

Figure 24.9: Do safety measures detract from visitor enjoyment? (N=63)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-one percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 5% disagree or disagree strongly, and 45% neither agree nor disagree. Twenty-five percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 33% disagree or disagree strongly, and 39% neither agree nor disagree. Thirty-three percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 22% agree or agree strongly, and 39% neither agree nor disagree.

In most cases, the majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (64%);
- signs warning and advising about hazards (74%);
- brochures and other information warning about hazards (67%);
- restrictions on the number of persons/groups who undertake particular activities (55%);
- park rangers to enforce rules and regulations (58%);
- enforcement of alcoholic beverage restrictions (46%); and,
- safe surfaces on walkways and stairs (80%).

Substantial proportions of respondents, however, believe that there should be more or many more:

- rules and regulations about what visitors should and should not do (13%);
- signs warning and advising about hazards (14%);
- brochures and other information warning about hazards (20%);
- park rangers to enforce rules and regulations (19%); and,
- greater enforcement of alcoholic beverage restrictions (19%).

Substantial proportions of respondents were more ambivalent about several items, however, and did not know if there should be more or fewer:

- rules and regulations about what visitors should and should not do (17%);
- restrictions on the number of persons/groups who undertake particular activities (33%);
- park rangers to enforce rules and regulations (23%); and,
- greater or lesser enforcement of alcoholic beverage restrictions (30%).

Among those respondents who were aware of the various sources of safety information in the park, Figure 24.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

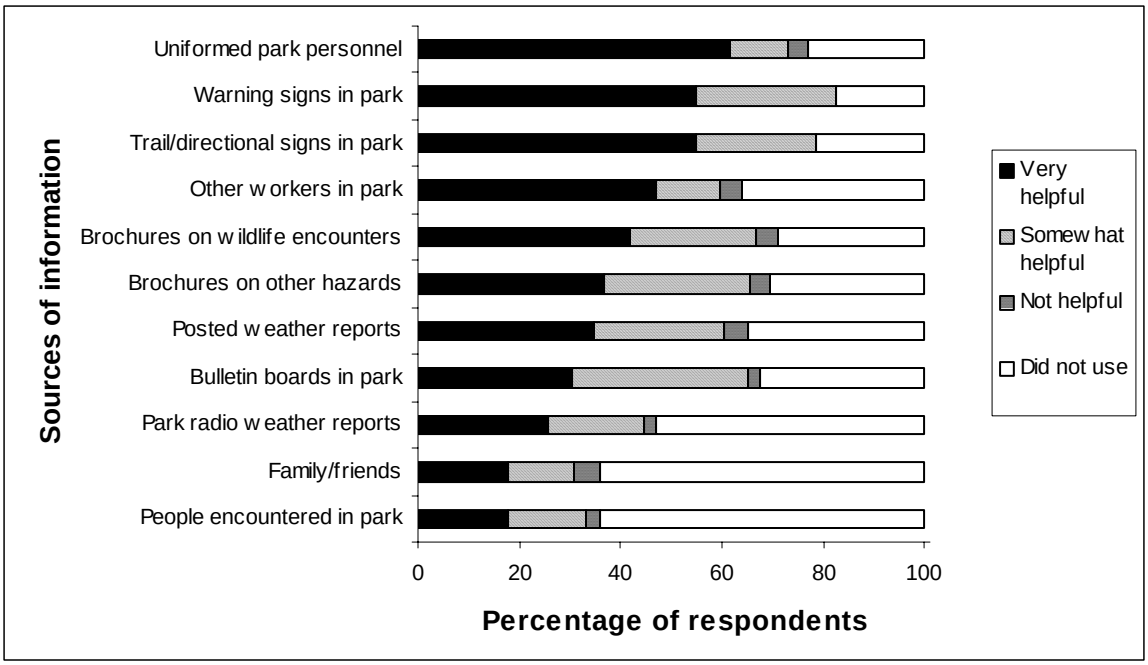

Figure 24.10: How helpful are various sources of safety information (N=39-51)

25.0 Little Bighorn Battlefield National Monument

25.1 Sample:

At Little Bighorn Battlefield National Monument, 529 visitor groups were contacted between July 26 and July 31, 2001, and 400 (75.6%) of these groups accepted questionnaires. Questionnaires were completed and returned by 259 visitor groups, resulting in a 64.8% response rate for this park.

25.2 Demographics:

Figure 25.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (95%)of respondents were white, with 1% Hispanic, 2% American Indian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 22% of respondents, while an additional 33% classified themselves as college graduates. The majority (94%) of respondents were residents of the US and 3% were international visitors, with 5 respondents from Canada, 1 from Germany, and 1 from the Czech Republic.

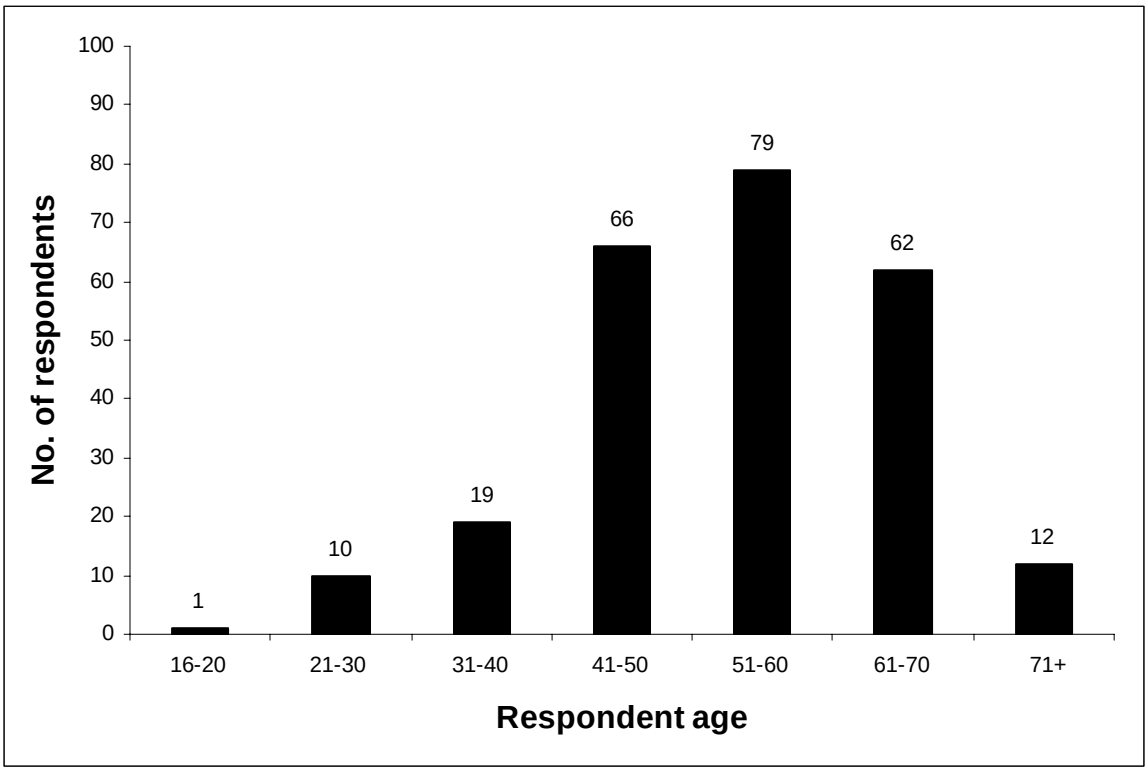

Figure 25.1: Distribution of respondents by age (N=249)

25.3 Visitation

For 75% of respondents, this was their first visit to the park. Among those 61respondents who indicated they were returning to the park, 69% had visited the park twice in the past

10 years (including the current visit), 25% 3-5 times, 5% 6-10 times, and 2% 11 or more times. This visit was the primary destination for 5% of respondents, but one of only several destinations for 74% of respondents. For 21% of respondents this visit was not a planned destination at all. Eighty-eight percent of the respondents visited the park for a half day or less, and 12% visited for up to one day. Five percent of respondents were visiting the park by themselves, 80% with family members, 7% with friends, and 5% with family members and friends.

25.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 25.2).

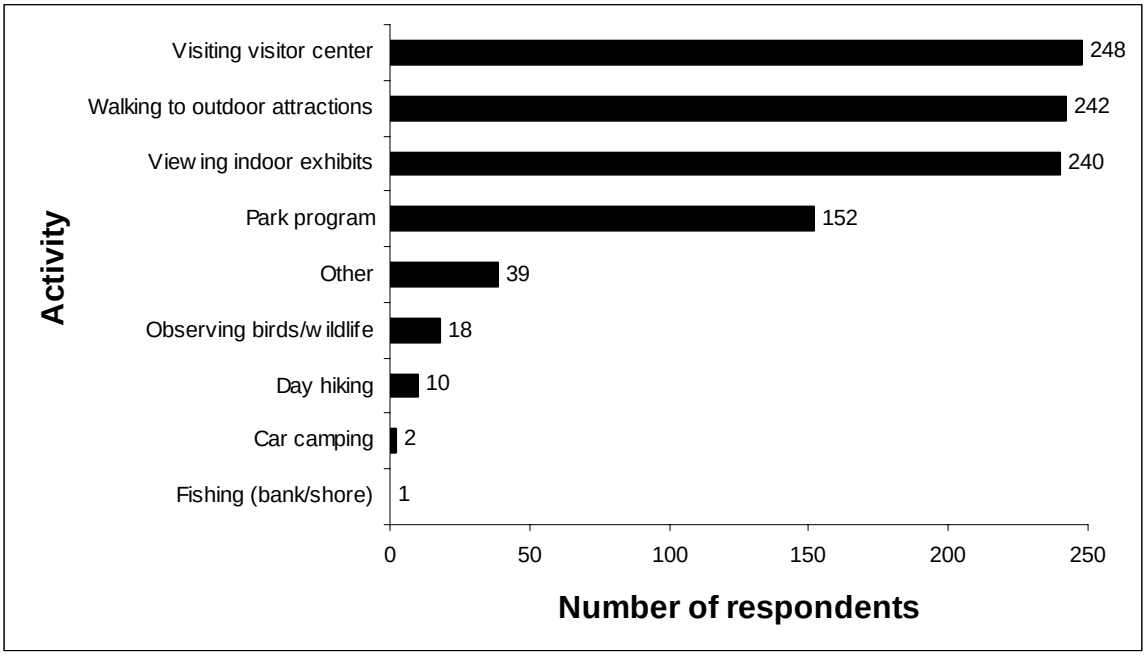

Figure 25.2: Visitor activities (N=259)
(Note: Several respondents listed more than one activity)

Figure 25.2 illustrates that many respondents visited the visitor center (96%) and viewed indoor exhibits (93%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 25.3 illustrates that walking to outdoor attractions (47%), participating in park programs (20%), and viewing indoor exhibits (13%) were the most popular primary activities. Most respondents (81%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 6% engaged in these activities alone, 12% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 25.4). Ratings of personal experience varied little between activities and between males and females.

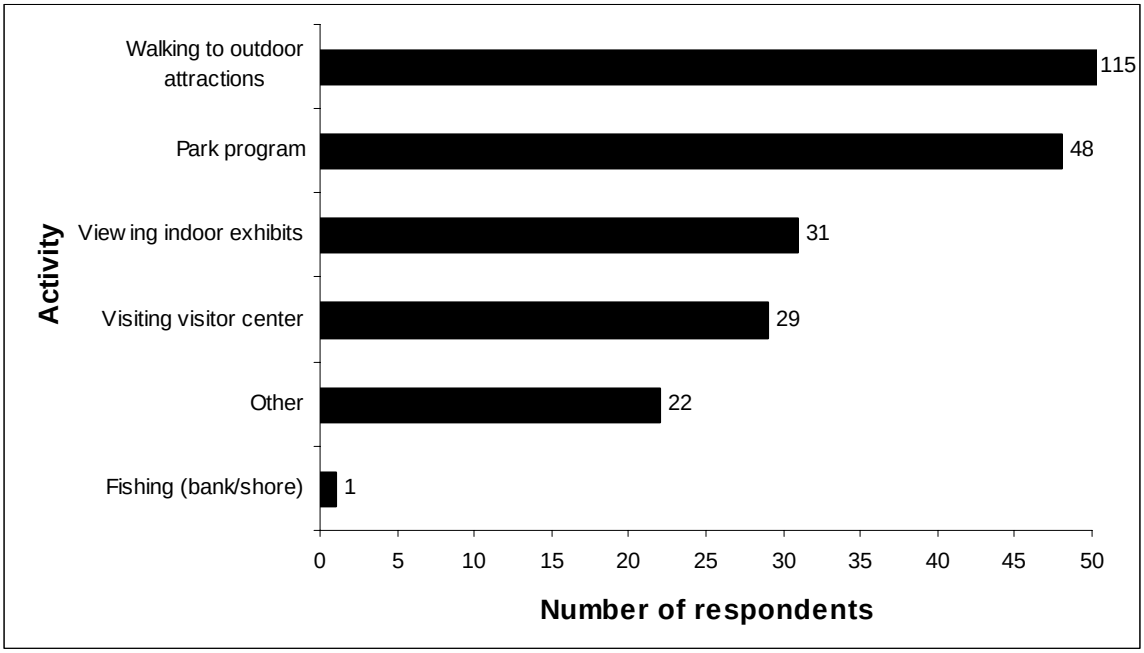

Figure 25.3: Primary visitor activities (N=246)

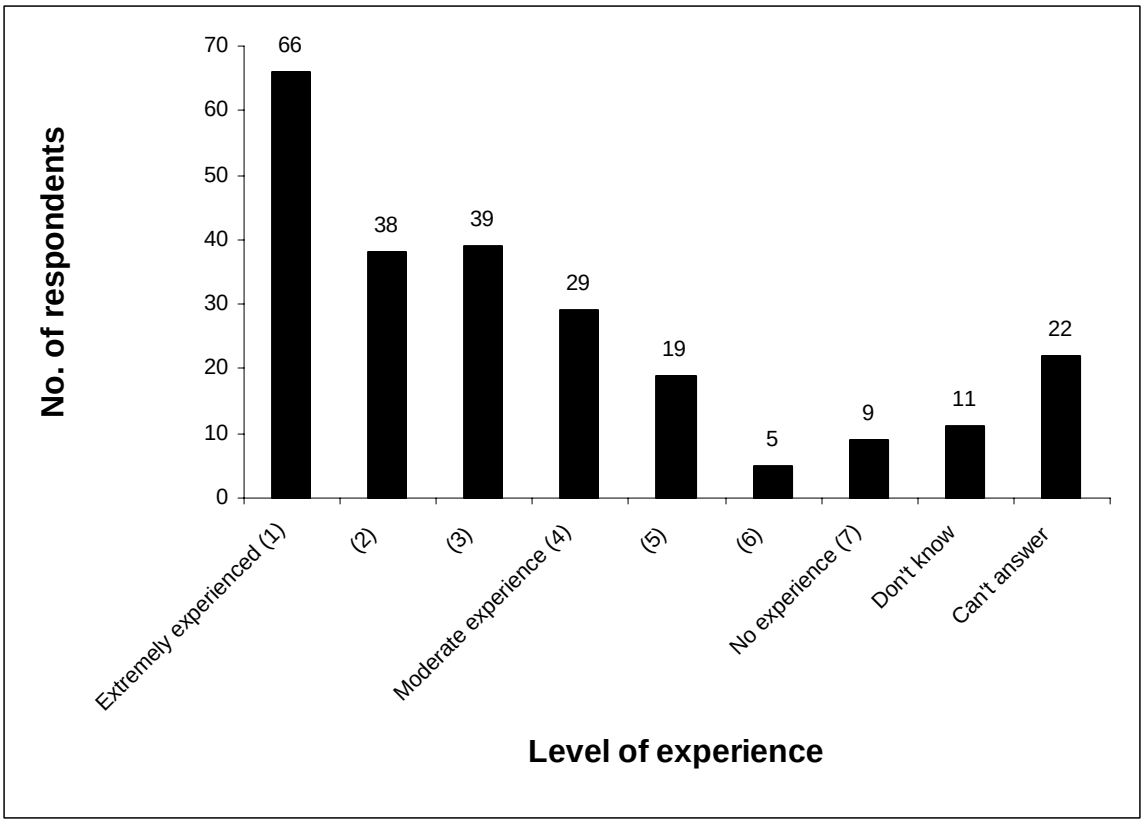

Figure 25.4: Personal level of experience (N=238)

Preparedness is one aspect of experience, and Figure 25.5 shows how prepared respondents were based on the safety items that they had available during their visit.

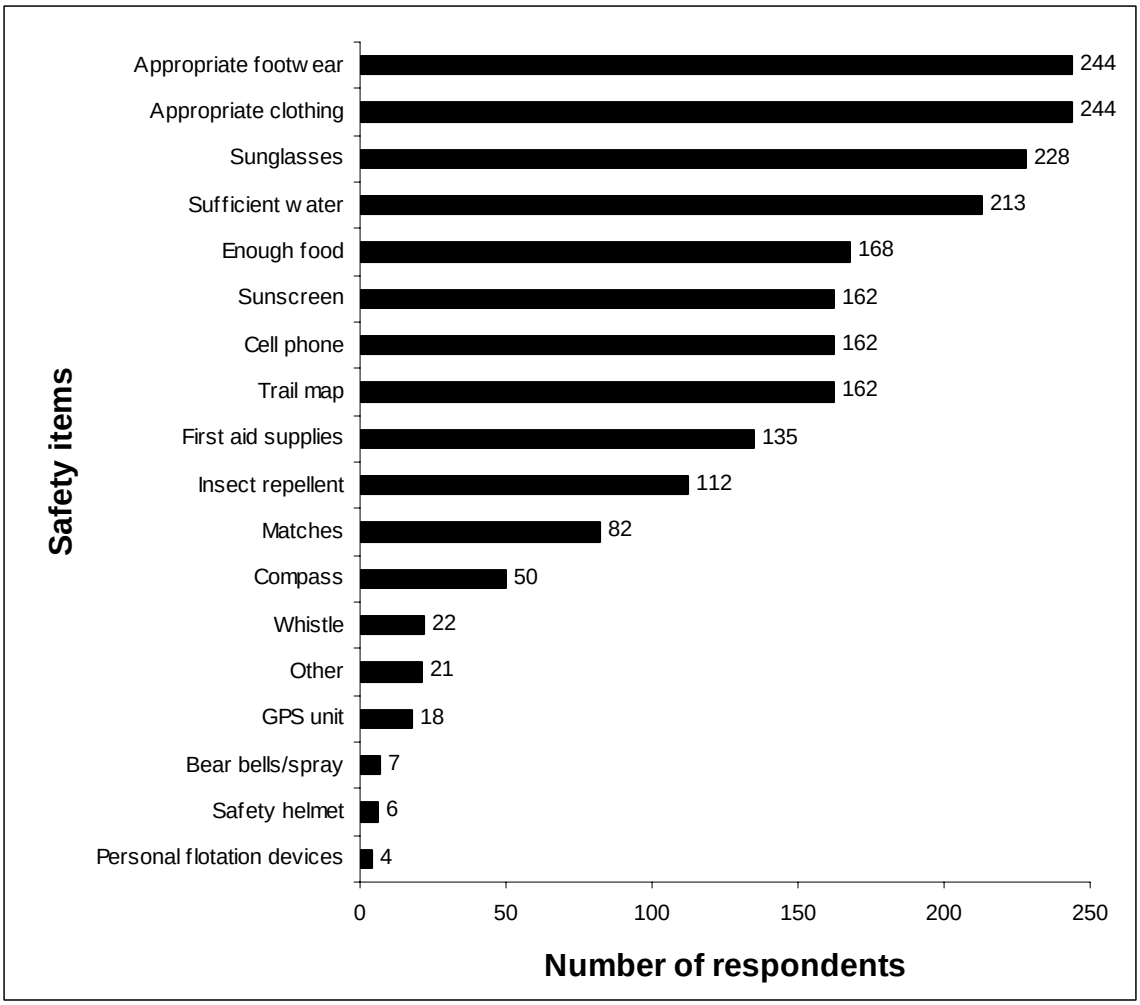

Figure 25.5: Personal safety items (N=244)

Few respondents (2%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 25.6 shows how concerned respondents were about various hazards that might be encountered in the park. The relatively low level of concern shown by respondents is consistent with the relatively low number accidents experienced in the park.

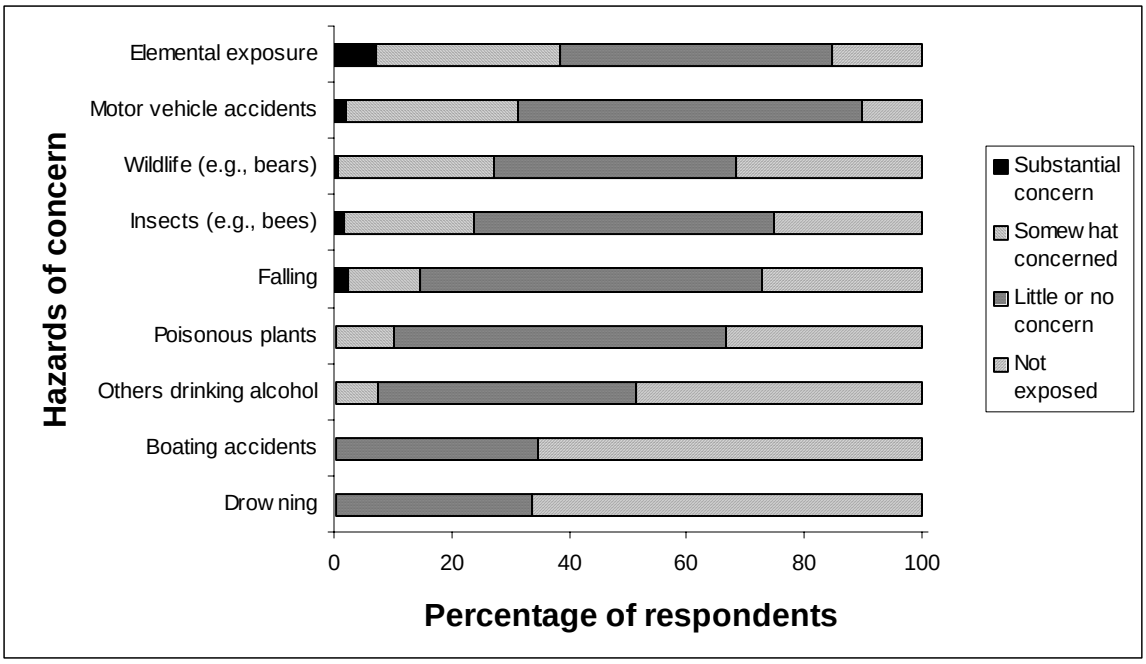

Figure 25.6: Level of concern about various hazards (N=252-255)

25.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 94% of respondents were traveling in privately owned or rented vehicles. Eighty-eight percent of respondents spent all of the time in the front seat, and 5% spent some of the time in the front seat. Of these individuals, 53% were driving for all or most of the time and 92% were wearing seatbelts most or all of the time. The majority (99%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Seventy percent of respondents never encountered cars that were driving too fast, and 24% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 27% of respondents encountered cars that were driving too slowly. Most (93%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 91% thought that hazard-warning signs were adequate most or all of the time. Figure 25.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and pedestrians on or beside the roads are the most commonly cited driving hazards.

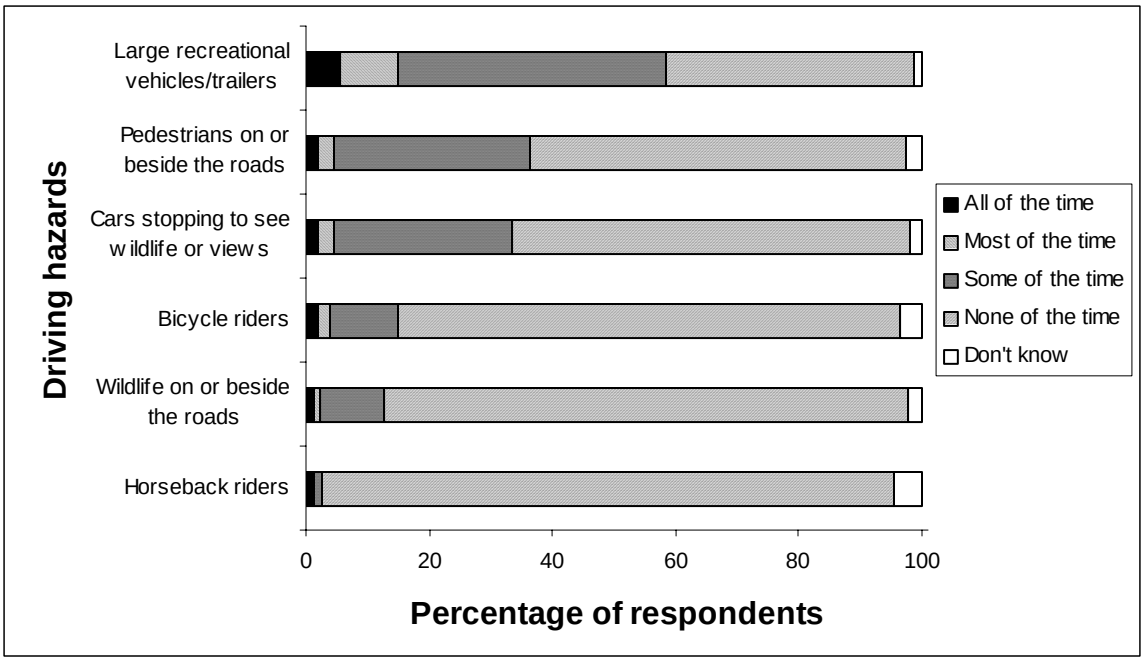

Figure 25.7: How often do these make traveling on roads more hazardous? (N=221-222)

25.6 Management issues:

With regard to the primary activity undertaken during their visit, 34% of respondents believed that safety was entirely the responsibility of the visitor, while 48% believed safety was the responsibility of both the visitor and the park staff (Figure 25.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 25.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (1%) who indicated that the safety measures did detract from their enjoyment, one was visiting the visitor center and two were walking to outdoor attractions.

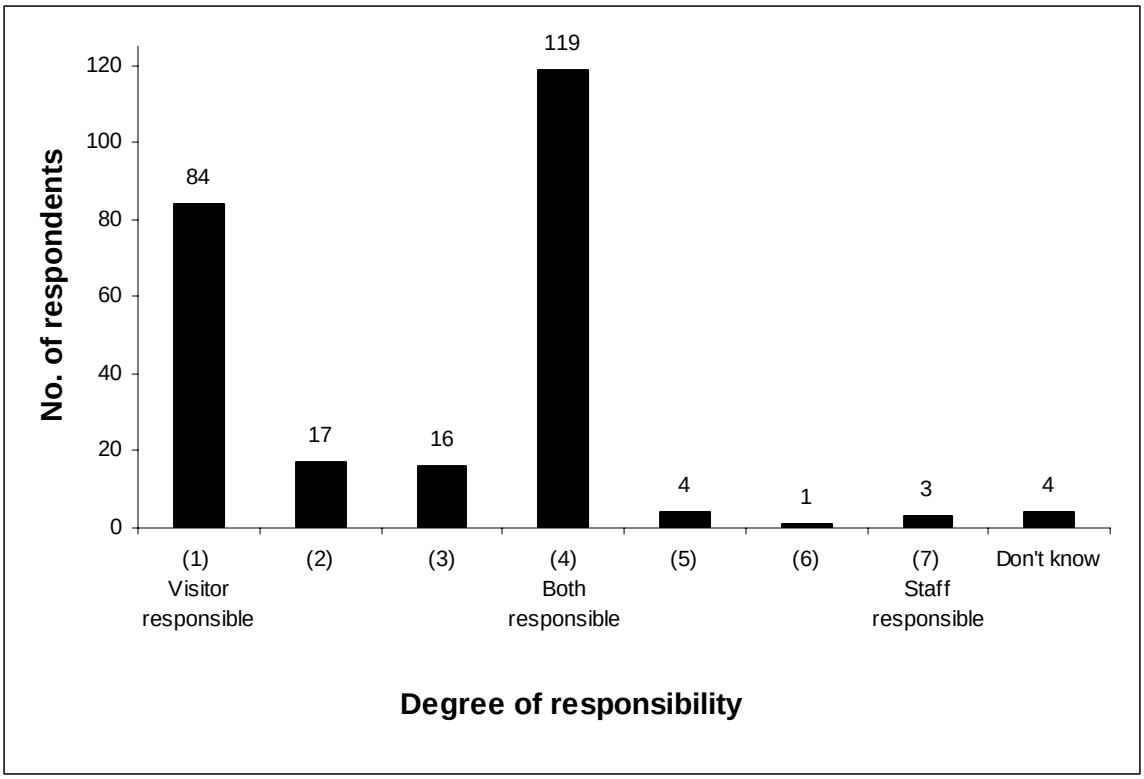

Figure 25.8: Responsibility for safety in chosen primary activity (N=248)

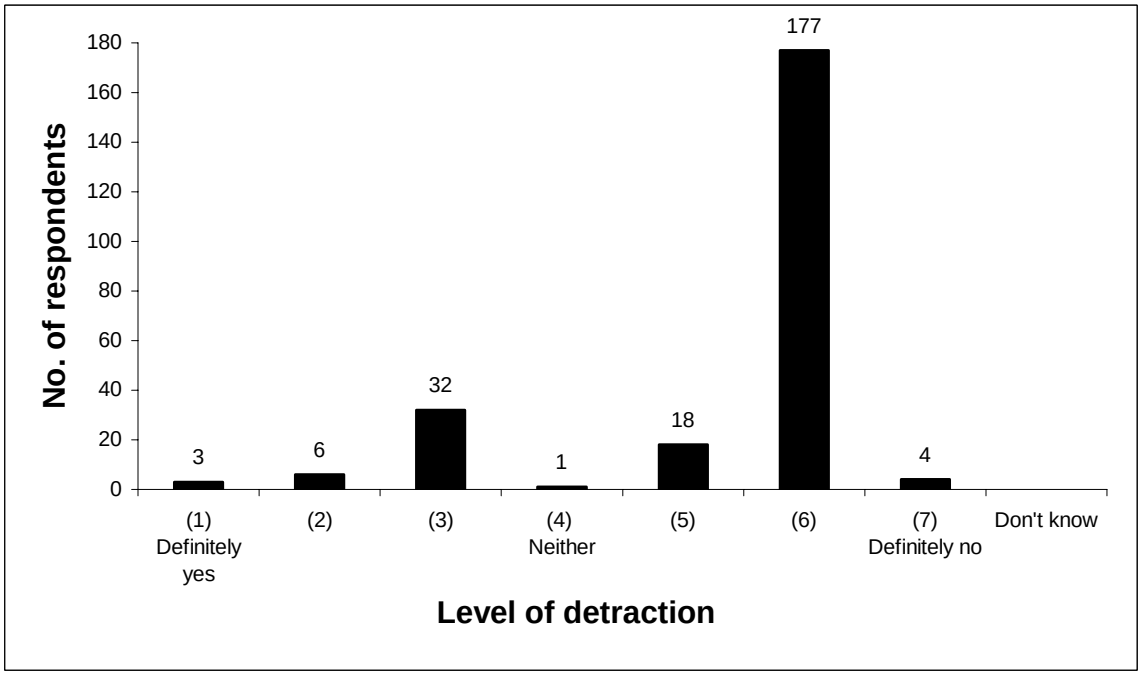

Figure 25.9: Do safety measures detract from visitor enjoyment? (N=241)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-five percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 15% disagree or disagree strongly, and 35% neither agree nor disagree. Twenty-eight percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 32% disagree or disagree strongly, and 35% neither agree nor disagree. Thirty-seven percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 27% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (85%);
- signs warning and advising about hazards (88%);
- brochures and other information warning about hazards (85%);
- restrictions on the number of persons/groups who undertake particular activities (73%);
- park rangers to enforce rules and regulations (83%);
- enforcement of alcoholic beverage restrictions (66%); and,
- safe surfaces on walkways and stairs (80%).

While few respondents indicated the need for more or less of the above, substantial proportion of respondents were more ambivalent about a couple of items. Nineteen percent did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 27% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 25.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

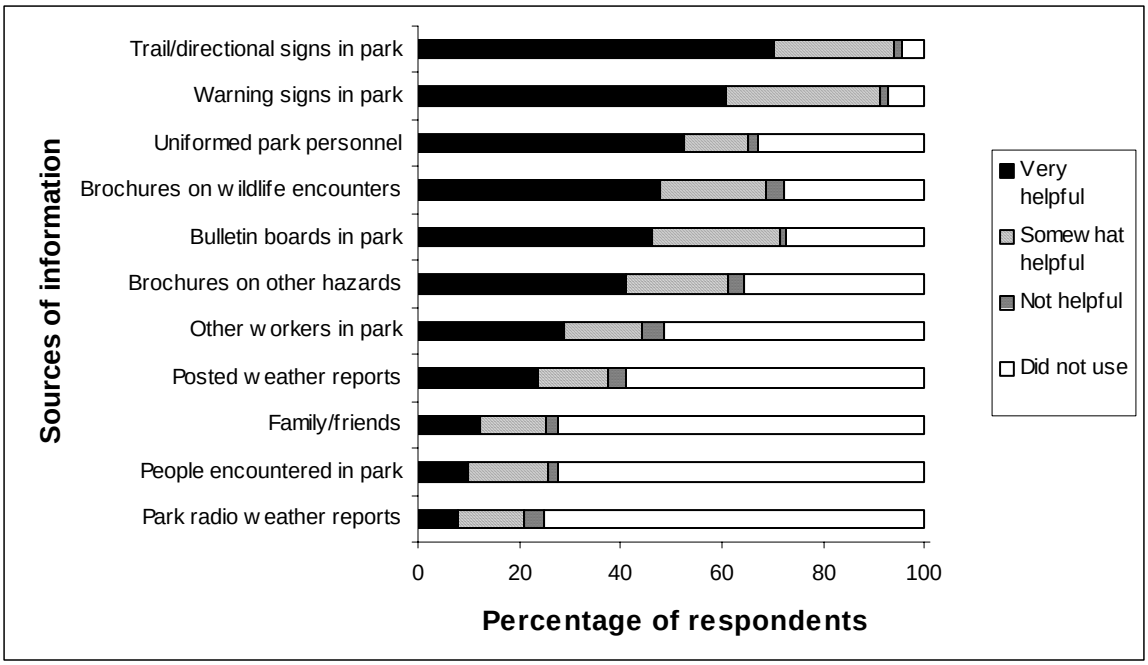

Figure 25.10: How helpful are various sources of safety information (N=125-233)

26.0 Lowell National Historic Park

26.1 Sample:

At Lowell National Historic Park, 122 visitor groups were contacted between May 23 and May 28, 2001, and 108 (88.5%) of these groups accepted questionnaires. Questionnaires were completed and returned by 72 visitor groups, resulting in a 66.7% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 9 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 63 in most cases below.

26.2 Demographics:

Figure 26.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Thirty-five percent of respondents were female and 65% male. The overwhelming majority (83%)of respondents were white, with 1% African-American, 8% Hispanic, and 7% Asian. Graduate school was the highest level of education attained by 37% of respondents, while an additional 39% classified themselves as college graduates. The majority (96%) of respondents were residents of the US and 4% were international visitors.

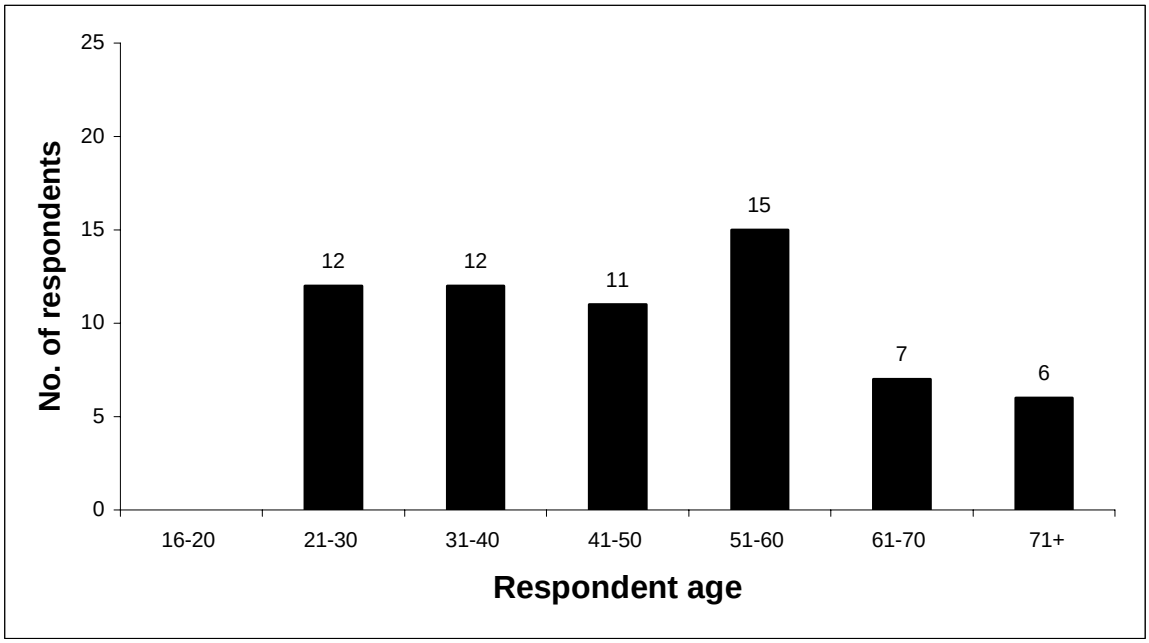

Figure 26.1: Distribution of respondents by age (N=63)

26.3 Visitation

For 71% of respondents, this was their first visit to the park. Among those respondents returning to the park, 53% had visited the park twice in the past 10 years (including the

current visit), 23% 3-5 times, 4% 6-10 times, and 21% 11 or more times. This visit was the primary destination for 38% of respondents, but one of only several destinations for 35% of respondents. For 27% of respondents this visit was not a planned destination at all. Eighty-four percent of the respondents visited the park for a half day or less, and 16% visited for up to one day. Twenty percent of respondents were visiting the park by themselves, 53% with family members, 19% with friends, and 7% with family members and friends.

26.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 26.2).

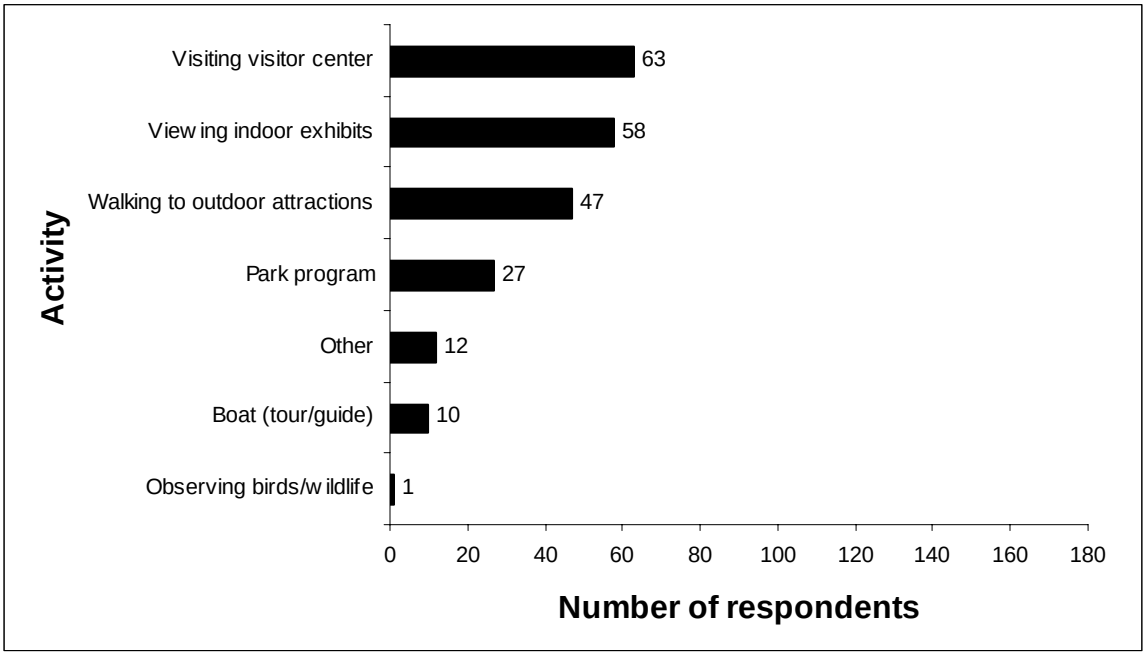

Figure 26.2: Visitor activities (N=63)
(Note: Several respondents listed more than one activity)

Figure 26.2 illustrates that all the respondents visited the visitor center (100%) and many viewed the indoor exhibits (92%), or walked to outdoor attractions (75%). The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 26.3 illustrates that viewing indoor exhibits (50%), walking to outdoor attractions (17%), and park programs (13%) were the most popular primary activities. Most respondents (72%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 20% engaged in these activities alone, and 6% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7

(not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 26.4). Ratings of personal experience, however, may have less significance in urban parks such as Lowell, where viewing indoor exhibits is a major activity.

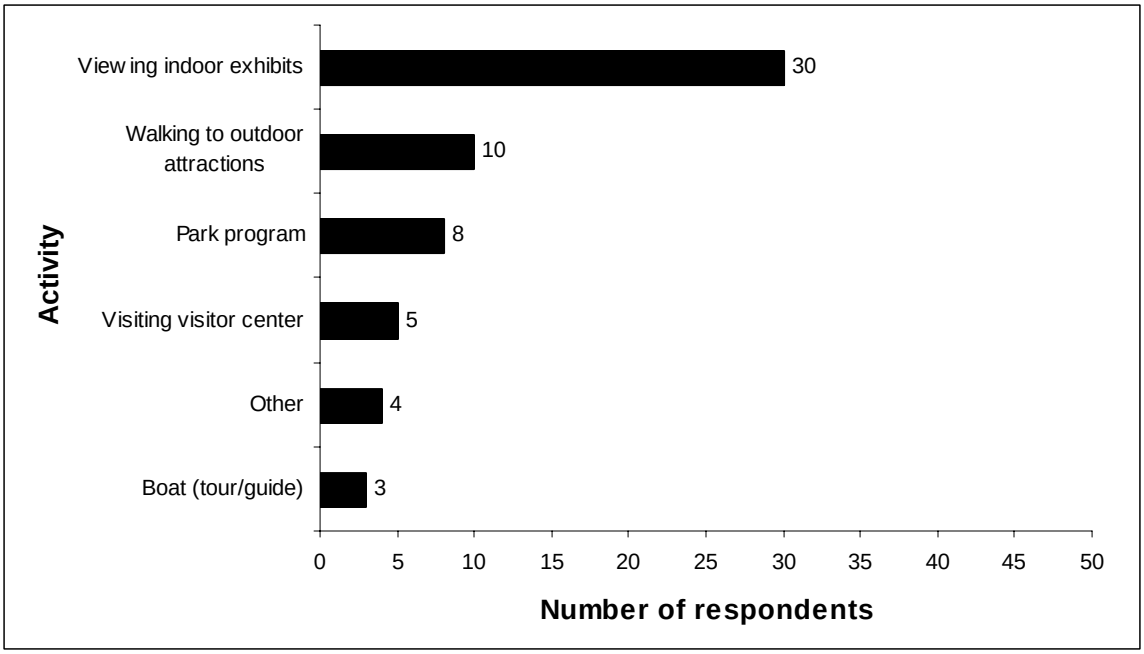

Figure 26.3: Primary visitor activities (N=60)

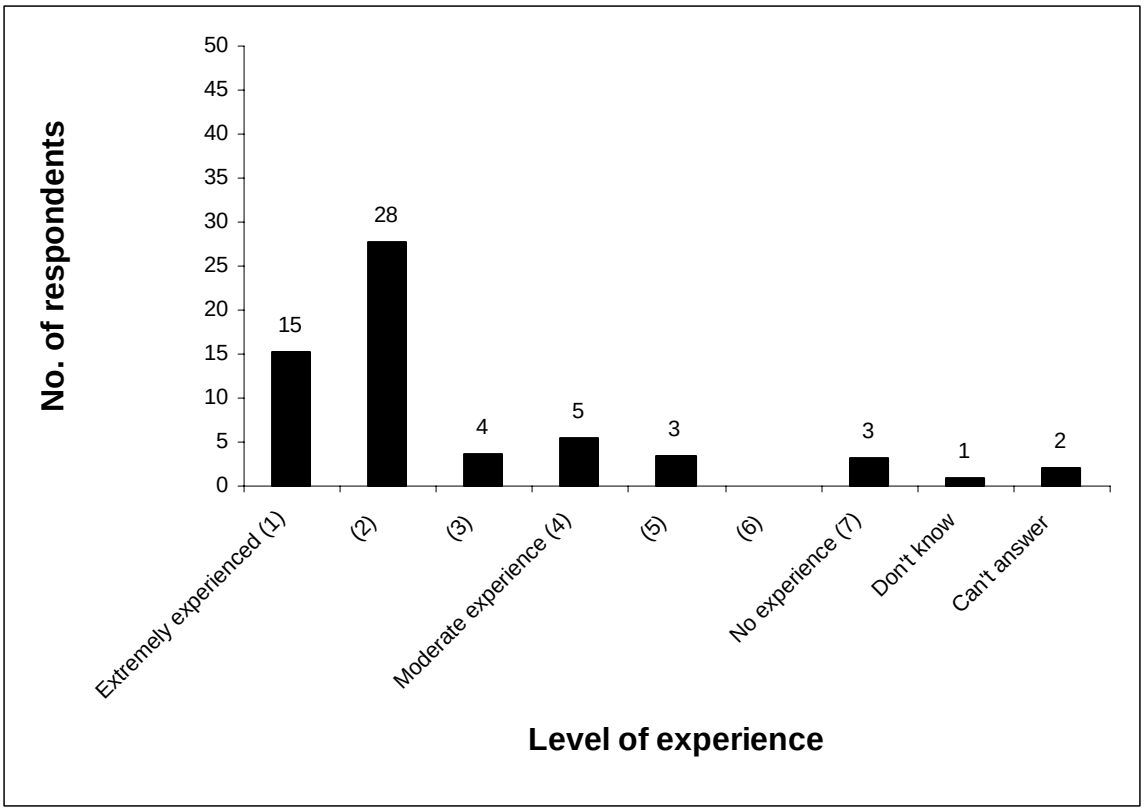

Figure 26.4: Personal level of experience (N=62)

Preparedness is one aspect of experience, even in urban parks where choosing appropriate footwear can be important. Figure 26.5 shows how prepared respondents were based on the safety items that they had available during their visit.

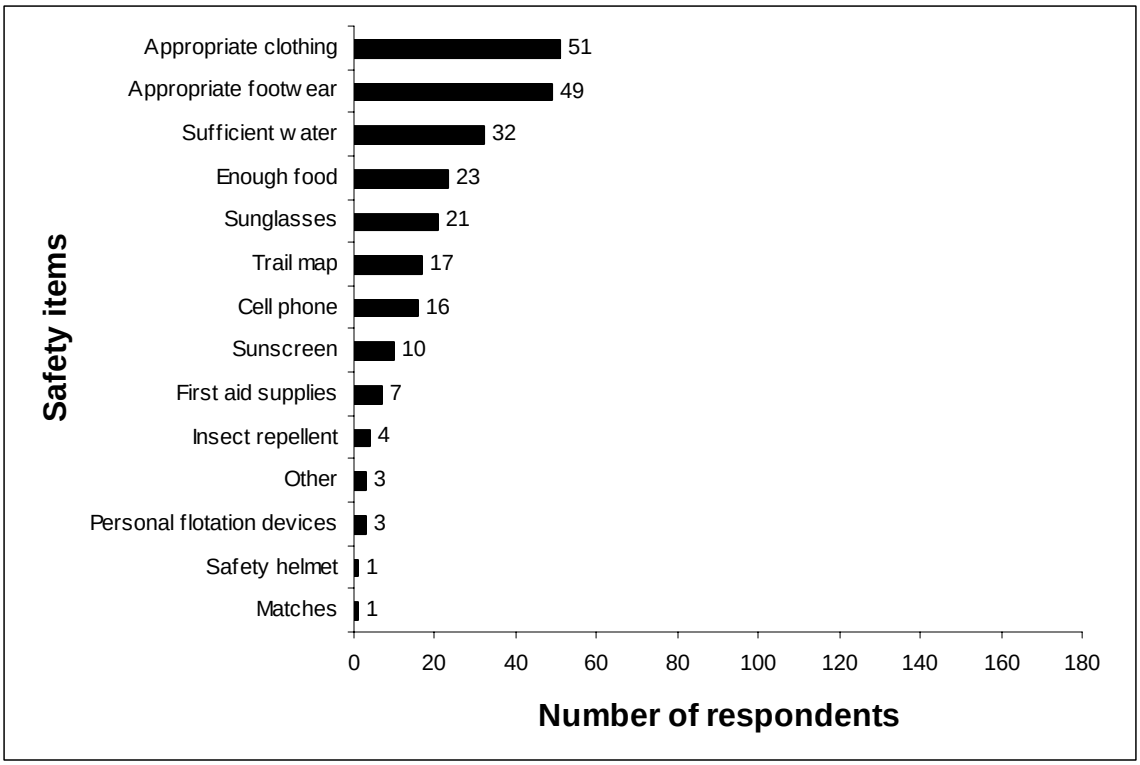

Figure 26.5: Personal safety items (N=51)

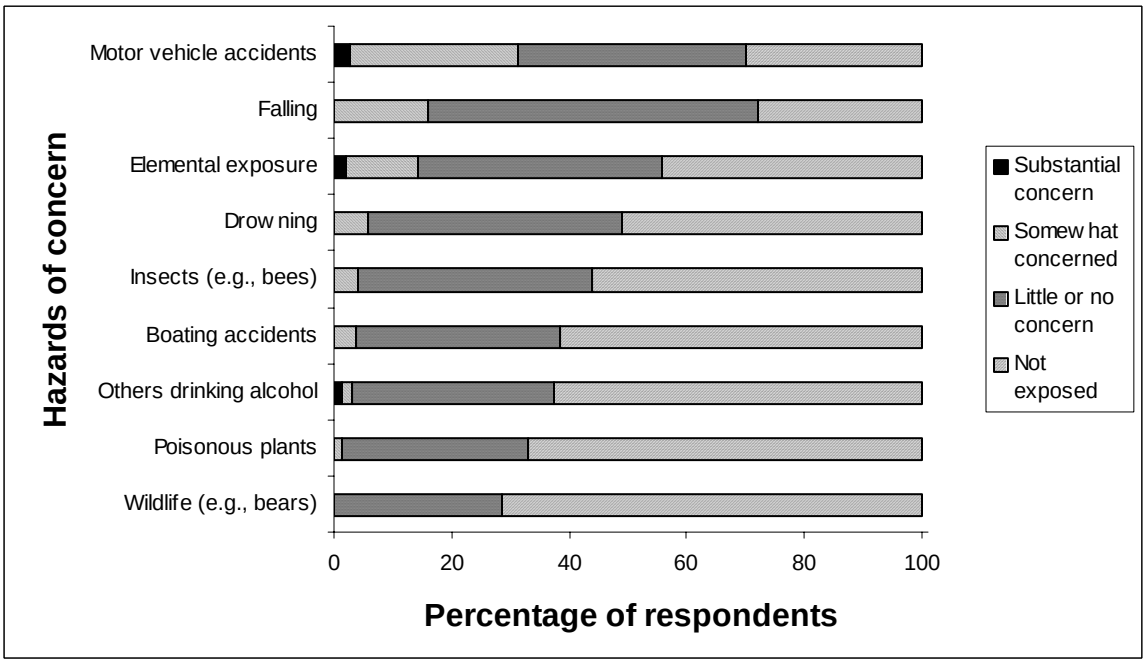

Figure 26.6: Level of concern about various hazards (N=59)

26.5 Motor vehicles:
Looking at motor vehicles in more detail, we find that 76% of respondents were traveling in privately owned or rented vehicles. Seventy percent of respondents spent all of the time in the front seat, and 4% spent some of the time in the front seat. Of these individuals, 64% were driving for all or most of the time and 90% were wearing seatbelts most or all of the time. The majority (95%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-nine percent of respondents never encountered cars that were driving too fast, and 36% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 18% of respondents encountered cars that were driving too slowly. Most (90%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 76% thought that hazard-warning signs were adequate most or all of the time. Figure 26.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders and pedestrians are the most commonly cited driving hazards, but the extent and level of concern are relatively small.

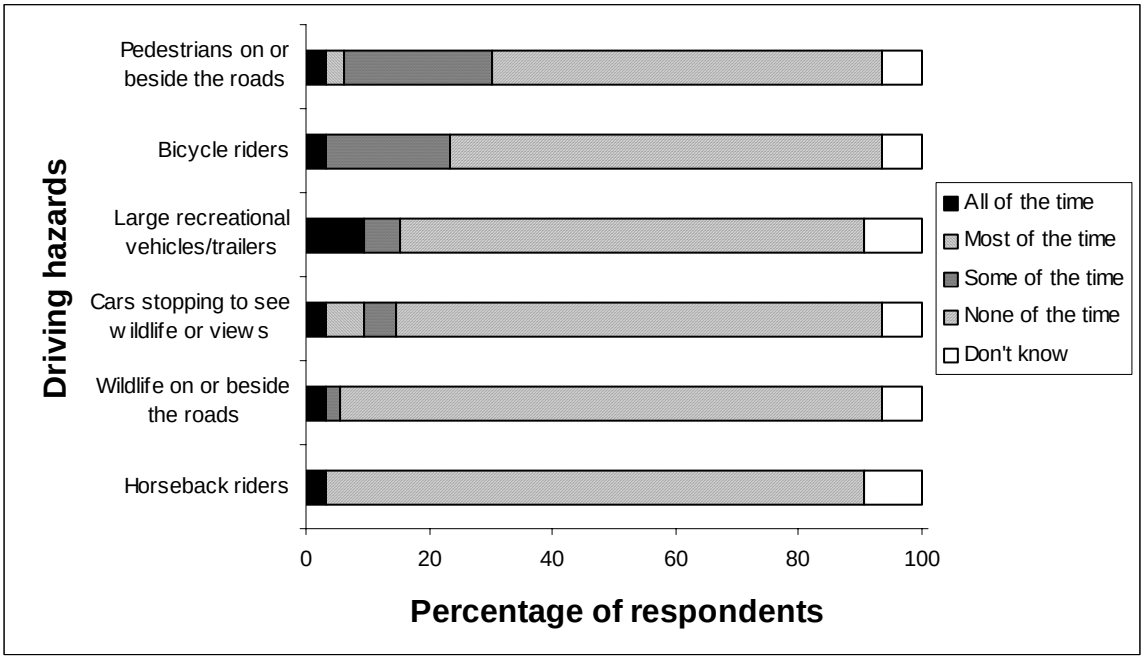

Figure 26.7: How often do these make traveling on roads more hazardous? (N=28)

26.6 Management issues:
With regard to the primary activity undertaken during their visit, 13% of respondents believed that safety was entirely the responsibility of the visitor, while 78% believed safety was the responsibility of both the visitor and the park staff (Figure 26.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity.

Figure 26.9 shows that the overwhelming majority (80%) of respondents thought such measures definitely did not detract.

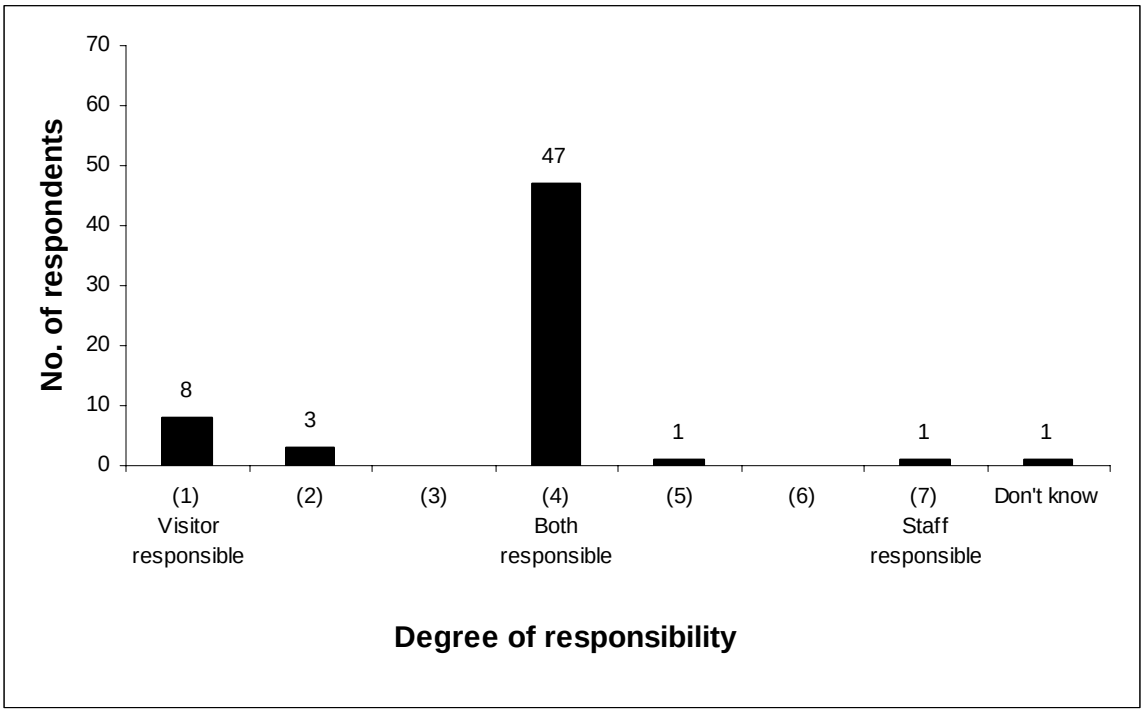

Figure 26.8: Responsibility for safety in chosen primary activity (N=61)

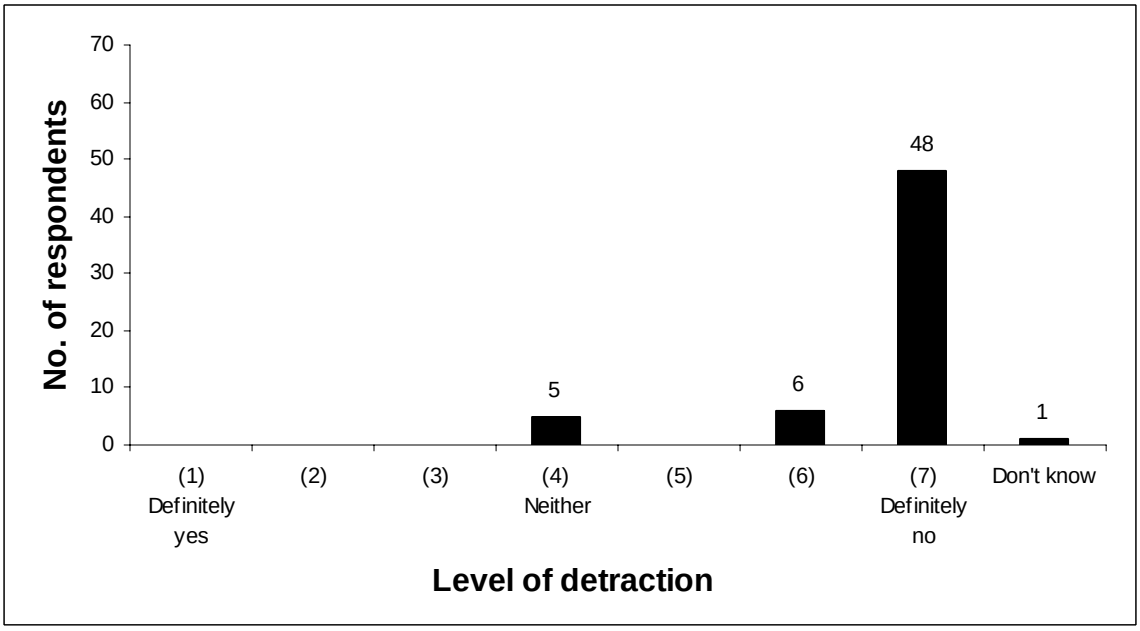

Figure 26.9: Do safety measures detract from visitor enjoyment? (N=60)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Thirty-eight percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 15% disagree or disagree strongly, and 41% neither agree nor disagree. Twenty-four percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 31% disagree or disagree strongly, and 41% neither agree nor disagree. Forty-five percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 16% agree or agree strongly, and 34% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (90%);
- signs warning and advising about hazards (88%);
- brochures and other information warning about hazards (87%);
- restrictions on the number of persons/groups who undertake particular activities (84%);
- park rangers to enforce rules and regulations (83%);
- enforcement of alcoholic beverage restrictions (77%); and,
- safe surfaces on walkways and stairs (83%).

A substantial proportion of respondents were more ambivalent about a couple of items, however, and 13% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 19% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 26.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel, other workers in the park, and directional and warning signs are the most helpful sources of safety information.

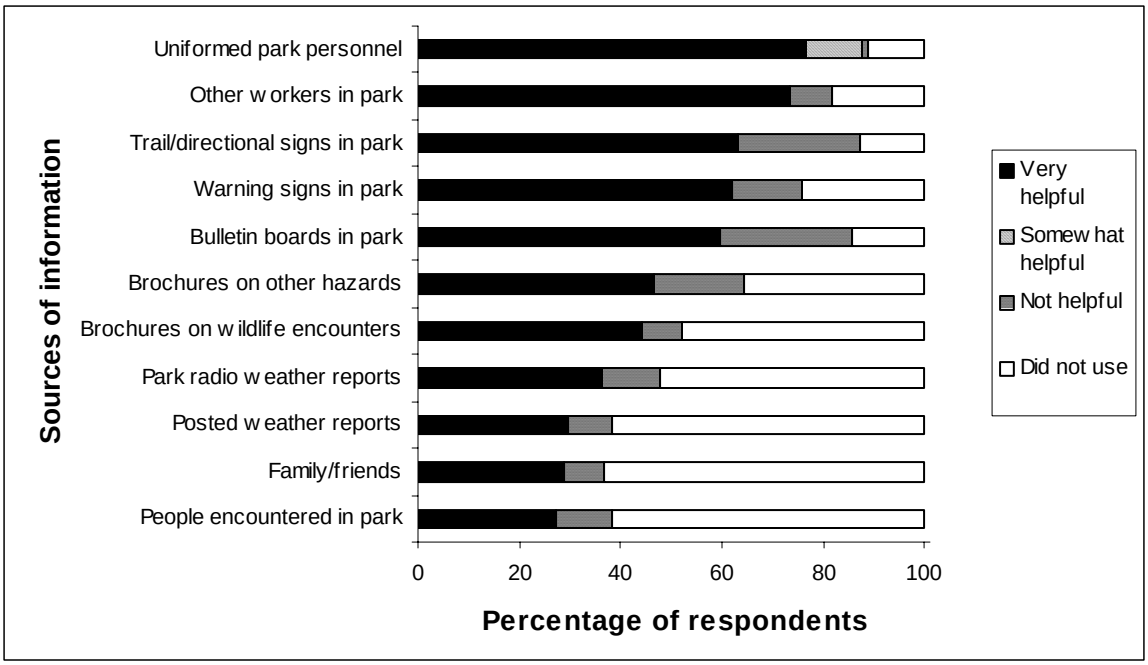

Figure 26.10: How helpful are various sources of safety information (N=27-53)

27.0 Mesa Verde National Park

27.1 Sample:

At Mesa Verde National Park, 537 visitor groups were contacted between June 14 and June 19, 2001, and 400 (74.5%) of these groups accepted questionnaires. Questionnaires were completed and returned by 290 visitor groups, resulting in a 72.5% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 3 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 287 in most cases below.

27.2 Demographics:

Figure 27.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-four percent of respondents were female and 46% male. The overwhelming majority (96%)of respondents were white, with 1% Hispanic, and 1% American Indian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 22% of respondents, while an additional 35% classified themselves as college graduates. The majority (94%) of respondents were residents of the US and 3% were international visitors, including 4 from the UK, and one from each of Austria, Canada, Germany, the Netherlands, and Switzerland.

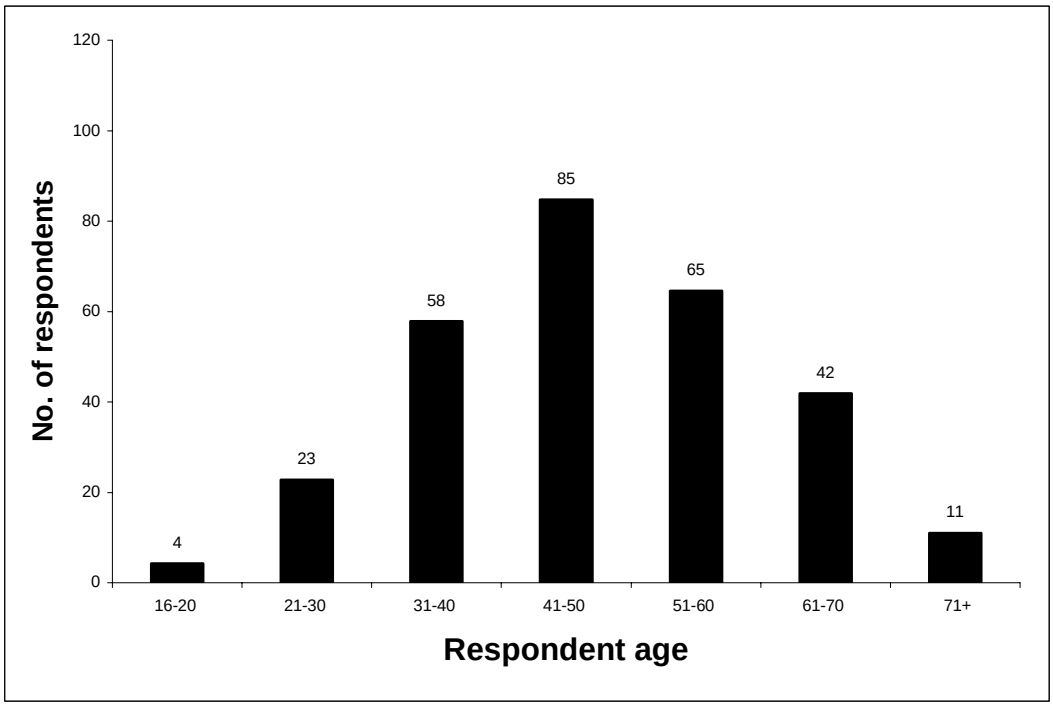

Figure 27.1: Distribution of respondents by age (N=287)

27.3 Visitation

For 63% of respondents, this was their first visit to the park. Among those respondents returning to the park, 77% had visited the park twice in the past 10 years (including the current visit), 18% 3-5 times, and 5% 6-10 times. This visit was the primary destination for 14% of respondents, but one of only several destinations for 81% of respondents. For 4% of respondents this visit was not a planned destination at all. Twenty-four percent of the respondents visited the park for a half day or less, 57% visited for up to one day, and 19% visited for more than one day. Two percent of respondents were visiting the park by themselves, 74% with family members, 10% with friends, and 10% with family members and friends.

27.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 27.2).

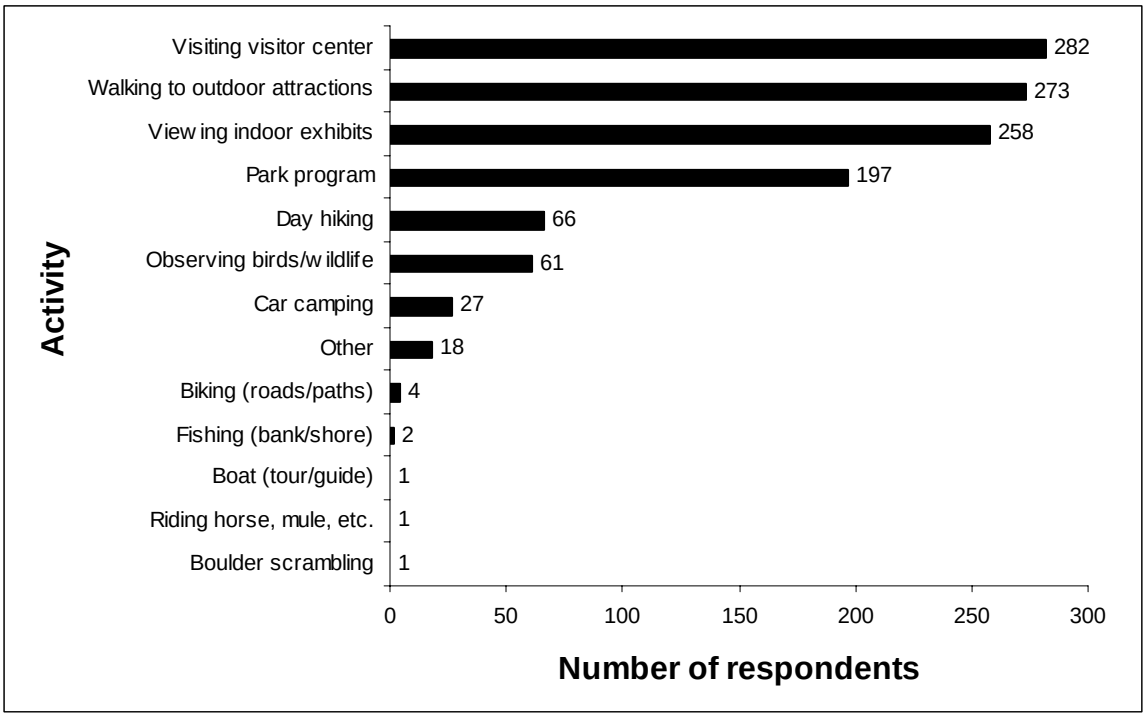

Figure 27.2: Visitor activities (N=287)
(Note: Several respondents listed more than one activity)

Figure 27.2 illustrates that many respondents visited the visitor center (98%), walked to outdoor attractions (95%), and viewed indoor exhibits (90%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 27.3 illustrates that walking to outdoor attractions (53%), park programs (34%), and hiking (5%) were the most popular primary activities. Most

respondents (69%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 4% engaged in these activities alone, 18% with people aside from their own personal group, and 8% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 27.4). Given the nature of the primary activities, ratings personal experience is difficult, and this may explain why larger proportions of respondents answered "don't know" or "can't answer" compared with some of the other parks.

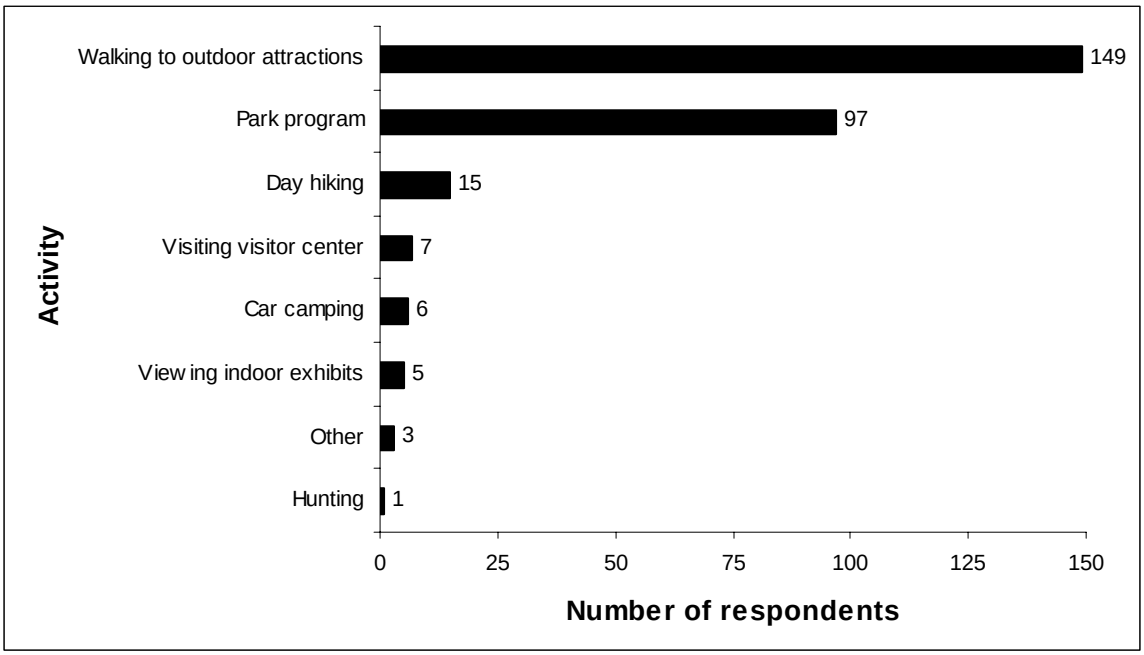

Figure 27.3: Primary visitor activities (N=283)

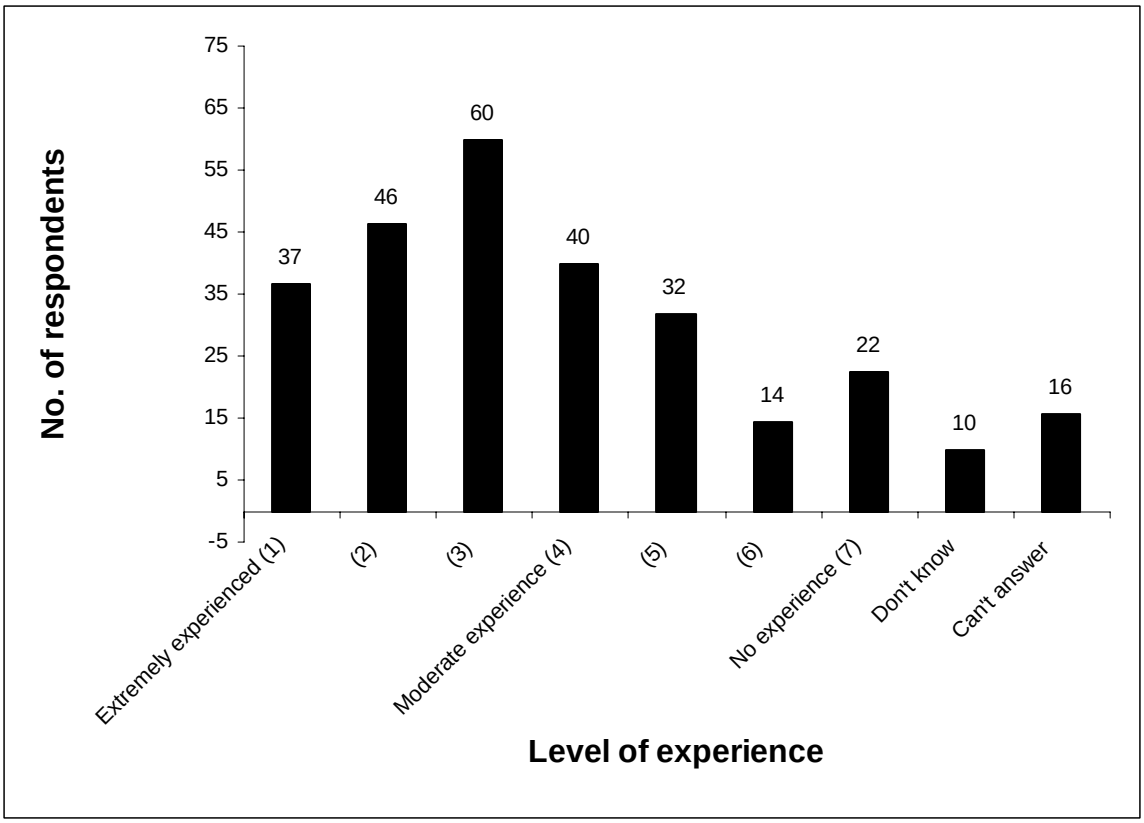

Figure 27.4: Personal level of experience (N=283)

Preparedness is one aspect of experience, and Figure 27.5 shows how prepared respondents were based on the safety items that they had available during their visit.

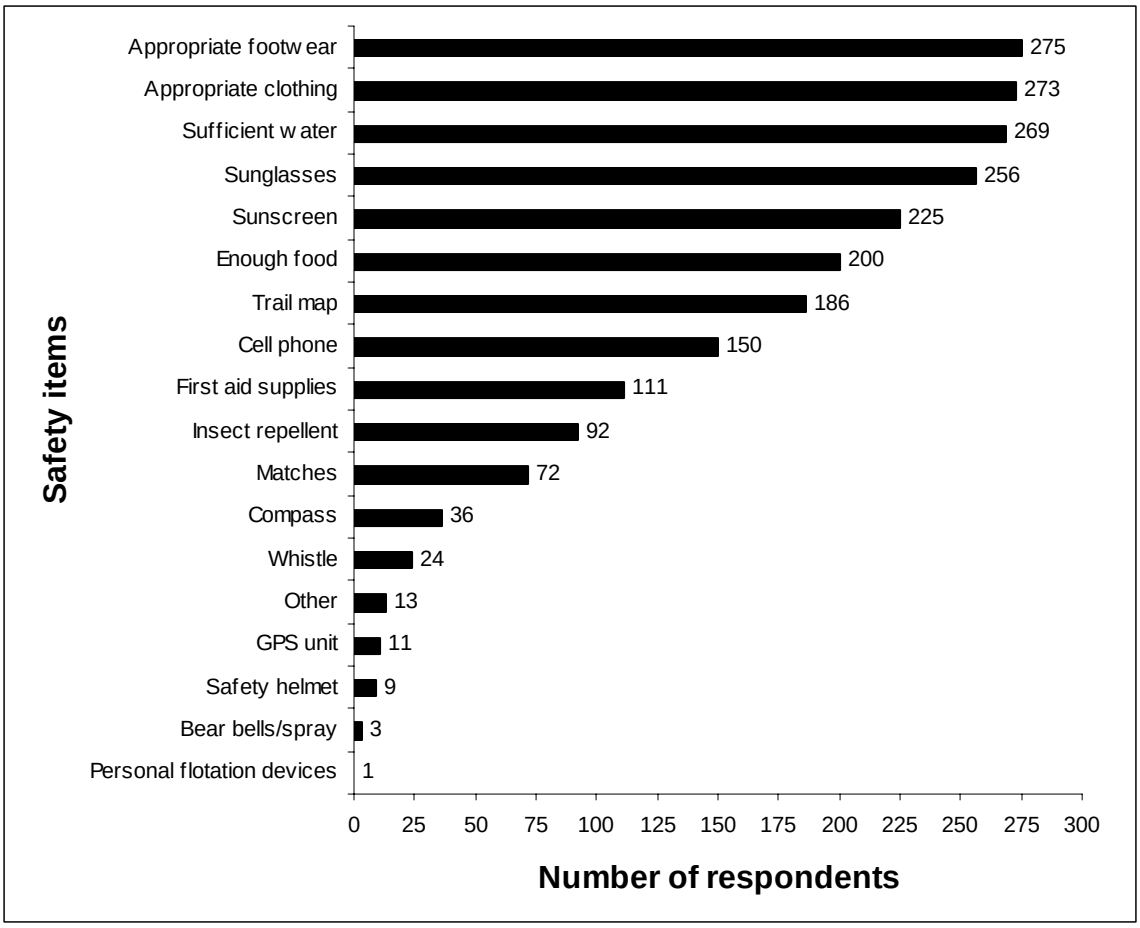

Figure 27.5: Personal safety items (N=275)

A surprisingly high proportion of respondents (23%) expressed concern about suffering an injury or illness while engaged in their primary activity. Seven percent of these respondents said that they were very concerned, and 5% of these respondents were concerned for much of the time during their visit.

Without reference to a particular activity, however, Figure 27.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of the park.

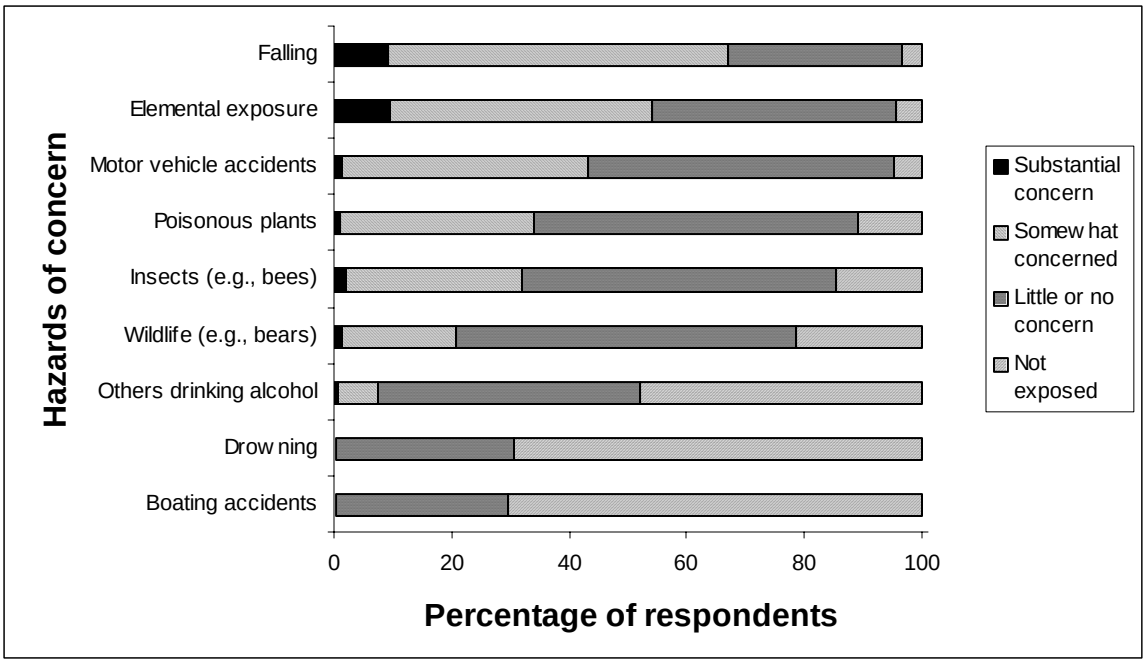

Figure 27.6: Level of concern about various hazards (N=279-284)

27.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 96% of respondents were traveling in privately owned or rented vehicles. Eighty-six percent of respondents spent all of the time in the front seat, and 7% spent some of the time in the front seat. Of these individuals, 47% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-five percent of respondents never encountered cars that were driving too fast, and 48% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 57% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 27.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

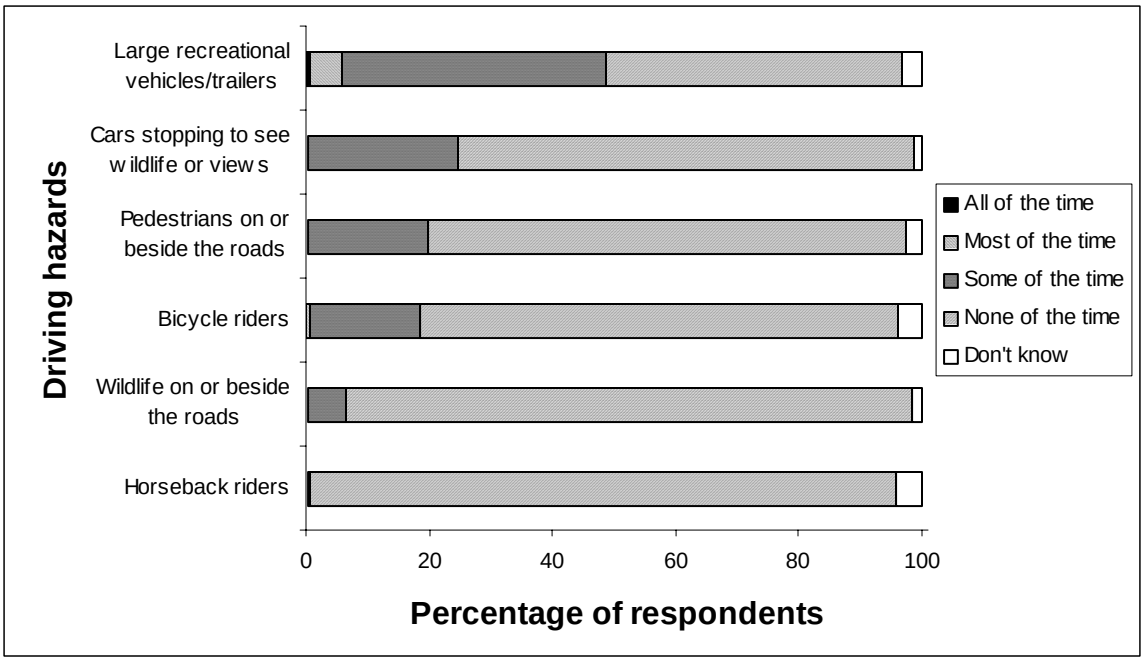

Figure 27.7: How often do these make traveling on roads more hazardous? (N=252)

27.6 Management issues:
With regard to the primary activity undertaken during their visit, 27% of respondents believed that safety was entirely the responsibility of the visitor, while 54% believed safety was the responsibility of both the visitor and the park staff (Figure 27.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 27.9 shows that the overwhelming majority (69%) of respondents thought such measures definitely did not detract. Of the two respondents who indicated that the safety measures did detract from their enjoyment, one was hiking and the other was walking to an outdoor attraction.

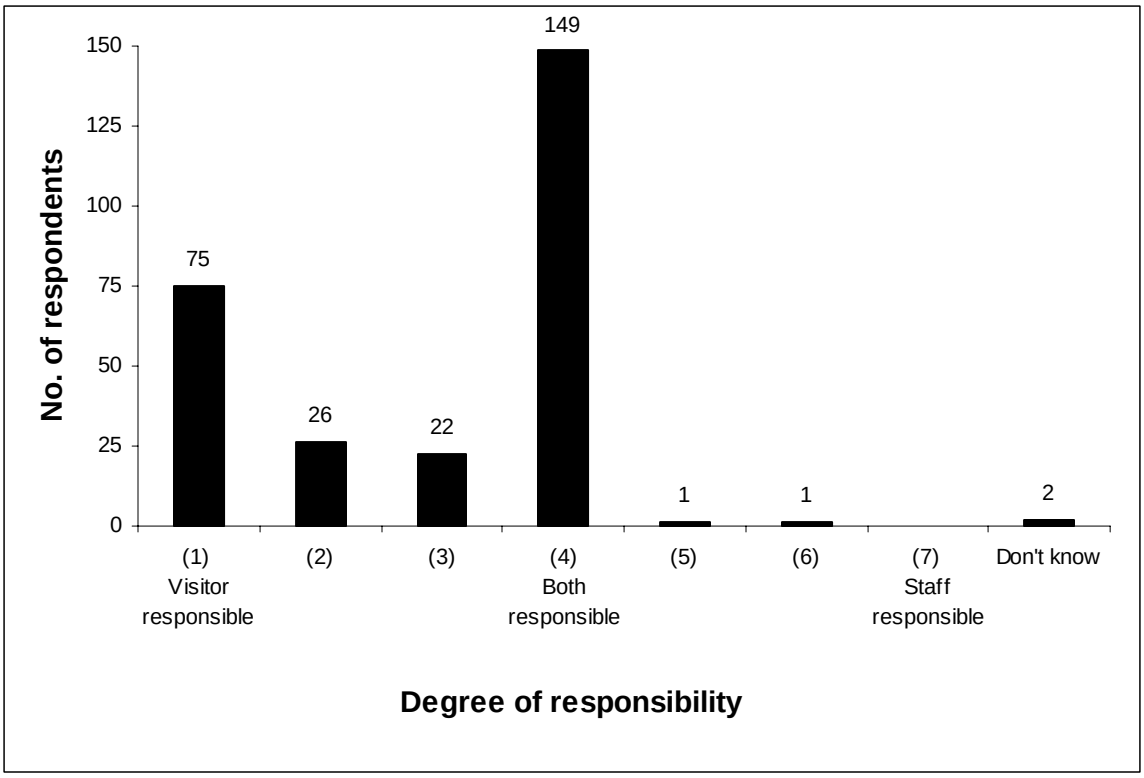

Figure 27.8: Responsibility for safety in chosen primary activity (N=277)

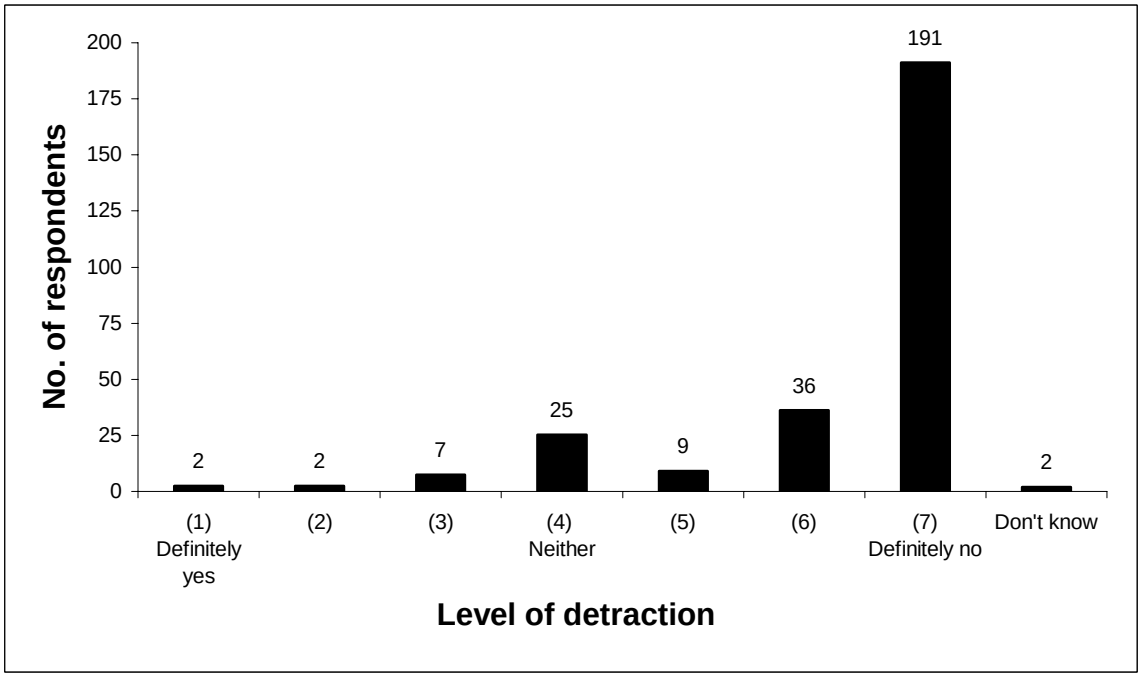

Figure 27.9: Do safety measures detract from visitor enjoyment? (N=276)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-six percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 8% disagree or disagree strongly, and 44% neither agree nor disagree. Twenty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 35% disagree or disagree strongly, and 44% neither agree nor disagree. Thirty-two percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 30% agree or agree strongly, and 35% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (88%);
- signs warning and advising about hazards (87%);
- brochures and other information warning about hazards (85%);
- restrictions on the number of persons/groups who undertake particular activities (73%);
- park rangers to enforce rules and regulations (80%);
- enforcement of alcoholic beverage restrictions (63%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (14%). A substantial proportion of respondents was more ambivalent about alcohol restrictions, however, and 27% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 27.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

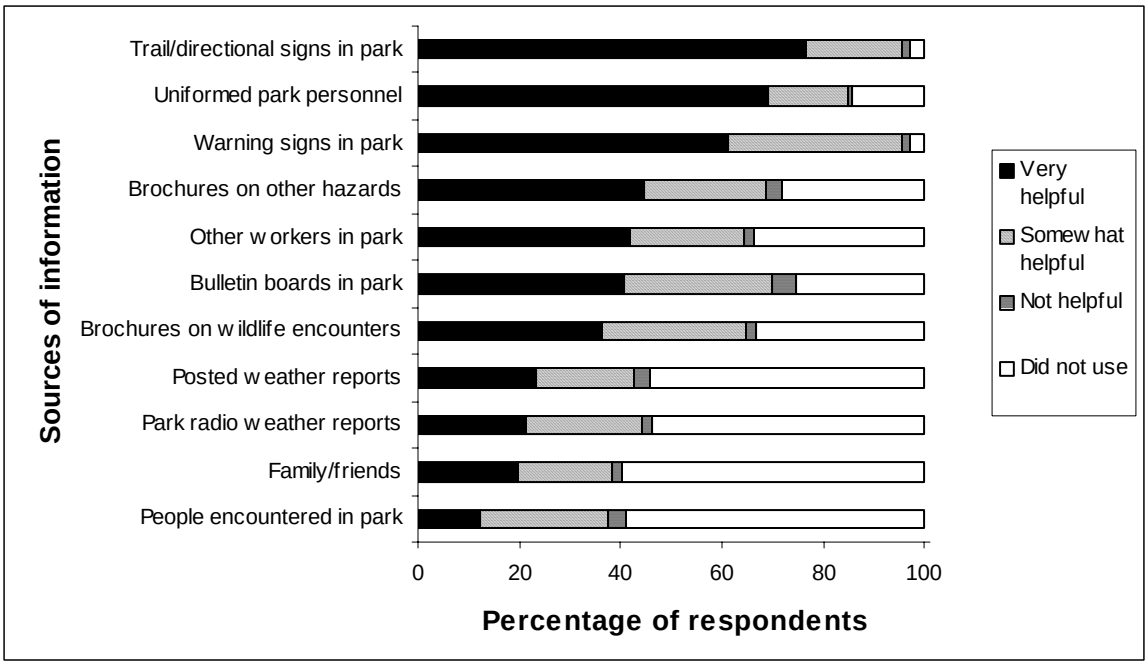

Figure 27.10: How helpful are various sources of safety information (N=195-265)

28.0 Mount Rainier National Park

28.1 Sample:

At Mount Rainier National Park, 432 visitor groups were contacted between August 2 and August 7, 2001, and 400 (92.6%) of these groups accepted questionnaires. Questionnaires were completed and returned by 232 visitor groups, resulting in a 58.0% response rate for this park.

28.2 Demographics:

Figure 28.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-eight percent of respondents were female and 52% male. The overwhelming majority (94%)of respondents were white, with 2% Hispanic, and 2% Asian. Graduate school was the highest level of education attained by 27% of respondents, while an additional 37% classified themselves as college graduates. The majority (96%) of respondents were residents of the US and 3% were international visitors, with 1 respondent from Canada, 1 from the Netherlands, 1 from Switzerland, and 5 from the UK.

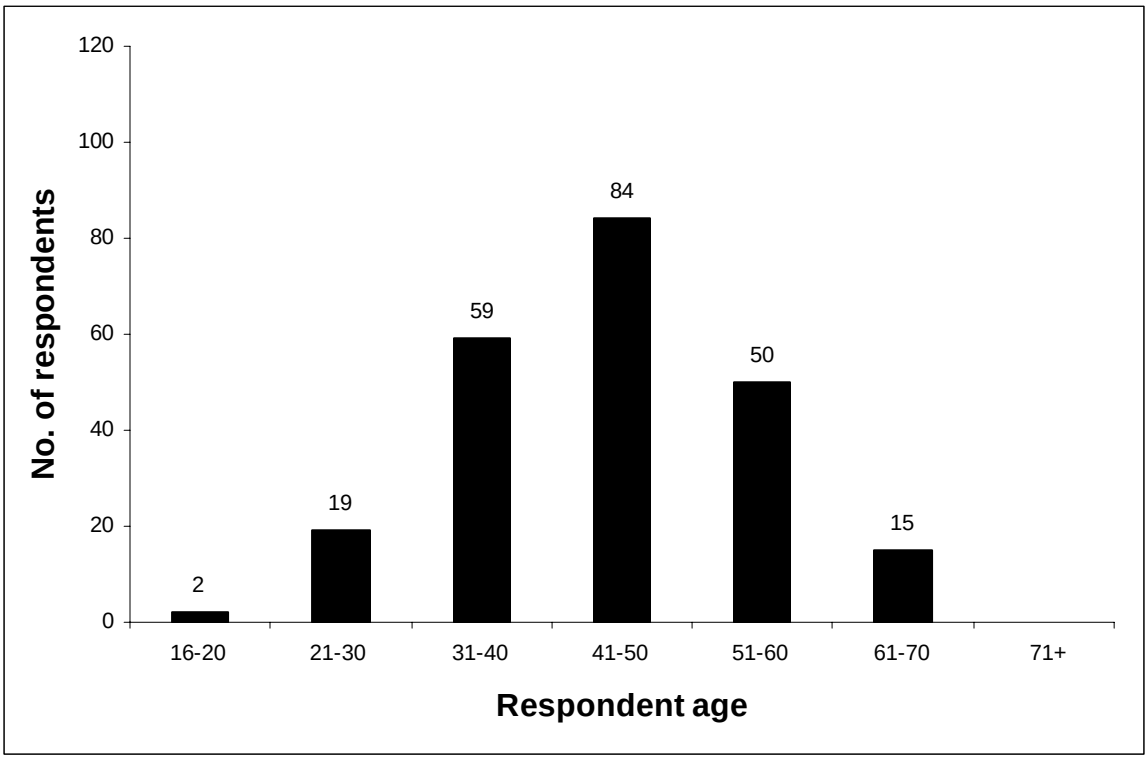

Figure 28.1: Distribution of respondents by age (N=229)

28.3 Visitation

For 52% of respondents, this was their first visit to the park. Among those 108 respondents who indicated they were returning to the park, 32% had visited the park

twice in the past 10 years (including the current visit), 32% 3-5 times, 15% 6-10 times, and 20% 11 or more times. This visit was the primary destination for 39% of respondents, but one of only several destinations for 57% of respondents. For 4% of respondents this visit was not a planned destination at all. Twenty-four percent of the respondents visited the park for a half day or less, 39% visited for up to one day, and 37% visited for more than one day. 1 percent of respondents were visiting the park by themselves, 74% with family members, 10% with friends, and 14% with family members and friends.

28.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 28.2).

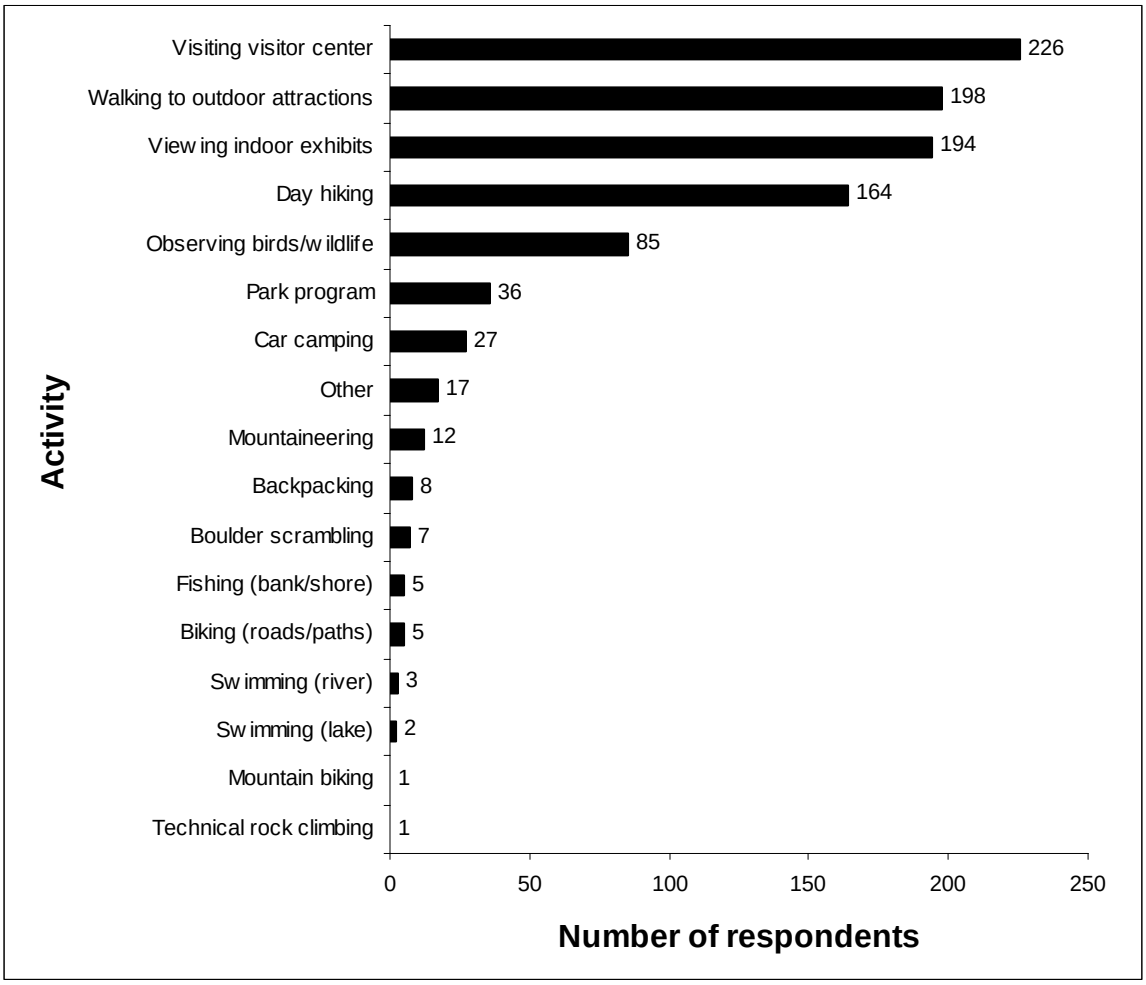

Figure 28.2: Visitor activities (N=232)
(Note: Several respondents listed more than one activity)

Figure 28.2 illustrates that many respondents visited the visitor center (97%) and viewed indoor exhibits (84%), but these are often only adjunct activities and not the primary

purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 28.3 illustrates that day hiking (56%), walking to outdoor attractions (22%), and visiting the visitor center (7%) were the most popular primary activities. Most respondents (95%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 3% engaged in these activities alone, 1% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 28.4). Ratings of personal experience varied little between activities and between males and females.

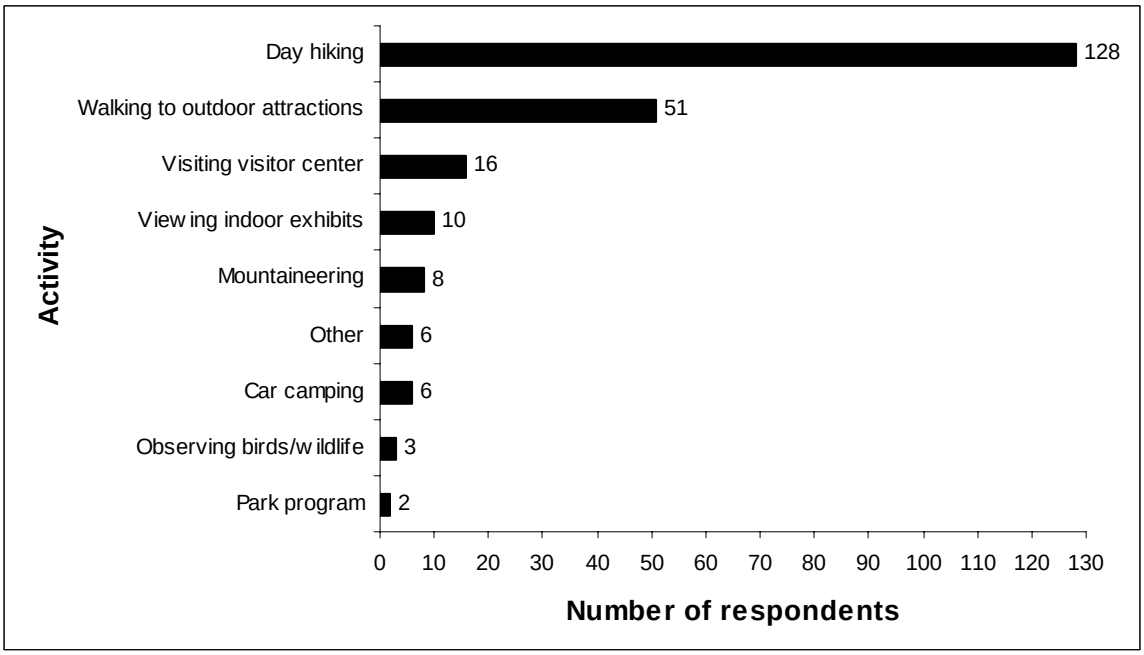

Figure 28.3: Primary visitor activities (N=230)

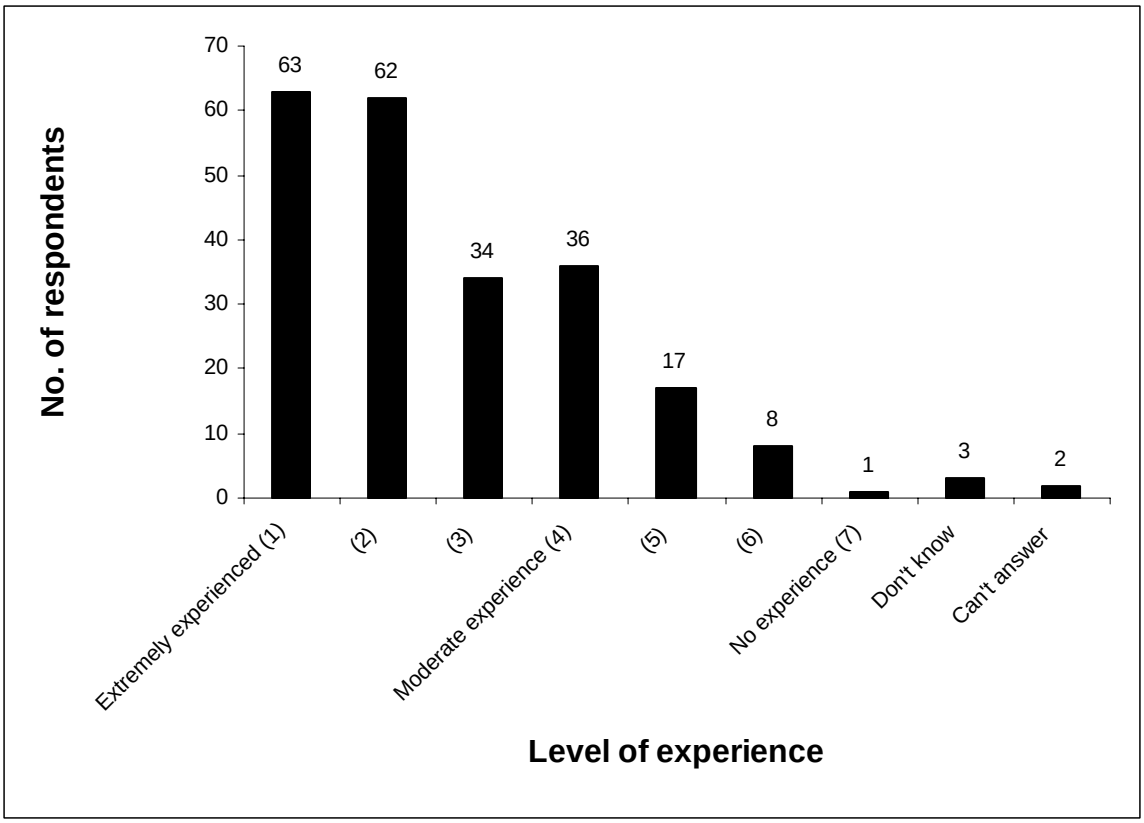

Figure 28.4: Personal level of experience (N=226)

Preparedness is one aspect of experience, and Figure 28.5 shows how prepared respondents were based on the safety items that they had available during their visit.

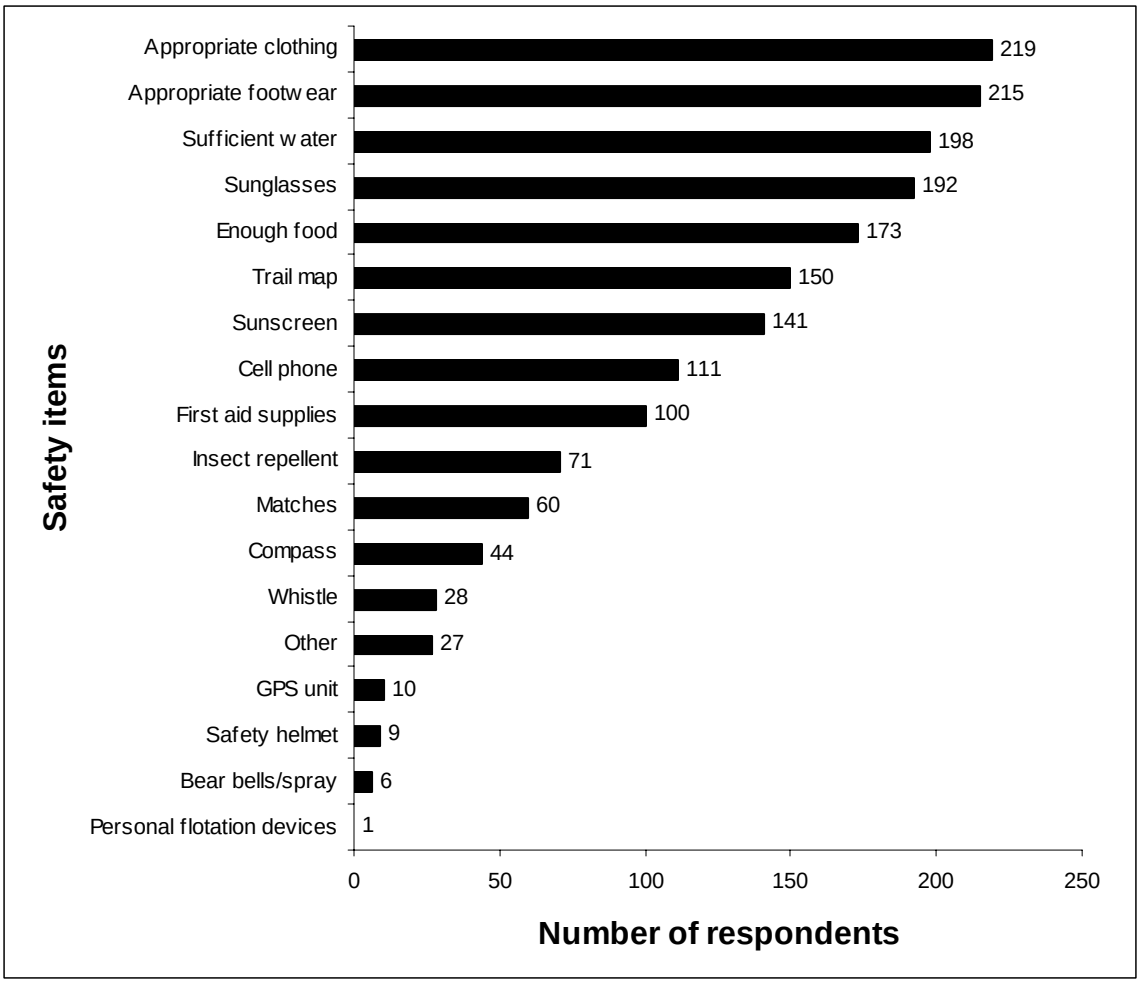

Figure 28.5: Personal safety items (N=219)

Twenty percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity. Most of these individuals were only somewhat concerned for brief periods of their visit. Only one respondent was "quite" concerned, and 2 respondents were very or quite concerned for the safety of others in their group.

Without reference to a particular activity, however, Figure 28.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be consistent with the nature of accidents reported in the park.

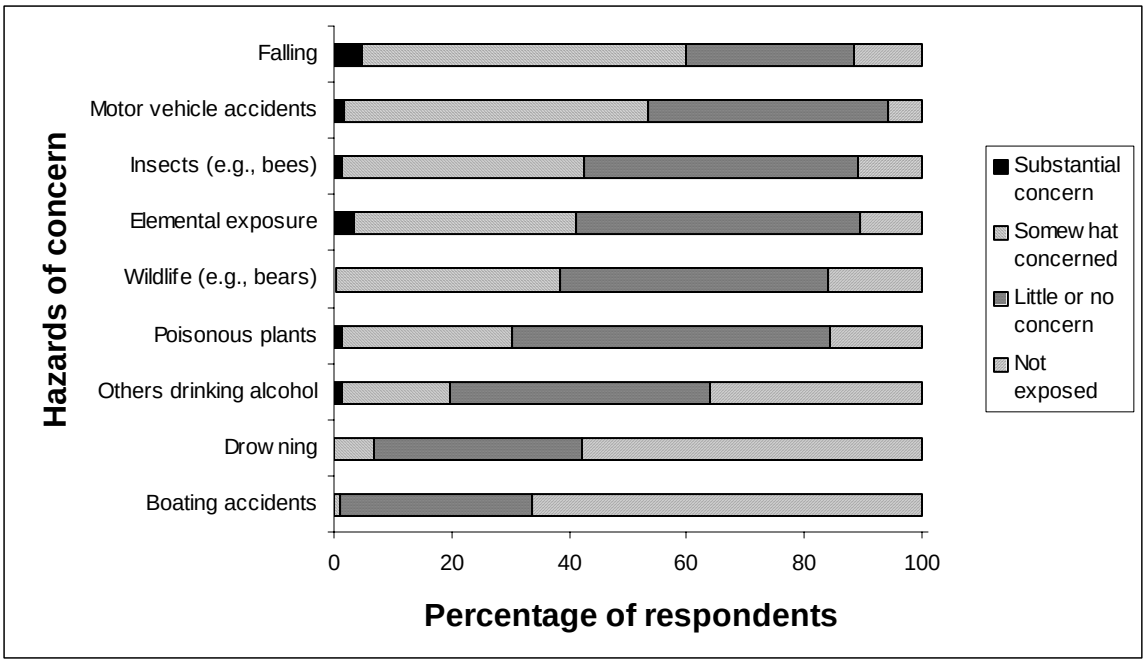

Figure 28.6: Level of concern about various hazards (N=225-230)

28.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. Eighty-three percent of respondents spent all of the time in the front seat, and 10% spent some of the time in the front seat. Of these individuals, 57% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-four percent of respondents never encountered cars that were driving too fast, and 51% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 52% of respondents encountered cars that were driving too slowly. Most (95%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time. Figure 28.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, pedestrians and large recreational vehicles are the most commonly cited driving hazards.

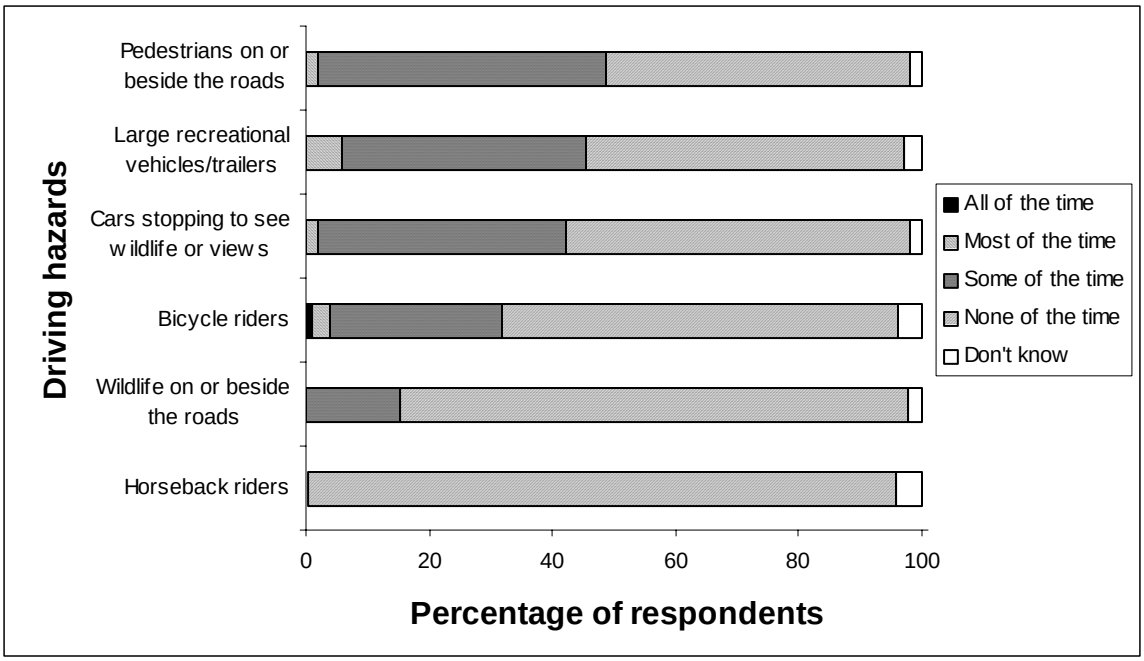

Figure 28.7: How often do these make traveling on roads more hazardous? (N=208-210)

28.6 Management issues:

With regard to the primary activity undertaken during their visit, 38% of respondents believed that safety was entirely the responsibility of the visitor, while 36% believed safety was the responsibility of both the visitor and the park staff (Figure 28.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 28.9 shows that the overwhelming majority (68%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (2%) who indicated that the safety measures did detract from their enjoyment, 3 were hiking, 1 was viewing indoor exhibits, and 1 was engaged in other unspecified activities.

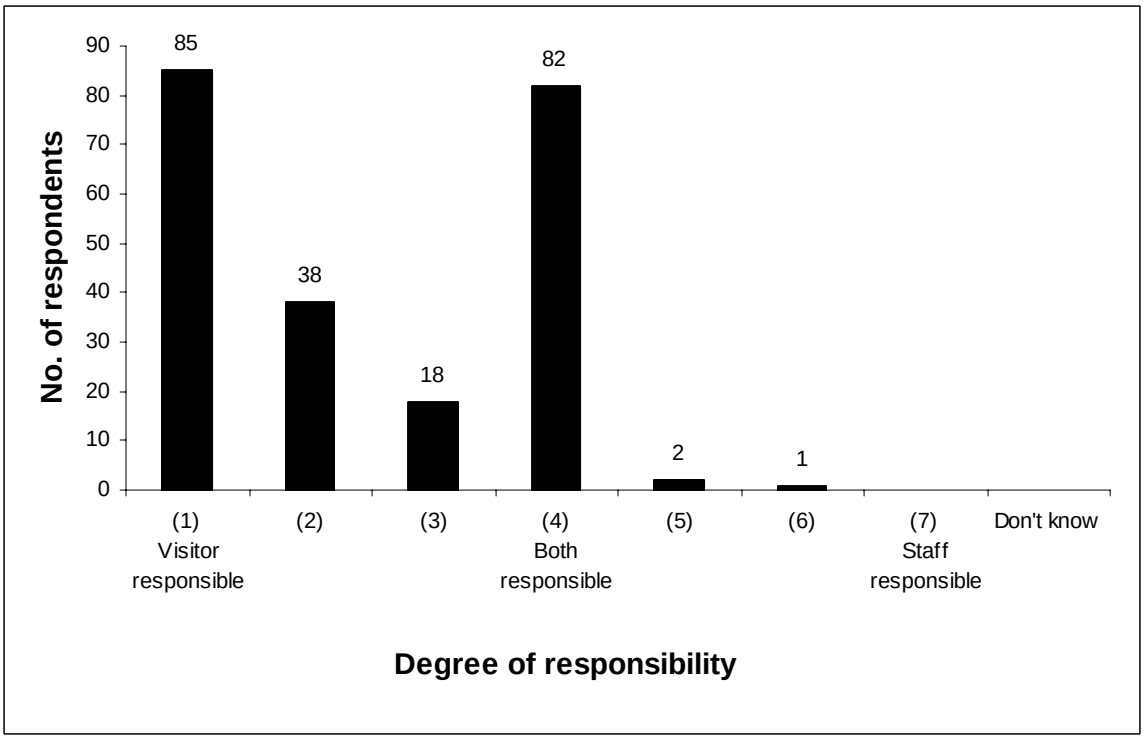

Figure 28.8: Responsibility for safety in chosen primary activity (N=226)

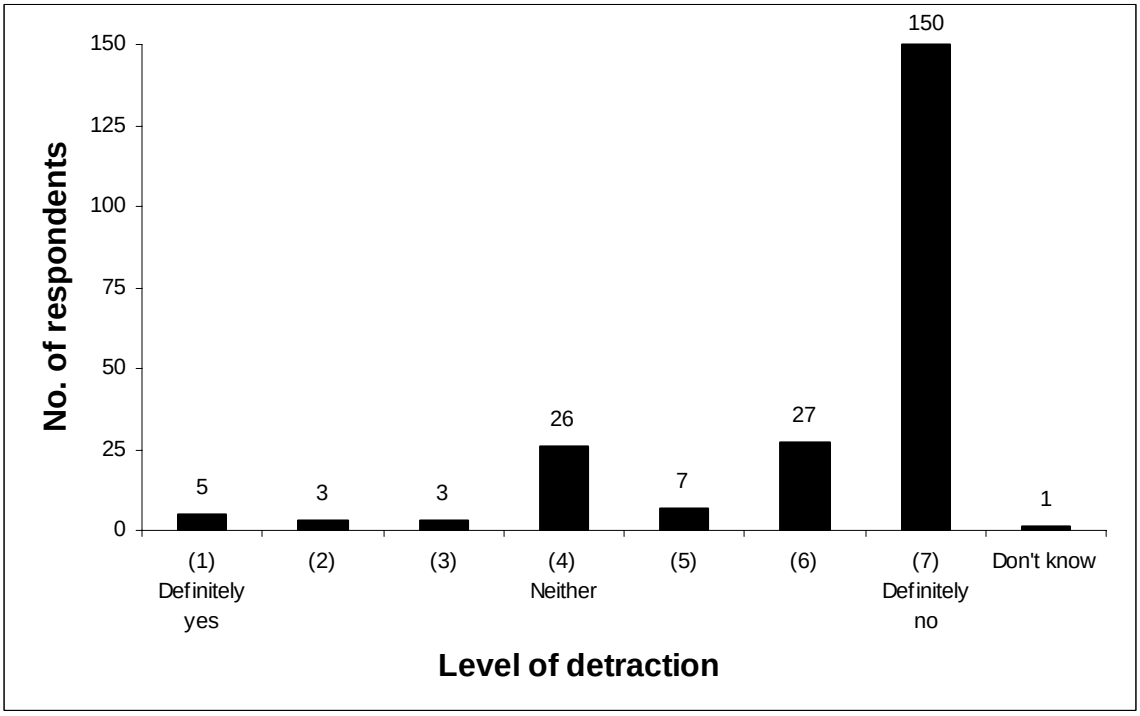

Figure 28.9: Do safety measures detract from visitor enjoyment? (N=222)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-four percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 34% neither agree nor disagree. Twenty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 44% disagree or disagree strongly, and 35% neither agree nor disagree. Thirty-six percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 29% agree or agree strongly, and 33% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (85%);
- signs warning and advising about hazards (85%);
- brochures and other information warning about hazards (84%);
- restrictions on the number of persons/groups who undertake particular activities (70%);
- park rangers to enforce rules and regulations (67%);
- enforcement of alcoholic beverage restrictions (64%); and,
- safe surfaces on walkways and stairs (82%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (24%) and more or much more enforcement of alcoholic beverage prohibitions (12%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 18% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 23% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 28.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

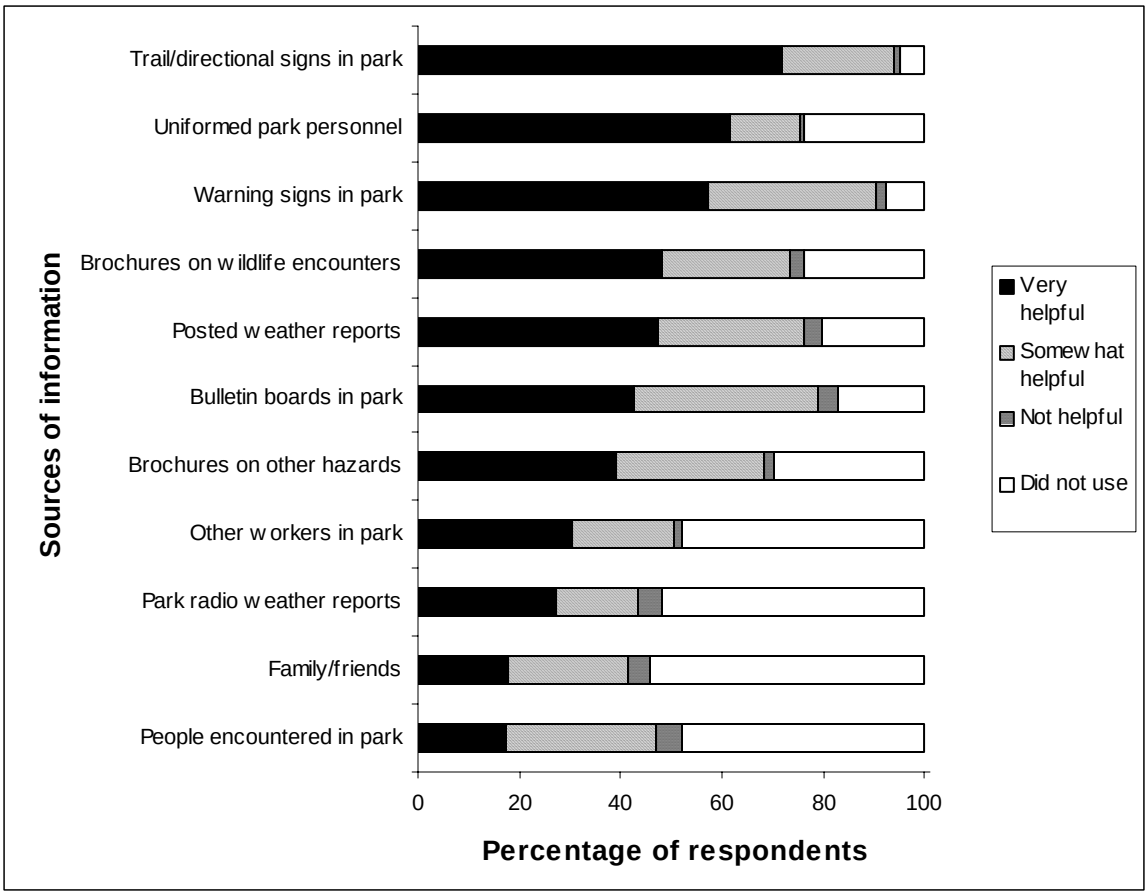

Figure 28.10: How helpful are various sources of safety information (N=148-217)

29.0 Mount Rushmore National Memorial

29.1 Sample:

At Mount Rushmore National Memorial, 481 visitor groups were contacted between July 5 and July 10, 2001, and 400 (83.2%) of these groups accepted questionnaires. Questionnaires were completed and returned by 205 visitor groups, resulting in a 51.3% response rate for this park.

29.2 Demographics:

Figure 29.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Sixty-four percent of respondents were female and 36% male. The overwhelming majority (94%)of respondents were white, with 2% African-American, 1% Hispanic, and 1% American Indian, and less than 1% Asian and less than 1% Hawaiian. Graduate school was the highest level of education attained by 20% of respondents, while an additional 27% classified themselves as college graduates. The majority (96%) of respondents were residents of the US, 1% were of unknown nationality, and 3% were international visitors, including 2 respondents from Canada, 2 from New Zealand, one from Switzerland, and 1 from the Netherlands.

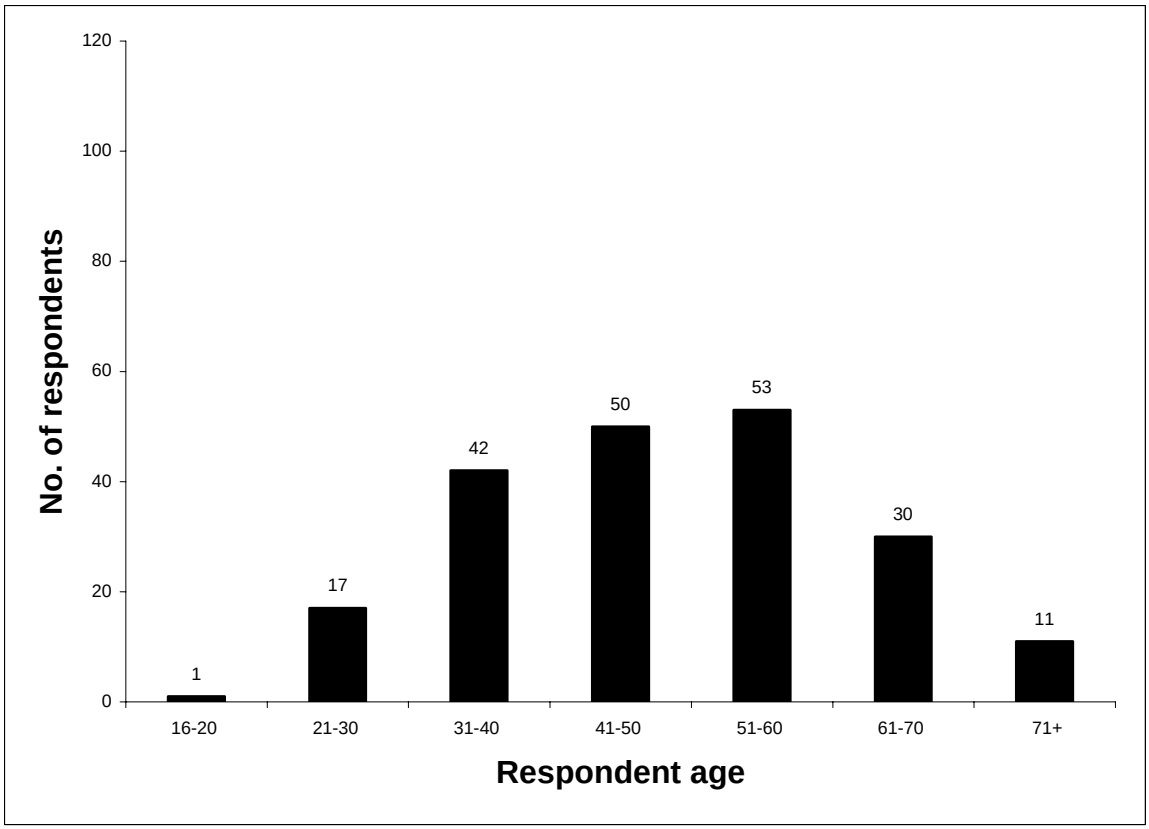

Figure 29.1: Distribution of respondents by age (N=204)

29.3 Visitation
For 51% of respondents, this was their first visit to the park. Among those 90 respondents who indicated they were returning to the park, 64% had visited the park twice in the past 10 years (including the current visit), 24% 3-5 times, 8% 6-10 times, and 3% 11 or more times. This visit was the primary destination for 14% of respondents, but one of only several destinations for 83% of respondents. For 2% of respondents this visit was not a planned destination at all. Eighty-one percent of the respondents visited the park for a half day or less, 11% visited for up to one day, and 8% visited for more than one day. Less than 1% of respondents were visiting the park by themselves, 81% with family members, 6% with friends, and 10% with family members and friends.

29.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 29.2).

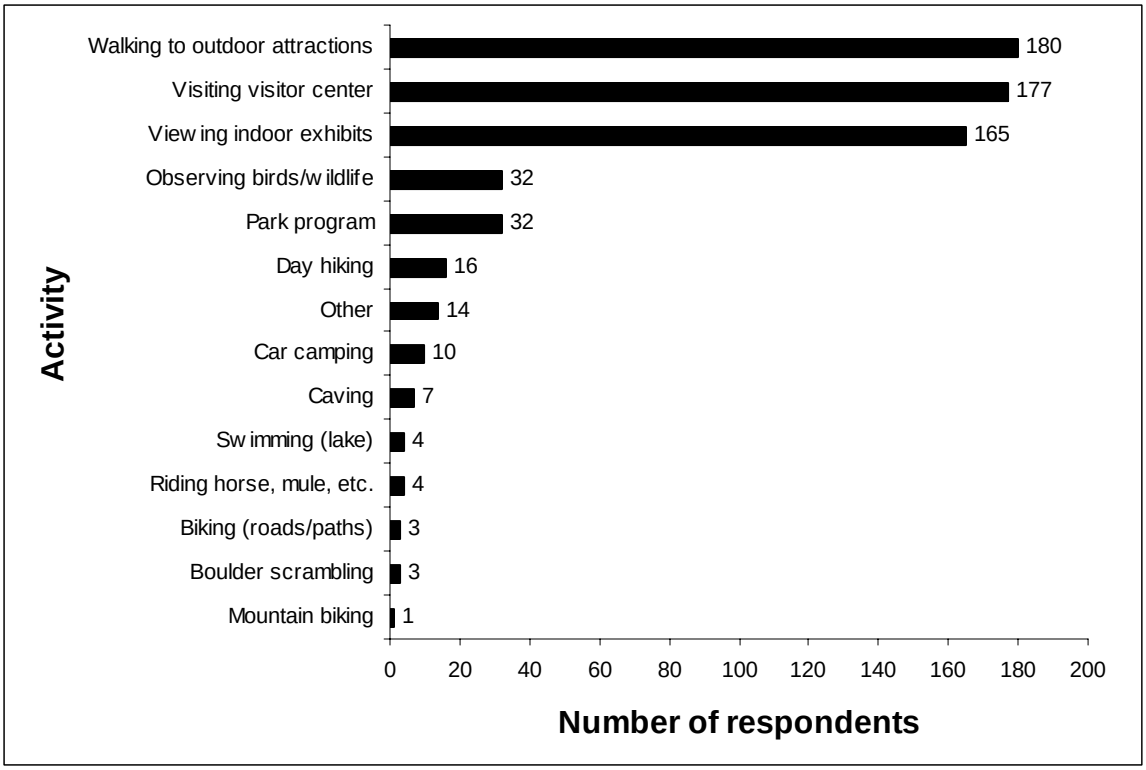

Figure 29.2: Visitor activities (N=205)
(Note: Several respondents listed more than one activity)

Figure 29.2 illustrates that many respondents visited the visitor center (86%) and viewed indoor exhibits (80%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 29.3 illustrates that walking to outdoor attractions (59%), viewing indoor exhibits (20%), and visiting the visitor center (12%) were the most popular primary activities. Most respondents (93%)

engaged in these activities with members of their own personal group (i.e., friends and family members), although 4% engaged in these activities alone, 2% with people aside from their own personal group, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 29.4). Ratings of personal experience varied little between males and females. Rating experience in these kinds of activities is difficult, and this is reflected in the 16% who indicated they didn't know or couldn't answer.

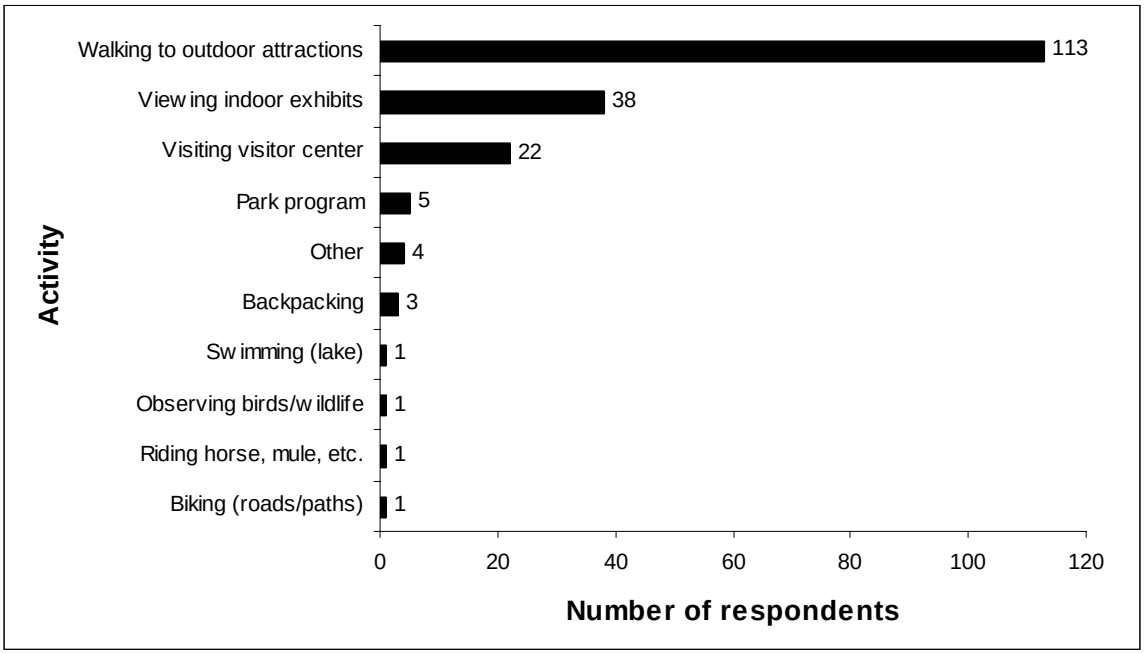

Figure 29.3: Primary visitor activities (N=191)

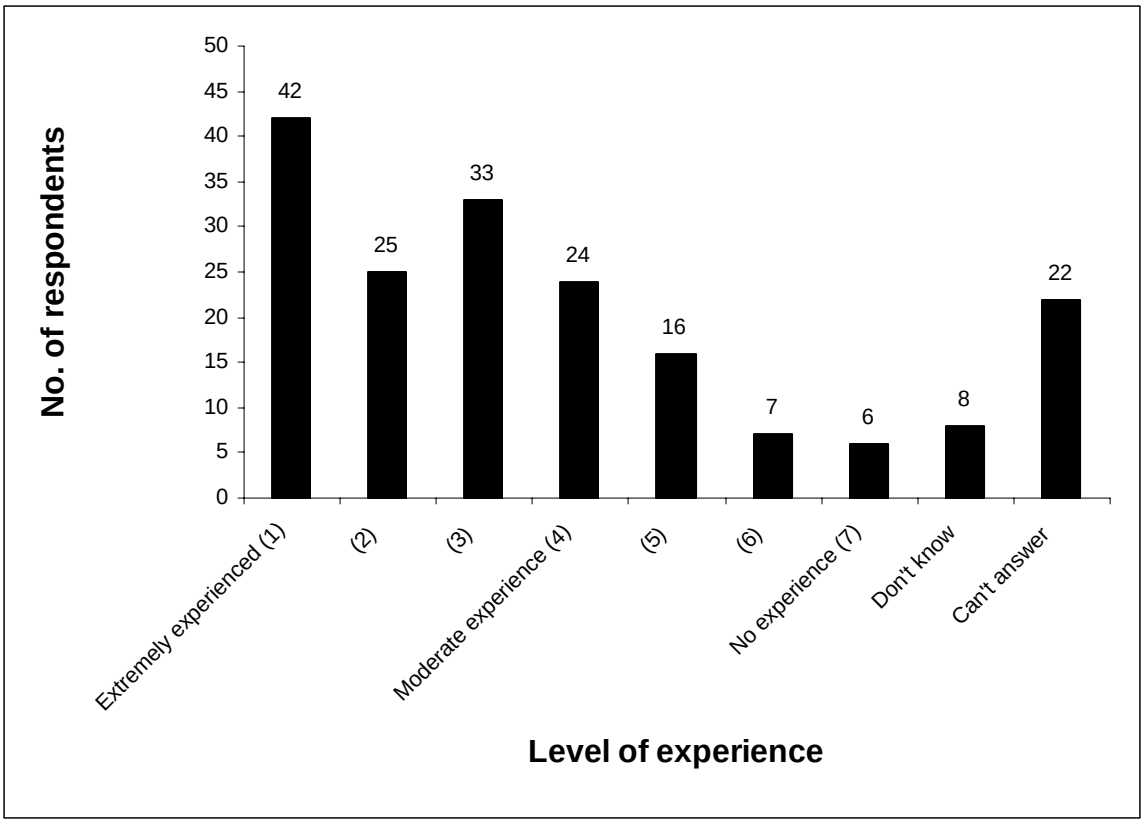

Figure 29.4: Personal level of experience (N=183)

Preparedness is one aspect of experience, and Figure 29.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given the number of respondents walking to outdoor attractions, it is perhaps surprising that no one identified appropriate clothing and footwear as safety items.

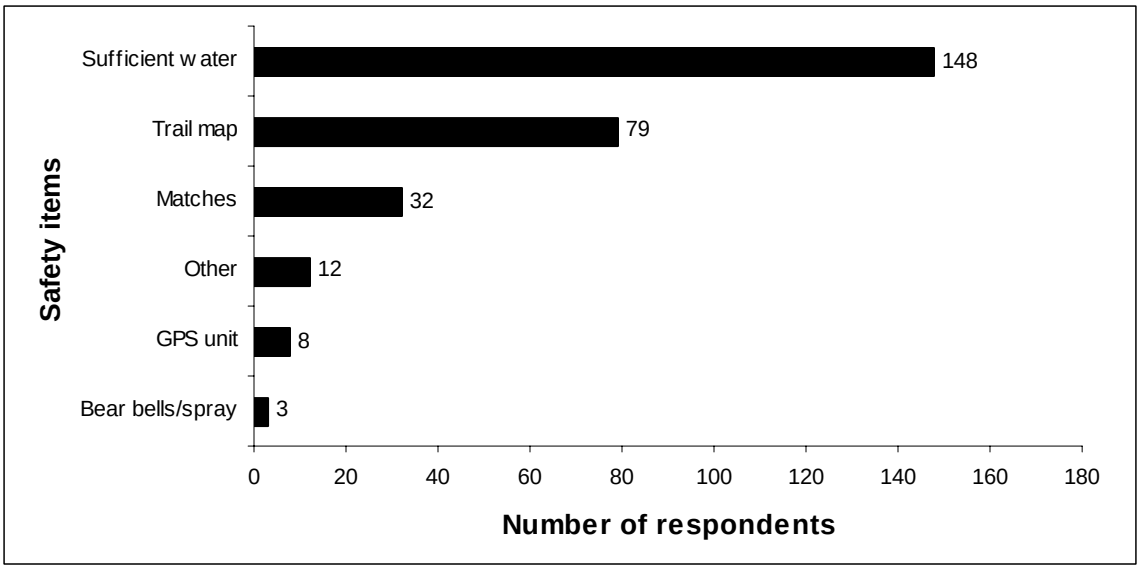

Figure 29.5: Personal safety items (N=148)

Few respondents (3%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 29.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

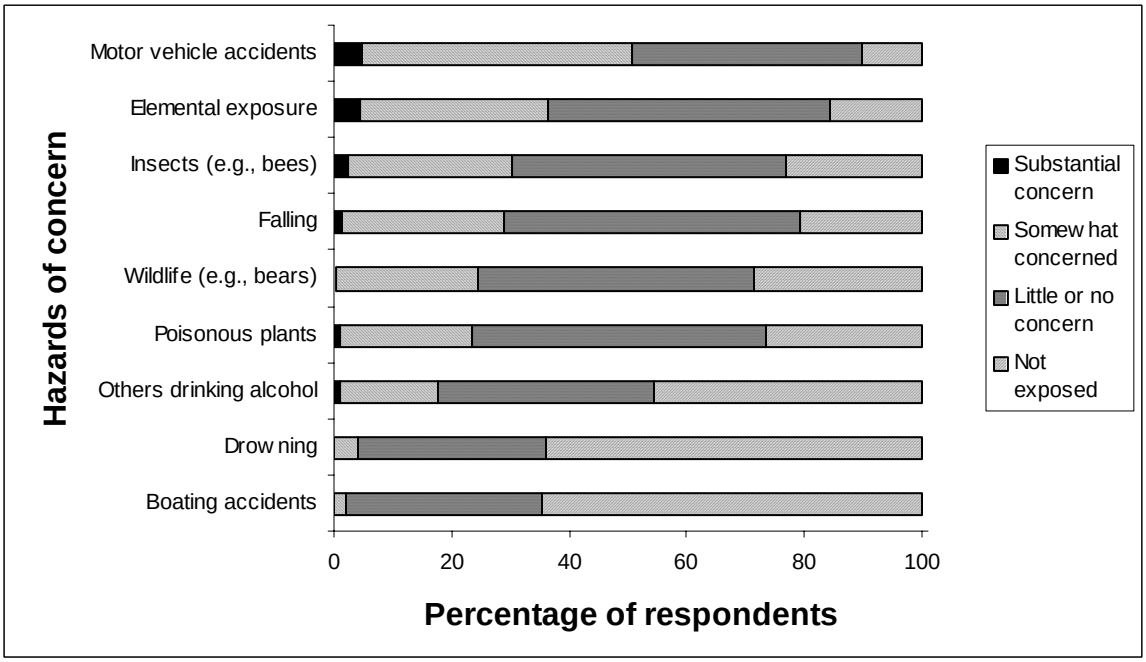

Figure 29.6: Level of concern about various hazards (N=203-204)

29.5 Motor vehicles:
Looking at motor vehicles in more detail, we find that 92% of respondents were traveling in privately owned or rented vehicles. Eighty-six percent of respondents spent all of the time in the front seat, and 6% spent some of the time in the front seat. Of these individuals, 40% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-eight percent of respondents never encountered cars that were driving too fast, and 46% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 62% of respondents encountered cars that were driving too slowly. Most (98%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 29.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and cars stopping to see the views or wildlife are the most commonly cited driving hazards.

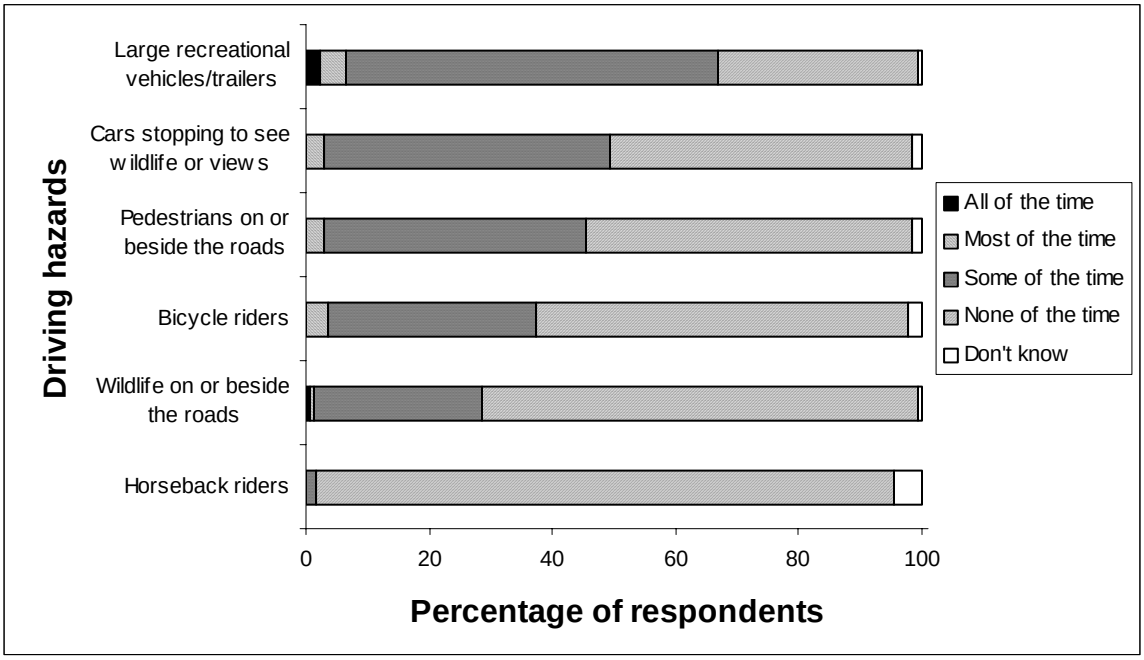

Figure 29.7: How often do these make traveling on roads more hazardous? (N=171-173)

29.6 Management issues:
With regard to the primary activity undertaken during their visit, 22% of respondents believed that safety was entirely the responsibility of the visitor, while 61% believed safety was the responsibility of both the visitor and the park staff (Figure 29.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 29.9 shows that the overwhelming majority (69%) of respondents thought such measures definitely did not detract. Of the three respondents (2%) who indicated that the safety measures did detract from their enjoyment, one was visiting the visitor center, one was walking to outdoor attractions, and one was swimming.

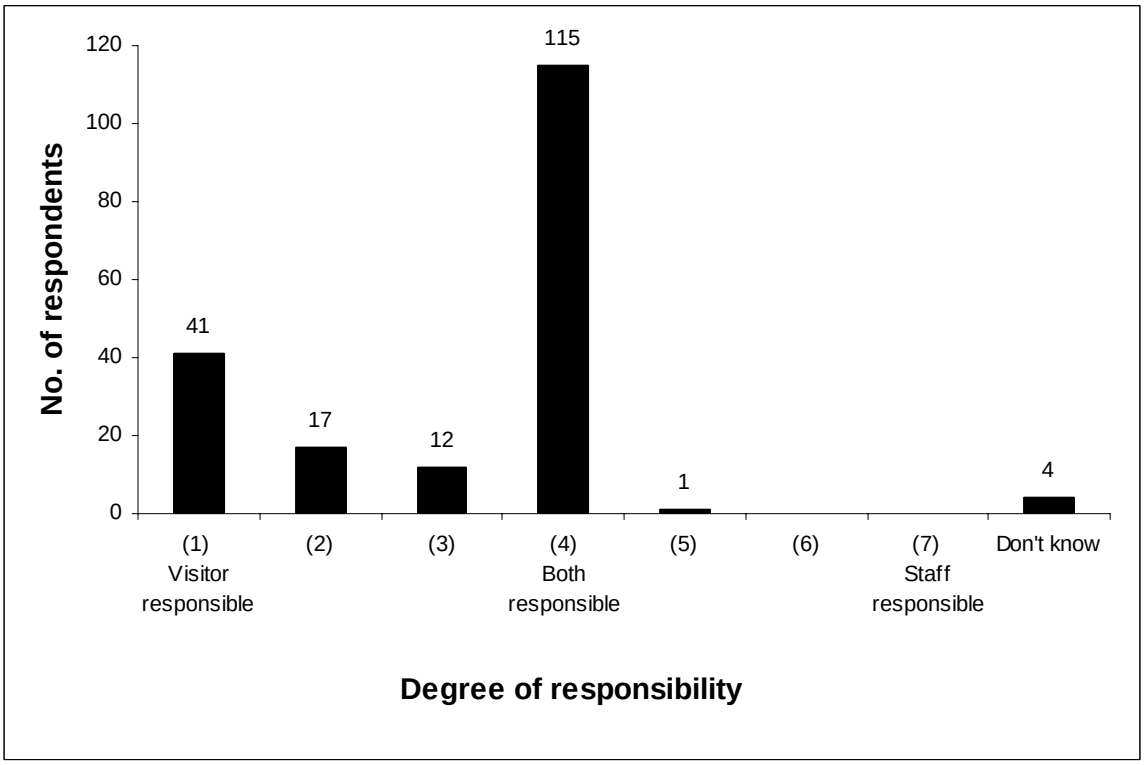

Figure 29.8: Responsibility for safety in chosen primary activity (N=190)

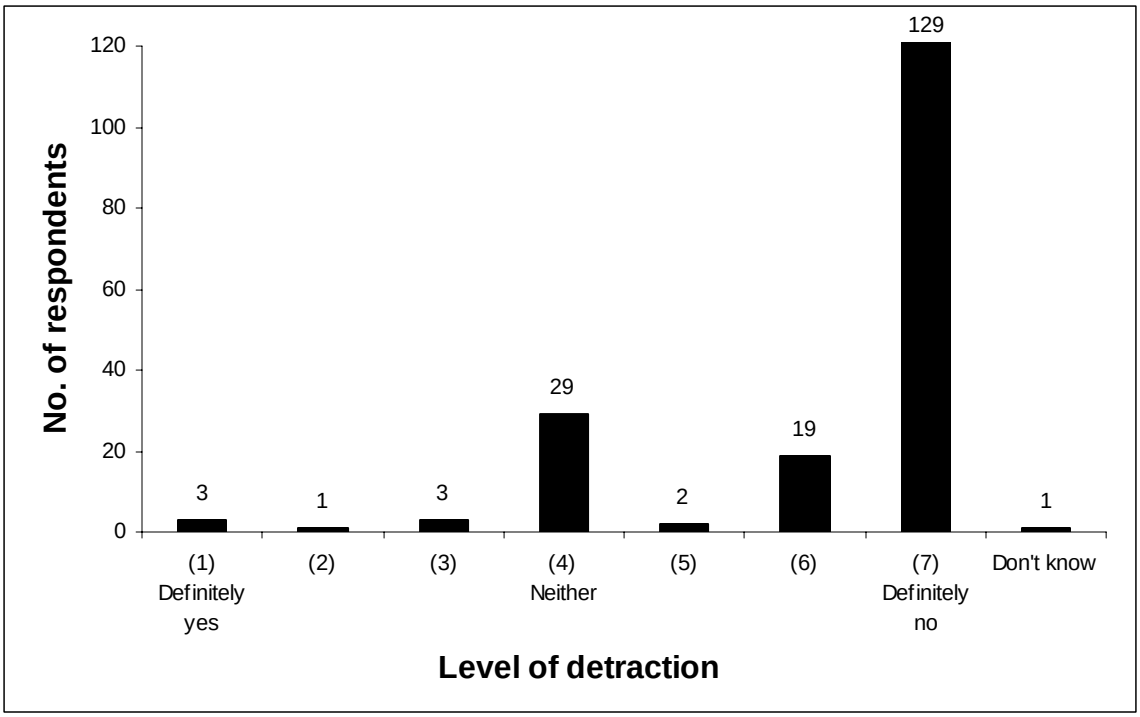

Figure 29.9: Do safety measures detract from visitor enjoyment? (N=187)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-seven percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 8% disagree or disagree strongly, and 39% neither agree nor disagree. Twenty-nine percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 30% disagree or disagree strongly, and 37% neither agree nor disagree. Thirty-eight percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 20% agree or agree strongly, and 35% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (89%);
- signs warning and advising about hazards (90%);
- brochures and other information warning about hazards (87%);
- restrictions on the number of persons/groups who undertake particular activities (78%);
- park rangers to enforce rules and regulations (79%);
- enforcement of alcoholic beverage restrictions (69%); and,
- safe surfaces on walkways and stairs (91%).

There was less support than at many other parks for more or many more rangers to enforce rules and regulations (9%) and more or much more enforcement of alcoholic beverage prohibitions (11%). As at other parks, a substantial proportion of respondents were somewhat ambivalent about a couple of items: 19% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 19% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 29.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

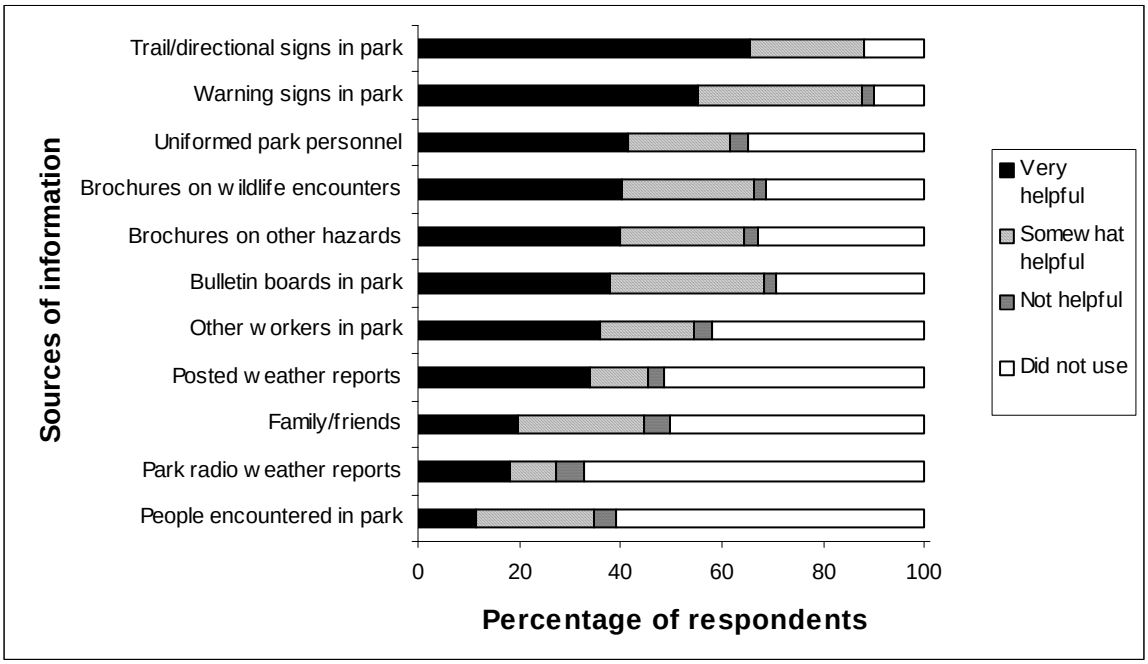

Figure 29.10: How helpful are various sources of safety information (N=110-173)

30.0 Natchez Trace Parkway

30.1 Sample:

At Natchez Trace Parkway, 141 visitor groups were contacted between May 31 and June 5, 2001, and 141 (100%) of these groups accepted questionnaires. Questionnaires were completed and returned by 104 visitor groups, resulting in a 73.7% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 2 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 102 in most cases below.

30.2 Demographics:

Figure 30.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Sixty-one percent of respondents were female and 39% male. The overwhelming majority (98%)of respondents were white, with 2% of other unspecified race/ethnicity. Graduate school was the highest level of education attained by 25% of respondents, while an additional 29% classified themselves as college graduates. One hundred-two respondents were residents of the US and one was from the UK.

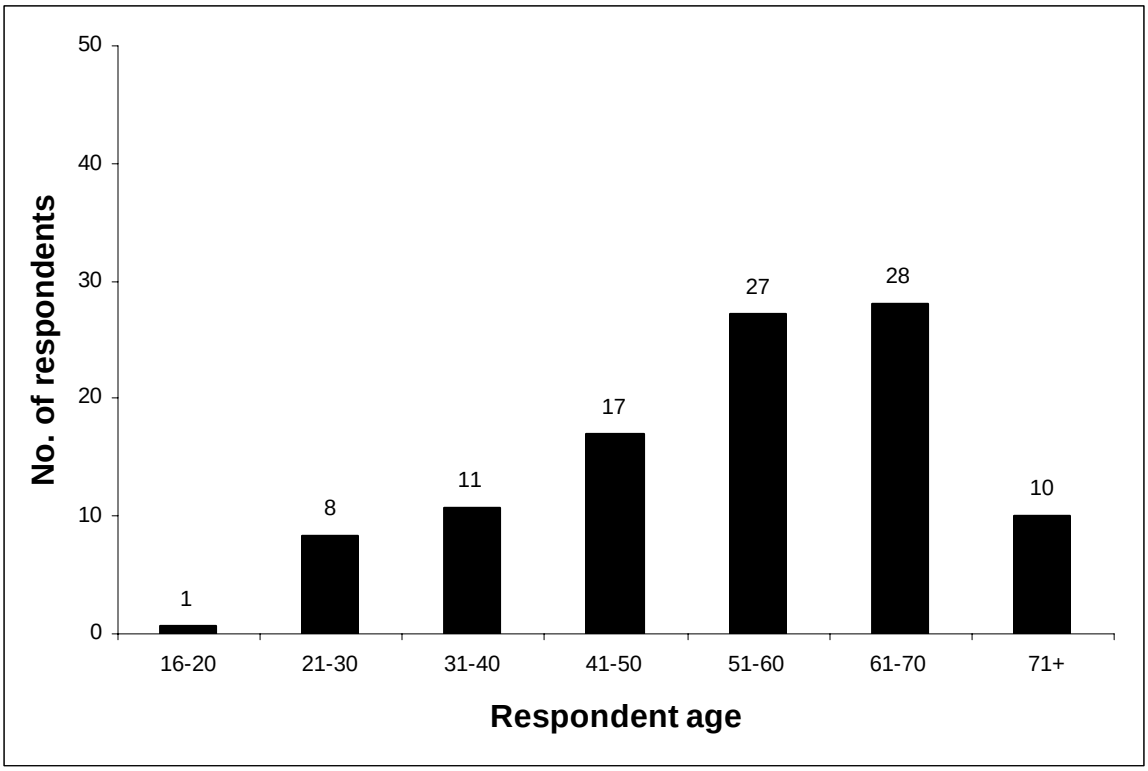

Figure 30.1: Distribution of respondents by age (N=102)

30.3 Visitation

For 49% of respondents, this was their first visit to the park. Among those respondents returning to the park, 28% had visited the park twice in the past 10 years (including the current visit), 23% 3-5 times, 11% 6-10 times, and 37% 11 or more times. This visit was the primary destination for 20% of respondents, but one of only several destinations for 54% of respondents. For 26% of respondents this visit was not a planned destination at all. Fifty percent of the respondents visited the park for a half day or less, 26% visited for up to one day, and 23% visited for more than one day. Ten percent of respondents were visiting the park by themselves, 78% with family members, 8% with friends, and 4% with family members and friends.

30.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 30.2).

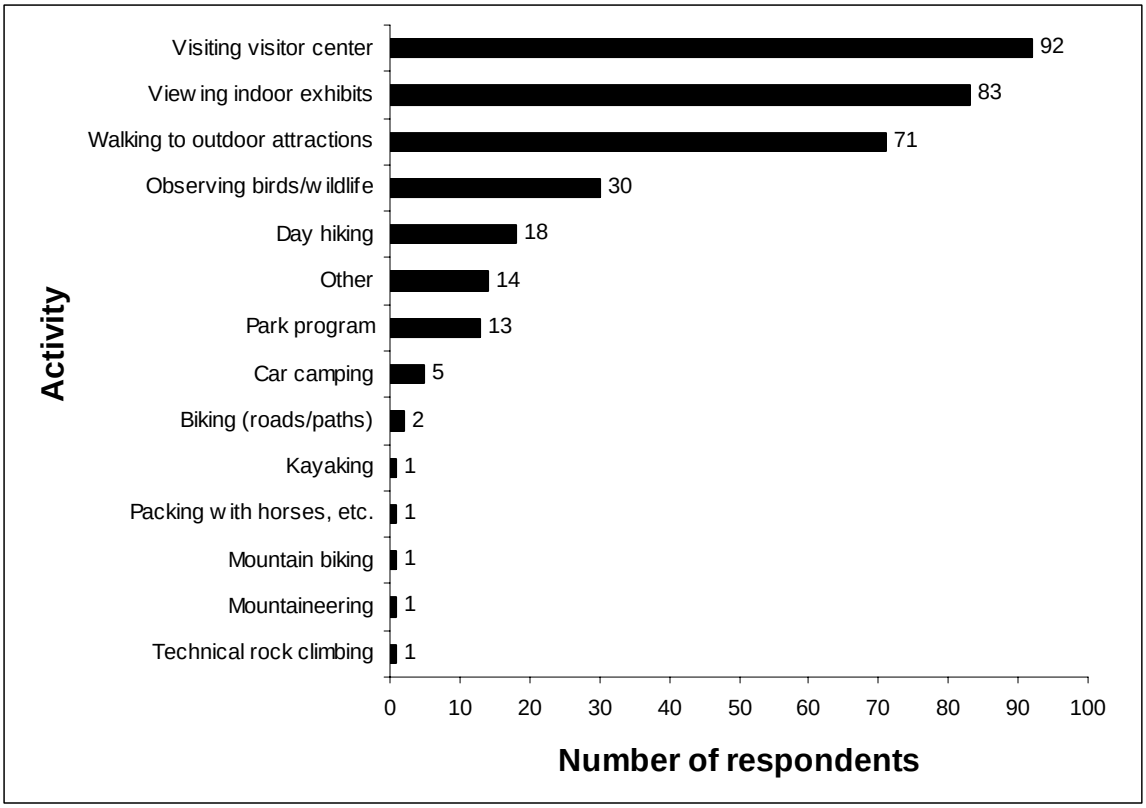

Figure 30.2: Visitor activities (N=102)
(Note: Several respondents listed more than one activity)

Figure 30.2 illustrates that many respondents visited the visitor center (90%) and viewed indoor exhibits (81%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 30.3 illustrates that walking to outdoor attractions (45%), visiting the visitor center (18%), and viewing

indoor exhibits (13%) were the most popular primary activities. Most respondents (86%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 11% engaged in these activities alone, and 3% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 30.4). Given the nature of the primary activities, ratings personal experience is difficult, and this may explain why larger proportions of respondents answered "don't know" or "can't answer" compared with some of the other parks.

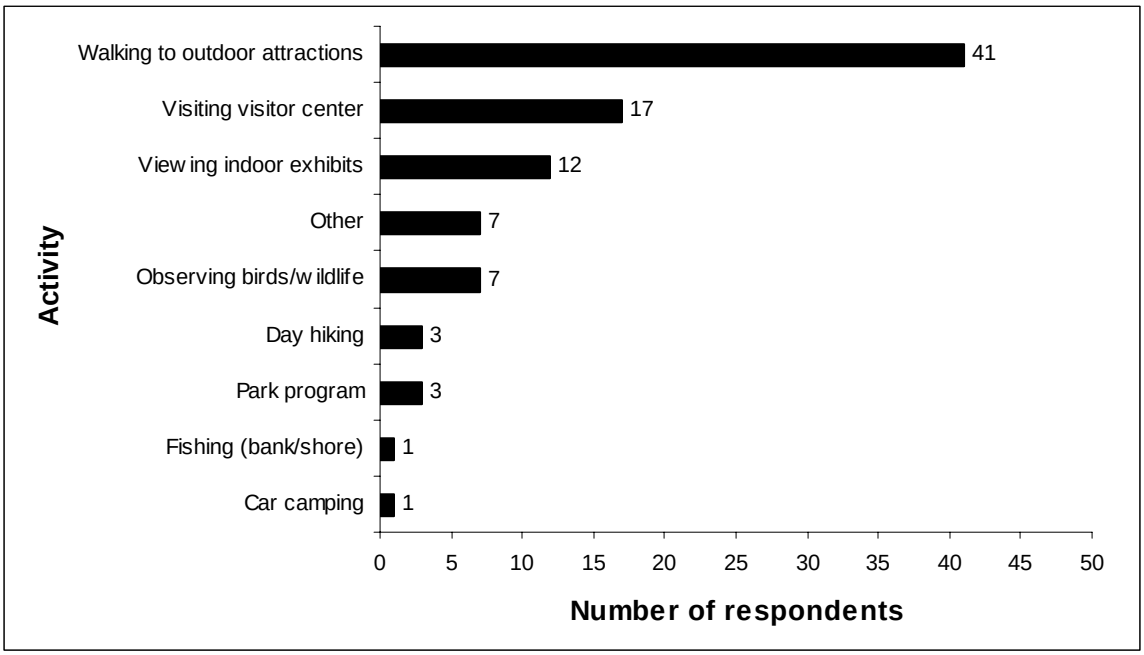

Figure 30.3: Primary visitor activities (N=92)

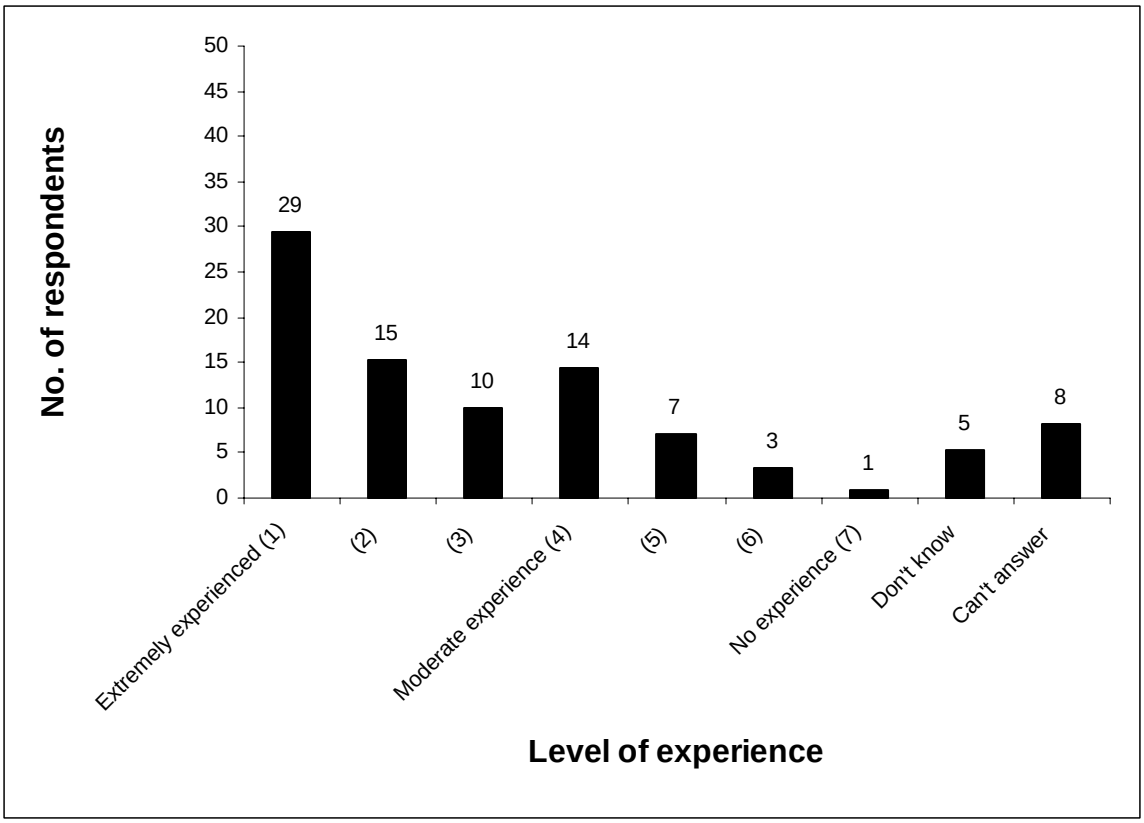

Figure 30.4: Personal level of experience (N=94)

Preparedness is one aspect of experience, and Figure 30.5 shows how prepared respondents were based on the safety items that they had available during their visit.

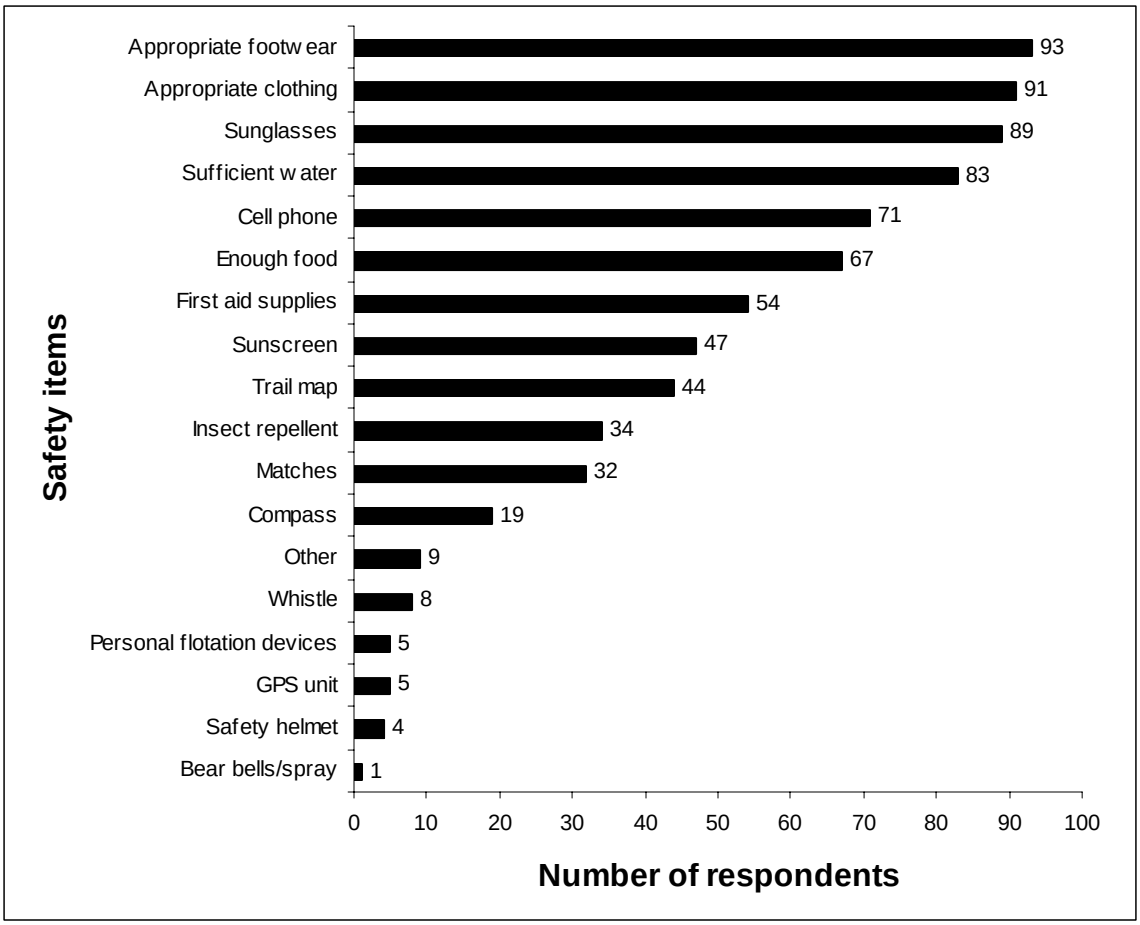

Figure 30.5: Personal safety items (N=93)

Few respondents (9%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 30.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of the park, although one might expect motor vehicle accidents to be more prominent.

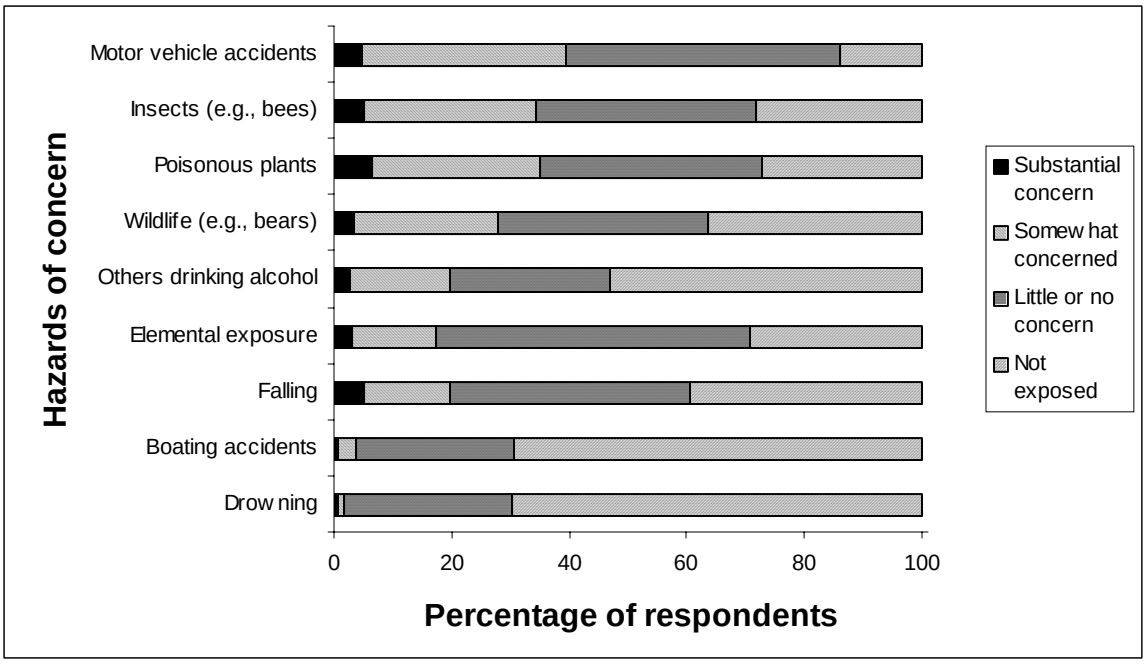

Figure 30.6: Level of concern about various hazards (N=99)

30.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 97% of respondents were traveling in privately owned or rented vehicles. Ninety-six percent of respondents spent all of the time in the front seat, and 3% spent some of the time in the front seat. Of these individuals, 59% were driving for all or most of the time and 98% were wearing seatbelts most or all of the time. The majority (98%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty-eight percent of respondents never encountered cars that were driving too fast, and 57% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 27% of respondents encountered cars that were driving too slowly. Most (99%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 92% thought that hazard-warning signs were adequate most or all of the time. Figure 30.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders, large recreational vehicles, and wildlife are the most commonly cited driving hazards, although these are only cited as problems some of the time.

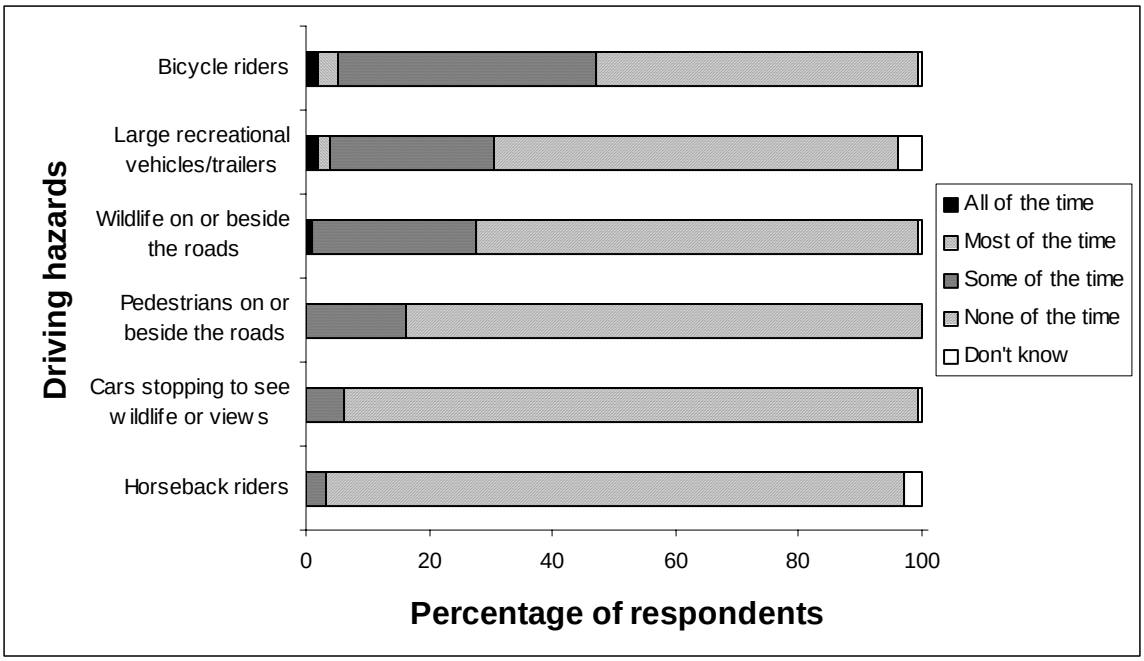

Figure 30.7: How often do these make traveling on roads more hazardous? (N=95-97)

30.6 Management issues:
With regard to the primary activity undertaken during their visit, 45% of respondents believed that safety was entirely the responsibility of the visitor, while 47% believed safety was the responsibility of both the visitor and the park staff (Figure 30.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 30.9 shows that the overwhelming majority (79%) of respondents thought such measures definitely did not detract. The two respondents that indicated that the safety measures did detract from their enjoyment to some extent were both involved in walking to an outdoor attraction.

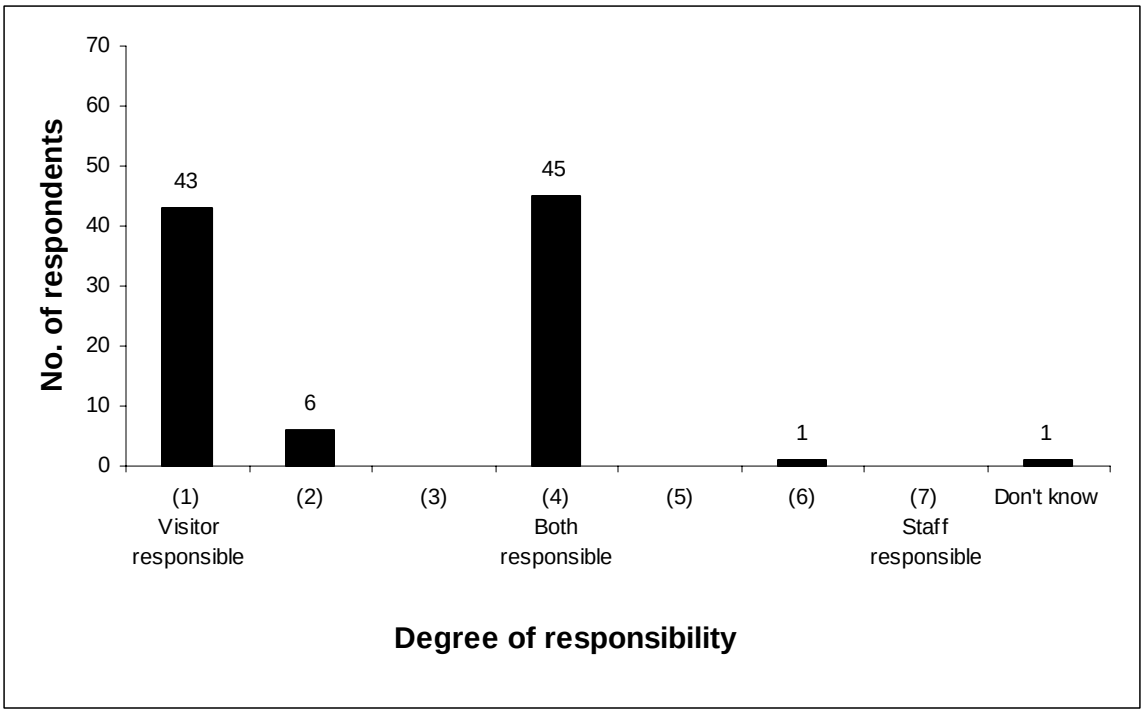

Figure 30.8: Responsibility for safety in chosen primary activity (N=96)

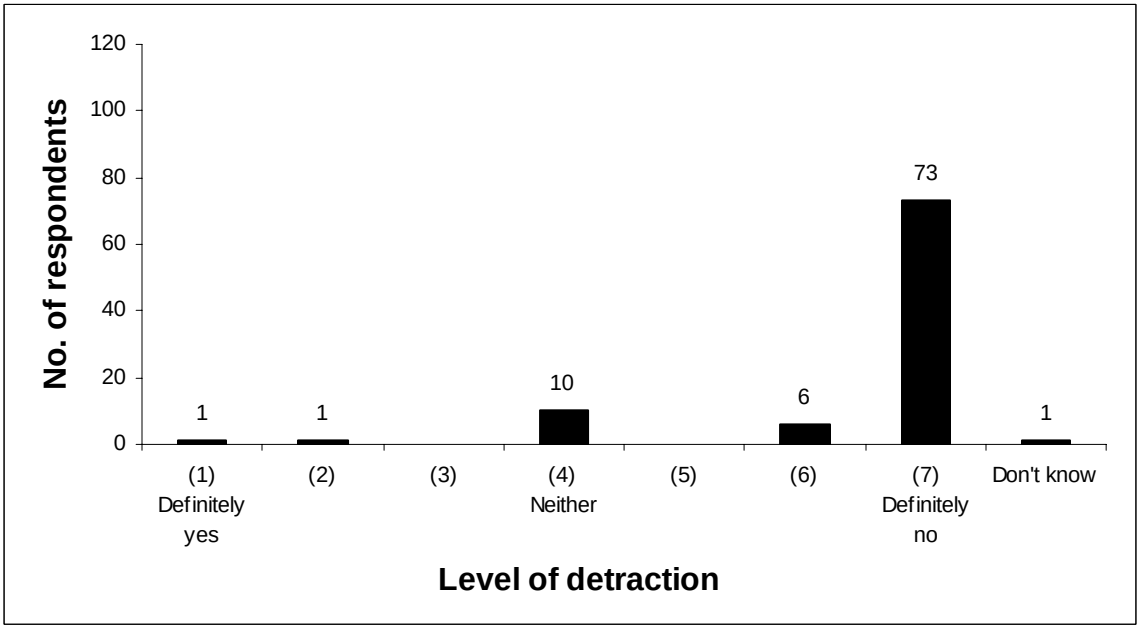

Figure 30.9: Do safety measures detract from visitor enjoyment? (N=92)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-nine percent of respondents agree

or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 8% disagree or disagree strongly, and 35% neither agree nor disagree. Thirty-six percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 36% disagree or disagree strongly, and 25% neither agree nor disagree. Forty-three percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 27% agree or agree strongly, and 27% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (83%);
- signs warning and advising about hazards (88%);
- brochures and other information warning about hazards (82%);
- restrictions on the number of persons/groups who undertake particular activities (60%);
- park rangers to enforce rules and regulations (68%);
- enforcement of alcoholic beverage restrictions (56%); and,
- safe surfaces on walkways and stairs (80%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (17%) and more or much more enforcement of alcoholic beverage prohibitions (13%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 31% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 30% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 30.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

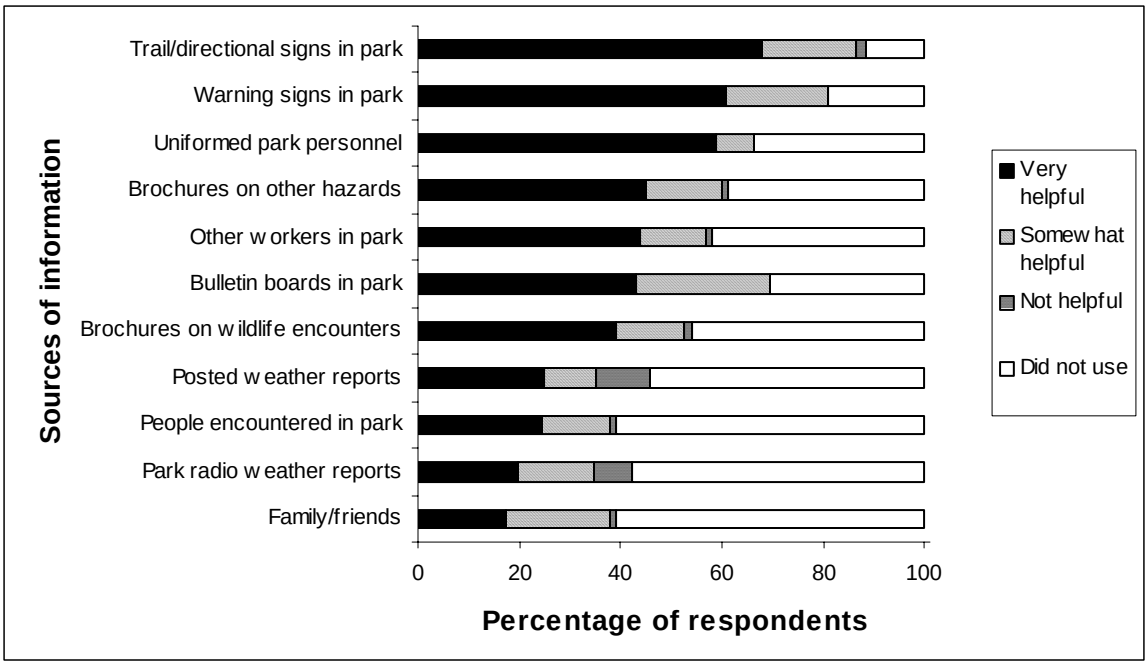

Figure 30.10: How helpful are various sources of safety information (N=68-80)

31.0 Olympic National Park

31.1 Sample:

At Olympic National Park, 427 visitor groups were contacted between August 9 and August 14, 2001, and 400 (93.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 213 visitor groups, resulting in a 53.3% response rate for this park.

31.2 Demographics:

Figure 31.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-six percent of respondents were female and 44% male. The overwhelming majority (96%)of respondents were white, with 1% Asian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 36% of respondents, while an additional 34% classified themselves as college graduates. The majority (96%) of respondents were residents of the US and 4% were international visitors, including 1 respondent from Canada, 3 from Germany, 1 from Poland, and 4 from the UK.

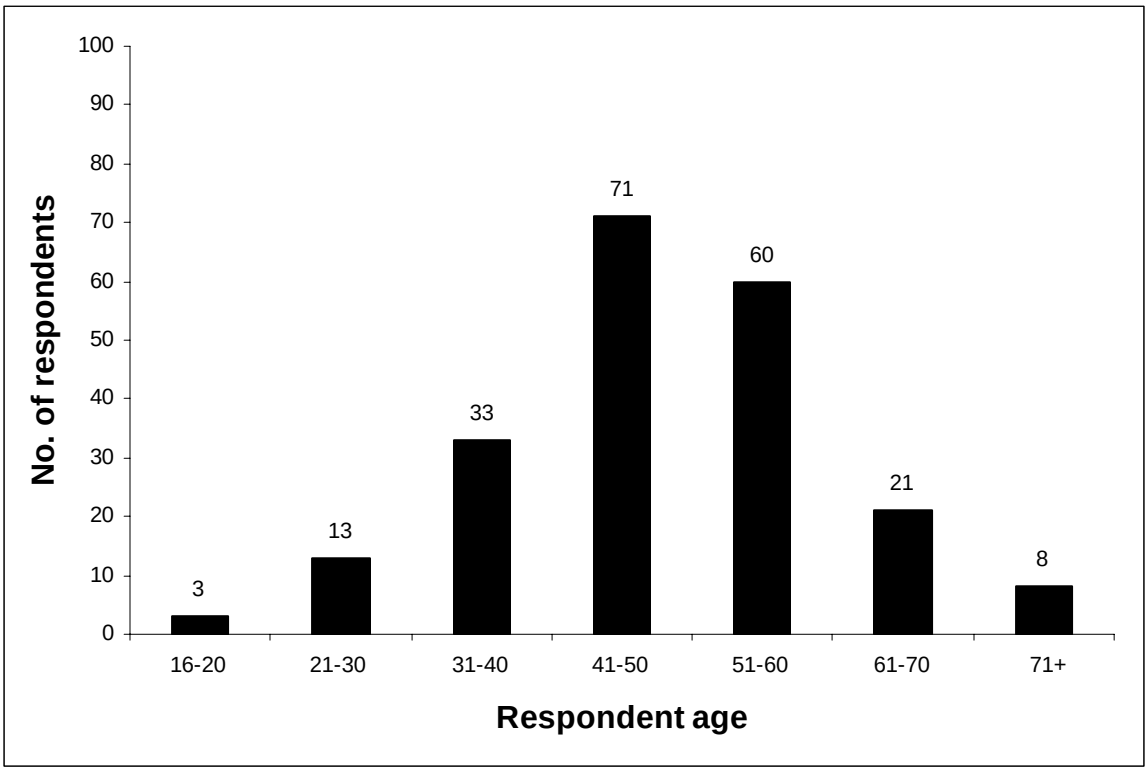

Figure 31.1: Distribution of respondents by age (N=209)

31.3 Visitation

For 52% of respondents, this was their first visit to the park. Among those 94respondents who indicated they were returning to the park, 38% had visited the park twice in the past

10 years (including the current visit), 30% 3-5 times, 17% 6-10 times, and 15% 11 or more times. This visit was the primary destination for 33% of respondents, but one of only several destinations for 63% of respondents. For 4% of respondents this visit was not a planned destination at all. Thirty-four percent of the respondents visited the park for a half day or less, 20% visited for up to one day, and 45% visited for more than one day. One percent of respondents were visiting the park by themselves, 83% with family members, 8% with friends, and 7% with family members and friends.

31.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 31.2).

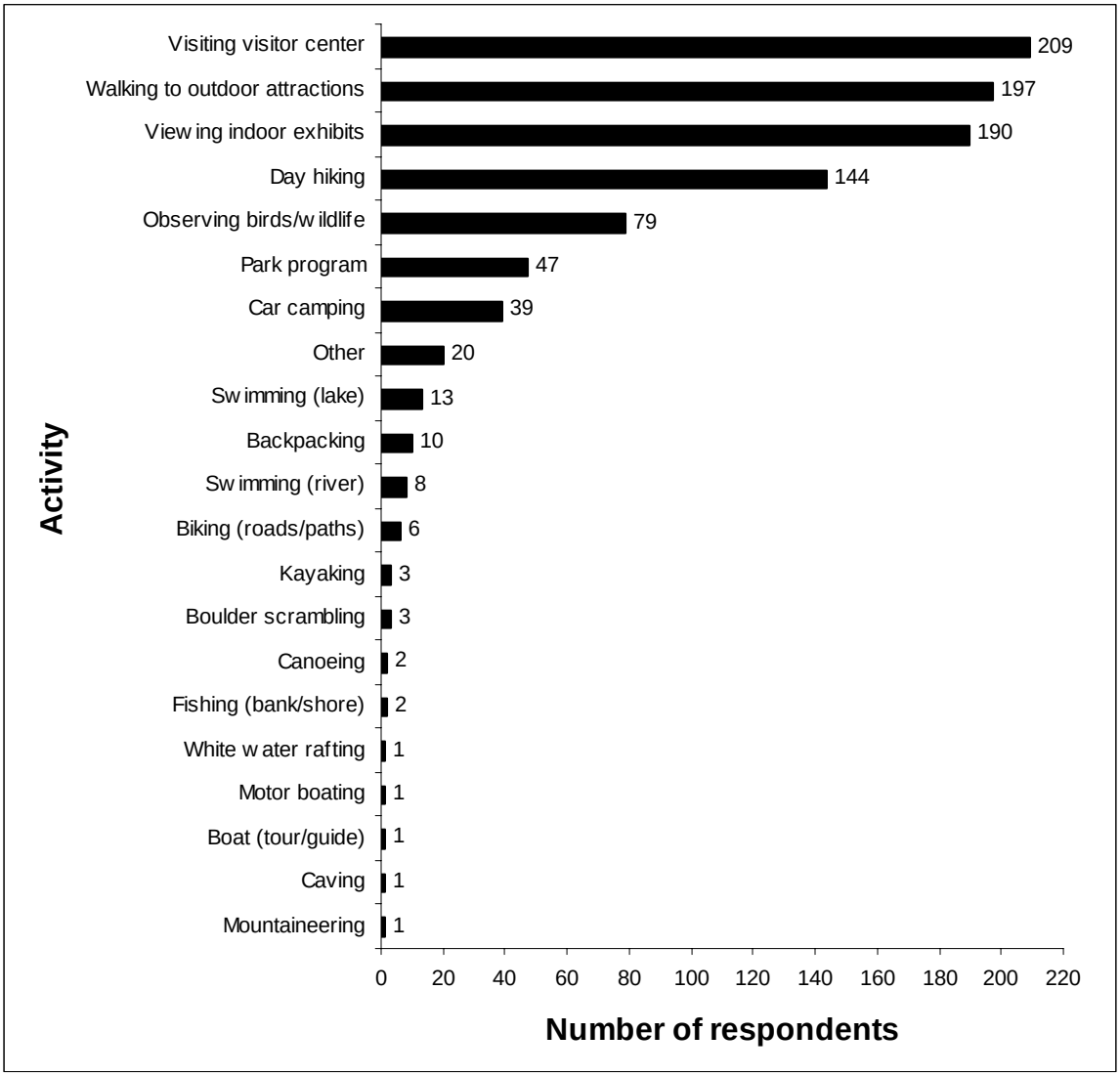

Figure 31.2: Visitor activities (N=213)
(Note: Several respondents listed more than one activity)

Figure 31.2 illustrates that many respondents visited the visitor center (98%) and viewed indoor exhibits (89%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 31.3 illustrates that day hiking (52%), walking to outdoor attractions (28%), and car camping (6%) were the most popular primary activities. Most respondents (95%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 2% engaged in these activities alone, 1% with people aside from their own personal group, and 0.5% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 31.4). Ratings of personal experience varied little between activities and between males and females.

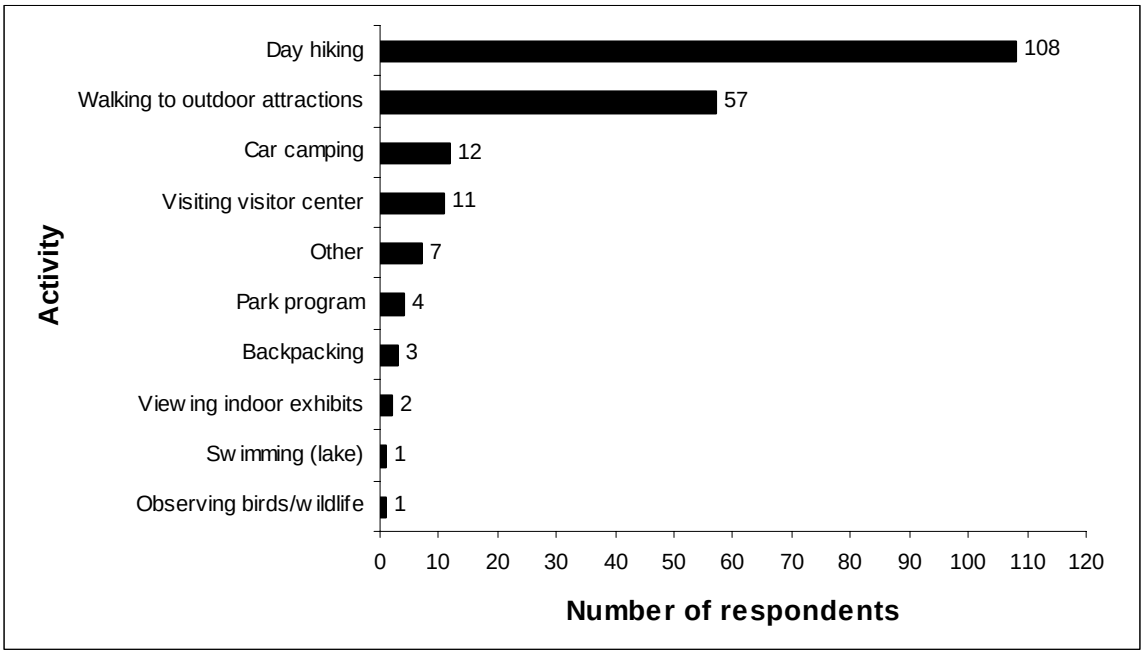

Figure 31.3: Primary visitor activities (N=206)

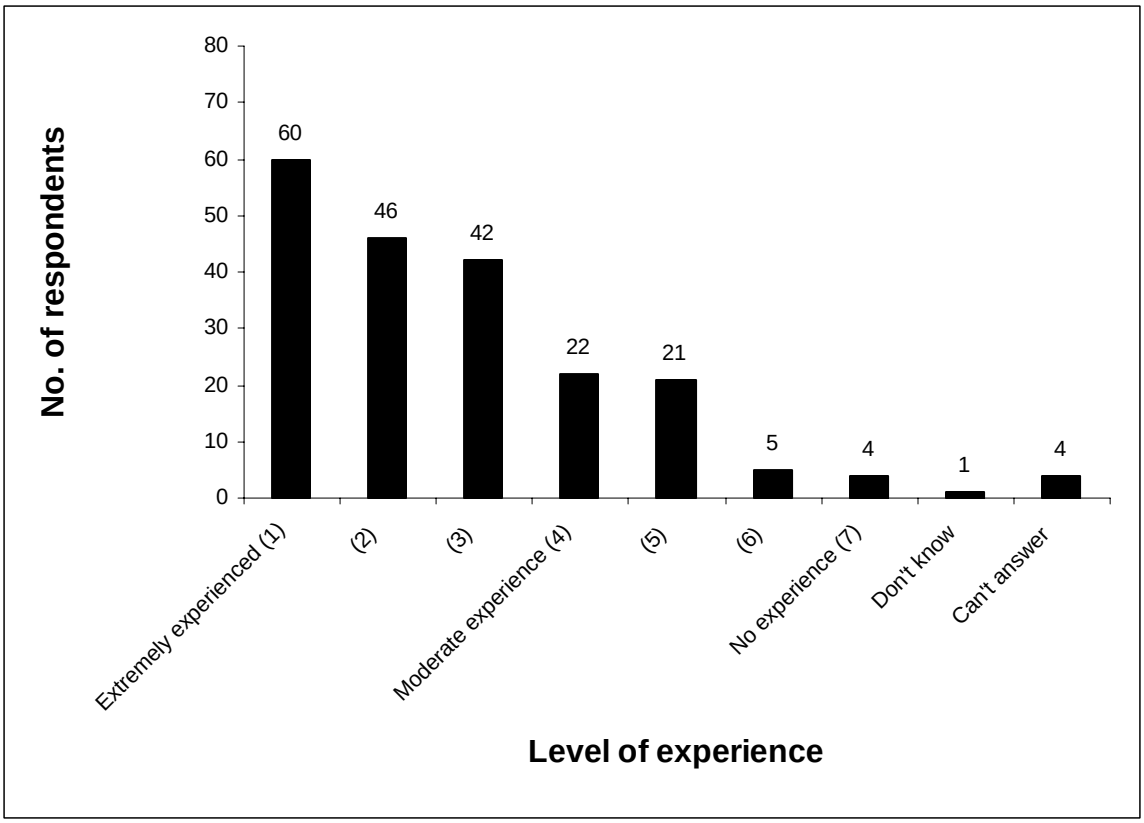

Figure 31.4: Personal level of experience (N=205)

Preparedness is one aspect of experience, and Figure 31.5 shows how prepared respondents were based on the safety items that they had available during their visit.

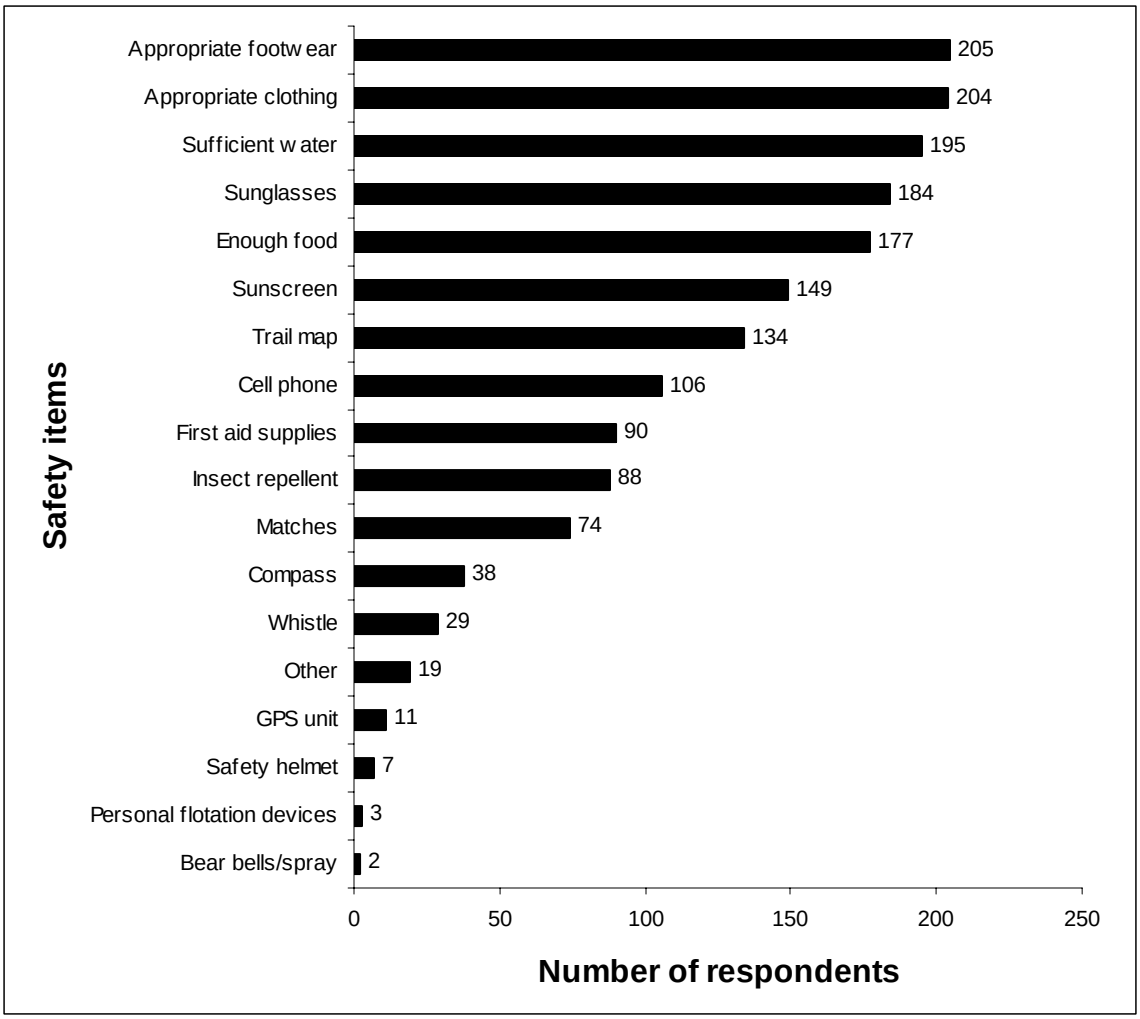

Figure 31.5: Personal safety items (N=205)

Thirteen percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity, although only two respondents were "quite" or "very" concerned, and only 2 respondents were concerned for much of the time. Without reference to a particular activity, however, Figure 31.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

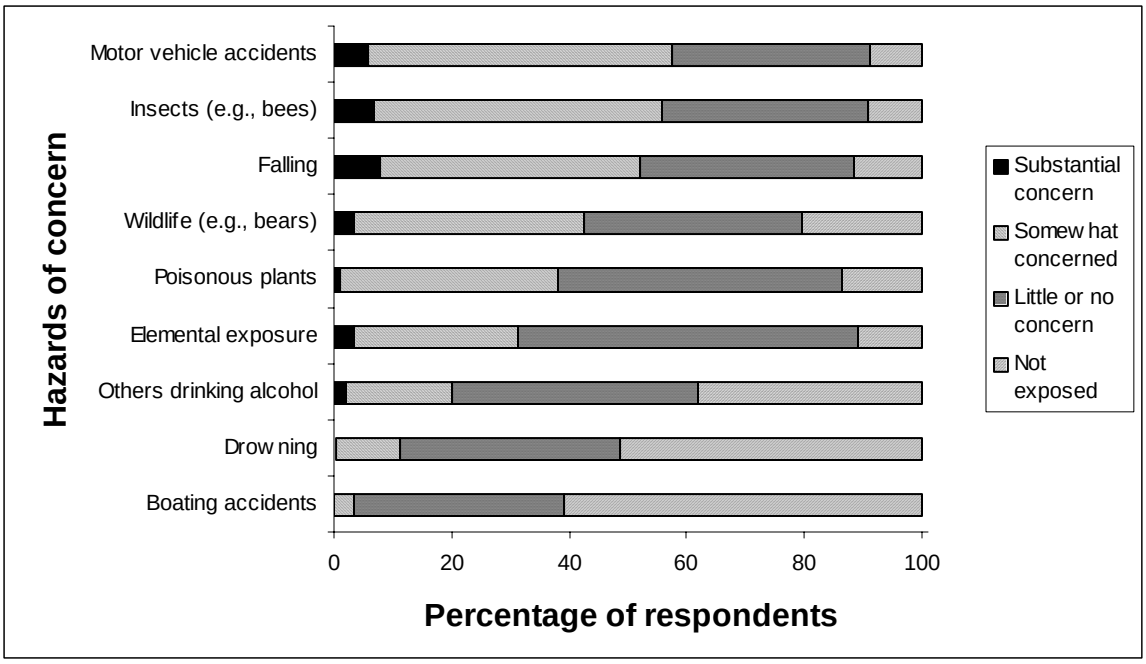

Figure 31.6: Level of concern about various hazards (N=204-205)

31.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 99% of respondents were traveling in privately owned or rented vehicles. Eighty-three percent of respondents spent all of the time in the front seat, and 9% spent some of the time in the front seat. Of these individuals, 47% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (97%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty percent of respondents never encountered cars that were driving too fast, and 53% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 47% of respondents encountered cars that were driving too slowly. Most (95%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 91% thought that hazard-warning signs were adequate most or all of the time. Figure 31.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, large recreational vehicles and bicycle riders are the most commonly cited driving hazards.

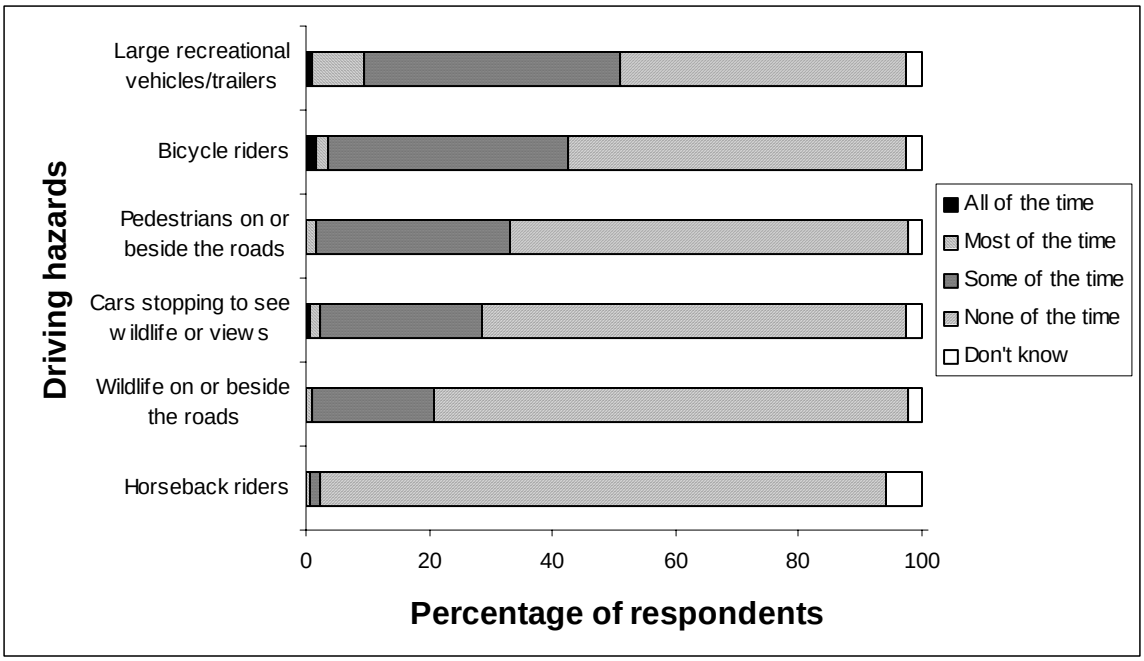

Figure 31.7: How often do these make traveling on roads more hazardous? (N=186-190)

31.6 Management issues:

With regard to the primary activity undertaken during their visit, 37% of respondents believed that safety was entirely the responsibility of the visitor, while 34% believed safety was the responsibility of both the visitor and the park staff (Figure 31.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 31.9 shows that the overwhelming majority (76%) of respondents thought such measures definitely did not detract. The one respondents who indicated that the safety measures did definitely detract from their enjoyment was walking to outdoor attractions.

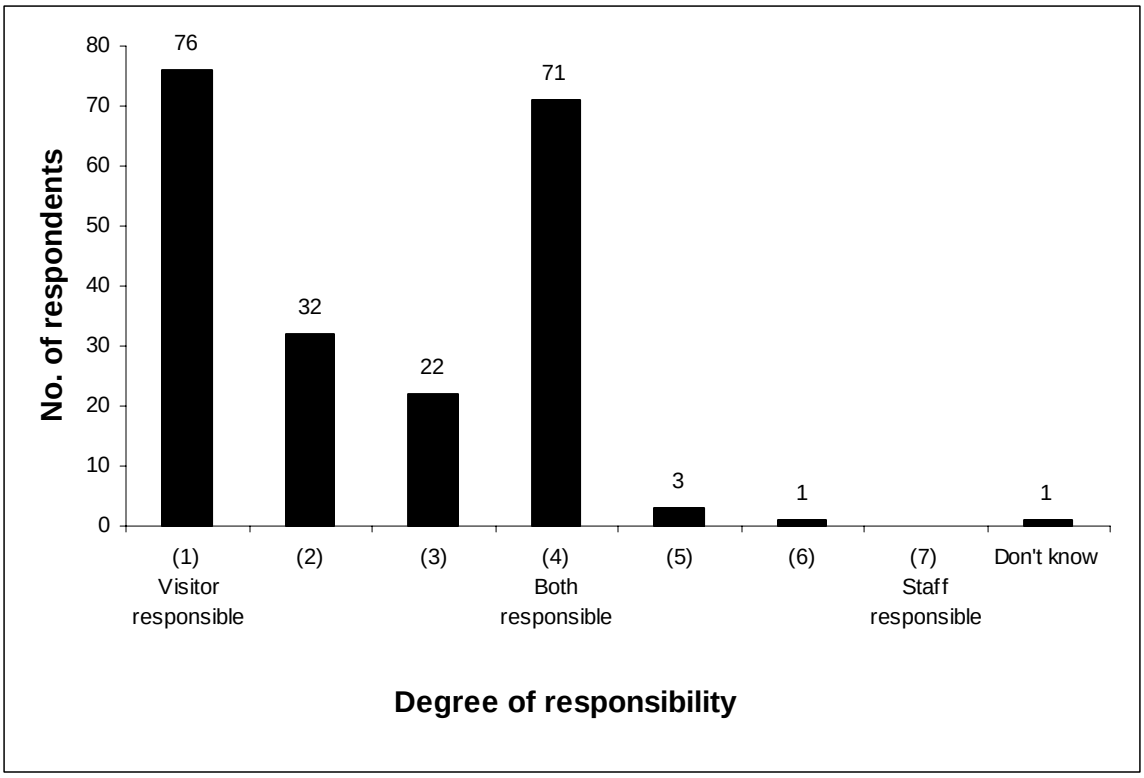

Figure 31.8: Responsibility for safety in chosen primary activity (N=206)

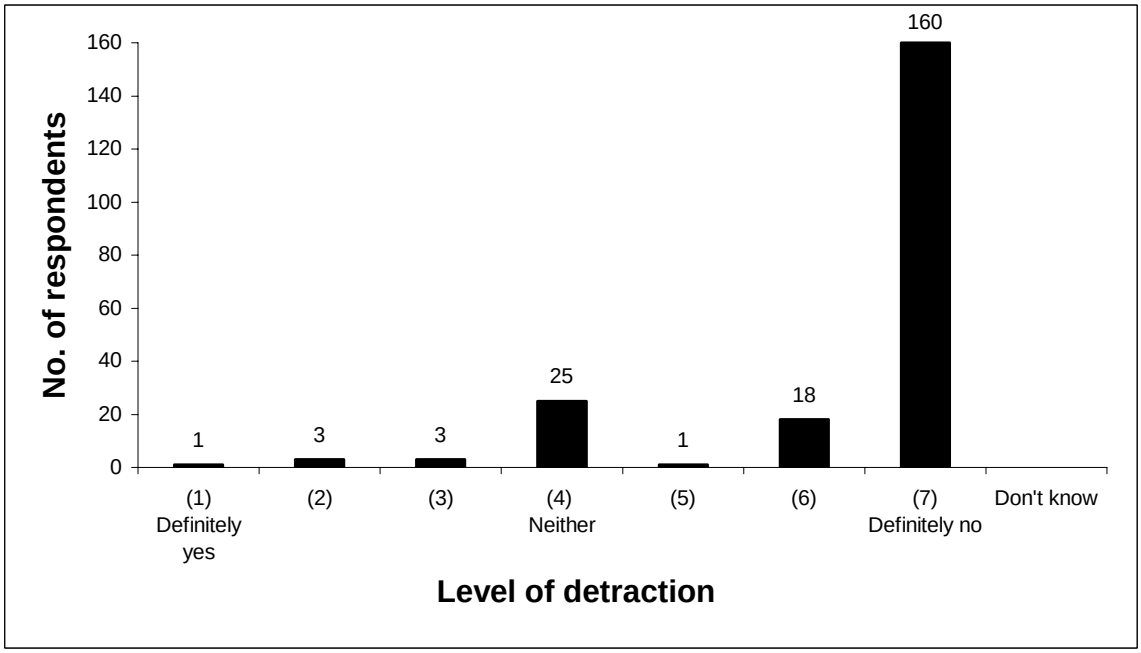

Figure 31.9: Do safety measures detract from visitor enjoyment? (N=211)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-three percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 10% disagree or disagree strongly, and 34% neither agree nor disagree. Twenty-three percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 38% disagree or disagree strongly, and 37% neither agree nor disagree. Thirty-five percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 28% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (84%);
- signs warning and advising about hazards (84%);
- brochures and other information warning about hazards (80%);
- restrictions on the number of persons/groups who undertake particular activities (65%);
- park rangers to enforce rules and regulations (66%);
- enforcement of alcoholic beverage restrictions (64%); and,
- safe surfaces on walkways and stairs (79%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (22%) and more or much more enforcement of alcoholic beverage prohibitions (14%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 22% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 19% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 31.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

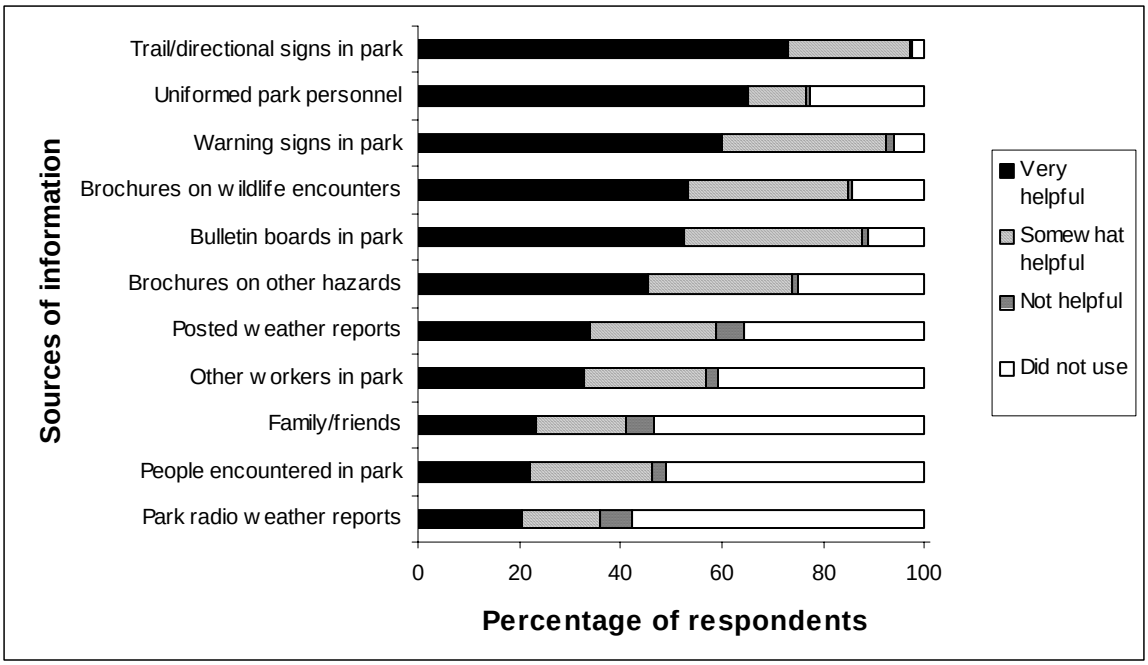

Figure 31.10: How helpful are various sources of safety information (N=137-198)

32.0 Ozark National Scenic Riverways

32.1 Sample:

At Ozark National Scenic Riverways, 204 visitor groups were contacted between August 2 and August 7, 2001, and 199 (97.5%) of these groups accepted questionnaires. Questionnaires were completed and returned by 67 visitor groups, resulting in a disappointing 33.7% response rate for this park. The low response rate may be related to the characteristics of the park visitors and the nature of their activities, but it may also reflect the fact that the survey was conducted late in the summer and completed surveys were still coming in at the time of the analysis.

32.2 Demographics:

Figure 32.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-four percent of respondents were female and 46% male. The overwhelming majority (95%)of respondents were white, with 2% American Indian and 3% of unknown race/ethnicity. Graduate school was the highest level of education attained by 5% of respondents, while an additional 26% classified themselves as college graduates. All of the respondents were residents of the US.

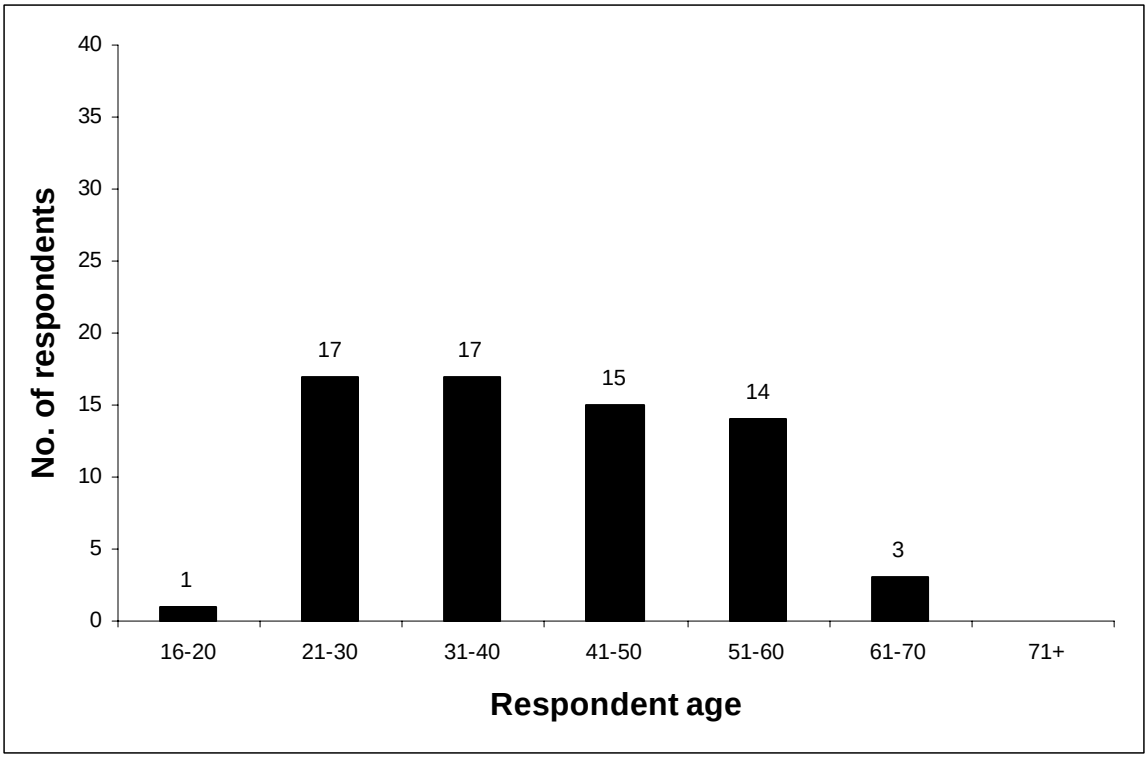

Figure 32.1: Distribution of respondents by age (N=67)

32.3 Visitation

For 18% of respondents, this was their first visit to the park. Among those 52 respondents who indicated they were returning to the park, 17% had visited the park twice in the past 10 years (including the current visit), 37% 3-5 times, 23% 6-10 times, and 23% 11 or more times. This visit was the primary destination for 82% of respondents, but one of only several destinations for 15% of respondents. For 3% of respondents this visit was not a planned destination at all. Three percent of the respondents visited the park for a half day or less, 33% visited for up to one day, and 64% visited for more than one day. Thirty-three percent of respondents were visiting the park with family members, 20% with friends, and 44% with family members and friends.

32.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 32.2).

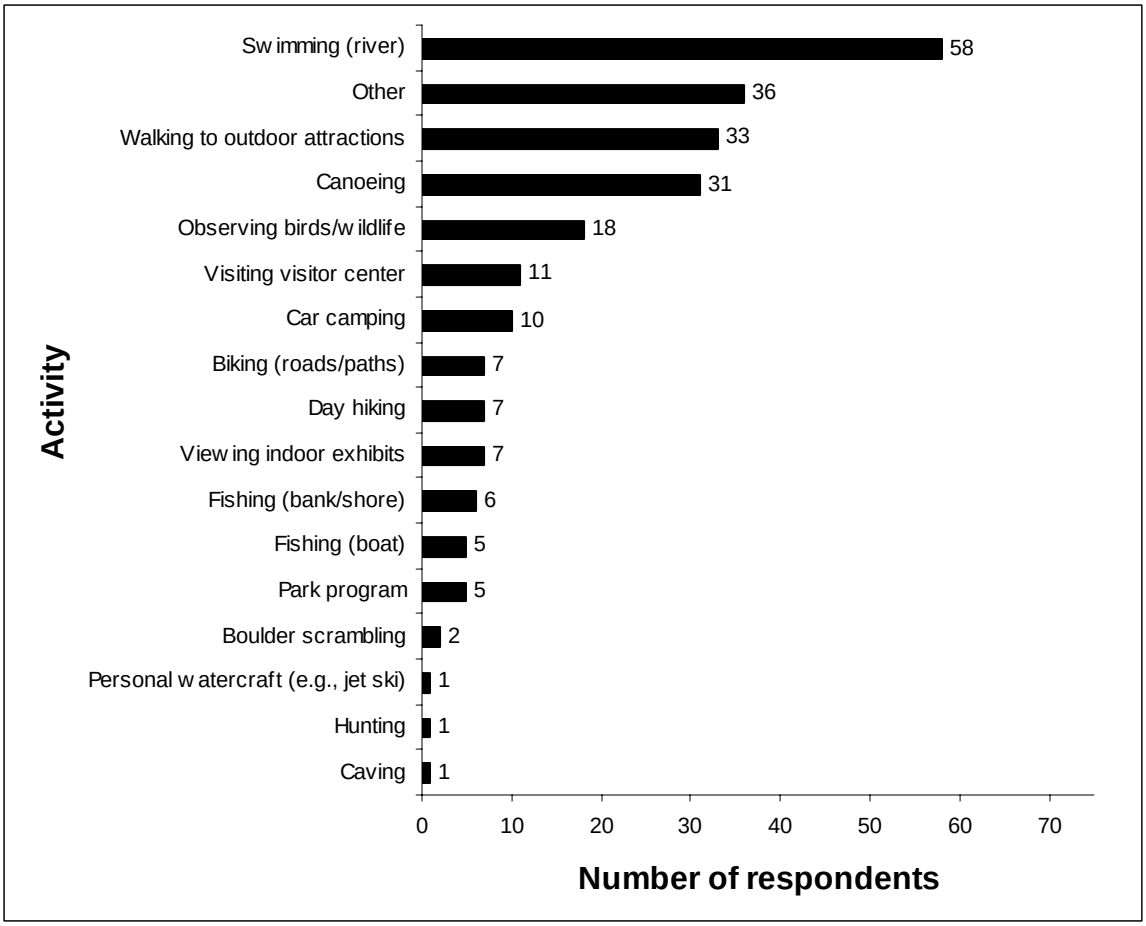

Figure 32.2: Visitor activities (N=67)
(Note: Several respondents listed more than one activity)

Figure 32.2 illustrates that unlike most other parks, few respondents visited the visitor center (16%) or viewed indoor exhibits (10%). The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 32.3 illustrates that canoeing (33%), swimming in the river (24%), and various other activities (29%) were the most popular primary activities. Most respondents (81%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 14% engaged in these activities with people aside from their own personal group, and 5% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and relatively few considered themselves to have little or no experience (Figure 32.4), although the graph is "flatter" than for many other parks.

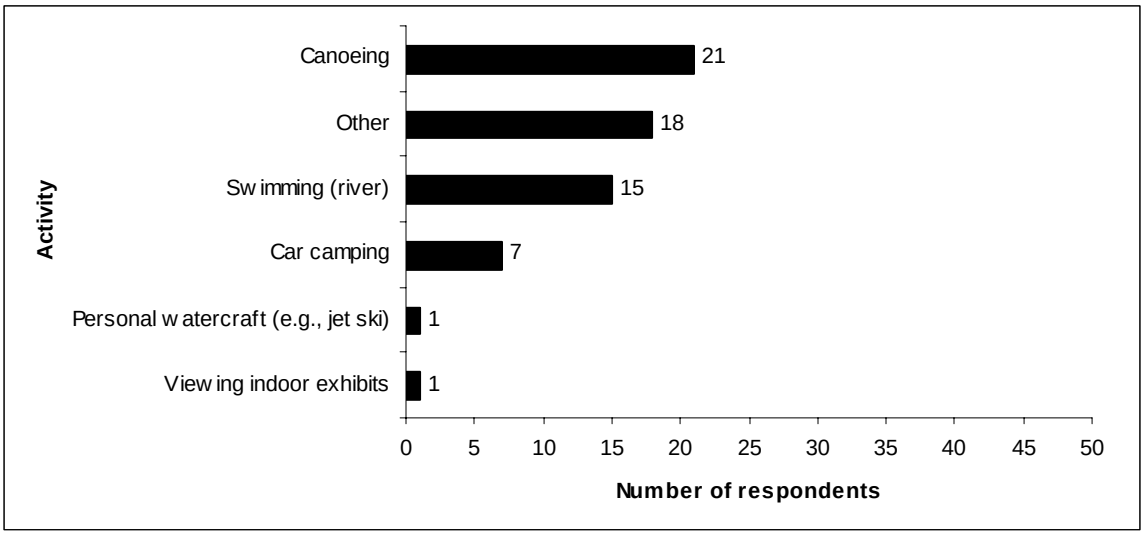

Figure 32.3: Primary visitor activities (N=63)

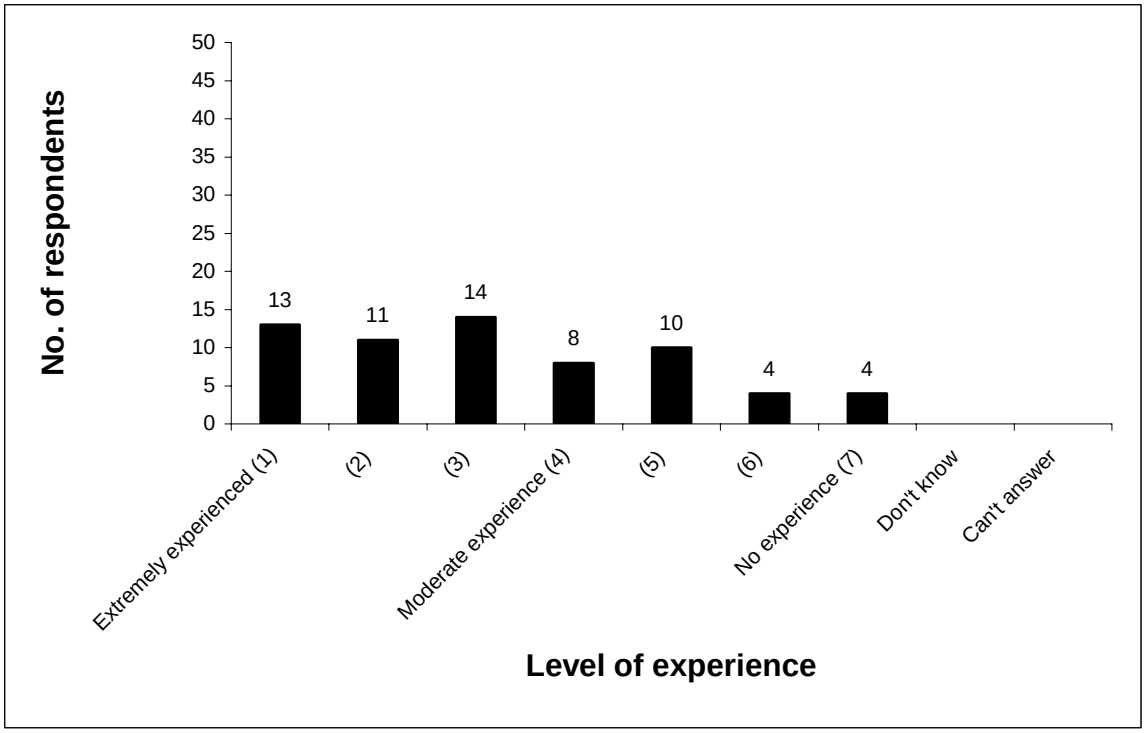

Figure 32.4: Personal level of experience (N=64)

Preparedness is one aspect of experience, and Figure 32.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given the nature of the primary activities in the park, it is surprising that other safety items, such as personal flotation devices and whistles were not mentioned.

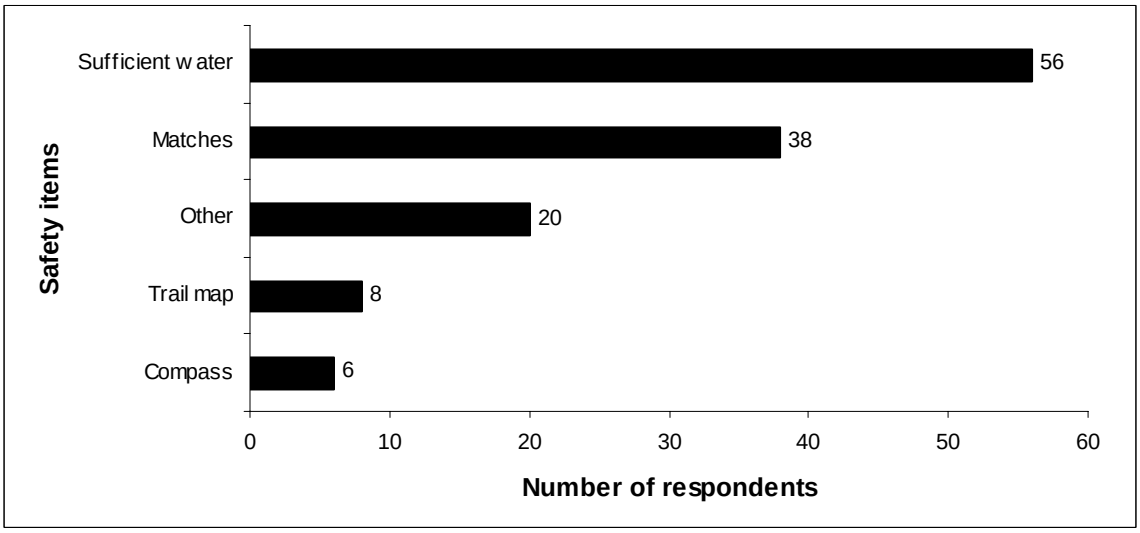

Figure 32.5: Personal safety items (N=56)

A surprisingly high proportion of respondents (22%) expressed concern about suffering an injury or illness while engaged in their primary activity. One respondent was concerned for much of the time, and 4 respondents considered themselves to be quite concerned. The majority of the respondents expressing concern, however, were concerned only minimally and for brief periods. Unfortunately, the small number of respondents (14) expressing concern limits a more detailed assessment.

Without reference to a particular activity, however, Figure 32.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park.

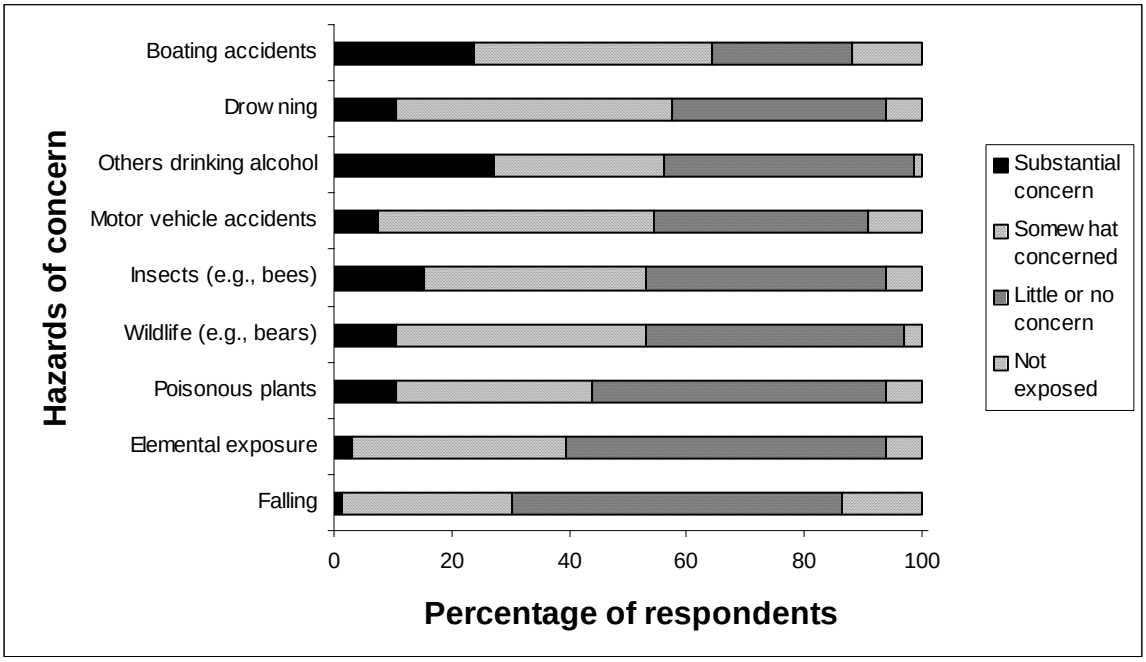

Figure 32.6: Level of concern about various hazards (N=66-67)

32.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 85% of respondents were traveling in privately owned or rented vehicles. Seventy-three percent of respondents spent all of the time in the front seat, and 16% spent some of the time in the front seat. Of these individuals, 49% were driving for all or most of the time and 85% were wearing seatbelts most or all of the time. The majority (92%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty-one percent of respondents never encountered cars that were driving too fast, and 67% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 38% of respondents encountered cars that were driving too slowly. Most (83%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 77% thought that hazard-warning signs were adequate most or all of the time.

Figure 32.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Compared with many other parks, there appears to be less concern about driving hazards in the Ozark National Scenic Riverways, although substantial numbers of respondents did indicate that large recreational vehicles and pedestrians on the roads do present driving hazards some of the time.

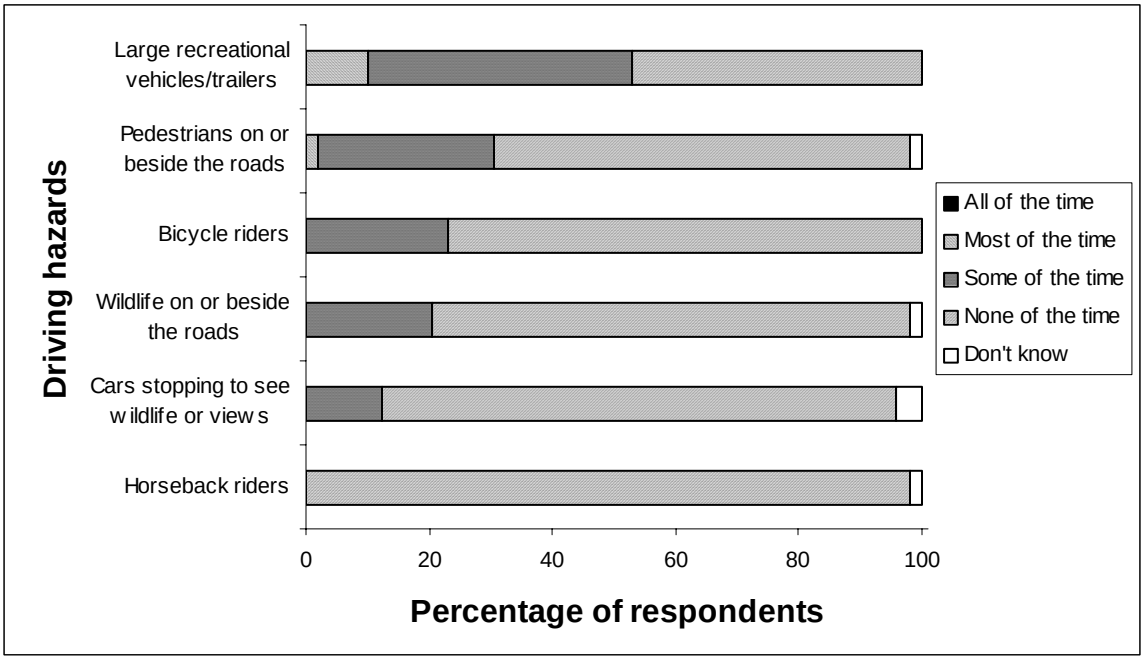

Figure 32.7: How often do these make traveling on roads more hazardous? (N=48-49)

32.6 Management issues:

With regard to the primary activity undertaken during their visit, 45% of respondents believed that safety was entirely the responsibility of the visitor, while 40% believed safety was the responsibility of both the visitor and the park staff (Figure 32.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 32.9 shows that the overwhelming majority (65%) of respondents thought such measures definitely did not detract.

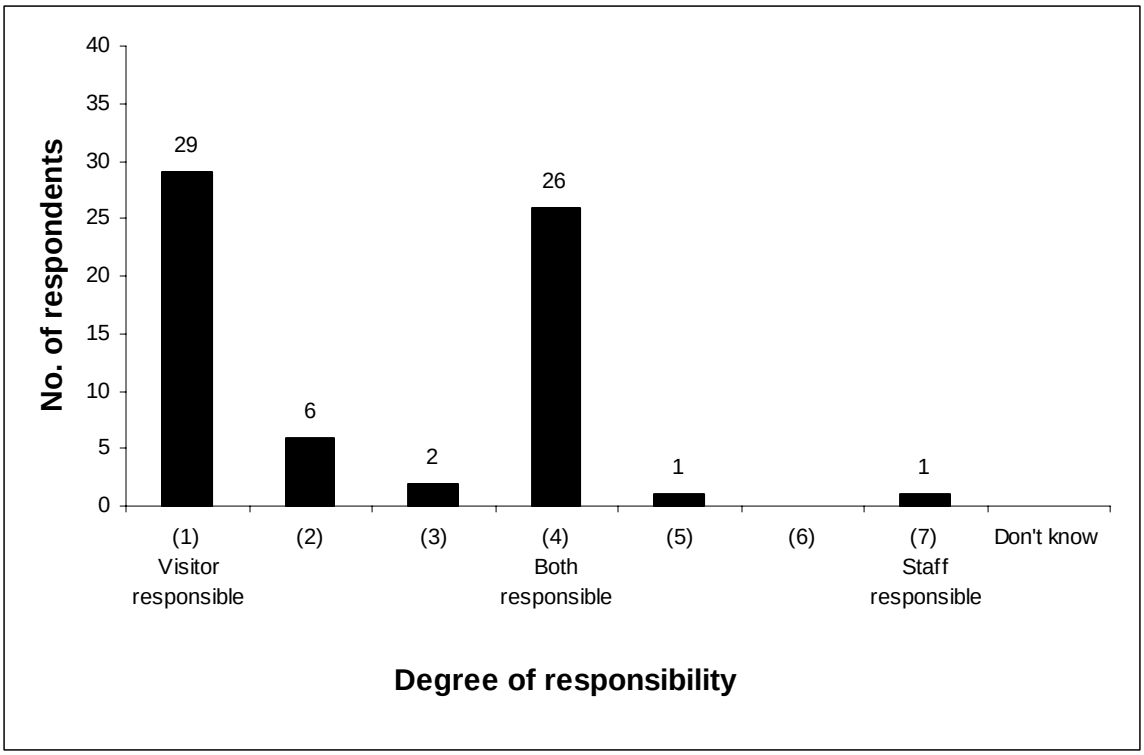

Figure 32.8: Responsibility for safety in chosen primary activity (N=65)

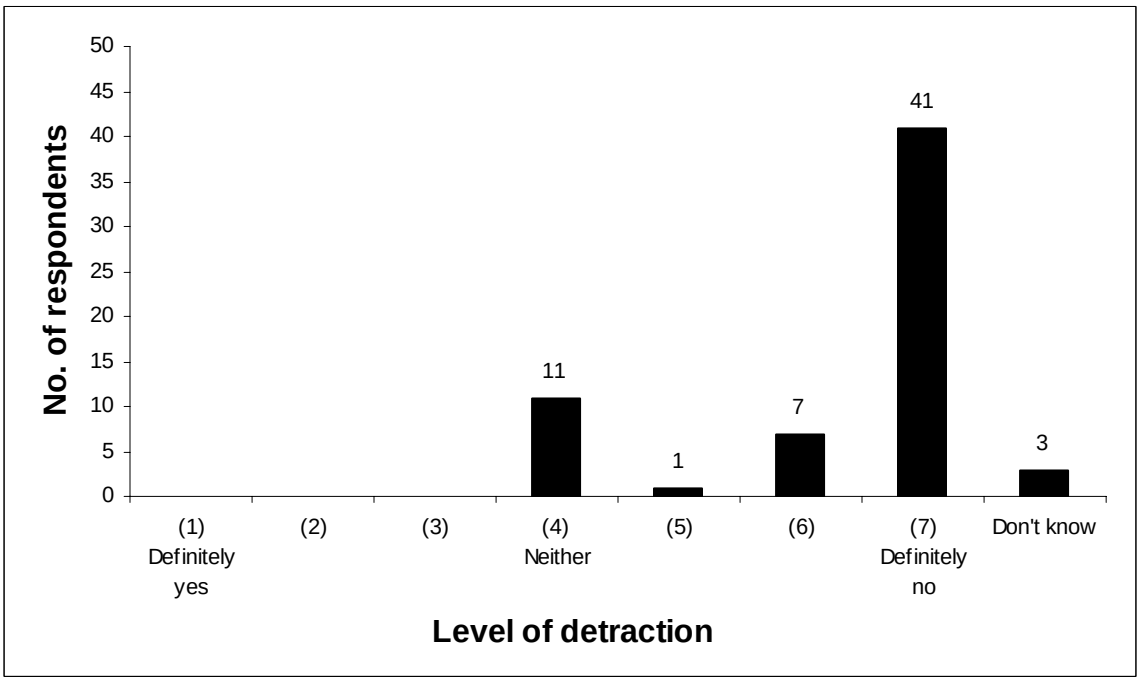

Figure 32.9: Do safety measures detract from visitor enjoyment? (N=63)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-three percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 12% disagree or disagree strongly, and 40% neither agree nor disagree. Twenty-four percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 38% disagree or disagree strongly, and 33% neither agree nor disagree. Twenty-seven percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 18% agree or agree strongly, and 52% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (66%);
- signs warning and advising about hazards (68%);
- brochures and other information warning about hazards (65%);
- restrictions on the number of persons/groups who undertake particular activities (68%);
- park rangers to enforce rules and regulations (64%);
- enforcement of alcoholic beverage restrictions (60%); and,
- safe surfaces on walkways and stairs (71%).

In contrast with many other parks, substantial numbers of respondents in the ways National Scenic River survey appear to be in favor of more or many more:

- rules and regulations about what visitors should and should not do (18%);
- signs warning and advising about hazards (26%);
- brochures and other information warning about hazards (26%);
- park rangers to enforce rules and regulations (27%);
- enforcement of alcoholic beverage restrictions (27%); and,
- safe surfaces on walkways and stairs (21%).

Only with regard to restrictions on the number of persons/groups who undertake particular activities are the respondents more ambivalent. On this point, 68% of respondents believe the present restrictions are appropriate, 12% would like to see more, 9% would like to see fewer, and 11% don't know.

Among those respondents who were aware of the various sources of safety information in the park, Figure 32.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

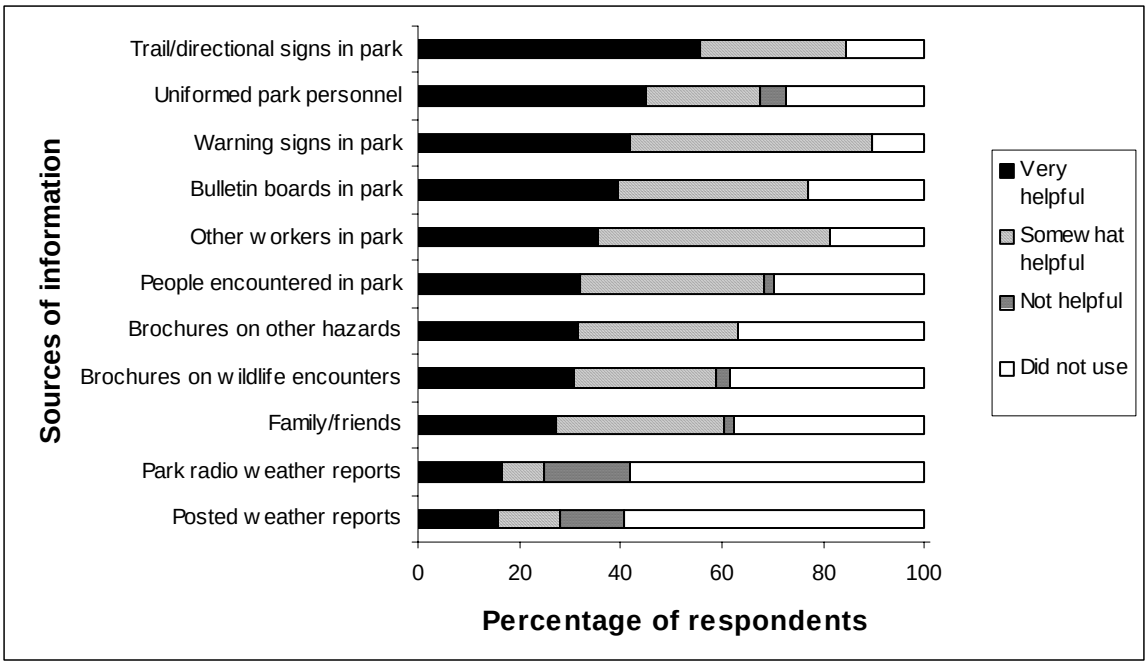

Figure 32.10: How helpful are various sources of safety information (N=24-48)

33.0 Padre Island National Seashore

33.1 Sample:

At Padre Island National Seashore, 386 visitor groups were contacted between May 31 and June 5, 2001, and 366 (94.8%) of these groups accepted questionnaires. Questionnaires were completed and returned by 160 visitor groups, resulting in a 43.7% response rate for this park.

33.2 Demographics:

Figure 33.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Forty-seven percent of respondents were female and 53% male. The overwhelming majority (83%)of respondents were white, with 9% Hispanic, 3% African-American, and 3% of other unspecified race/ethnicity. Graduate school was the highest level of education attained by 19% of respondents, while an additional 35% classified themselves as college graduates. The majority of respondents (158/160) were residents of the US and there was one respondent from Canada and one from the UK.

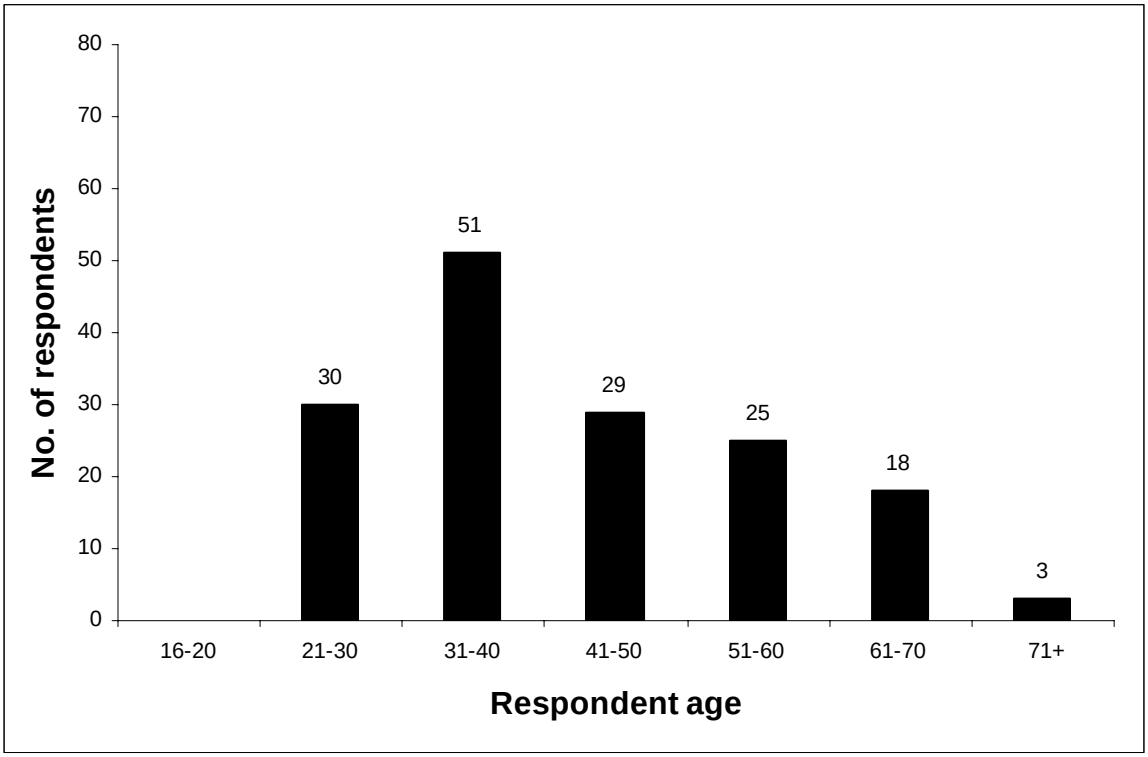

Figure 33.1: Distribution of respondents by age (N=156)

33.3 Visitation

For 55% of respondents, this was their first visit to the park. Among those 70 respondents who indicated they were returning to the park, 26% had visited the park twice in the past 10 years (including the current visit), 31% 3-5 times, 16% 6-10 times, and 27% 11 or more times. This visit was the primary destination for 37% of

respondents, but one of only several destinations for 41% of respondents. For 23% of respondents this visit was not a planned destination at all. Fifty-five percent of the respondents visited the park for a half day or less, 30% visited for up to one day, and 15% visited for more than one day. Eight percent of respondents were visiting the park by themselves, 69% with family members, 12% with friends, and 7% with family members and friends.

33.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 33.2).

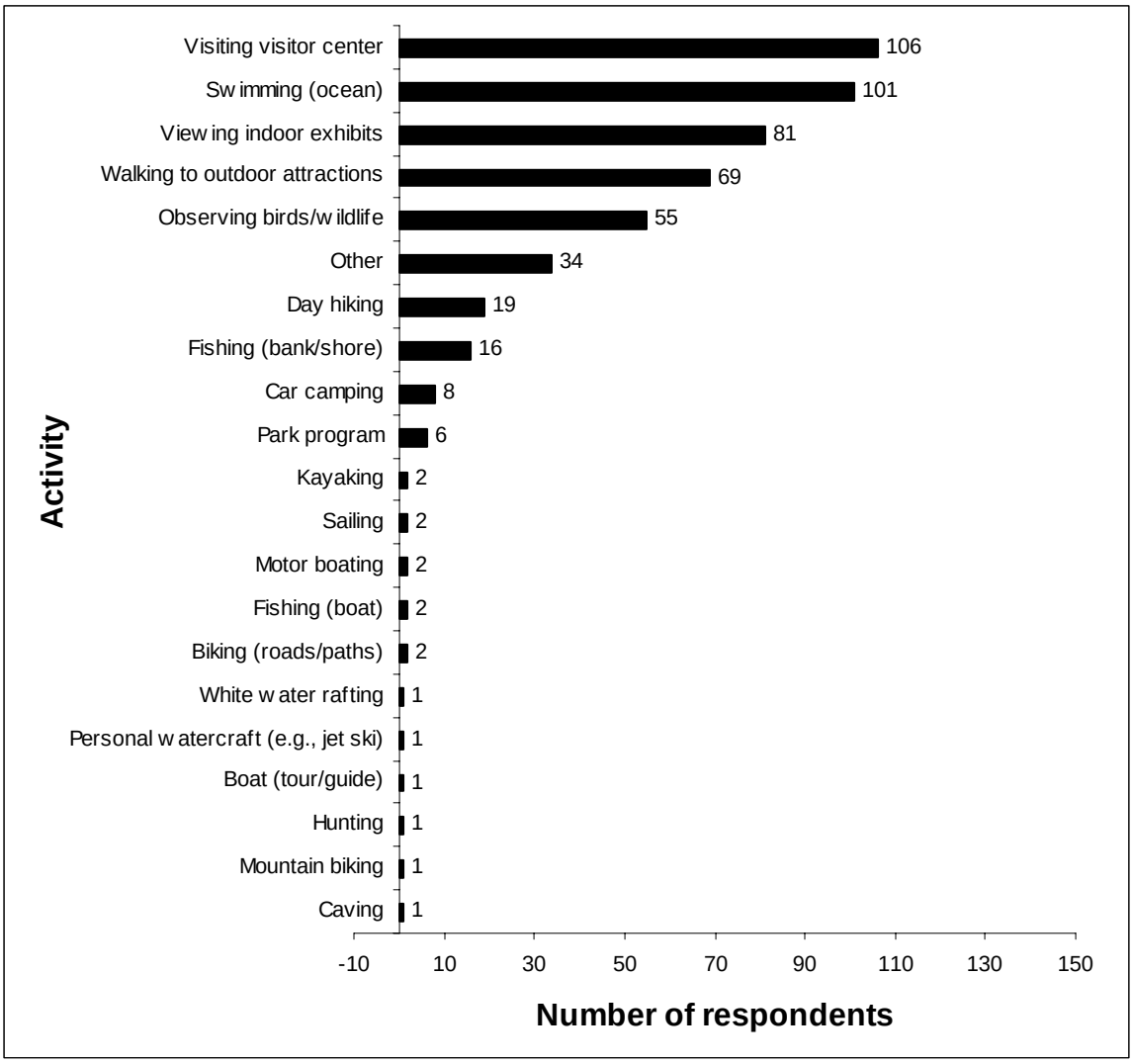

Figure 33.2: Visitor activities (N=160)
(Note: Several respondents listed more than one activity)

Figure 33.2 illustrates that many respondents visited the visitor center (66%) and viewed indoor exhibits (51%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 33.3 illustrates that swimming in the ocean (48%), walking to outdoor attractions (12%), and various other activities (13%) were the most popular primary activities. Most respondents (87%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 9% engaged in these activities alone, 1% with people aside from their own personal group, and 2% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 33.4). Ratings of personal experience varied little between males and females, but swimming was the primary activity for 15 out of the 30 respondents indicating little or no experience.

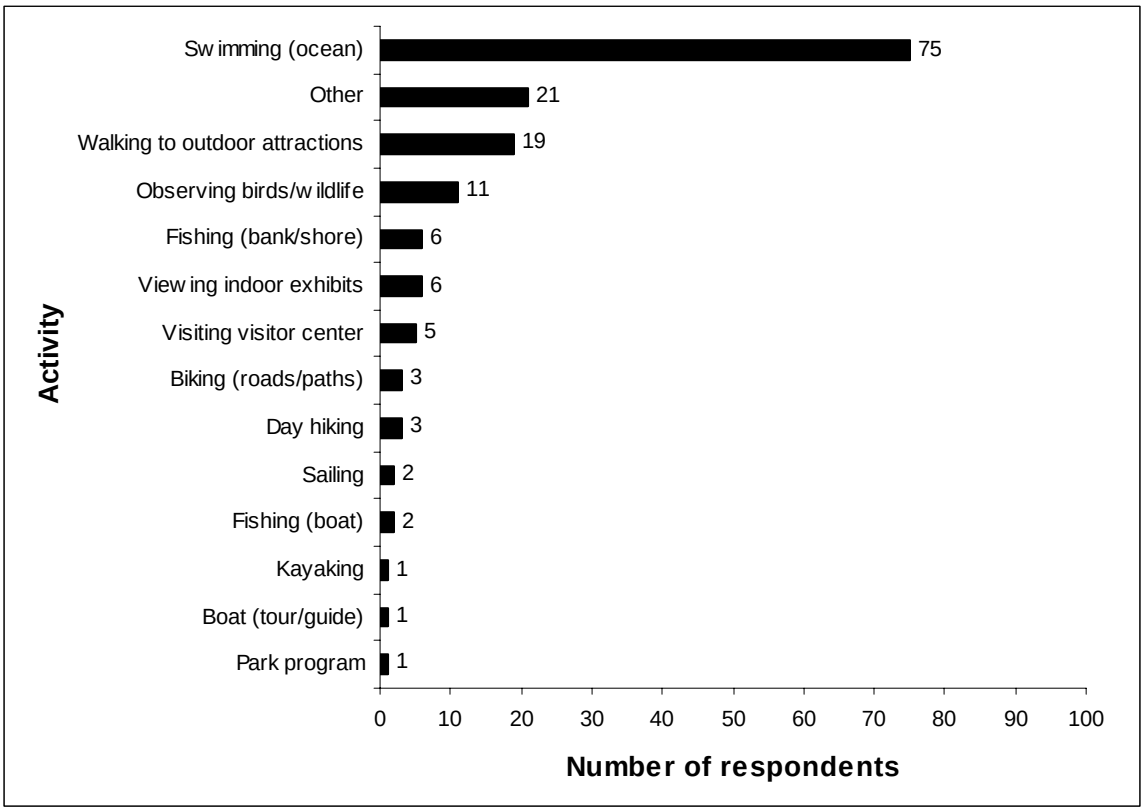

Figure 33.3: Primary visitor activities (N=156)

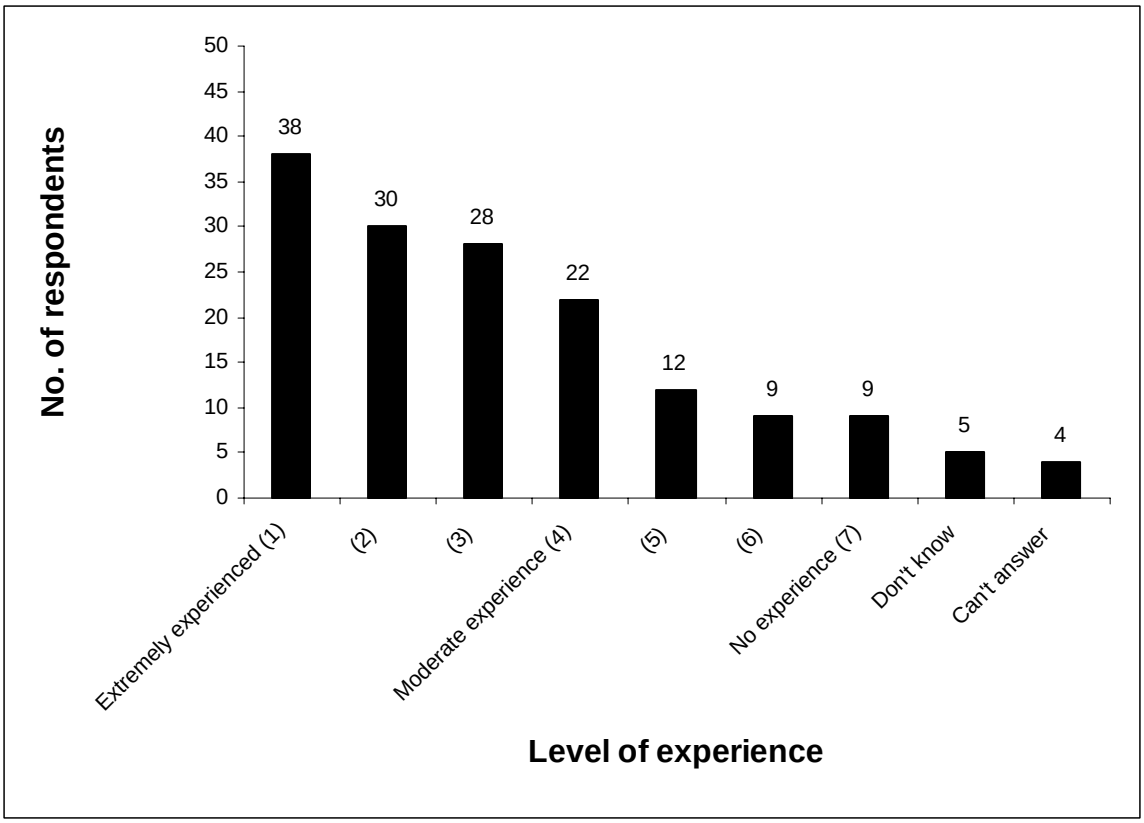

Figure 33.4: Personal level of experience (N=157)

Preparedness is one aspect of experience, and Figure 33.5 shows how prepared respondents were based on the safety items that they had available during their visit. Given the nature of the park, it is perhaps surprising that no one indicated sunglasses, sunscreen, insect repellent, or personal flotation devices as safety items in their possession.

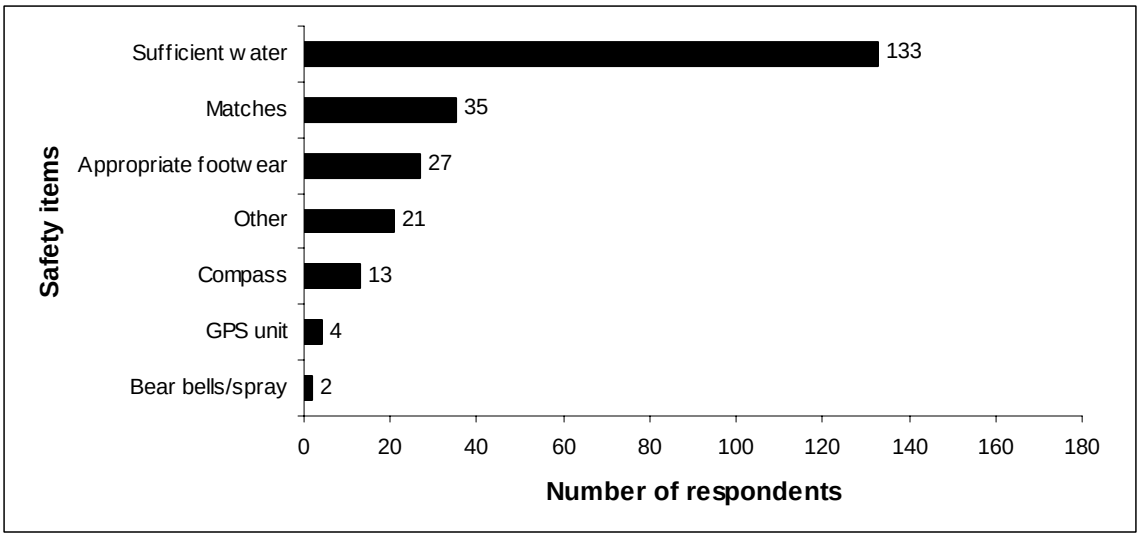

Figure 33.5: Personal safety items (N=133)

A relatively large proportion of respondents (29%) expressed concern about suffering an injury or illness while engaged in their primary activity. Of those 42 respondents expressing concern, 24% were concerned much or all of the time, and 69% were concerned briefly or some of the time. Five percent of the 40 respondents indicating their level of concern were very or extremely concerned about their own personal safety, while 73% were somewhat or quite concerned. Thirty-one out of 41 respondents (76%) were concerned about the safety of others in their personal group for some, much, or all of the time, and 8/36 respondents (22%) were very or extremely concerned about the safety of others in their group.

Without reference to a particular activity, however, Figure 33.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although concern about wildlife probably refers mostly to jellyfish and stingrays.

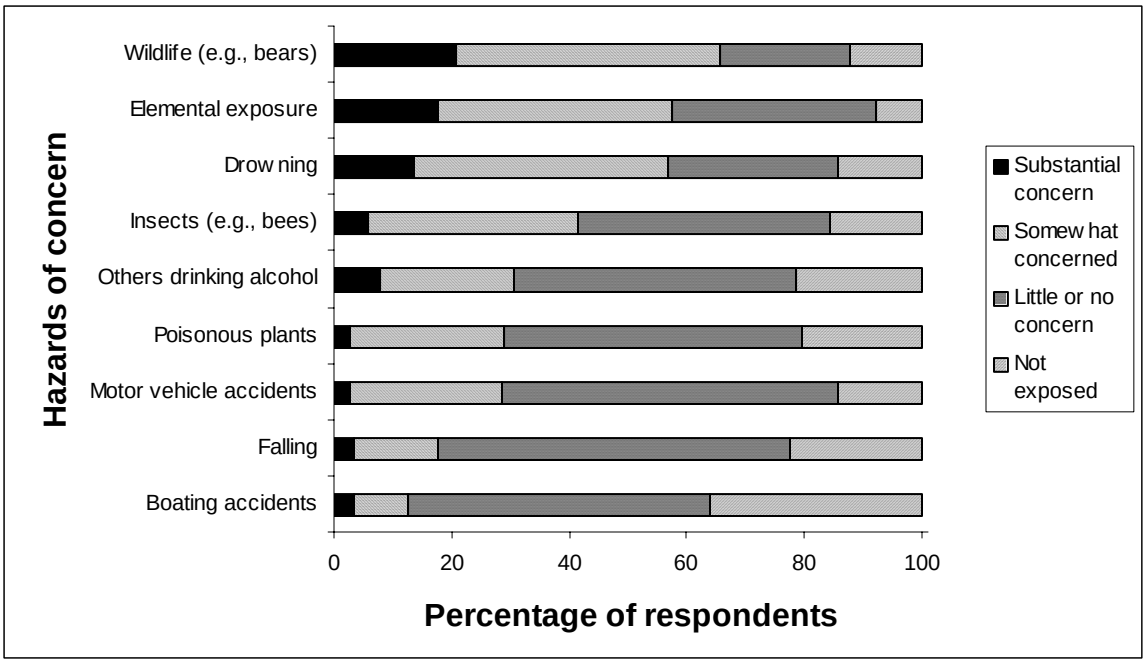

Figure 33.6: Level of concern about various hazards (N=152-155)

33.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 93% of respondents were traveling in privately owned or rented vehicles. Ninety-three percent of respondents spent all of the time in the front seat, and 3% spent some of the time in the front seat. Of these individuals, 66% were driving for all or most of the time and 94% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Fifty-two percent of respondents never encountered cars that were driving too fast, and 40% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 21% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 95% thought that hazard-warning signs were adequate most or all of the time. Figure 33.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, visitors to Padre Island have relatively little concern about possible driving hazards in the park.

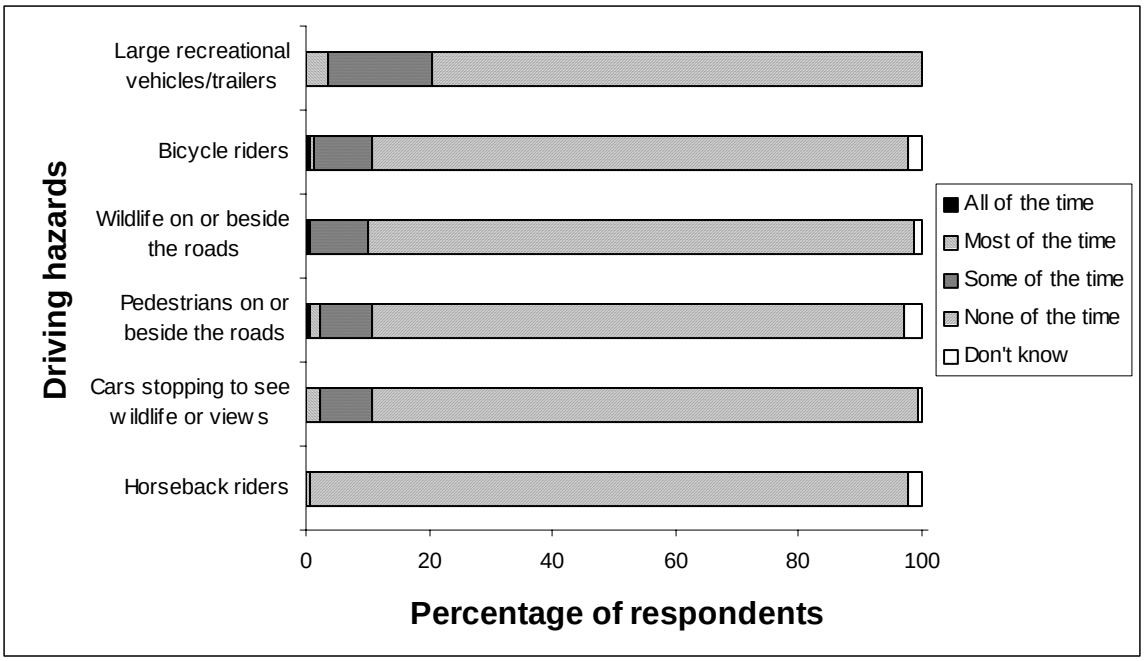

Figure 33.7: How often do these make traveling on roads more hazardous? (N=140-141)

33.6 Management issues:

With regard to the primary activity undertaken during their visit, 49% of respondents believed that safety was entirely the responsibility of the visitor, while 34% believed safety was the responsibility of both the visitor and the park staff (Figure 33.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 33.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. Among the 4 respondents (3%) who indicated that the safety measures definitely did detract from their enjoyment, 3 were swimming and 1 was observing wildlife.

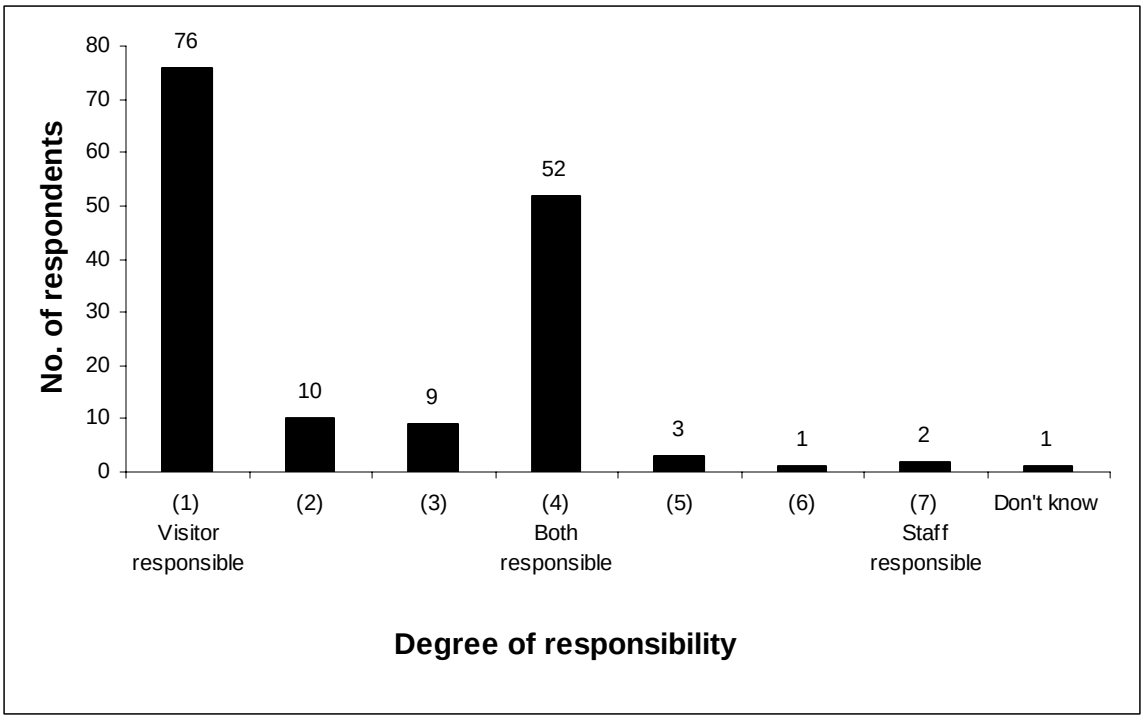

Figure 33.8: Responsibility for safety in chosen primary activity (N=154)

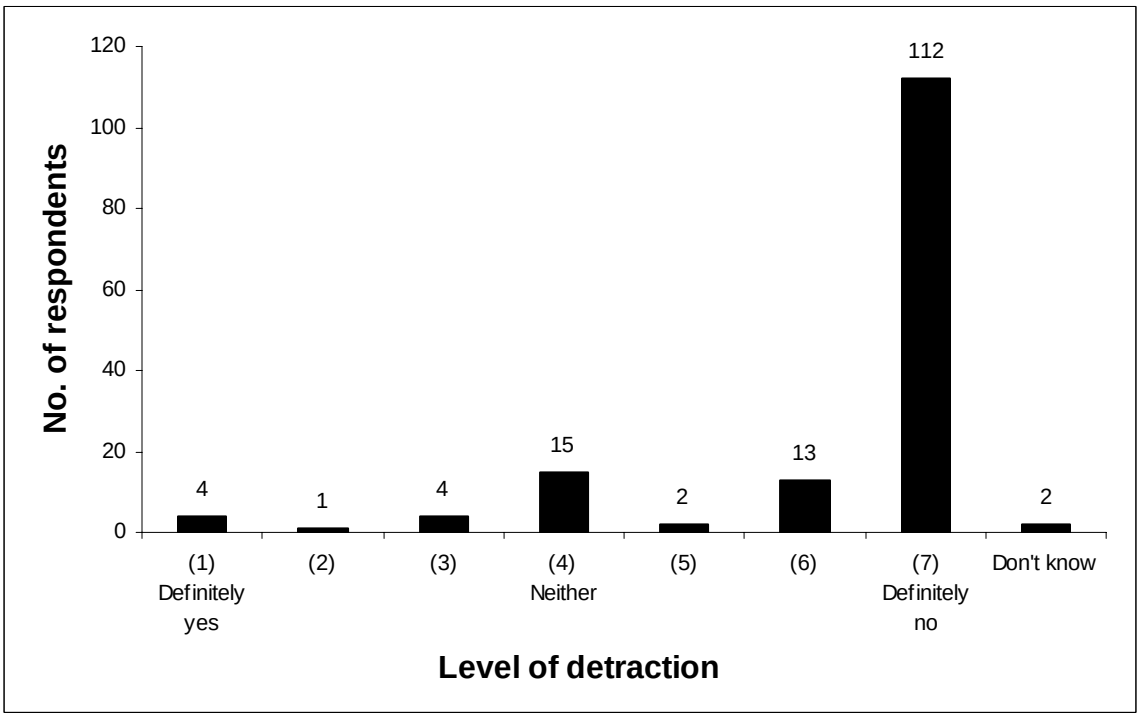

Figure 33.9: Do safety measures detract from visitor enjoyment? (N=153)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-one percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 10% disagree or disagree strongly, and 45% neither agree nor disagree. Twenty-seven percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 32% disagree or disagree strongly, and 40% neither agree nor disagree. Thirty-four percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 22% agree or agree strongly, and 41% neither agree nor disagree.

Many respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (85%);
- signs warning and advising about hazards (74%);
- brochures and other information warning about hazards (71%);
- restrictions on the number of persons/groups who undertake particular activities (70%);
- park rangers to enforce rules and regulations (60%);
- enforcement of alcoholic beverage restrictions (48%); and,
- safe surfaces on walkways and stairs (77%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (28%) and more or much more enforcement of alcoholic beverage prohibitions (25%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 24% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 21% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 33.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

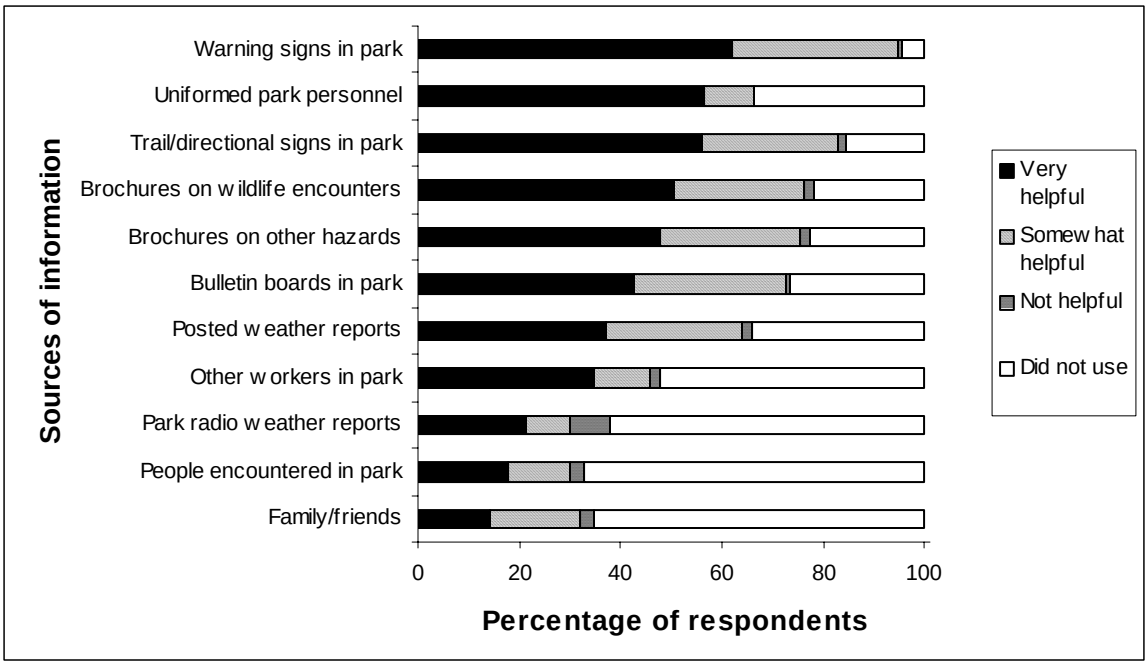

Figure 33.10: How helpful are various sources of safety information (N=90-129)

34.0 Point Reyes National Seashore

34.1 Sample:

At Point Reyes National Seashore, 305 visitor groups were contacted between July 26 and July 31, 2001, and 256 (83.9%) of these groups accepted questionnaires. Questionnaires were completed and returned by 143 visitor groups, resulting in a 55.9% response rate for this park.

34.2 Demographics:

Figure 34.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-seven percent of respondents were female and 43% male. The overwhelming majority (89%)of respondents were white, with 1% American Indian, 2% Hispanic, 5% Asian, and 3% of unknown race/ethnicity. Graduate school was the highest level of education attained by 35% of respondents, while an additional 37% classified themselves as college graduates. All of the respondents were residents of the US.

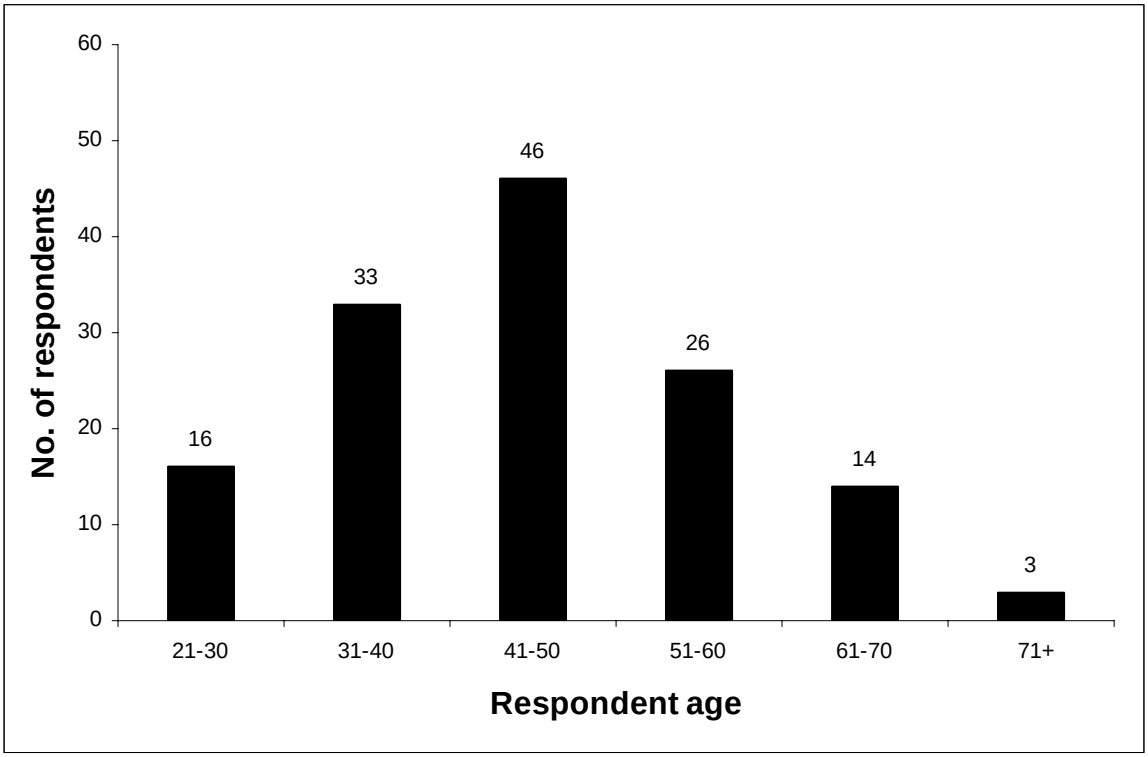

Figure 34.1: Distribution of respondents by age (N=138)

34.3 Visitation

For 44% of respondents, this was their first visit to the park. Among those 74 respondents who indicated they were returning to the park, 23% had visited the park twice in the past 10 years (including the current visit), 30% 3-5 times, 20% 6-10 times, and 27% 11 or more times. This visit was the primary destination for 49% of

respondents, but one of only several destinations for 39% of respondents. For 13% of respondents this visit was not a planned destination at all. Forty-eight percent of the respondents visited the park for a half day or less, 33% visited for up to one day, and 19% visited for more than one day. Four percent of respondents were visiting the park by themselves, 61% with family members, 20% with friends, and 12% with family members and friends.

34.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 34.2).

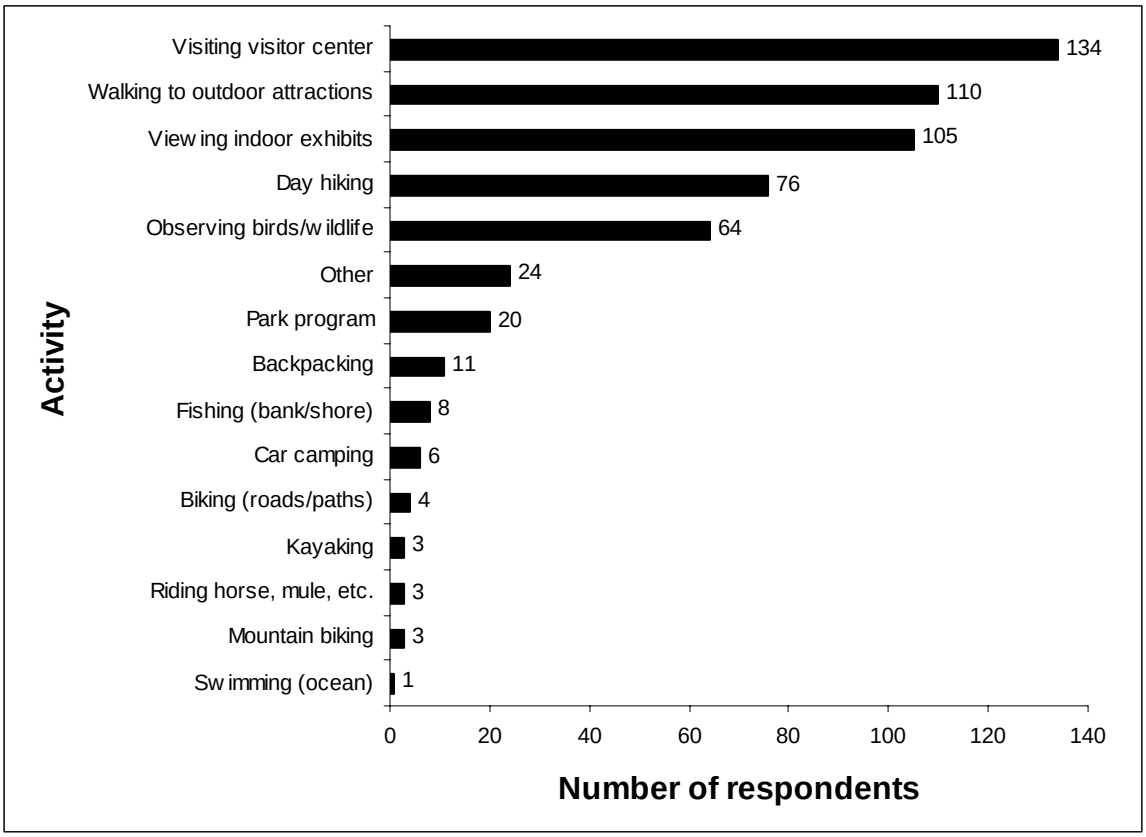

Figure 34.2: Visitor activities (N=143)
(Note: Several respondents listed more than one activity)

Figure 34.2 illustrates that many respondents visited the visitor center (94%) and viewed indoor exhibits (73%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 34.3 illustrates that walking to outdoor attractions (36%), day hiking (34%), and various other activities (7%) were the most popular primary activities. Most respondents (93%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 6% engaged in these activities alone, and 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 34.4). Ratings of personal experience varied little between activities and between males and females.

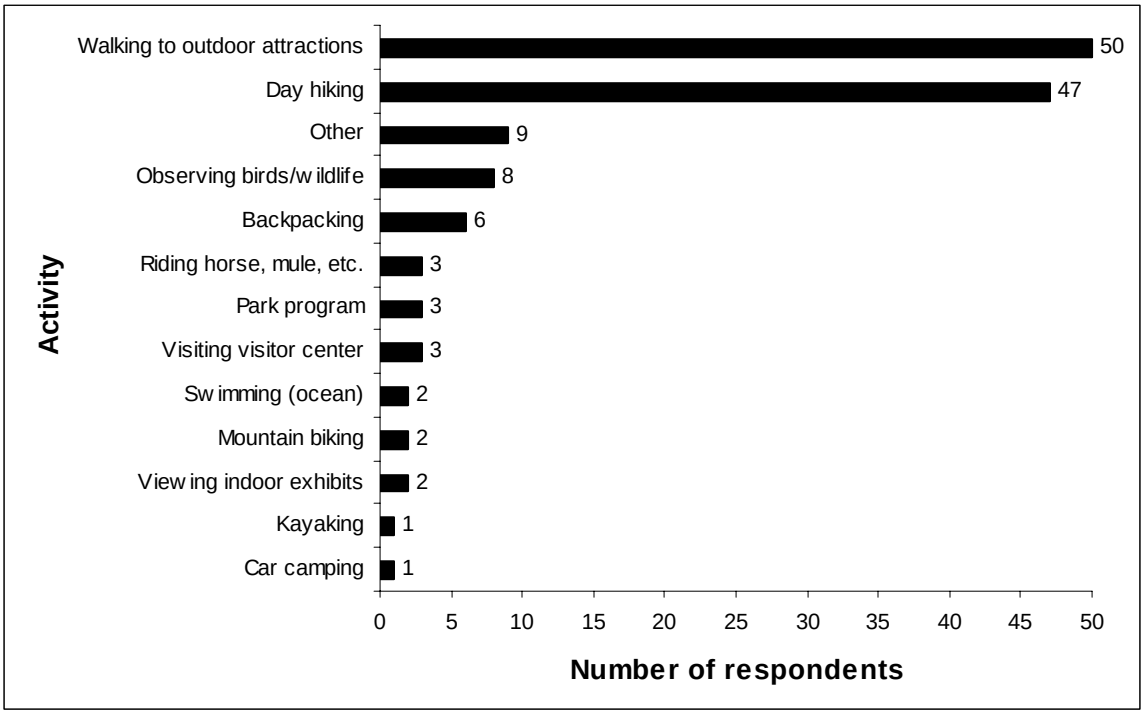

Figure 34.3: Primary visitor activities (N=137)

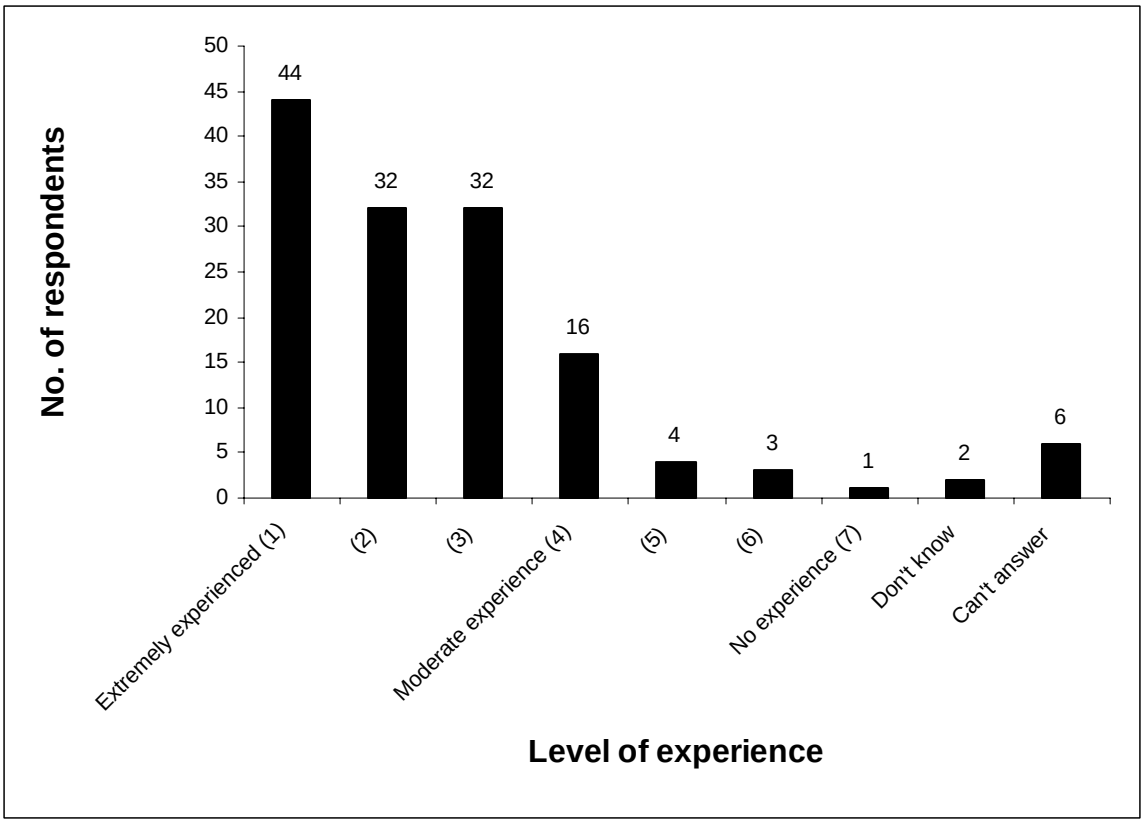

Figure 34.4: Personal level of experience (N=140)

Preparedness is one aspect of experience, and Figure 34.5 shows how prepared respondents were based on the safety items that they had available during their visit.

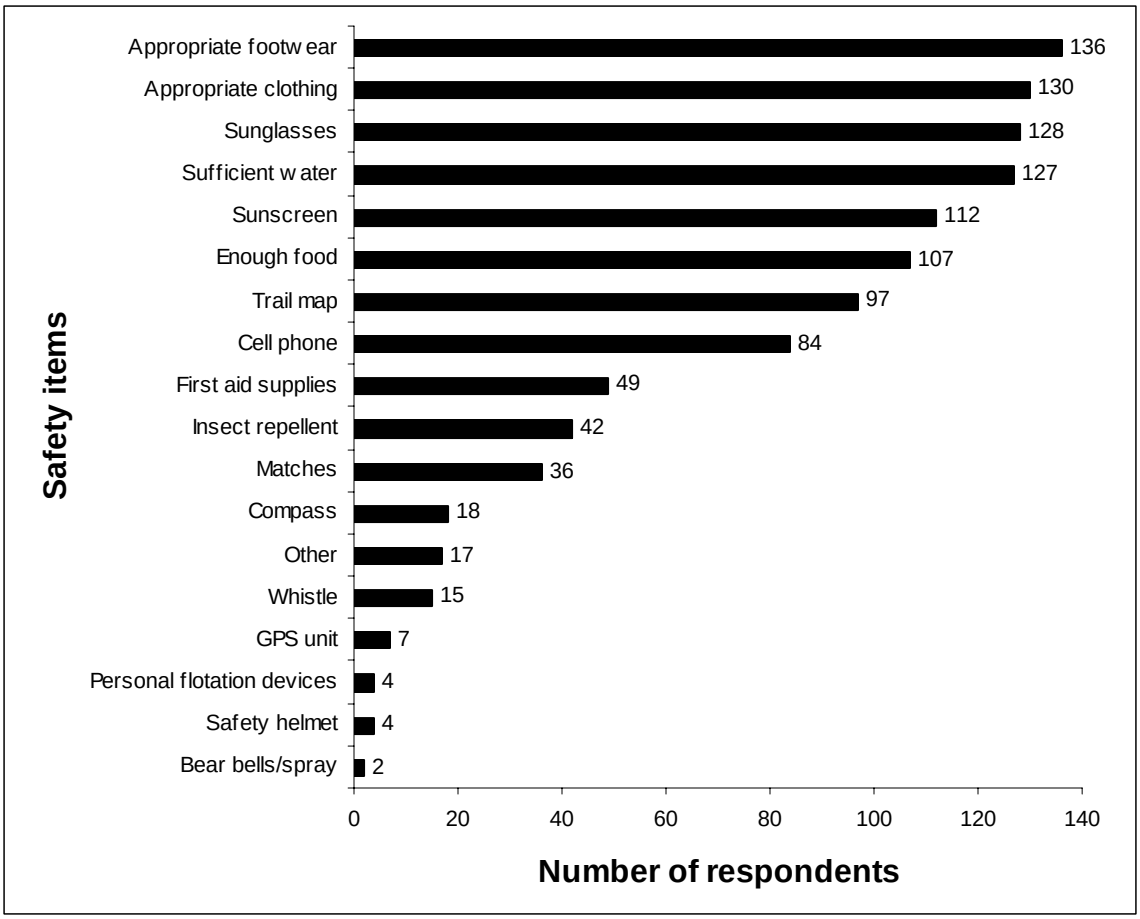

Figure 34.5: Personal safety items (N=136)

Fourteen percent of respondents expressed some concern about suffering an injury or illness while engaged in their primary activity. Of these 20 respondents, only one was concerned for much of the time, and only one was very concerned. Most of the concerned respondents were less concerned for brief periods only. Without reference to a particular activity, however, Figure 34.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although the level of concern about poisonous plants seems inordinate.

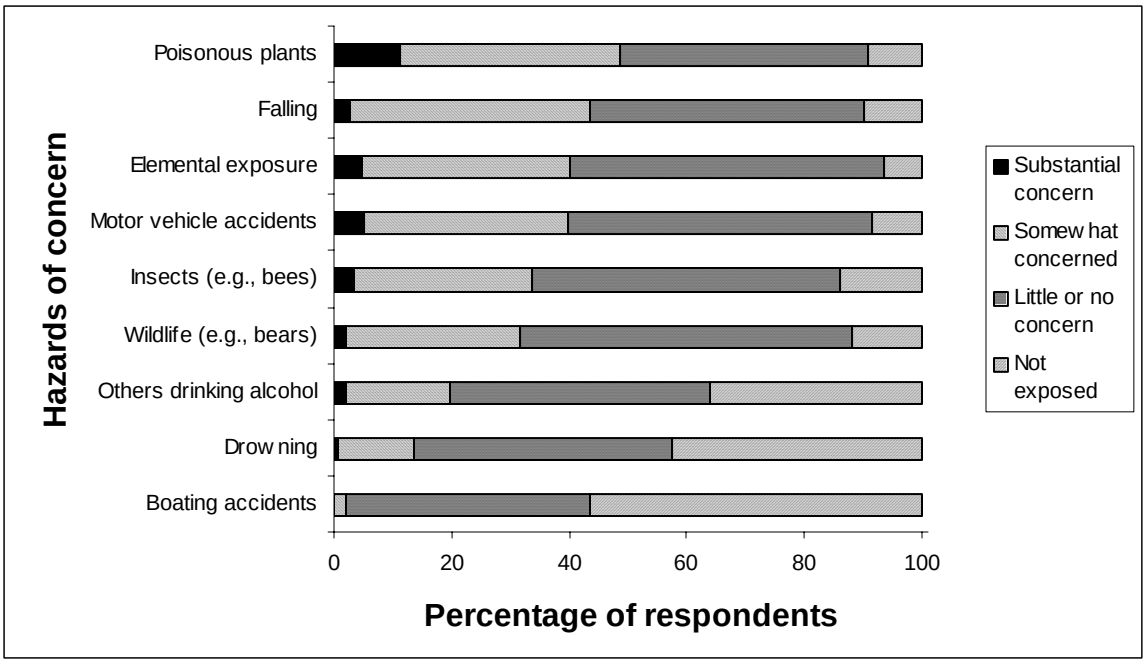

Figure 34.6: Level of concern about various hazards (N=141-142)

34.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 99% of respondents were traveling in privately owned or rented vehicles. Eighty-five percent of respondents spent all of the time in the front seat, and 5% spent some of the time in the front seat. Of these individuals, 97% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (95%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty-six percent of respondents never encountered cars that were driving too fast, and 46% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 35% of respondents encountered cars that were driving too slowly. Most (88%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 94% thought that hazard-warning signs were adequate most or all of the time. Figure 34.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, bicycle riders and large recreational vehicles are the most commonly cited driving hazards.

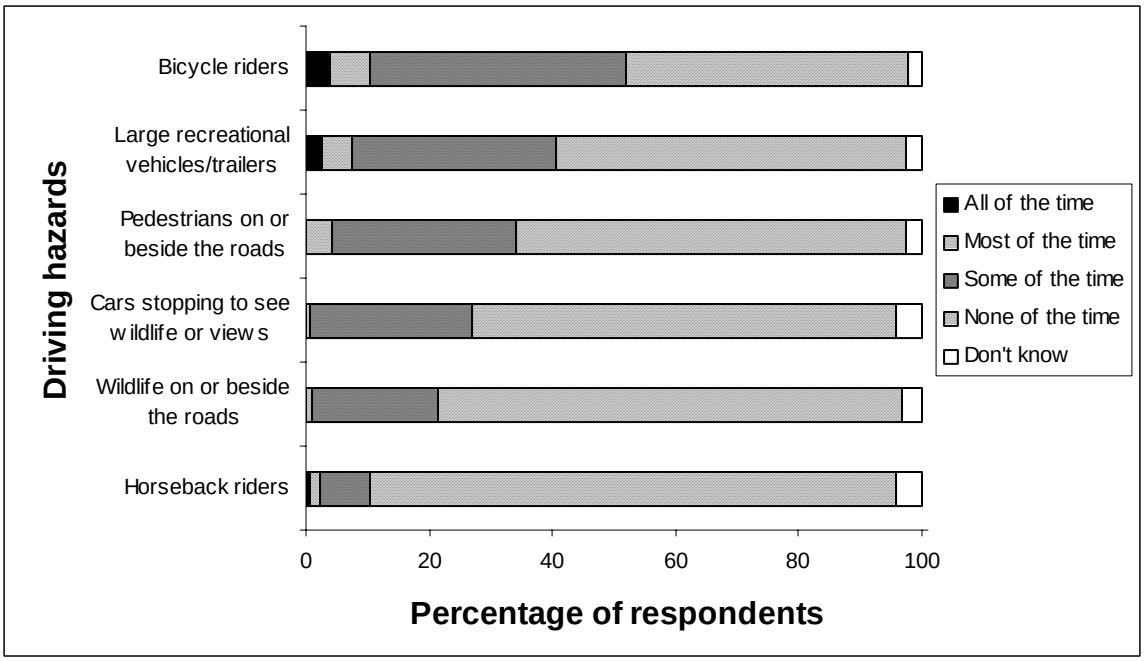

Figure 34.7: How often do these make traveling on roads more hazardous? (N=122-125)

34.6 Management issues:
With regard to the primary activity undertaken during their visit, 30% of respondents believed that safety was entirely the responsibility of the visitor, while 41% believed safety was the responsibility of both the visitor and the park staff (Figure 34.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 34.9 shows that the overwhelming majority (79%) of respondents thought such measures definitely did not detract. Of the two respondents (1%) who indicated that the safety measures definitely did detract from their enjoyment, one was hiking and the other was engaged in a park program.

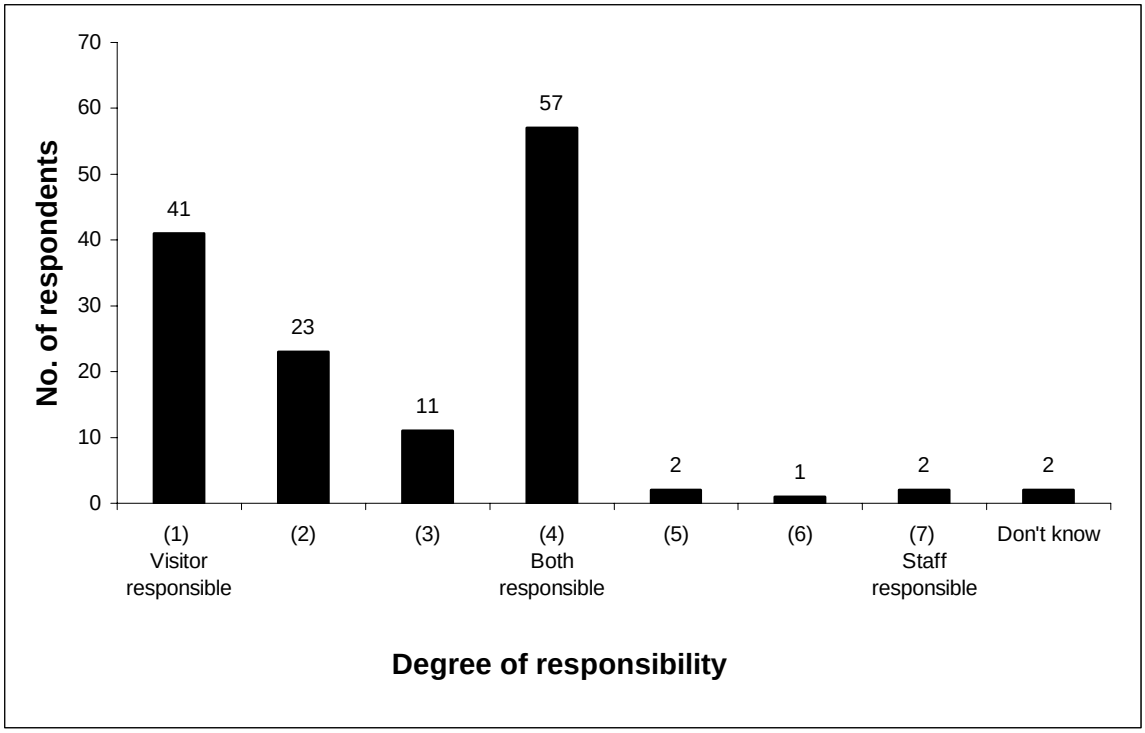

Figure 34.8: Responsibility for safety in chosen primary activity (N=139)

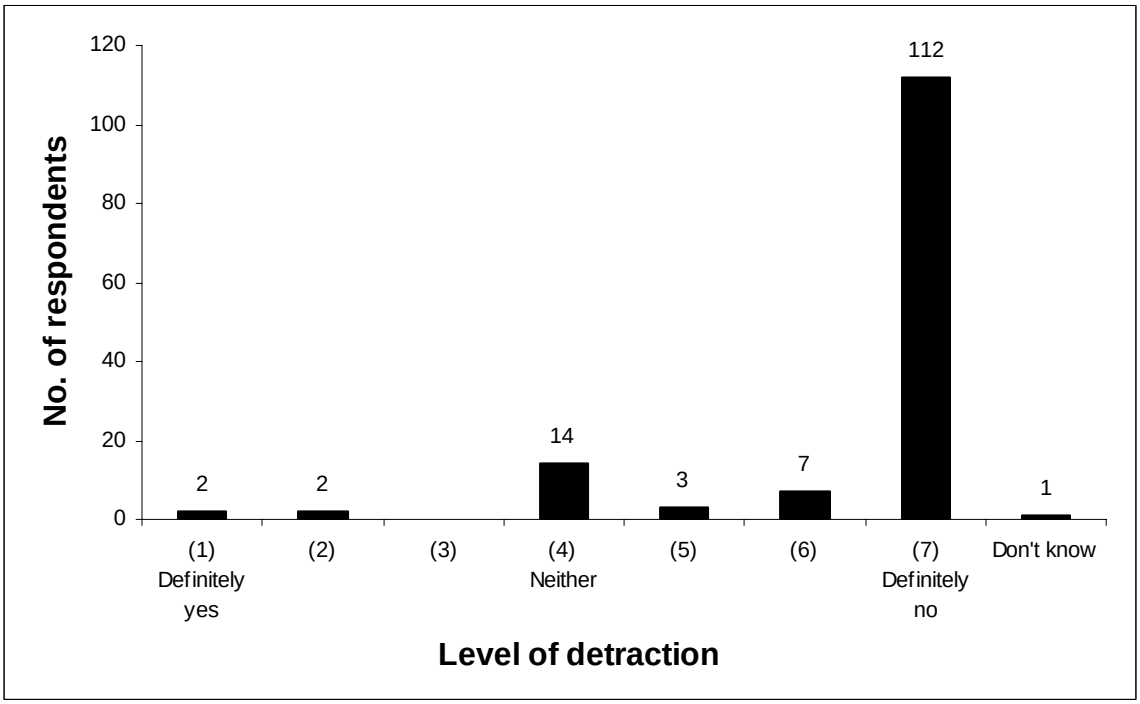

Figure 34.9: Do safety measures detract from visitor enjoyment? (N=141)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-three percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 11% disagree or disagree strongly, and 42% neither agree nor disagree. Eighteen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 39% disagree or disagree strongly, and 40% neither agree nor disagree. Thirty-nine percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 20% agree or agree strongly, and 36% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (86%);
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (78%);
- restrictions on the number of persons/groups who undertake particular activities (69%);
- park rangers to enforce rules and regulations (65%);
- enforcement of alcoholic beverage restrictions (63%); and,
- safe surfaces on walkways and stairs (77%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (20%) and more or much more enforcement of alcoholic beverage prohibitions (13%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 22% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 23% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 34.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

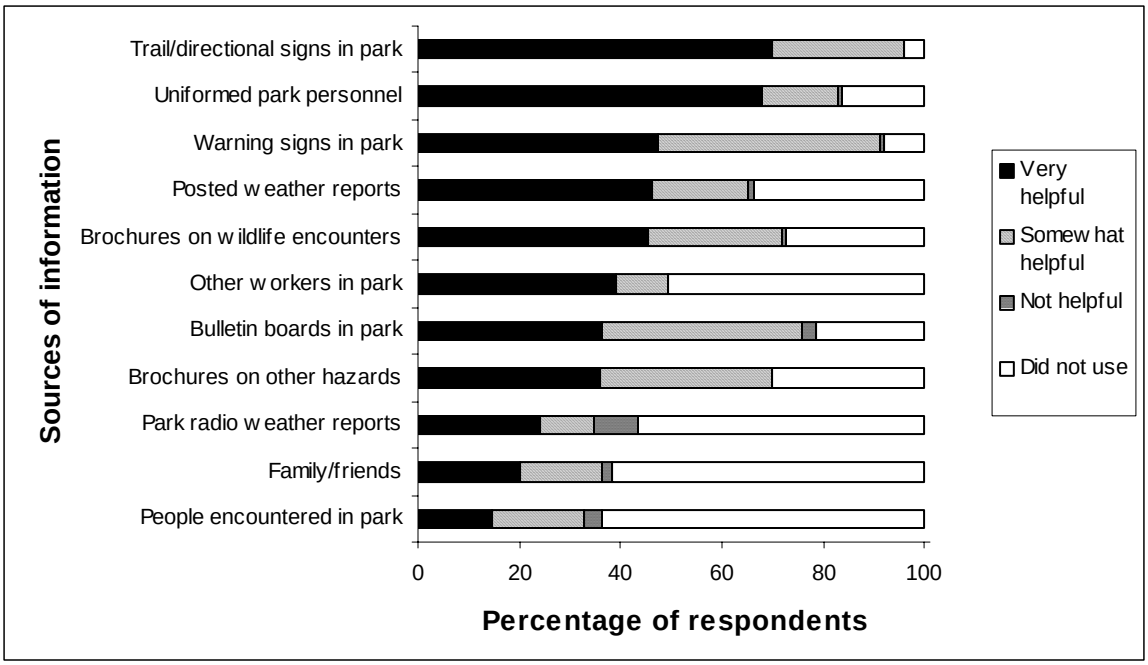

Figure 34.10: How helpful are various sources of safety information (N=92-127)

35.0 Rocky Mountain National Park

35.1 Sample:

At Rocky Mountain National Park, 464 visitor groups were contacted between May 31 and June 5, 2001, and 400 (86.2%) of these groups accepted questionnaires. Questionnaires were completed and returned by 281 visitor groups, resulting in a 70.3% response rate for this park. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 3 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 278 or less.

35.2 Demographics:

Figure 35.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty percent of respondents were female and 50% male. The overwhelming majority (95%)of respondents were white, with 1% Hispanic, 2% Asian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 18% of respondents, while an additional 35% classified themselves as college graduates. The majority (95%) of respondents were residents of the US and 5% were international visitors, including 5 from the UK, 2 from the Netherlands, 2 from Canada, and one from each of Australia, Finland, and Sweden.

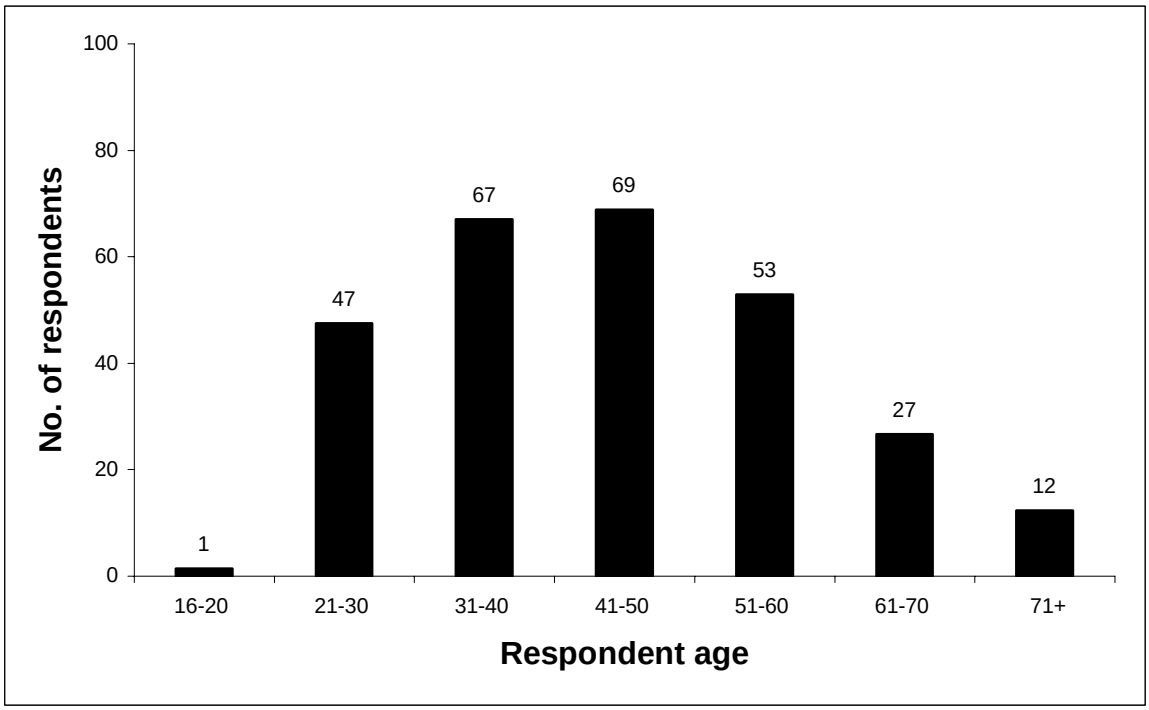

Figure 35.1: Distribution of respondents by age (N=277)

35.3 Visitation

For 45% of respondents, this was their first visit to the park. Among those 145 respondents returning to the park, 40% had visited the park twice in the past 10 years (including the current visit), 26% 3-5 times, 16% 6-10 times, and 18% 11 or more times. This visit was the primary destination for 37% of respondents, but one of only several destinations for 54% of respondents. For 9% of respondents this visit was not a planned destination at all. Thirty percent of the respondents visited the park for a half day or less, 48% visited for up to one day, and 22% visited for more than one day. Five percent of respondents were visiting the park by themselves, 65% with family members, 15% with friends, and 13% with family members and friends.

35.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 35.2).

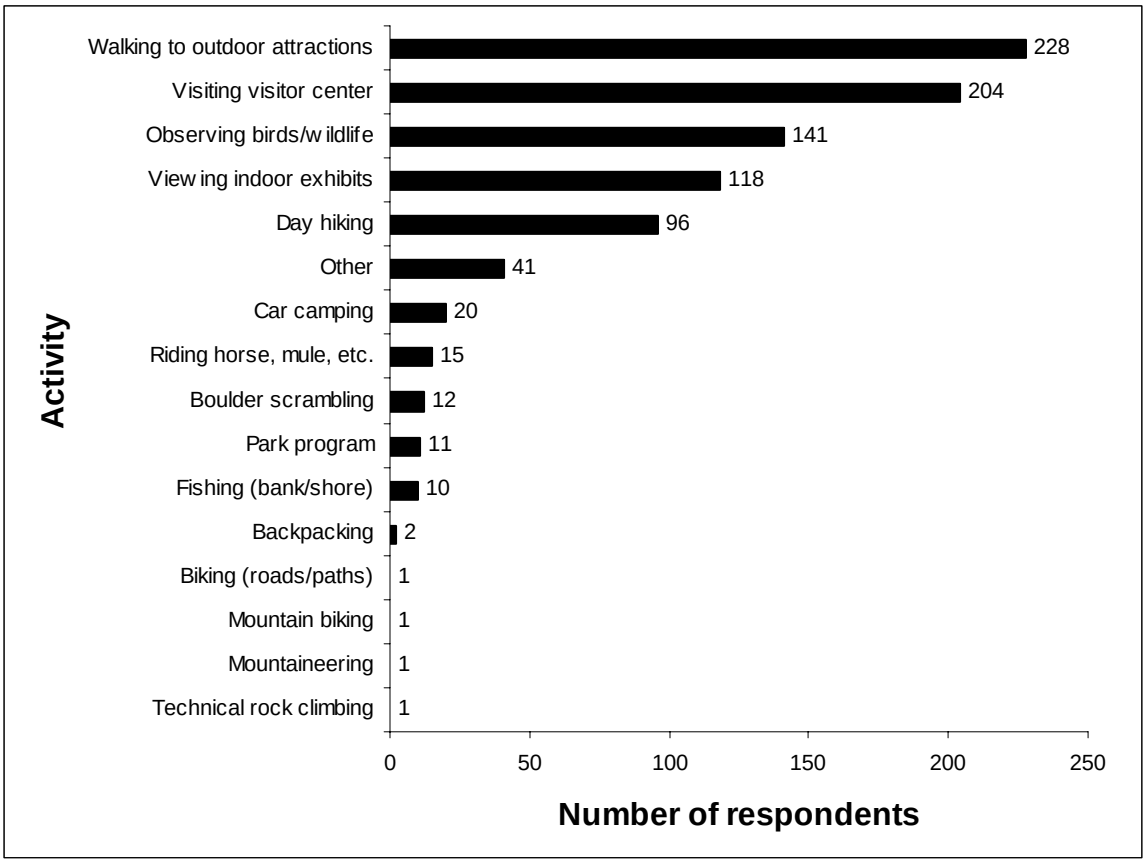

Figure 35.2: Visitor activities (N=277)
(Note: Several respondents listed more than one activity)

Figure 35.2 illustrates that many respondents walked to outdoor attractions (82%), visited the visitor center (74%) and viewed indoor exhibits (43%), but these are often only

adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 35.3 illustrates that walking to outdoor attractions (38%), day hiking (25%), observing birds and wildlife (17%), and various other activities (12%) were the most popular primary activities. Most respondents (90%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, less than 2% with people aside from their own personal group, and less than 1% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 35.4). Ratings of personal experience varied little between activities and between males and females.

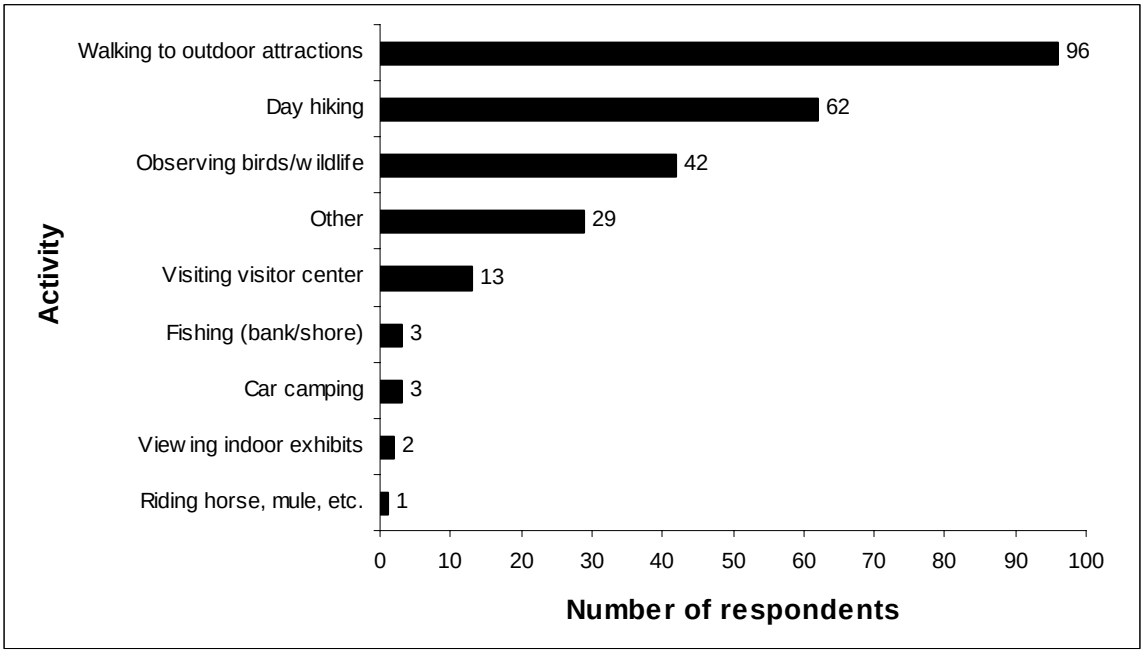

Figure 35.3: Primary visitor activities (N=250)

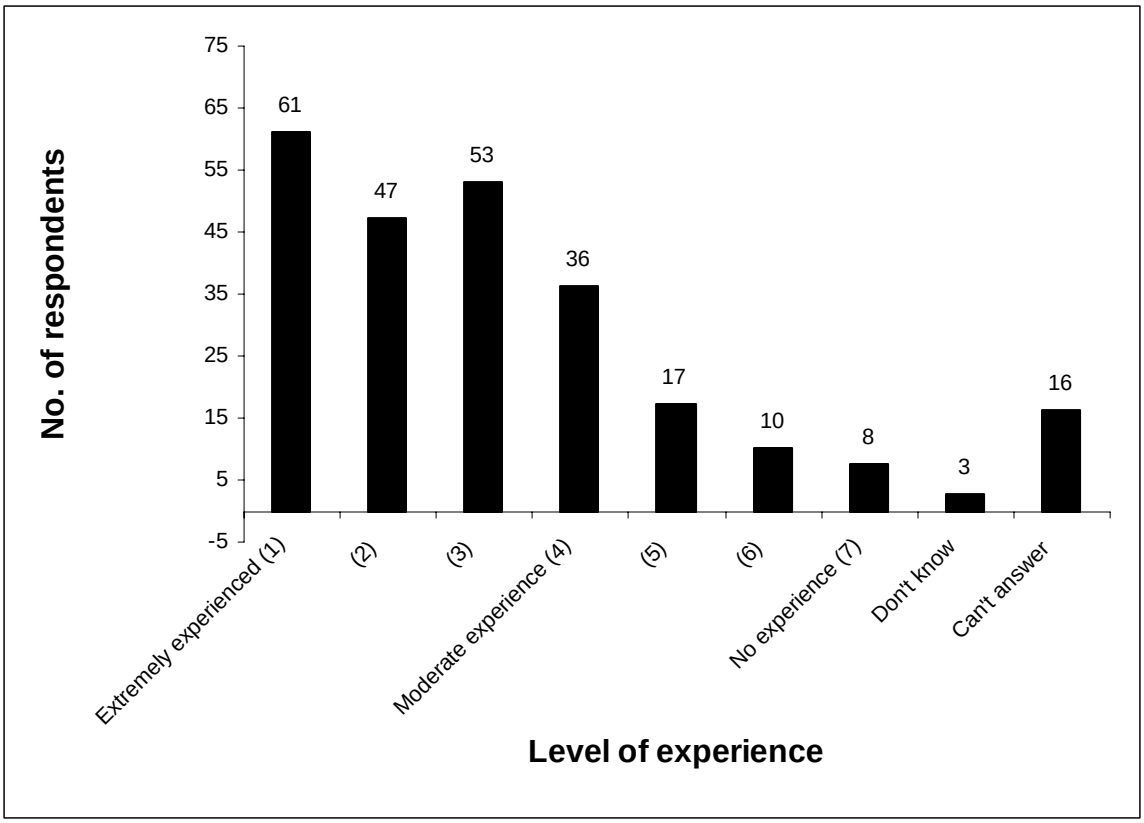

Figure 35.4: Personal level of experience (N=251)

Preparedness is one aspect of experience, and Figure 35.5 shows how prepared respondents were based on the safety items that they had available during their visit.

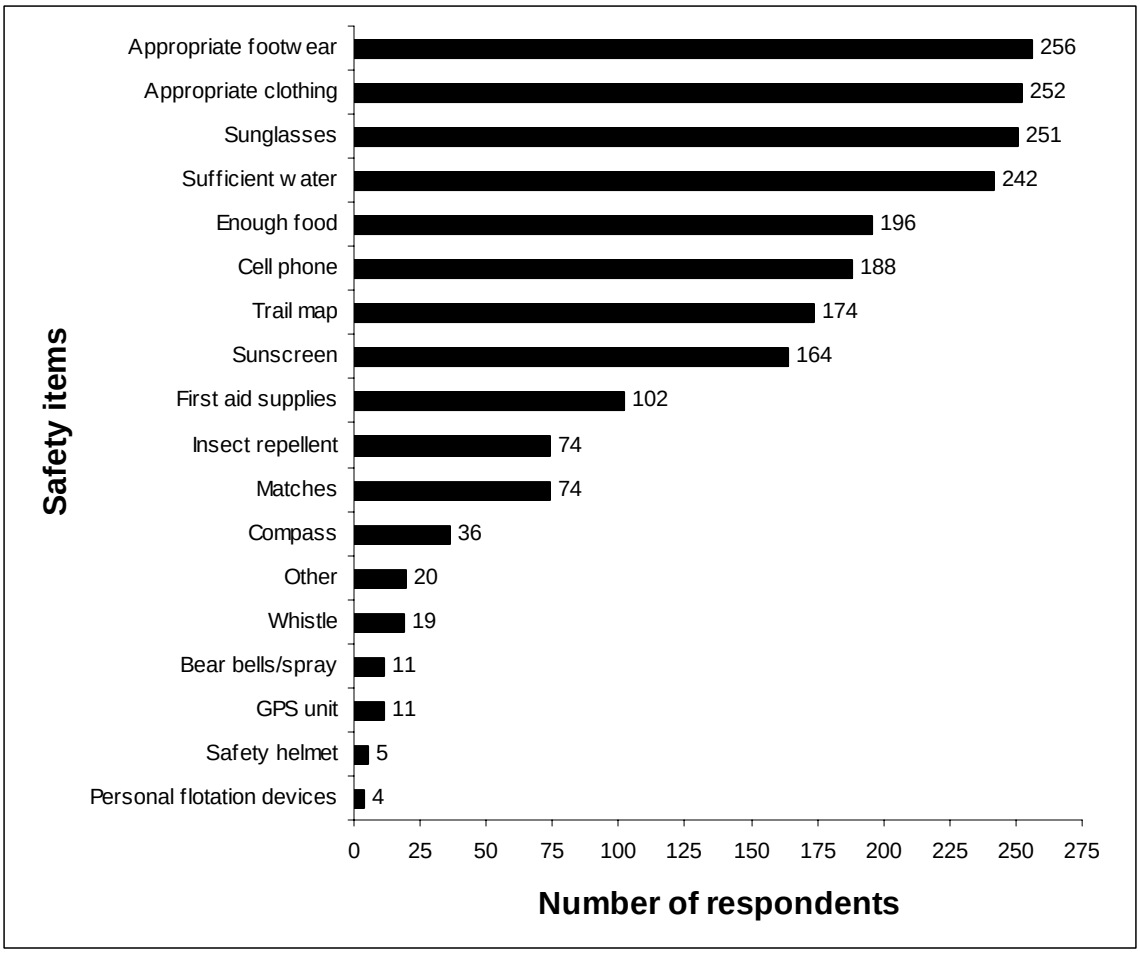

Figure 35.5: Personal safety items (N=256)

Sixteen percent (i.e., 43) respondents expressed some concern about suffering an injury or illness while engaged in their primary activity, although only 2 respondents were quite concerned and only 2 were concerned for much of the time.

Without reference to a particular activity, however, Figure 35.6 shows how concerned respondents were about various hazards that might be encountered in the park. Evidently, substantial numbers of respondents had some concerns about the risks of motor vehicle accidents, falling, and exposure to the weather. These concerns would appear to be broadly consistent with the nature of the park.

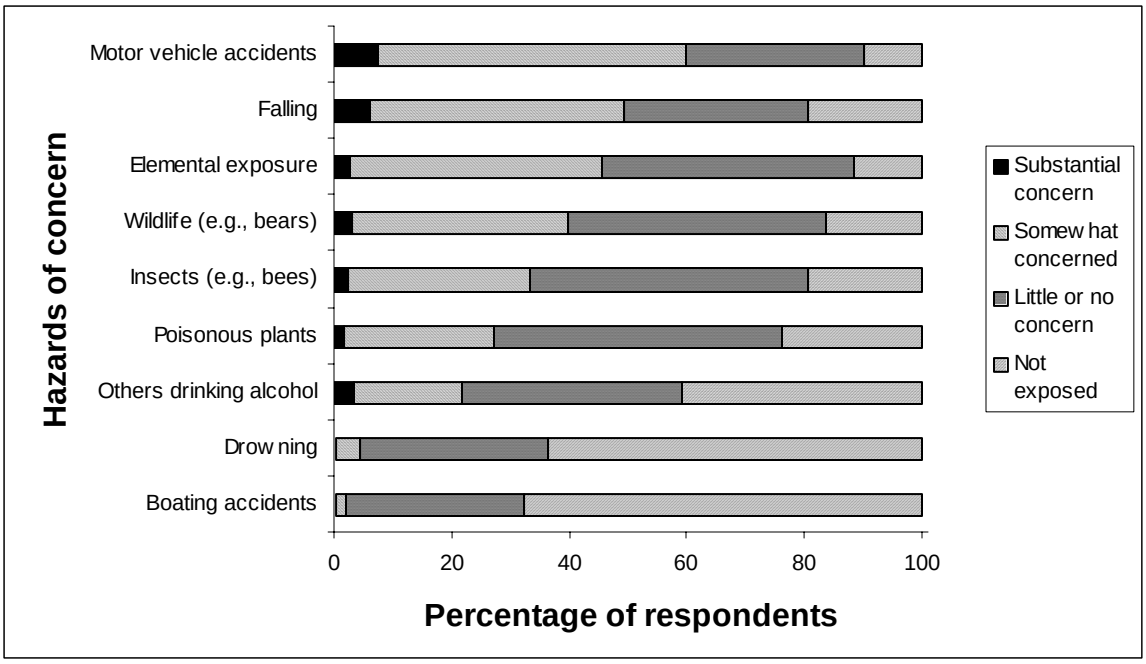

Figure 35.6: Level of concern about various hazards (N=270-274)

35.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 98% of respondents were traveling in privately owned or rented vehicles. Eighty-two percent of respondents spent all of the time in the front seat, and 9% spent some of the time in the front seat. Of these individuals, 55% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (95%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Forty percent of respondents never encountered cars that were driving too fast, and 53% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 52% of respondents encountered cars that were driving too slowly. Most (96%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 93% thought that hazard-warning signs were adequate most or all of the time. Figure 35.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, cars stopping to see the views or wildlife , pedestrians, bicyclists, and large recreational vehicles are considered driving hazards at least some of the time by sizeable proportions of the respondents.

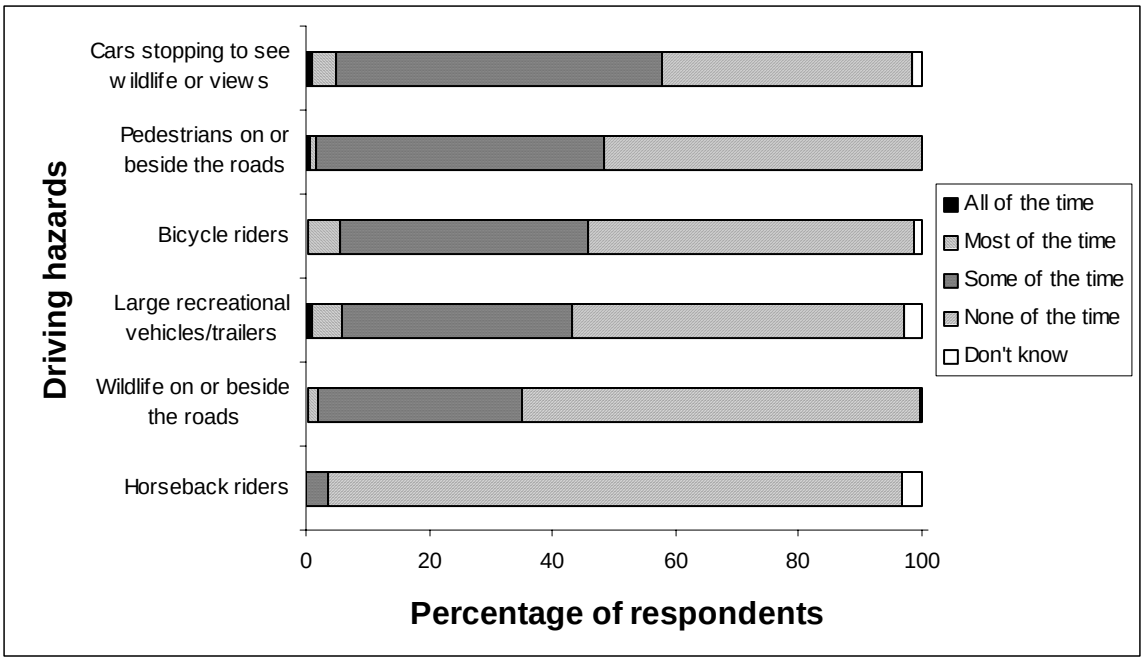

Figure 35.7: How often do these make traveling on roads more hazardous? (N=241-244)

35.6 Management issues:

With regard to the primary activity undertaken during their visit, 44% of respondents believed that safety was entirely the responsibility of the visitor, while 30% believed safety was the responsibility of both the visitor and the park staff (Figure 35.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 35.9 shows that the overwhelming majority (73%) of respondents thought such measures definitely did not detract. The 2 respondents (1%) who indicated that the safety measures did detract from their enjoyment were day hiking.

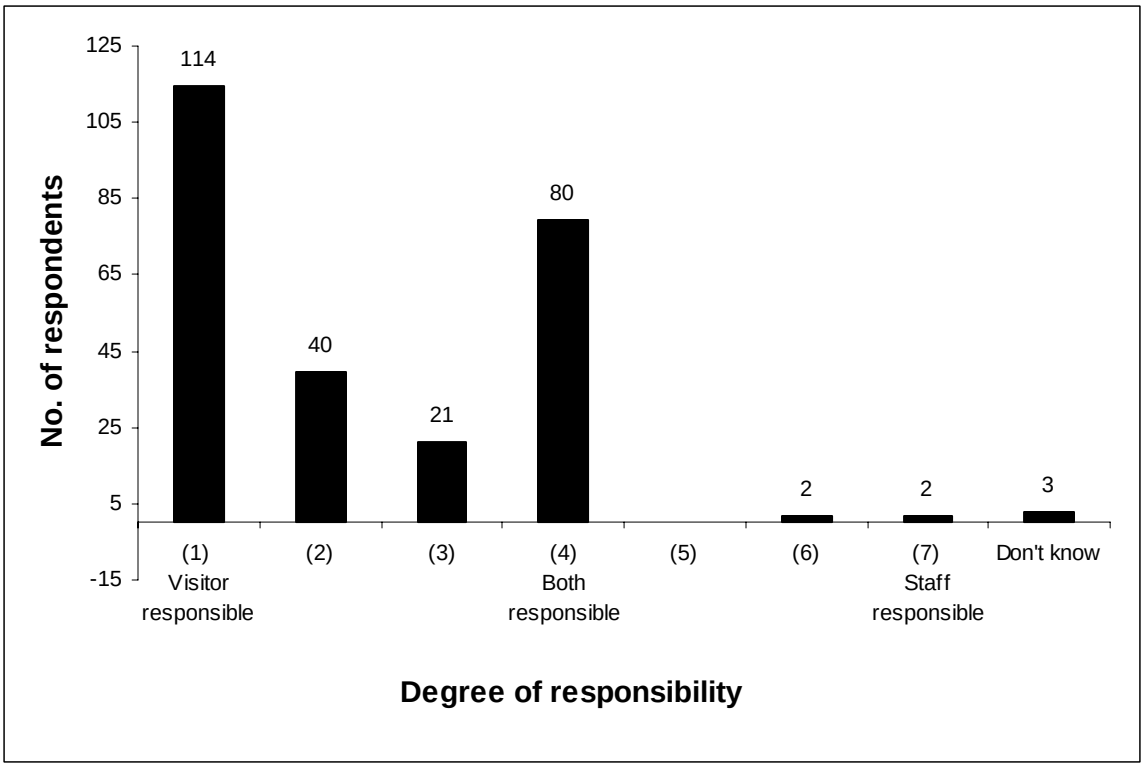

Figure 35.8: Responsibility for safety in chosen primary activity (N=261)

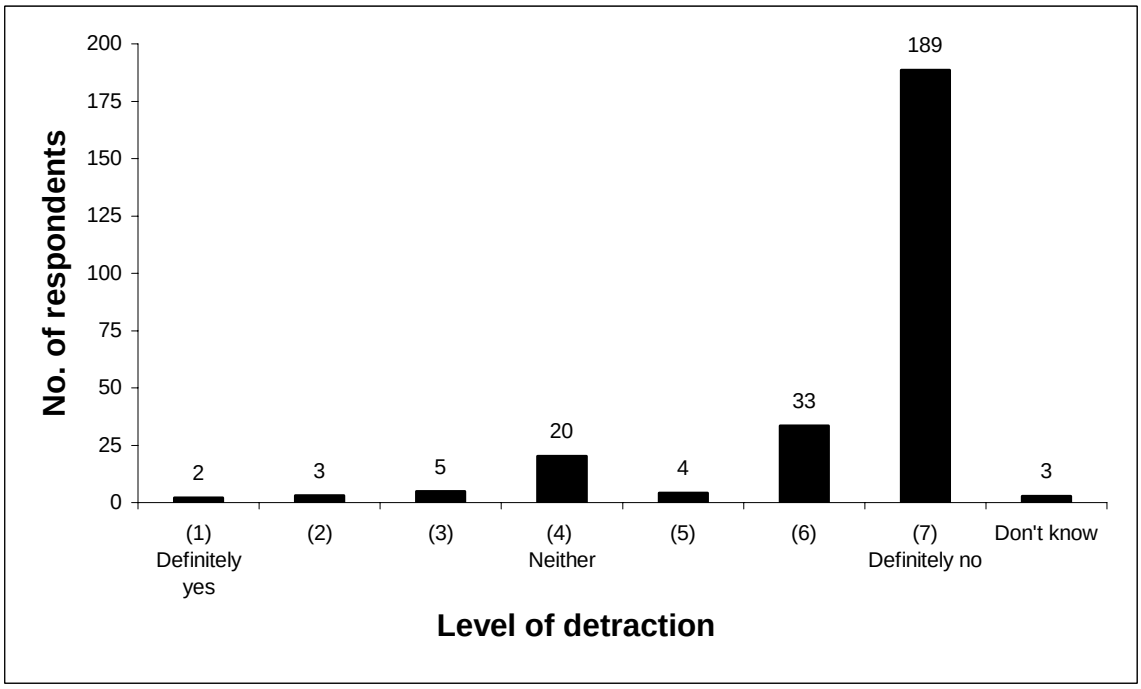

Figure 35.9: Do safety measures detract from visitor enjoyment? (N=259)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 40% neither agree nor disagree. Twenty-two percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 43% disagree or disagree strongly, and 34% neither agree nor disagree. Thirty-six percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 26% agree or agree strongly, and 34% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (81%);
- signs warning and advising about hazards (82%);
- brochures and other information warning about hazards (76%);
- restrictions on the number of persons/groups who undertake particular activities (65%);
- park rangers to enforce rules and regulations (63%);
- enforcement of alcoholic beverage restrictions (57%); and,
- safe surfaces on walkways and stairs (85%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (22%) and more or much more enforcement of alcoholic beverage prohibitions (15%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 24% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 26% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 35.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that directional and warning signs and brochures on wildlife encounters and other hazards are the most helpful sources of safety information. As a source of safety information, uniformed park personnel are rated further down the list at Rocky Mountain than at many other parks.

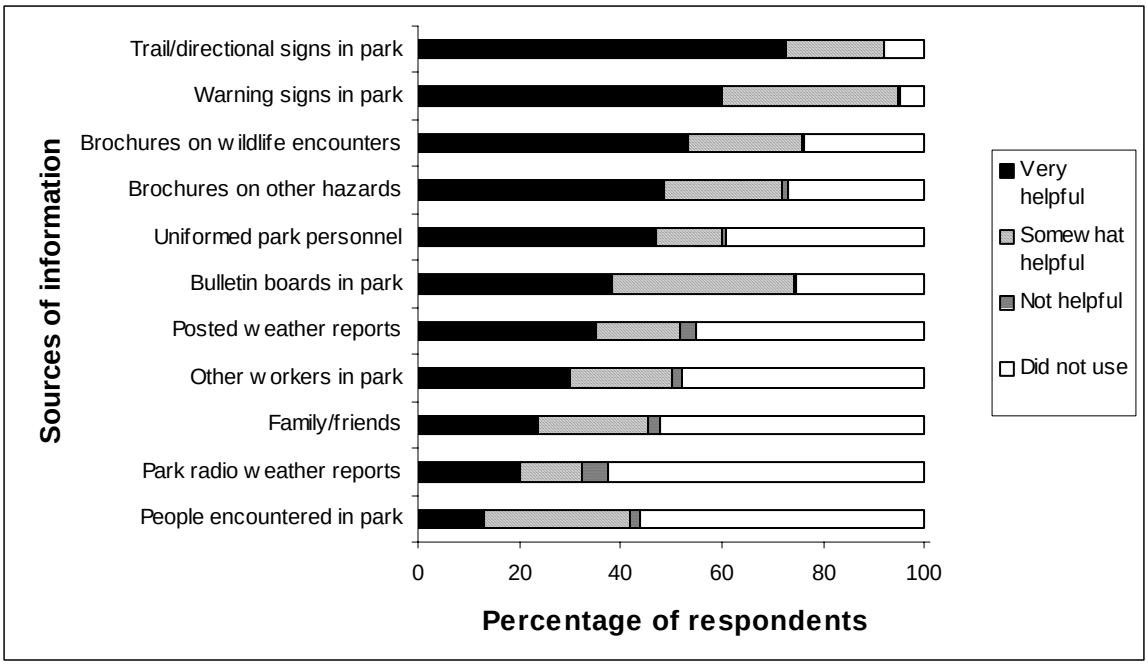

Figure 35.10: How helpful are various sources of safety information (N=169-249)

36.0 Saguaro National Park

36.1 Sample:

At Saguaro National Park, 133 visitor groups were contacted between June 21and June 26, 2001, and 126 (94.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 90 visitor groups, resulting in a 71.4% response rate for this park.

36.2 Demographics:

Figure 36.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty percent of respondents were female and 50% male. The overwhelming majority (90%)of respondents were white, with 3% Asian , 2% American Indian, 1% Hispanic, and 3% of unknown race/ethnicity. Graduate school was the highest level of education attained by 28% of respondents, while an additional 38% classified themselves as college graduates. Eighty-five respondents were residents of the US, 3 were from Germany, 1 from the UK, and 1 from Canada.

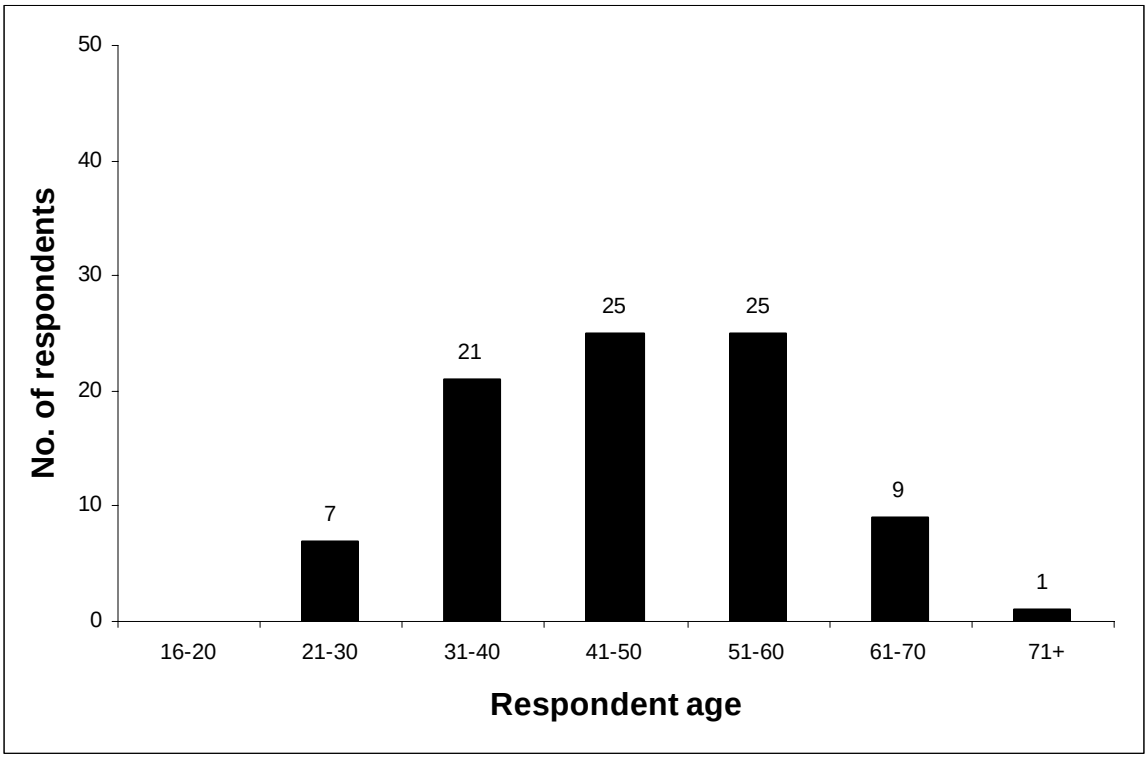

Figure 36.1: Distribution of respondents by age (N=88)

36.3 Visitation

For 65 (72%) respondents, this was their first visit to the park. Nine percent of respondents had visited the park twice in the past 10 years (including the current visit), 11% 3-5 times, 6% 6-10 times, and 2% 11 or more times. This visit was the primary

destination for 15% of respondents, but one of only several destinations for 66% of respondents. For 19% of respondents this visit was not a planned destination at all. Seventy-nine percent of the respondents visited the park for a half day or less, 12% visited for up to one day, and 9% visited for more than one day. Seven percent of respondents were visiting the park by themselves, 78% with family members, 9% with friends, and 6% with family members and friends.

36.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 36.2).

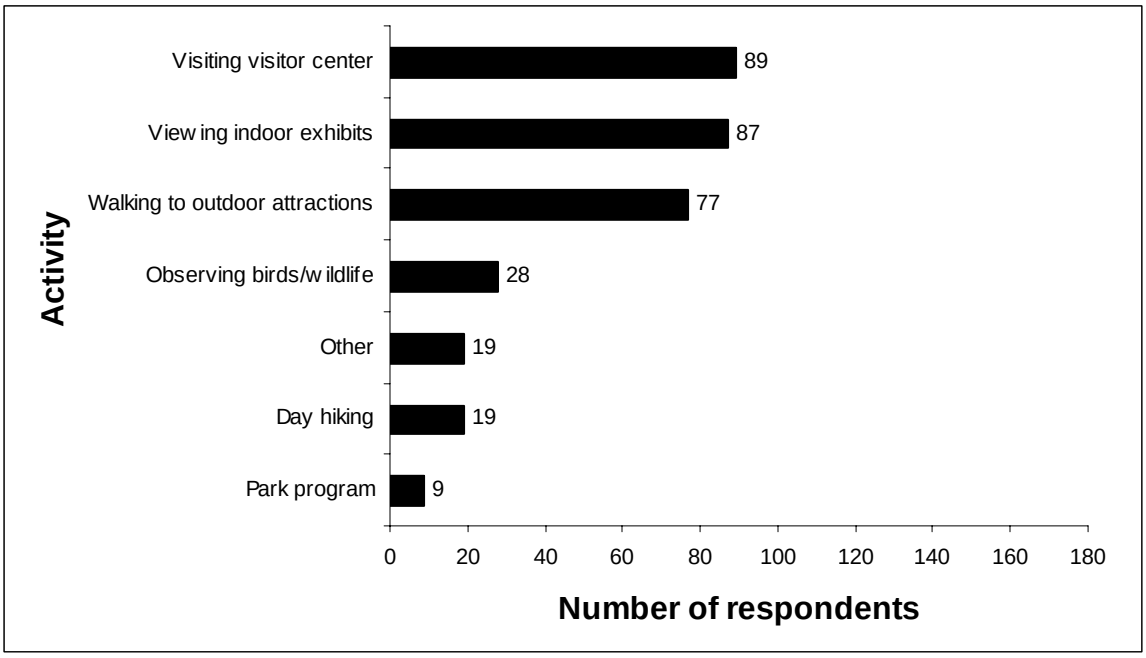

Figure 36.2: Visitor activities (N=90)
(Note: Several respondents listed more than one activity)

Figure 36.2 illustrates that many respondents visited the visitor center (99%) and viewed indoor exhibits (97%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 36.3 illustrates that walking to outdoor attractions (38%), visiting the visitor center (20%), and various other unidentified activities (13%) were the most popular primary activities. Most respondents (92%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, and 1% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7

(not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 36.4). Ratings of personal experience varied little between activities and between males and females. Preparedness is one aspect of experience, and Figure 36.5 shows how prepared respondents were based on the safety items that they had available during their visit.

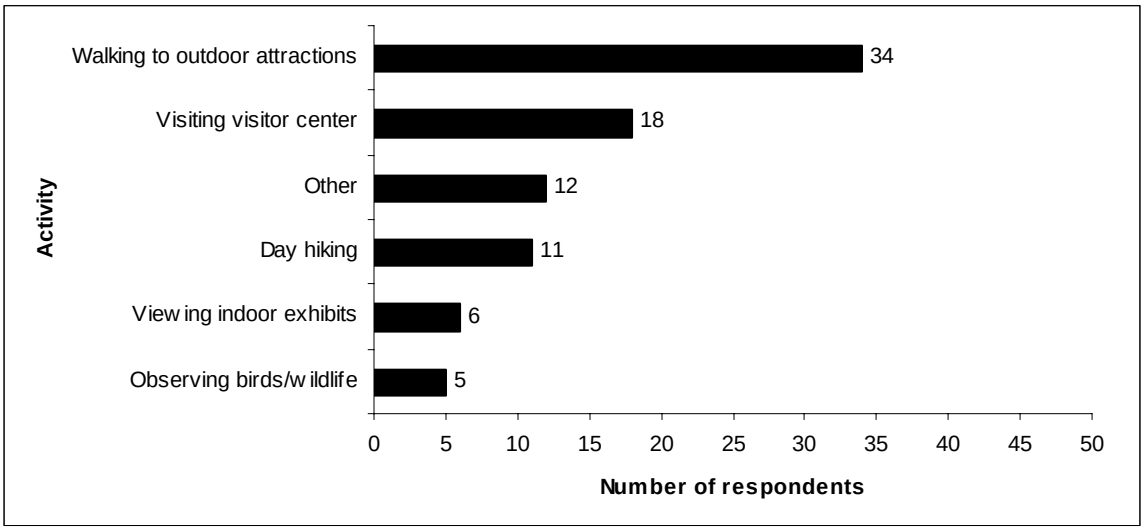

Figure 36.3: Primary visitor activities (N=90)

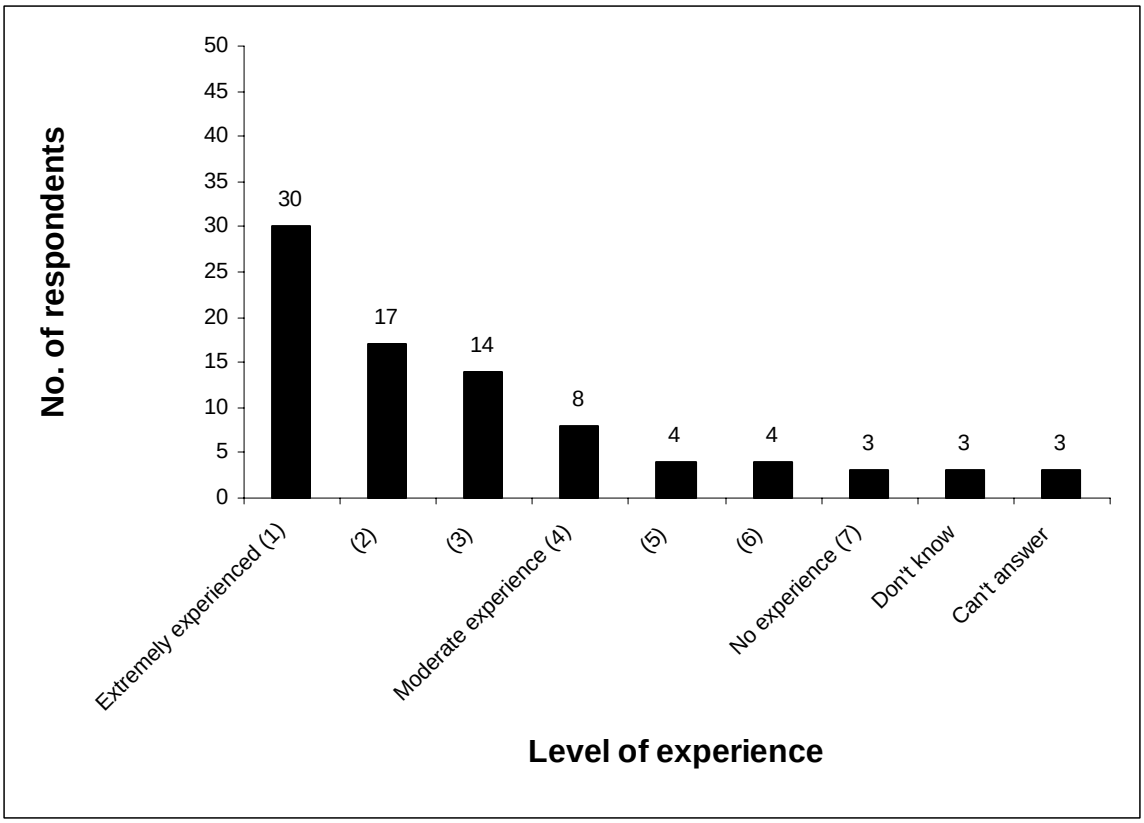

Figure 36.4: Personal level of experience (N=86)

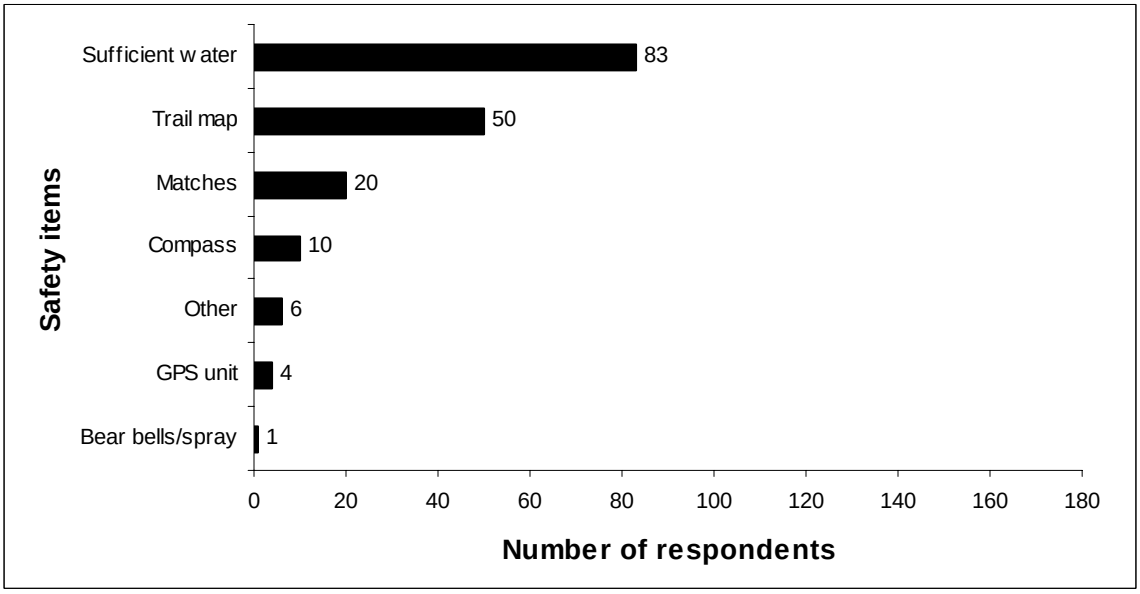

Figure 36.5: Personal safety items (N=83)

Few respondents (6%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 36.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of the park.

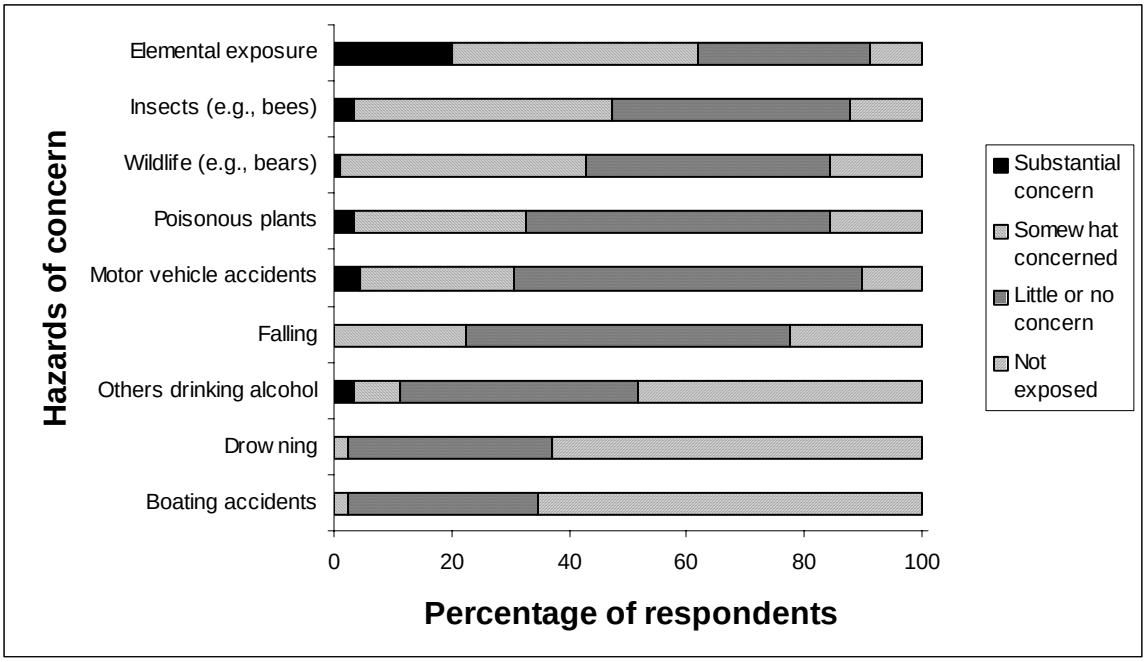

Figure 36.6: Level of concern about various hazards (N=89)

36.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 98% of respondents were traveling in privately owned or rented vehicles. Ninety percent of respondents spent all of the time in the front seat, and 7% spent some of the time in the front seat. Of these 84 individuals, 51% were driving for all or most of the time and 88% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Sixty-four percent of respondents never encountered cars that were driving too fast, and 30% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 15% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 92% thought that hazard-warning signs were adequate most or all of the time. Figure 36.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, most respondents have few significant concerns about driving hazards in the park.

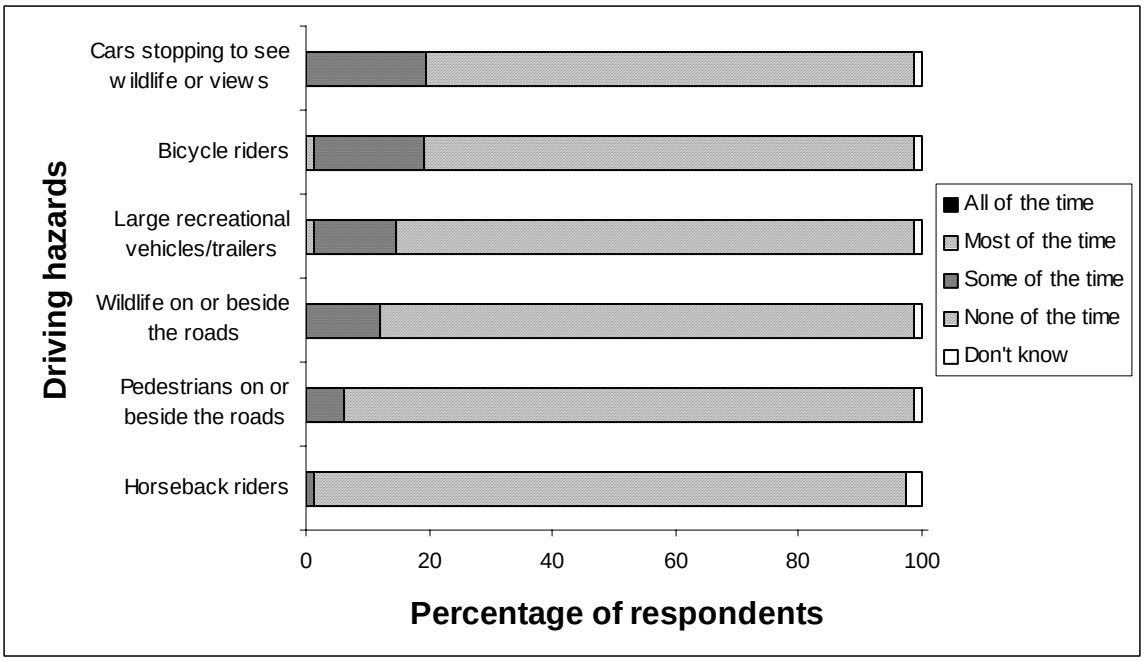

Figure 36.7: How often do these make traveling on roads more hazardous? (N=82-83)

36.6 Management issues:

With regard to the primary activity undertaken during their visit, 31% of respondents believed that safety was entirely the responsibility of the visitor, while 49% believed safety was the responsibility of both the visitor and the park staff (Figure 36.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 36.9 shows that the overwhelming majority (72%) of respondents thought such measures definitely did not detract. The only respondent indicating that these measures did detract to some extent (i.e., a rating of 1 or 2) was primarily engaged in visiting the visitor center.

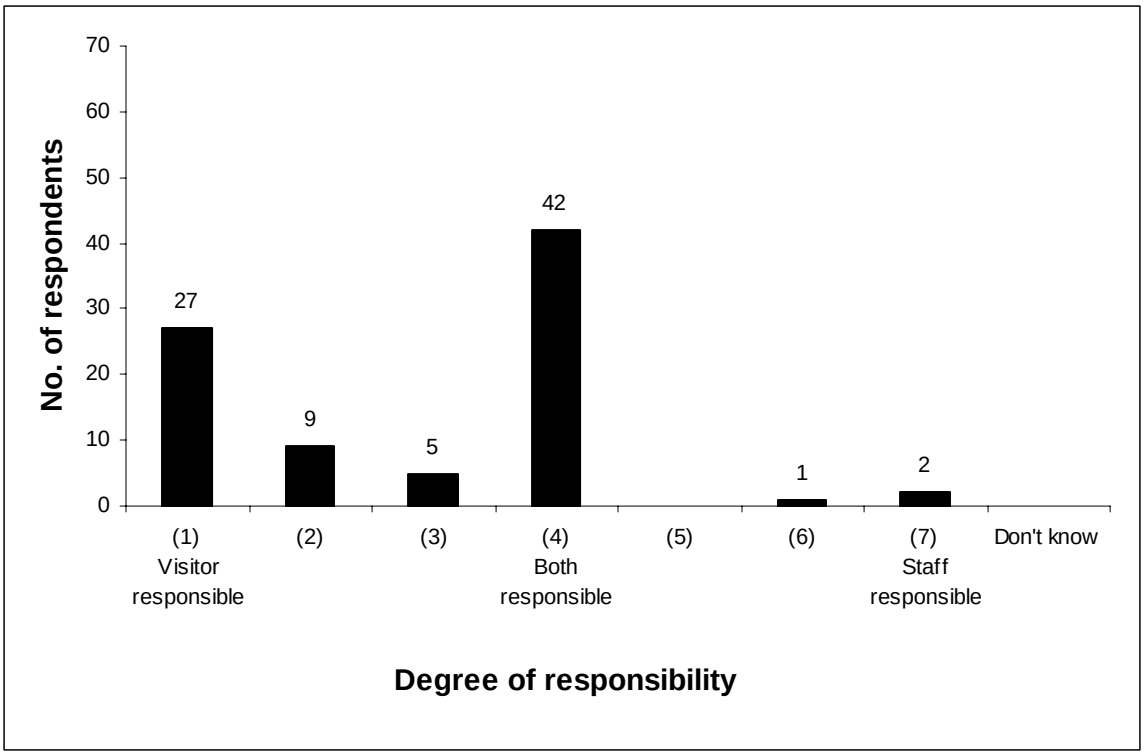

Figure 36.8: Responsibility for safety in chosen primary activity (N=86)

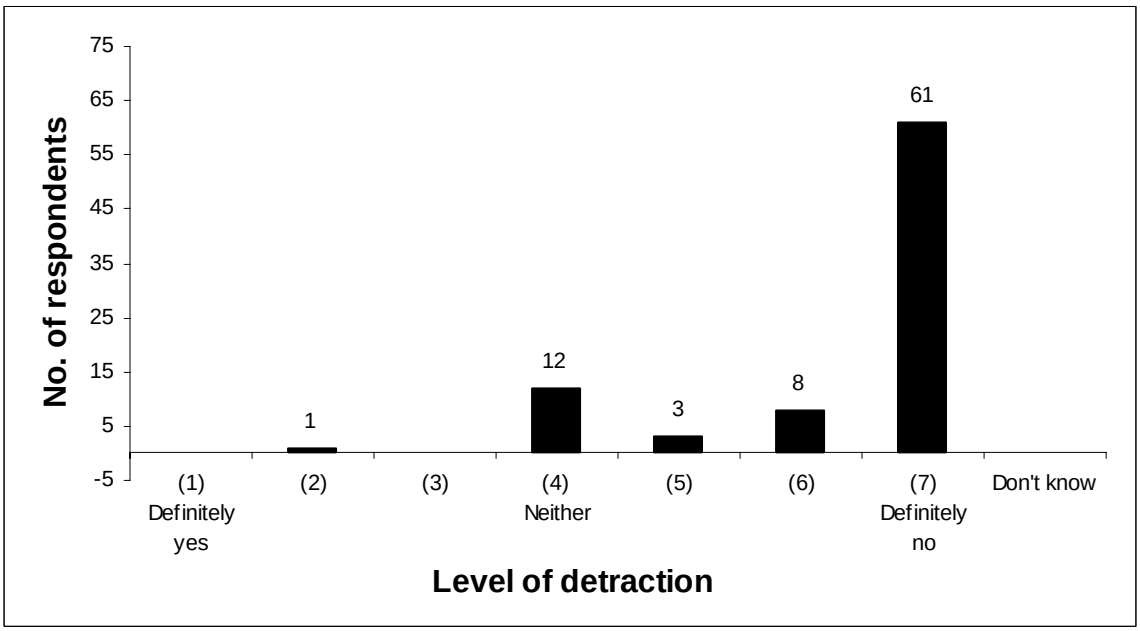

Figure 36.9: Do safety measures detract from visitor enjoyment? (N=85)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-seven percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 7% disagree or disagree strongly, and 43% neither agree nor disagree. Twenty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 36% disagree or disagree strongly, and 41% neither agree nor disagree. Thirty-one percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 26% agree or agree strongly, and 41% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (90%);
- signs warning and advising about hazards (85%);
- brochures and other information warning about hazards (82%);
- restrictions on the number of persons/groups who undertake particular activities (70%);
- park rangers to enforce rules and regulations (68%);
- enforcement of alcoholic beverage restrictions (51%); and,
- safe surfaces on walkways and stairs (82%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (22%) and more or much more enforcement of alcoholic beverage prohibitions (17%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 24% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 33% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 36.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

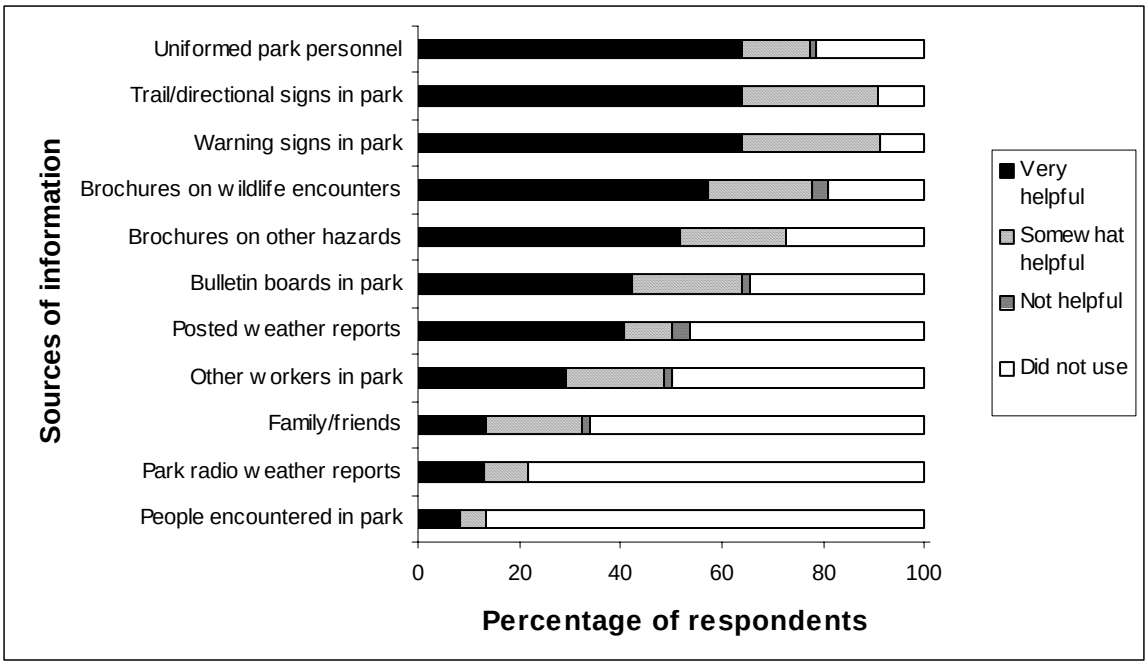

Figure 36.10: How helpful are various sources of safety information (N=46-75)

37.0 Statue of Liberty/Ellis Island National Monument

37.1 Sample:

At Statue of Liberty/Ellis Island National Monument, 528 visitor groups were contacted between July 25 and July 30, 2001, and 400 (75.8%) of these groups accepted questionnaires. Questionnaires were completed and returned by 196 visitor groups, resulting in a 49% response rate for this park.

37.2 Demographics:

Figure 37.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (85%)of respondents were white, with 8% Hispanic, 4% Asian, 3% African-American, and 1% Hawaiian. Graduate school was the highest level of education attained by 24% of respondents, while an additional 33% classified themselves as college graduates. The majority (88%) of respondents were residents of the US and 12% were international visitors, with respondents from the following countries: Agentina (1), Australia (2), Austria (1), Canada (1), Denmark (1), France (3), Germany (1), India (1), Mexico (2), the Netherlands (1), Sweden (1), Switzerland (1), and the UK (7).

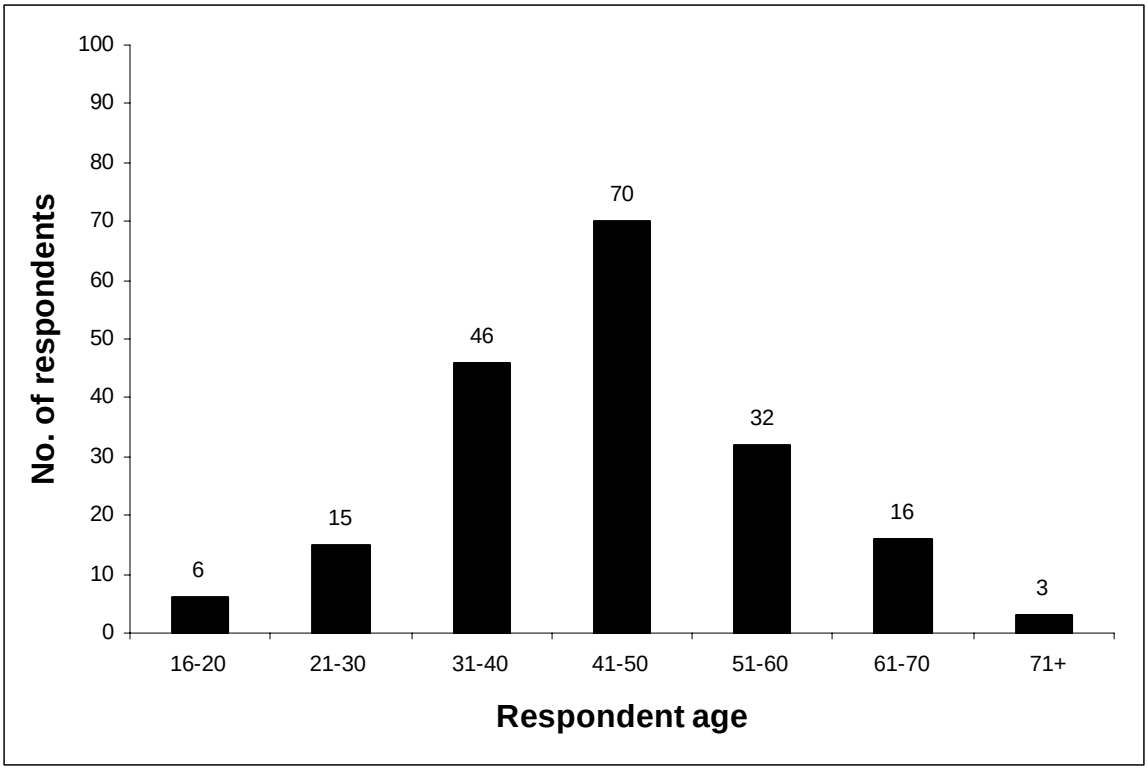

Figure 37.1: Distribution of respondents by age (N=188)

37.3 Visitation
For 65% of respondents, this was their first visit to the park. Among those 63 respondents who indicated they were returning to the park, 67% had visited the park twice in the past 10 years (including the current visit), 27% 3-5 times, 5% 6-10 times, and 2% 11 or more times. This visit was the primary destination for 36% of respondents, but one of only several destinations for 61% of respondents. For 3% of respondents this visit was not a planned destination at all. Forty-eight percent of the respondents visited the park for a half day or less, 50% visited for up to one day, and 2% visited for more than one day. Three percent of respondents were visiting the park by themselves, 74% with family members, 10% with friends, and 13% with family members and friends.

37.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities (Figure 37.2).

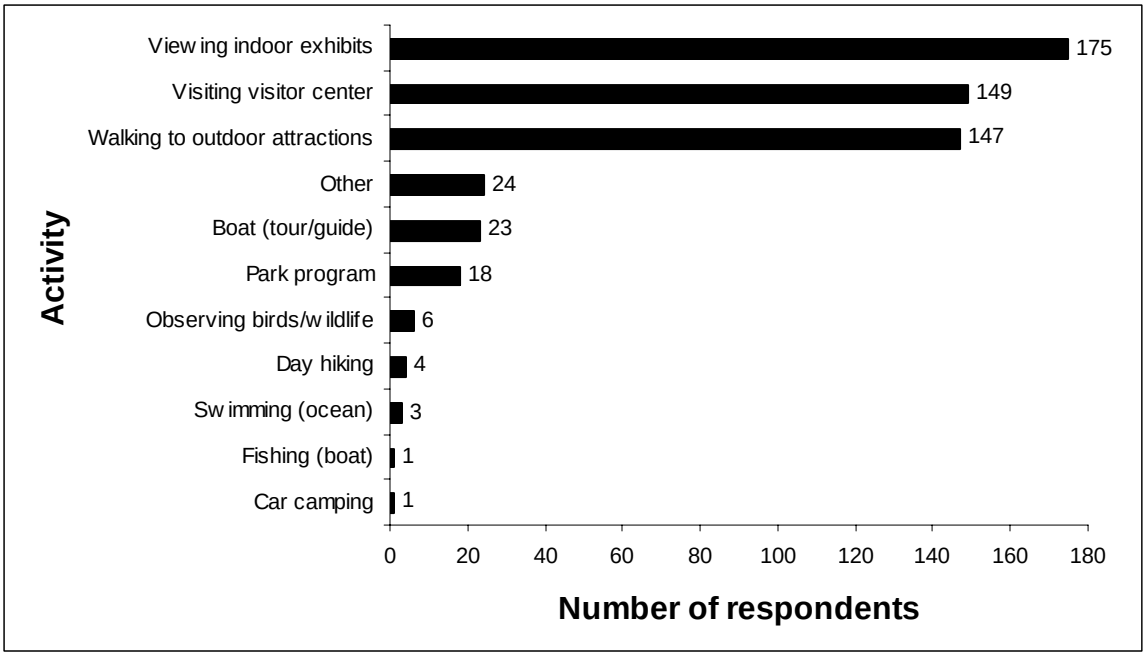

Figure 37.2: Visitor activities (N=196)
(Note: Several respondents listed more than one activity)

Figure 37.2 illustrates that many respondents visited the visitor center (76%) and viewed indoor exhibits (89%). At many other parks, these are often only adjunct activities, but at Statue of Liberty/Ellis Island these were the primary activities. Figure 37.3 illustrates that viewing indoor exhibits (58%), walking to outdoor attractions (18%), visiting the visitor center (15%), and various other activities (8%) were the most popular primary activities. Most respondents (90%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 5% engaged in these activities alone, and 4% with people aside from their own personal group.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 37.4). Rating one's level of experience in activities such as viewing indoor exhibits is difficult, however, which may help to explain the relatively large number of people saying they don't know or can't answer.

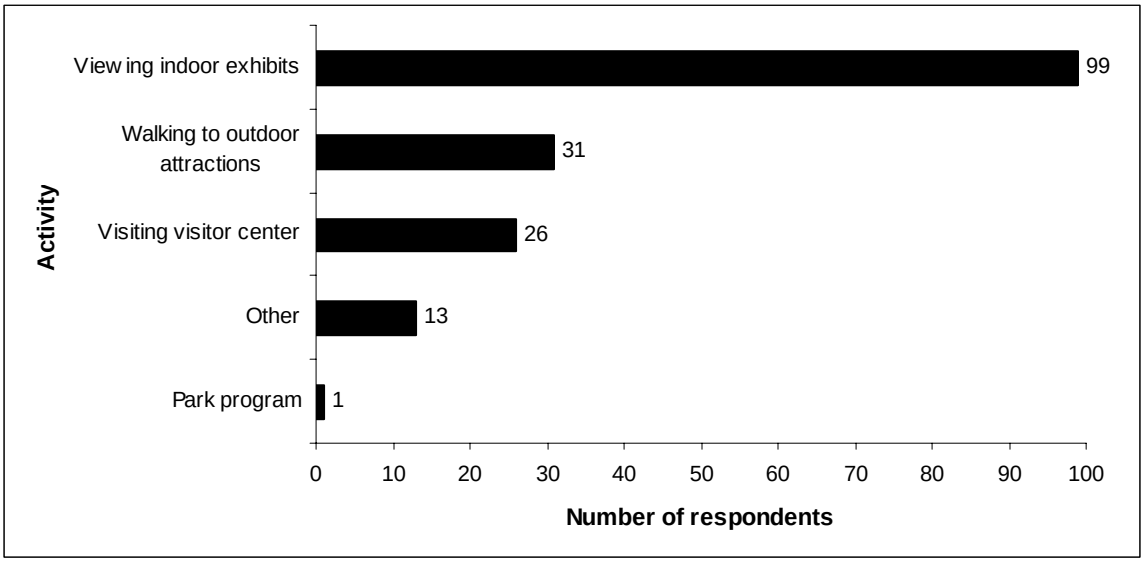

Figure 37.3: Primary visitor activities (N=170)

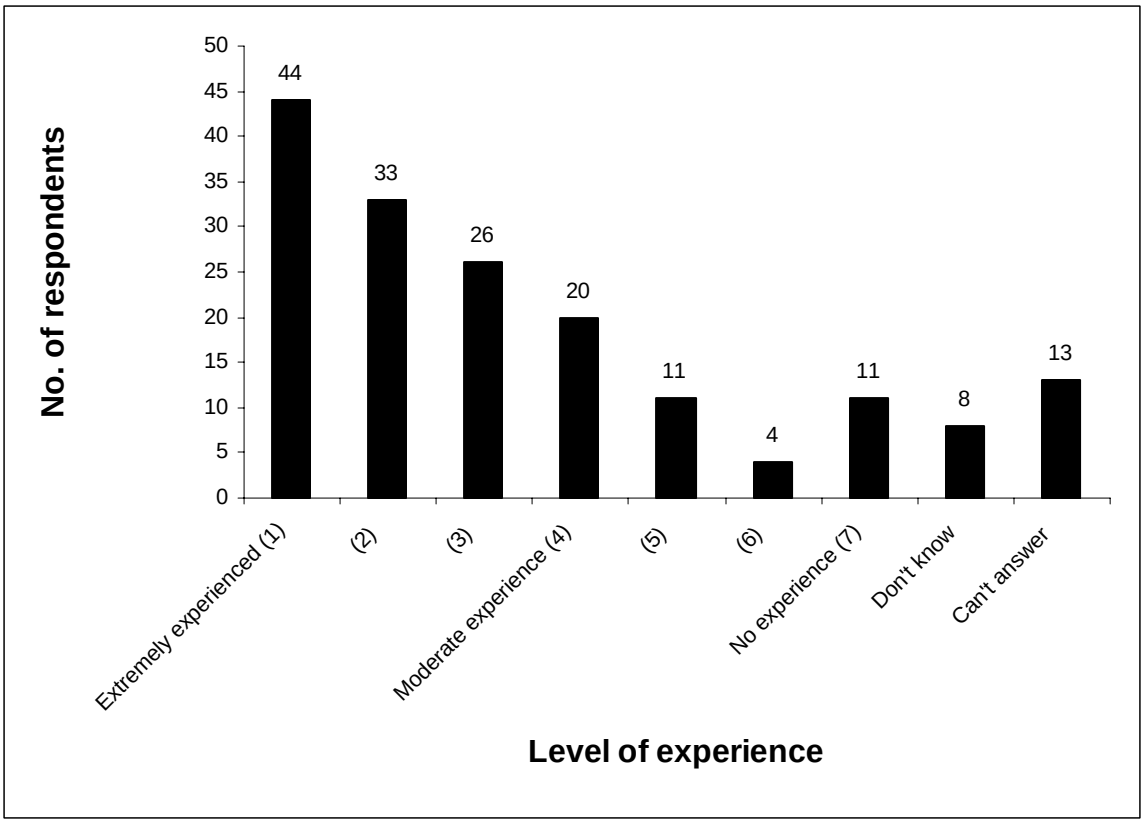

Figure 37.4: Personal level of experience (N=170)

Preparedness is one aspect of experience, and Figure 37.5 shows how prepared respondents were based on the safety items that they had available during their visit.

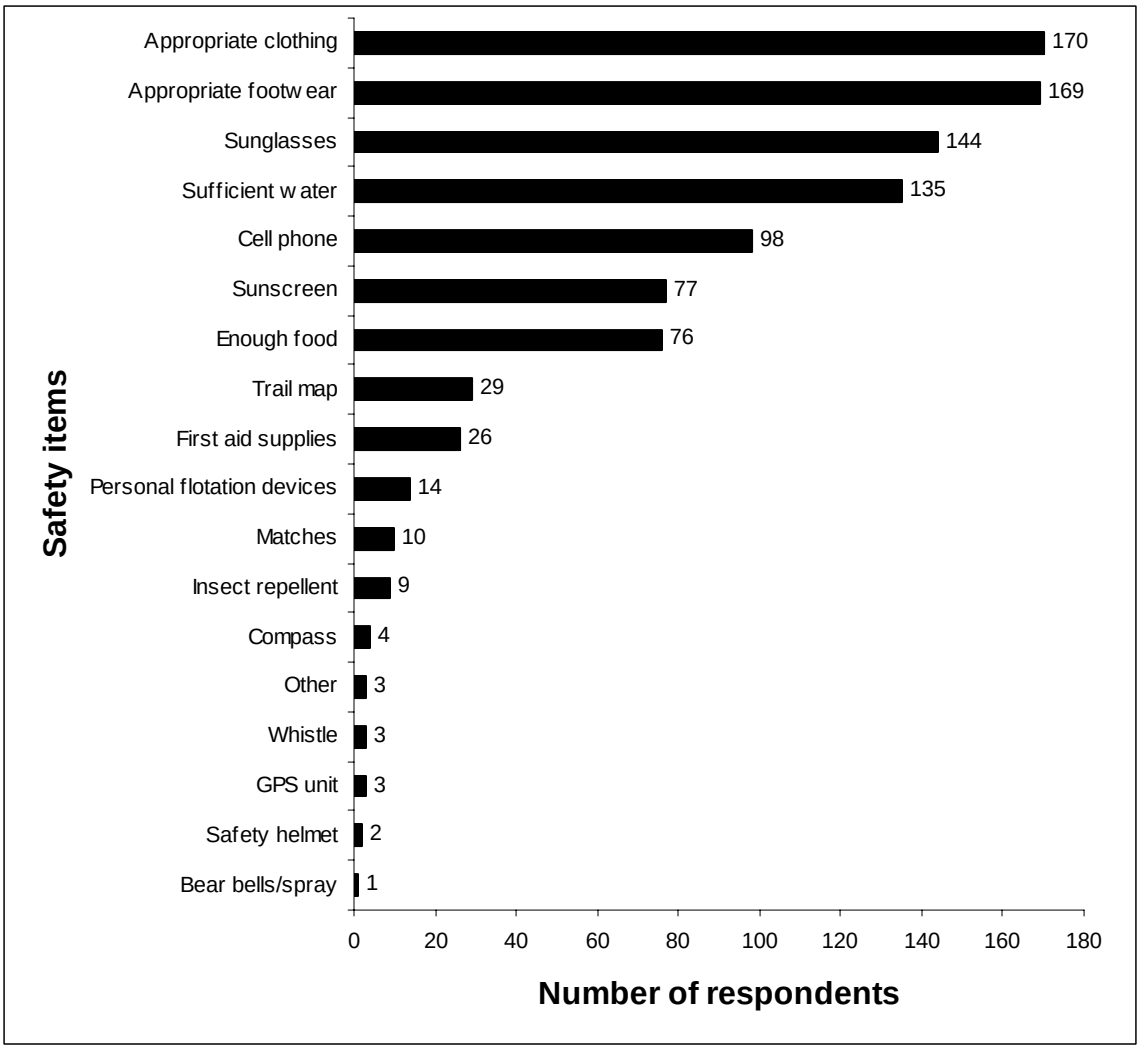

Figure 37.5: Personal safety items (N=170)

Few respondents (9%) expressed any concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 37.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, although while respondents may be concerned about boating and drowning (presumably related to ferry crossings) the actual number of boating accidents is small and there were no reported drownings between 1993 and 1998.

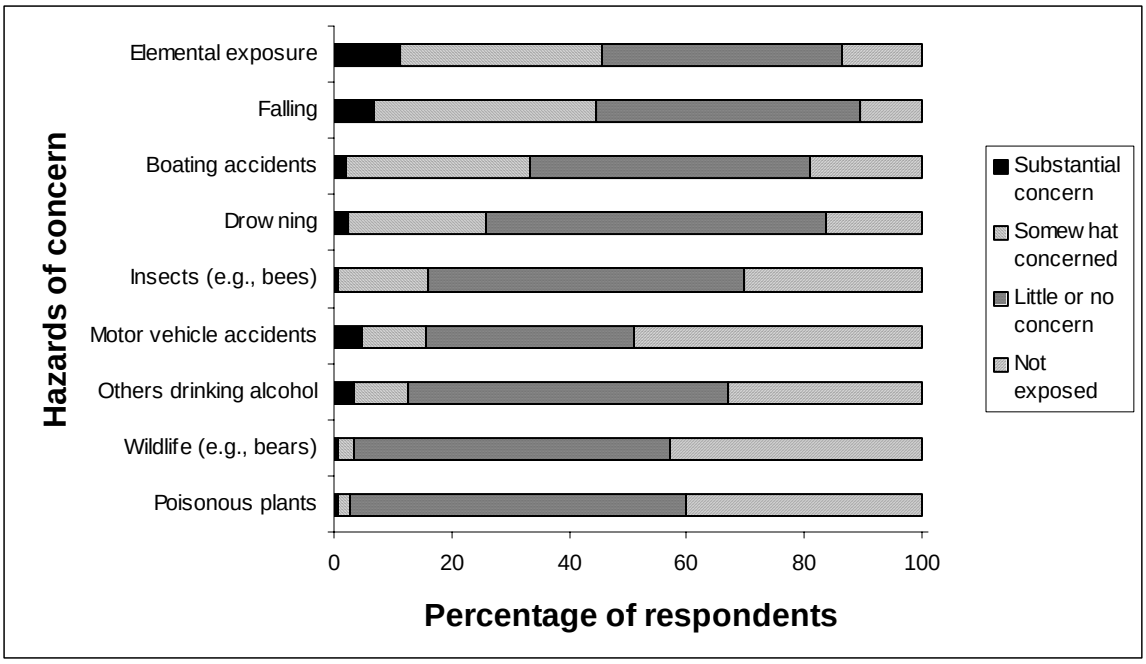

Figure 37.6: Level of concern about various hazards (N=174-183)

37.5 Motor vehicles:
Many respondents answered the battery of questions pertaining to motor vehicle safety. Unfortunately, the responses must refer to driving to and from the park, since visitors are not allowed to drive in the park. Consequently, we have excluded these responses.

37.6 Management issues:
With regard to the primary activity undertaken during their visit, 10% of respondents believed that safety was entirely the responsibility of the visitor, while 71% believed safety was the responsibility of both the visitor and the park staff (Figure 37.7).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 37.8 shows that the overwhelming majority (68%) of respondents thought such measures definitely did not detract, and only a very small proportion of respondents (3%) indicated that the safety measures did detract from their enjoyment.

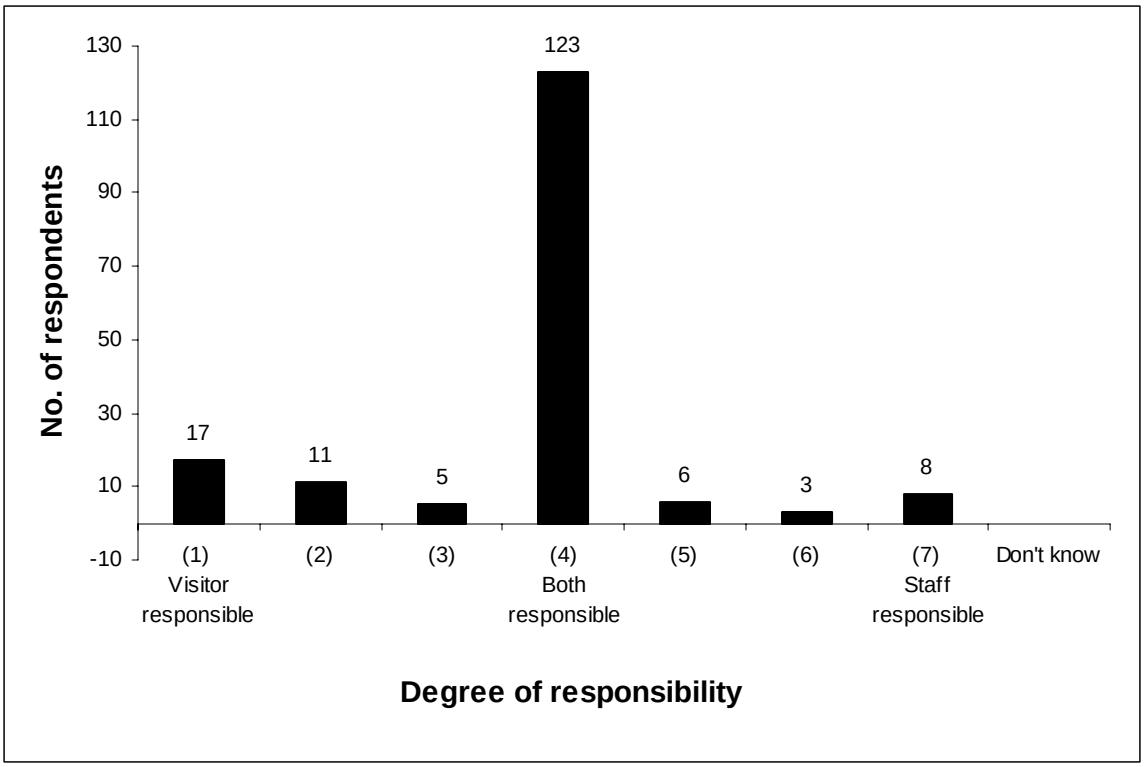

Figure 37.7: Responsibility for safety in chosen primary activity (N=173)

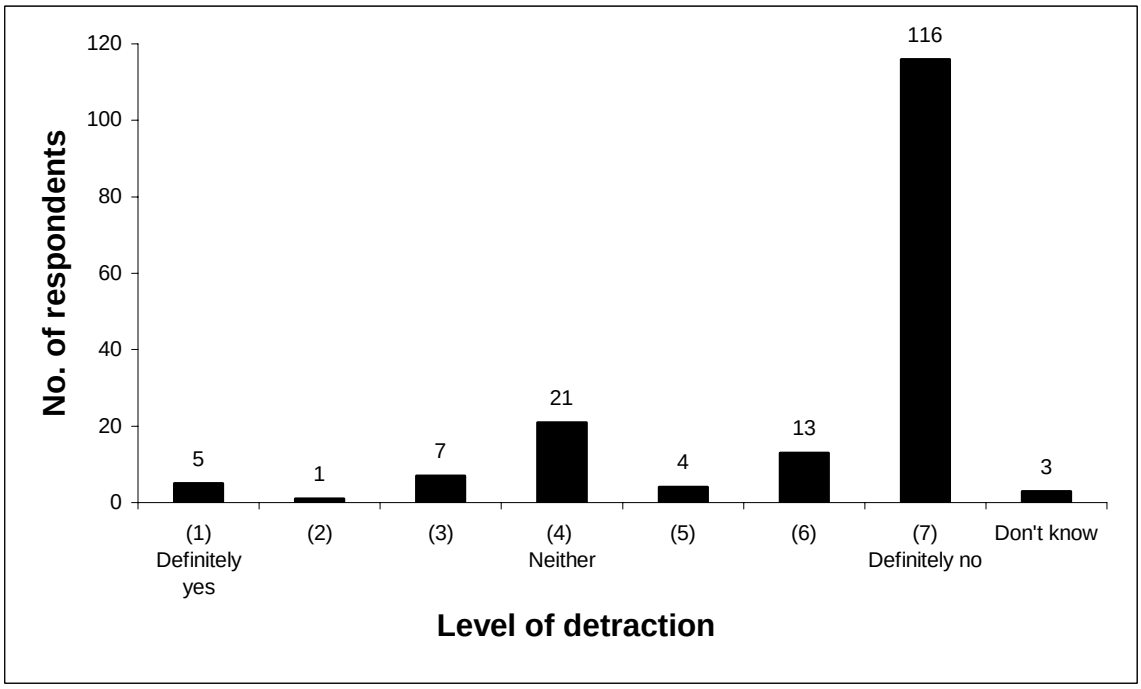

Figure 37.8: Do safety measures detract from visitor enjoyment? (N=170)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Thirty-one percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 16% disagree or disagree strongly, and 45% neither agree nor disagree. Forty percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 16% disagree or disagree strongly, and 39% neither agree nor disagree. Forty-seven percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 16% agree or agree strongly, and 32% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (85%);
- signs warning and advising about hazards (85%);
- brochures and other information warning about hazards (91%);
- restrictions on the number of persons/groups who undertake particular activities (74%);
- park rangers to enforce rules and regulations (77%);
- enforcement of alcoholic beverage restrictions (74%); and,
- safe surfaces on walkways and stairs (79%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (18%) and safe surfaces on walkways and stairs (17%). Eleven percent of respondents believe that there should be fewer restrictions on the number of persons/groups who undertake particular activities.

Among those respondents who were aware of the various sources of safety information in the park, Figure 37.9 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information.

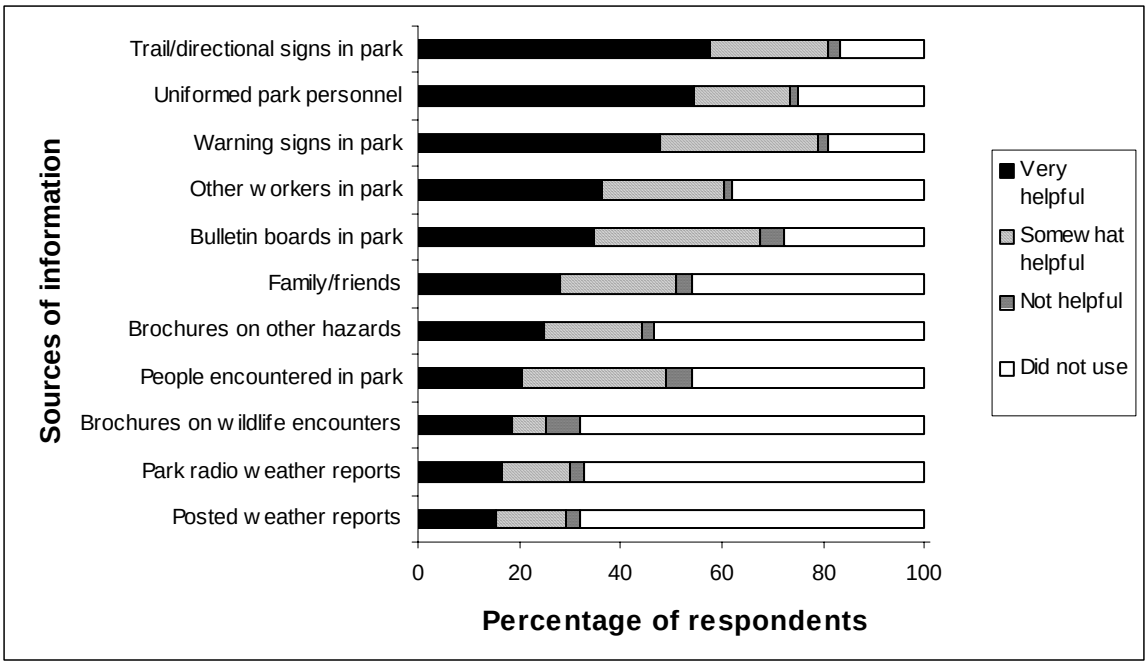

Figure 37.9: How helpful are various sources of safety information (N=67-132)

38.0 Yosemite National Park

38.1 Sample:

At Yosemite National Park, 456 visitor groups were contacted between July 12 and July 17, 2001, and 400 (87.7%) of these groups accepted questionnaires. Questionnaires were completed and returned by 183 visitor groups, resulting in a 45.8% response rate for this park.

38.2 Demographics:

Figure 38.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (90%)of respondents were white, with 1% African-American, 2% Hispanic, 2% Asian, and 5% of unknown race/ethnicity. Graduate school was the highest level of education attained by 26% of respondents, while an additional 41% classified themselves as college graduates. The majority (90%) of respondents were residents of the US and 10% were international visitors, UK (8), Netherlands (4), Belgium (2), Canada (1), France (1), Germany (1), and Italy (1).

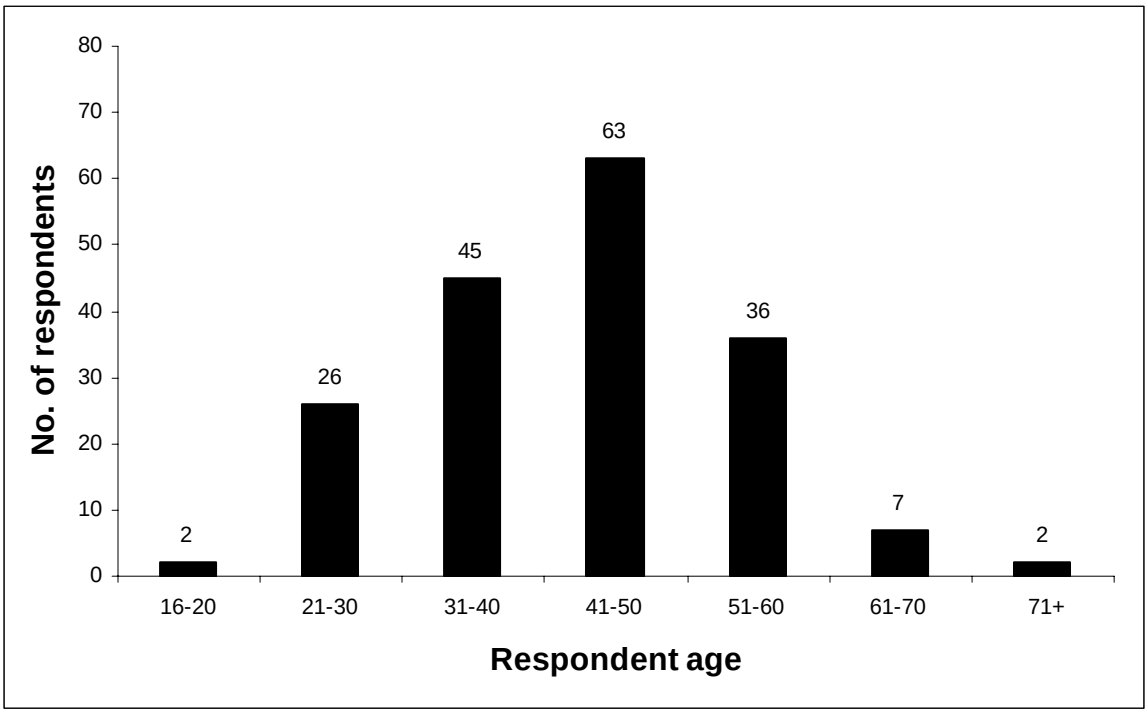

Figure 38.1: Distribution of respondents by age (N=181)

38.3 Visitation

For 47% of respondents, this was their first visit to the park. Among those 89 respondents who indicated they were returning to the park, 34% had visited the park twice in the past 10 years (including the current visit), 35% 3-5 times, 15% 6-10 times,

and 17% 11 or more times. This visit was the primary destination for 43% of respondents, but one of only several destinations for 54% of respondents. For 3% of respondents this visit was not a planned destination at all. Six percent of the respondents visited the park for a half day or less, 25% visited for up to one day, and 68% visited for more than one day. Four percent of respondents were visiting the park by themselves, 67% with family members, 14% with friends, and 13% with family and friends.

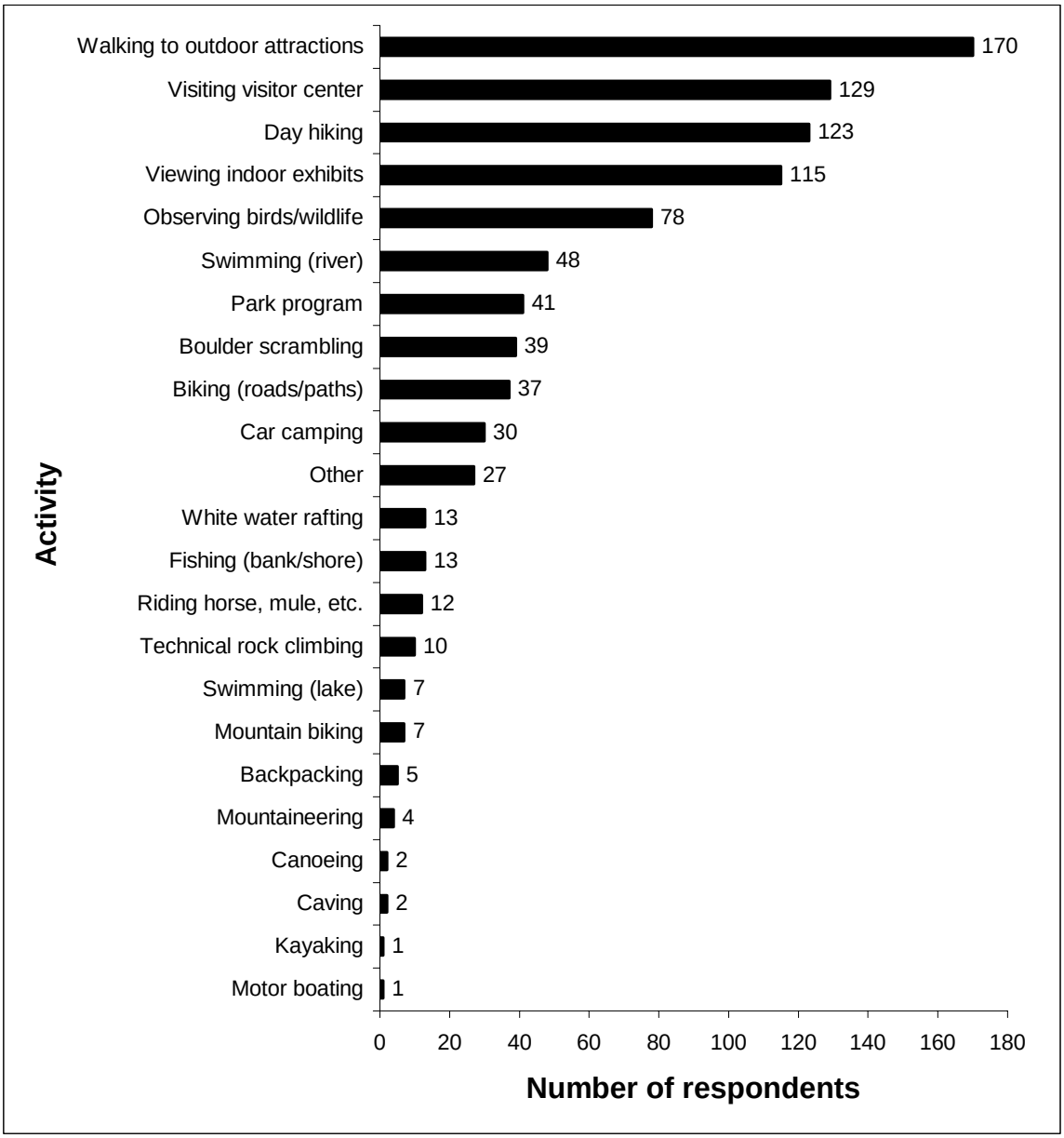

Figure 38.2: Visitor activities (N=183)
(Note: Several respondents listed more than one activity)

38.4 Activities:
Respondents were asked to identify every activity they pursued during their visit to the park from a list of 35 named activities. Figure 38.2 illustrates that many respondents visited the visitor center (70%) and viewed indoor exhibits (63%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 38.3 illustrates that walking to outdoor attractions (44%), day hiking (37%), and various other activities (4%) were the most popular primary activities. Most respondents (89%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 3% engaged in these activities alone, and 6% with people aside from their own personal group.

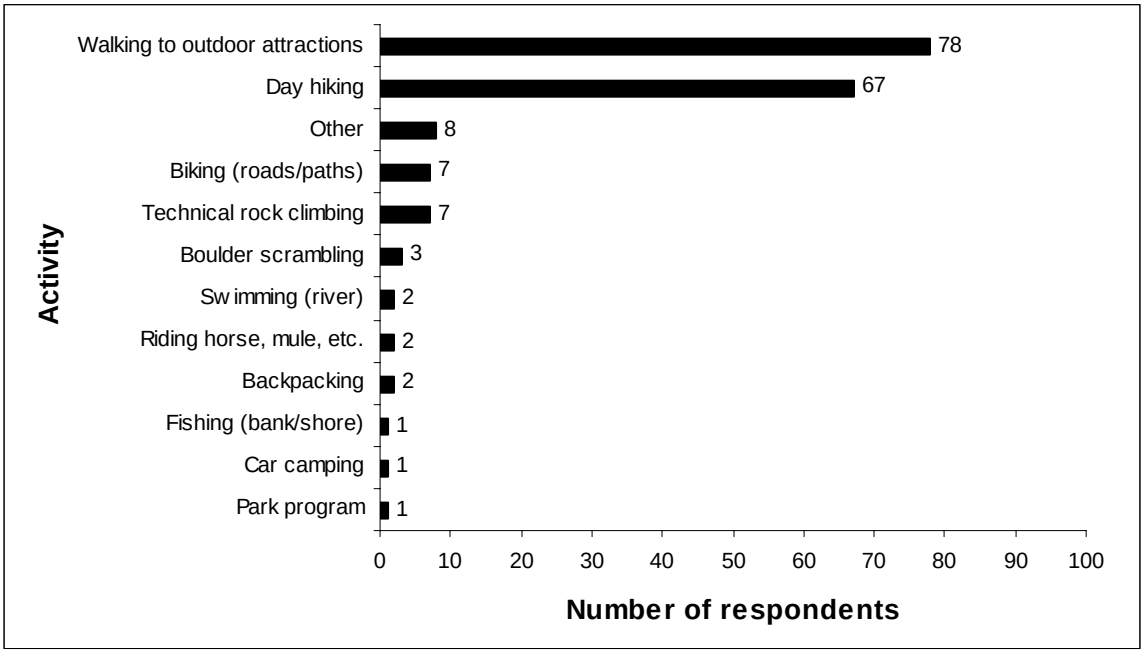

Figure 38.3: Primary visitor activities (N=179)

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 38.4). Ratings of personal experience varied little between activities and between males and females.

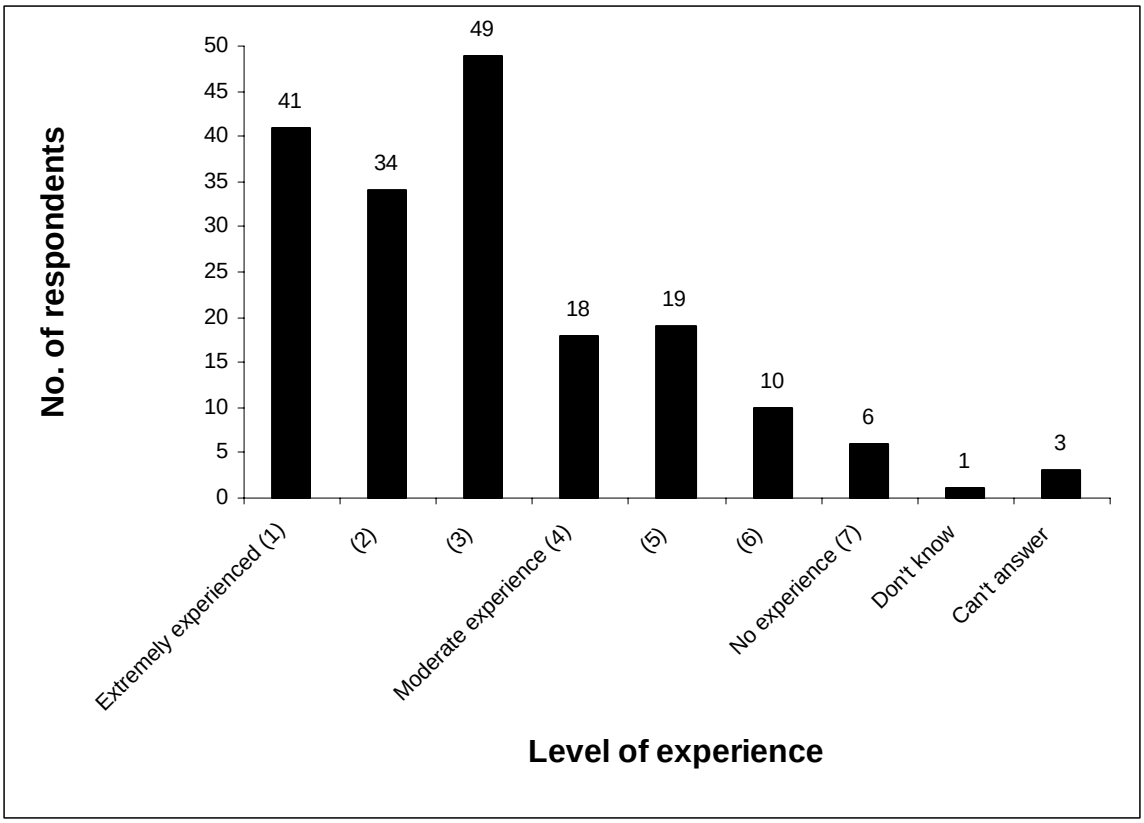

Figure 38.4: Personal level of experience (N=181)

Preparedness is one aspect of experience, and Figure 38.5 shows how prepared respondents were based on the safety items that they had available during their visit. Note that nobody mentioned appropriate clothing or footwear as safety items.

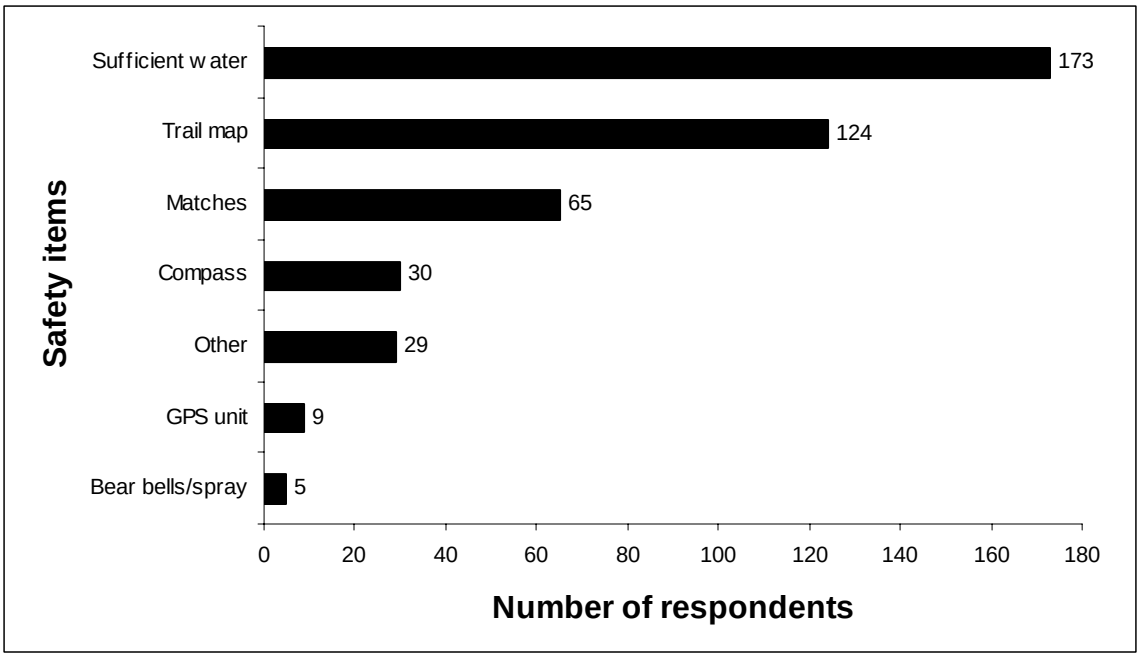

Figure 38.5: Personal safety items (N=173)

A relatively large number of respondents (27%) expressed concern about suffering an injury or illness while engaged in their primary activity. Eighty-two percent of the 49 people expressing concern, were concerned only briefly or for some of the time during their visit. Only 2 respondents were concerned all or much of the time. Forty-eight respondents also expressed concern for the safety of others in their group, but 83% of these respondents were concerned briefly or for some of the time.

Without reference to a particular activity, however, Figure 38.6 shows how concerned respondents were about various hazards that might be encountered in the park. These concerns would appear to be broadly consistent with the nature of accidents reported in the park, except that concerns about wildlife are probably overstated compared with the actual number of wildlife encounters.

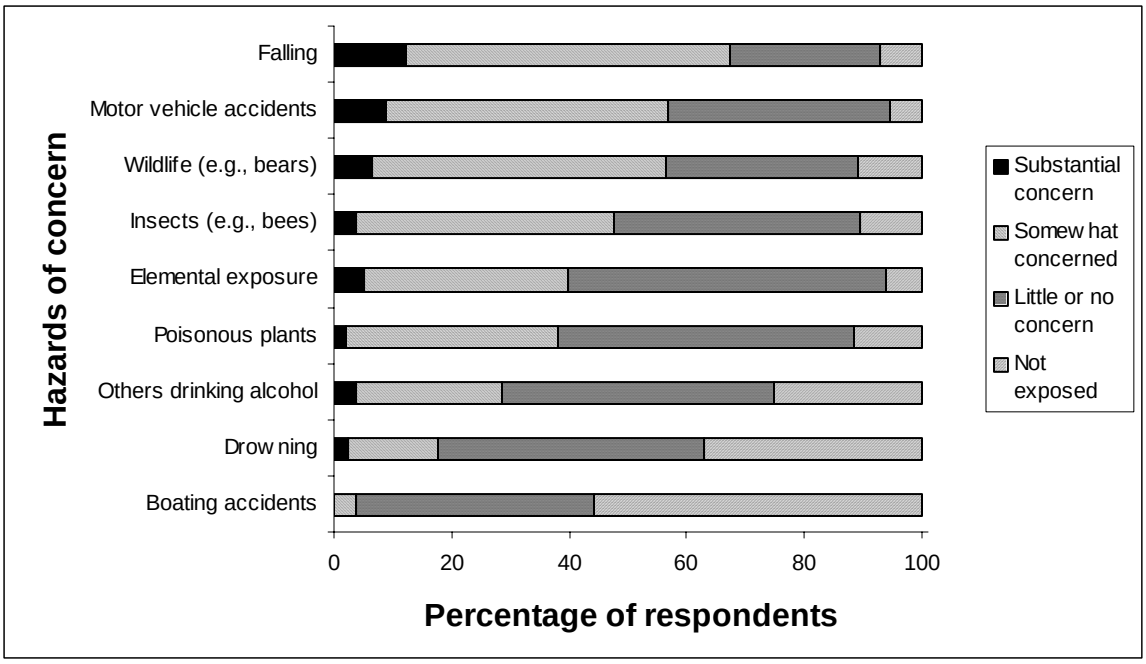

Figure 38.6: Level of concern about various hazards (N=179-181)

38.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 96% of respondents were traveling in privately owned or rented vehicles. Eighty-two percent of respondents spent all of the time in the front seat, and 10% spent some of the time in the front seat. Of these individuals, 52% were driving for all or most of the time and 97% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in the park were appropriate all or most of the time. Thirty percent of respondents never encountered cars that were driving too fast, and 68% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 61% of respondents encountered cars that were driving too slowly. Most (96%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 94% thought that hazard-warning signs were adequate most or all of the time. Figure 38.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Evidently, more than 50% of our respondents believe that large recreational vehicles, pedestrians, and cars stopping to see the views or wildlife present driving hazards for at least some of the time.

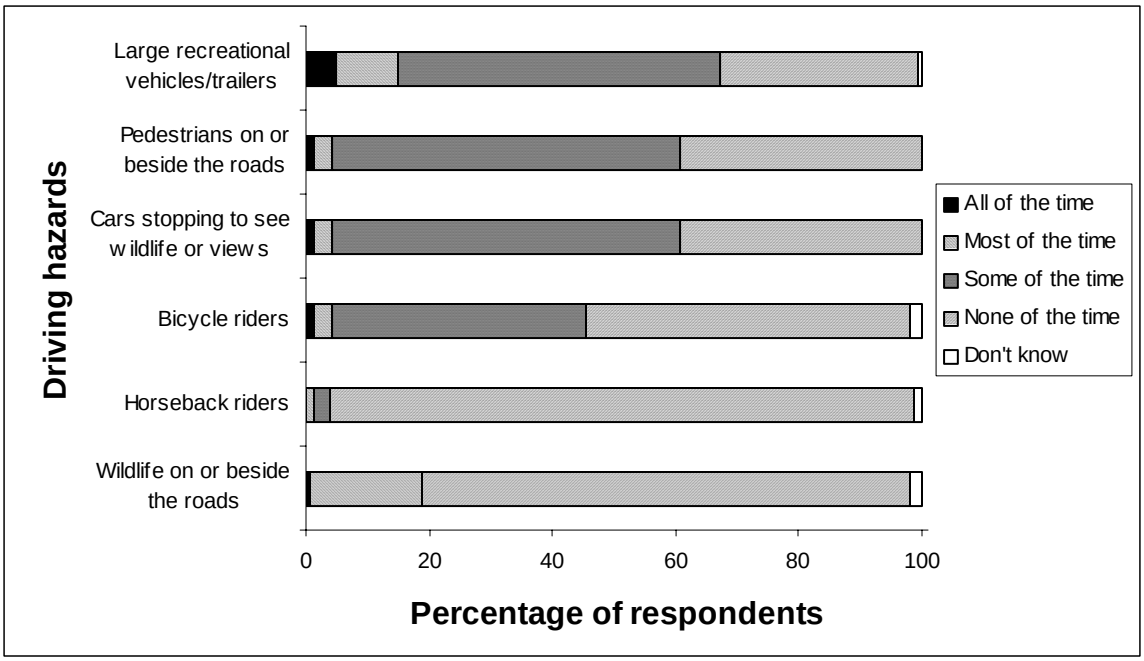

Figure 38.7: How often do these make traveling on roads more hazardous? (N=159-161)

38.6 Management issues:

With regard to the primary activity undertaken during their visit, 45% of respondents believed that safety was entirely the responsibility of the visitor, while 29% believed safety was the responsibility of both the visitor and the park staff (Figure 38.8).

The questionnaire also asked if any of the park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 38.9 shows that the overwhelming majority (74%) of respondents thought such measures definitely did not detract. Among the small proportion of respondents (2%) who indicated that the safety measures definitely did detract from their enjoyment, 2 were involved in day hiking, one was walking to outdoor attractions, and one was rock climbing.

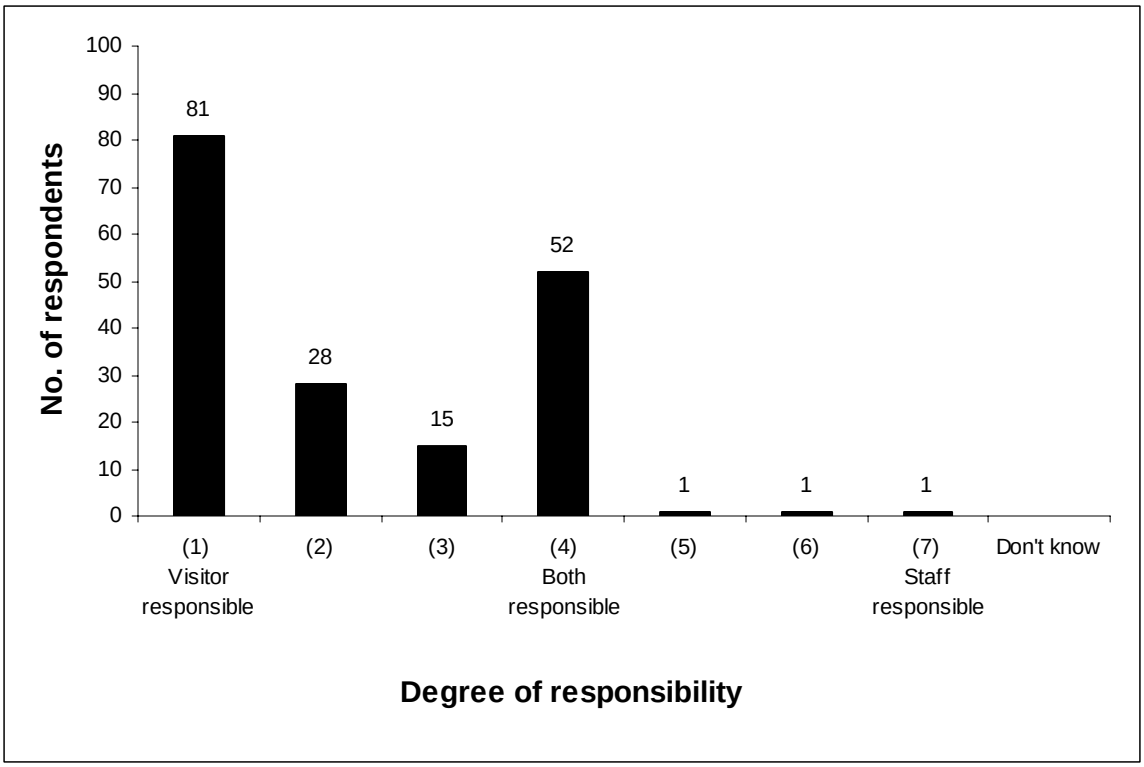

Figure 38.8: Responsibility for safety in chosen primary activity (N=179)

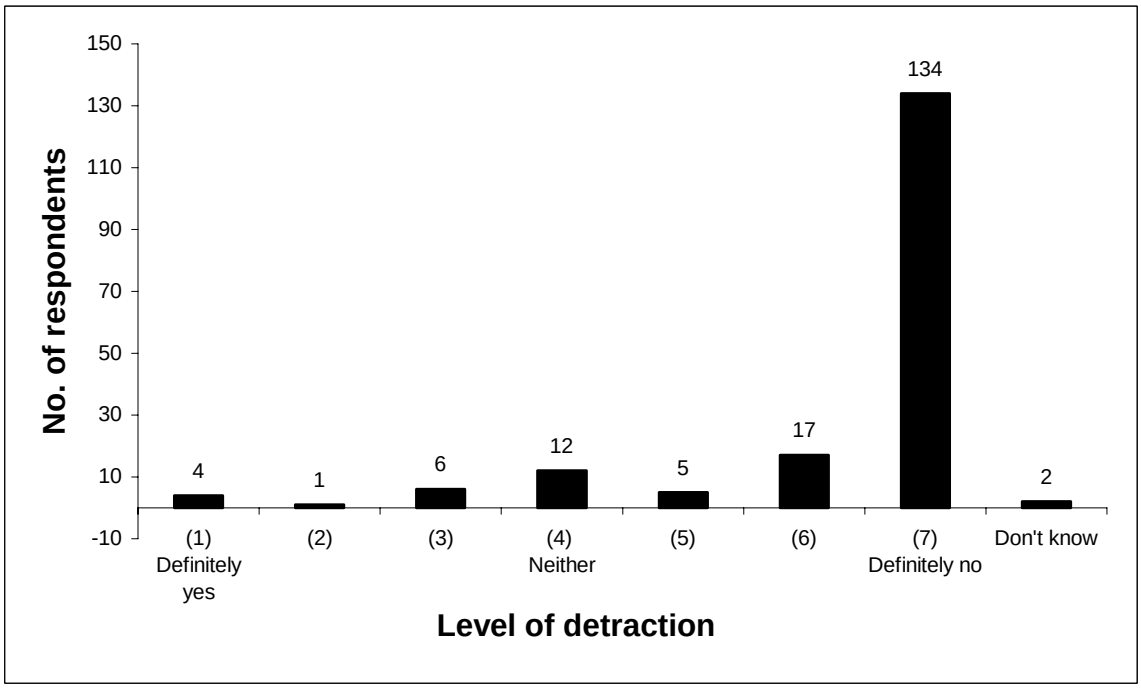

Figure 38.9: Do safety measures detract from visitor enjoyment? (N=181)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Fifty-nine percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 29% neither agree nor disagree. Seventeen percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 46% disagree or disagree strongly, and 36% neither agree nor disagree. Twenty-seven percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 41% agree or agree strongly, and 30% neither agree nor disagree.

The majority of respondents believe the park should have the present amount of:

- rules and regulations about what visitors should and should not do (78%):
- signs warning and advising about hazards (83%);
- brochures and other information warning about hazards (77%);
- restrictions on the number of persons/groups who undertake particular activities (78%);
- park rangers to enforce rules and regulations (64%);
- enforcement of alcoholic beverage restrictions (55%); and,
- safe surfaces on walkways and stairs (74%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (30%) and more or much more enforcement of alcoholic beverage prohibitions (24%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 17% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 17% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of safety information in the park, Figure 38.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel and directional and warning signs are the most helpful sources of safety information, which is consistent with the findings in other parks, but it is notable that respondents also rated brochures on wildlife encounters highly as a source of safety information.

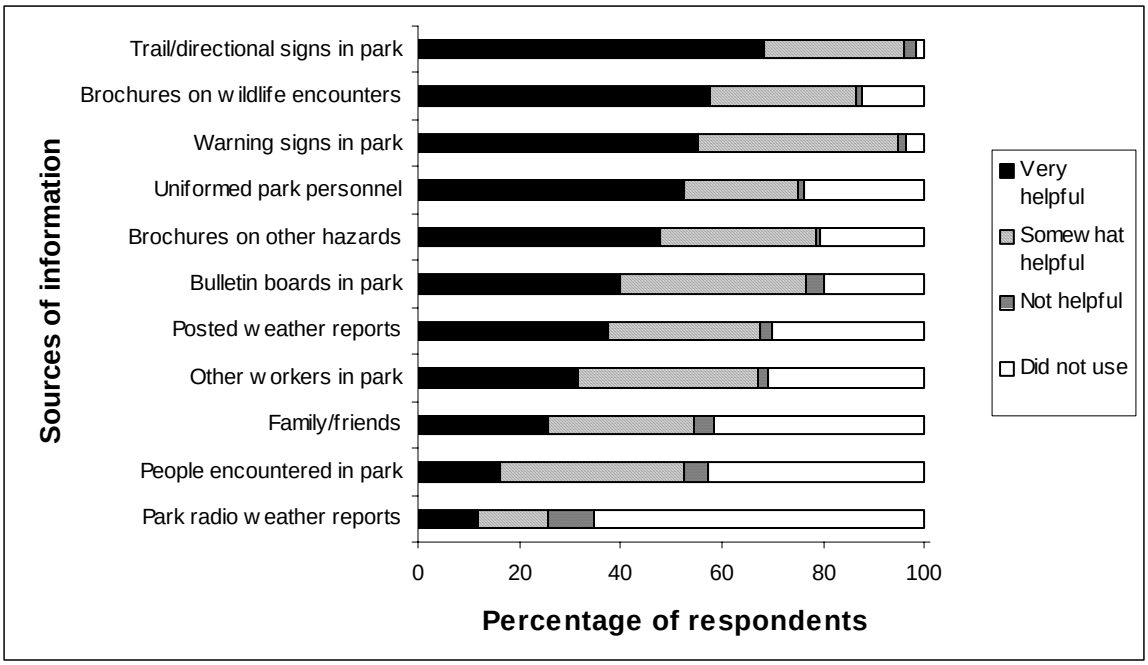

Figure 38.10: How helpful are various sources of safety information (N=101-171)

39.0 The 30 Summer Parks in Aggregate

39.1 Sample:

The summer survey included 30 parks. Overall, 10,726 visitor groups were contacted between May 23 and August 14, 2001, and 9,275 (87.9%) of these groups accepted questionnaires. Questionnaires were completed and returned by 5,325 visitor groups, resulting in a 57.4% response rate for this park. In this section, we present aggregated data from all 30 parks. We use the term "their park" below to indicate that the data refer to particular visitors at particular parks. The data summarized below were weighted to adjust for the slight difference in ages between the respondent and non-respondent groups (see Section 1 for an explanation of the weighting process). Because 118 respondents did not report their ages, their responses could not be appropriately weighted and are excluded from the analysis. This means that the sample size (N) is 5,207 or less.

39.2 Demographics:

Figure 39.1 shows the distribution of respondents by age. (Since participation was solicited from only those visitors 16 and over, there are no respondents below the age of 16 years.). Fifty-three percent of respondents were female and 47% male. The overwhelming majority (93%)of respondents were white, with 2% Hispanic, 1% African-American, 1% Asian, and 2% of unknown race/ethnicity. Graduate school was the highest level of education attained by 24% of respondents, while an additional 34% classified themselves as college graduates. The majority (95%) of respondents were residents of the US, 4% were international visitors, and 1% were of unknown nationality.

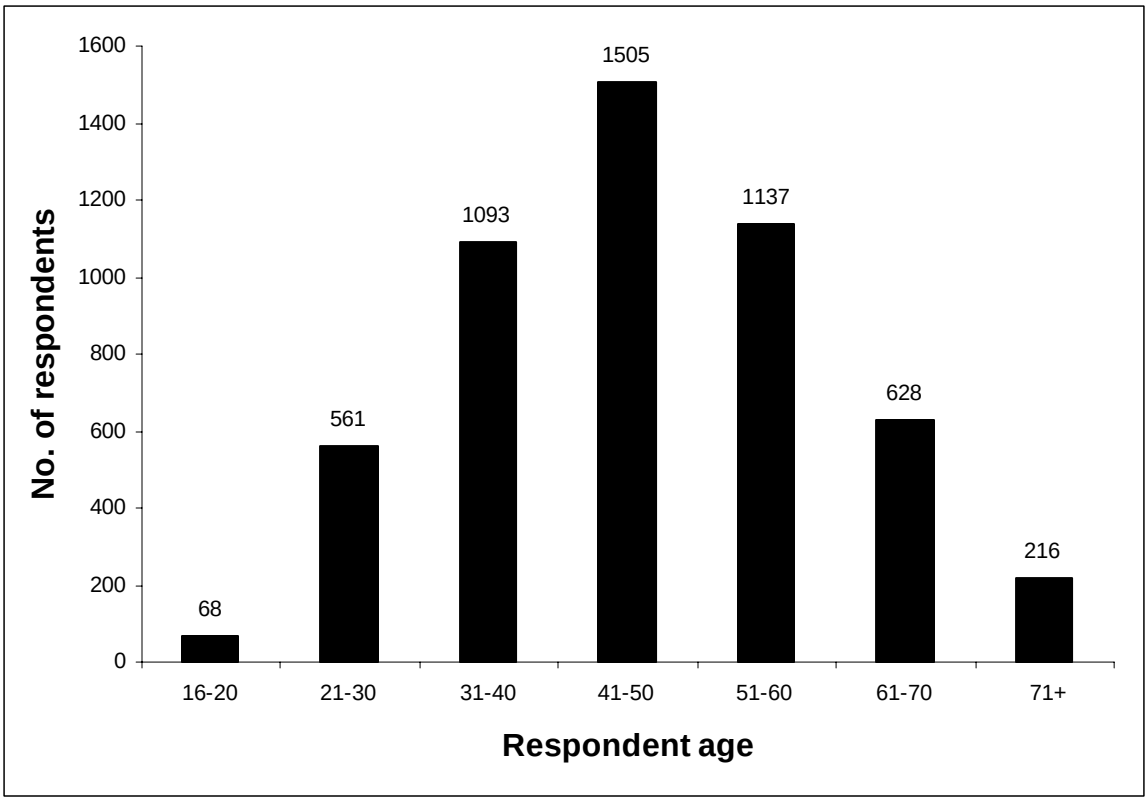

Figure 39.1: Distribution of respondents by age (N=5207)

39.3 Visitation

For 54% of respondents, this was their first visit to their park. Among those 2,560 respondents who indicated they were returning to their park, 33% had visited their park twice in the past 10 years (including the current visit), 22% 3-5 times, 13% 6-10 times, and 20% 11 or more times. This visit was the primary destination for 30% of respondents, but one of only several destinations for 61% of respondents. For 9% of respondents this visit was not a planned destination at all. Forty-eight percent of the respondents visited their park for a half day or less, 28% visited for up to one day, and 24% visited for more than one day. Five percent of respondents were visiting their park by themselves, 70% with family members, 12% with friends, and 10% with family members and friends.

39.4 Activities:

Respondents were asked to identify every activity they pursued during their visit to their park from a list of 35 named activities (Figure 39.2).

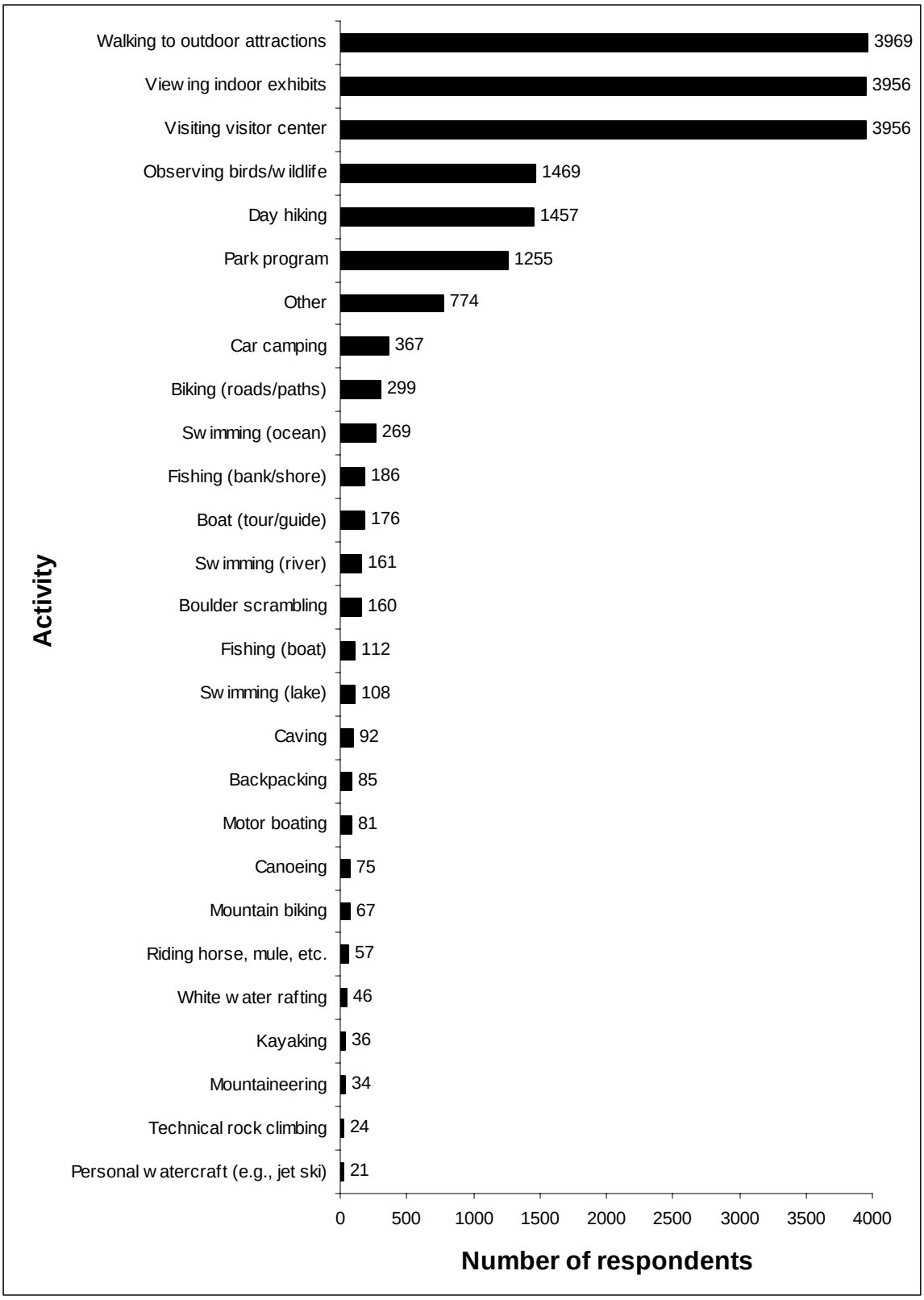

Figure 39.2: Visitor activities (N=5207)

Figure 39.2 illustrates that many respondents visited the visitor center (76%) and viewed indoor exhibits (76%), but these are often only adjunct activities and not the primary purpose of many visitors. The questionnaire also asked respondents to identify the activity that engaged them for most of the time during their visit. Figure 39.3 illustrates that walking to outdoor attractions (33%), day hiking (16%), viewing indoor exhibits (10%), and various other activities (8%) were the most popular primary activities. Most respondents (85%) engaged in these activities with members of their own personal group (i.e., friends and family members), although 7% engaged in these activities alone, 6% with people aside from their own personal group, and 2% as members of organized groups.

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in their park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience (Figure 39.4). Ratings of personal experience varied little between activities and between males and females.

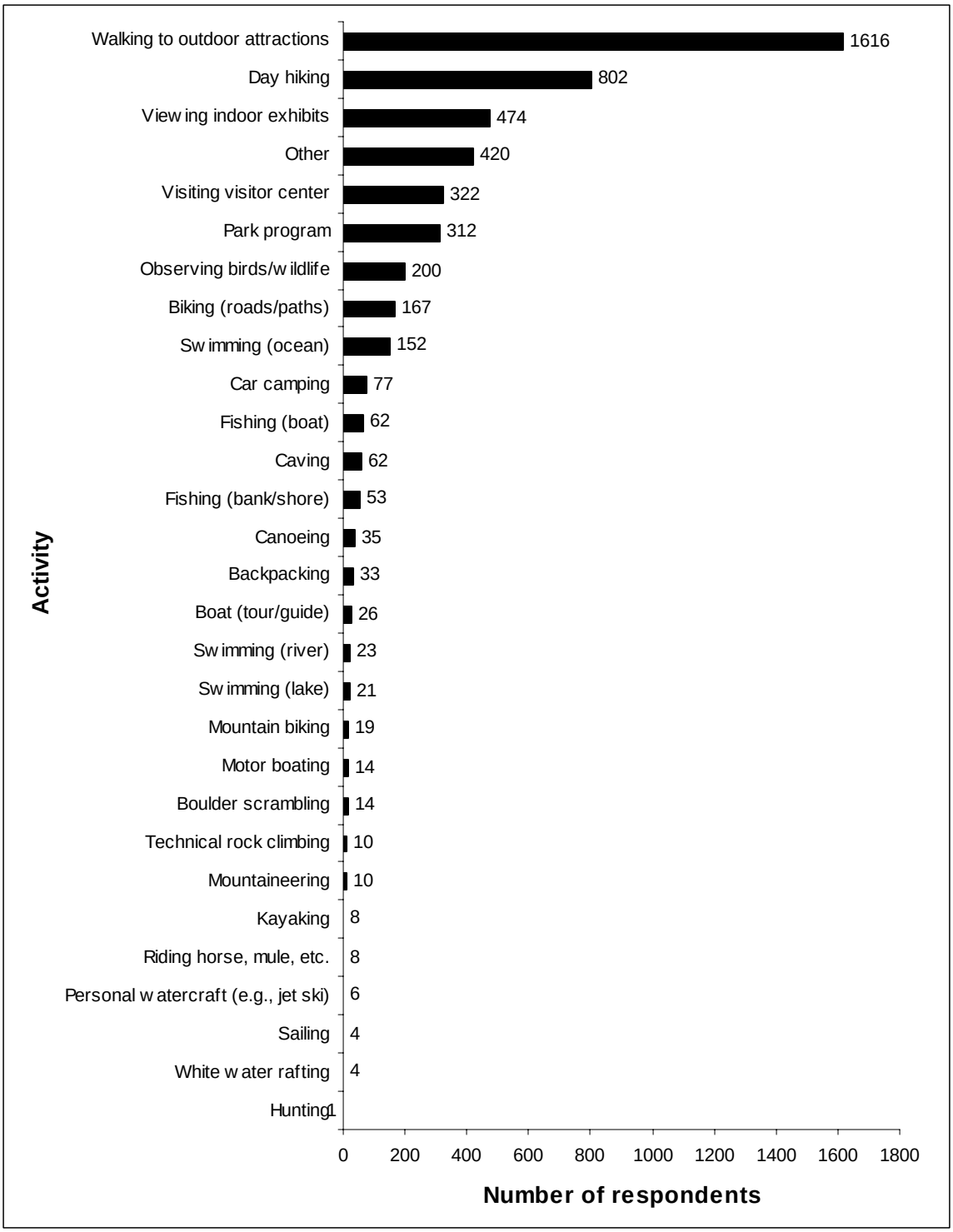

Figure 39.3: Primary visitor activities (N=4955)

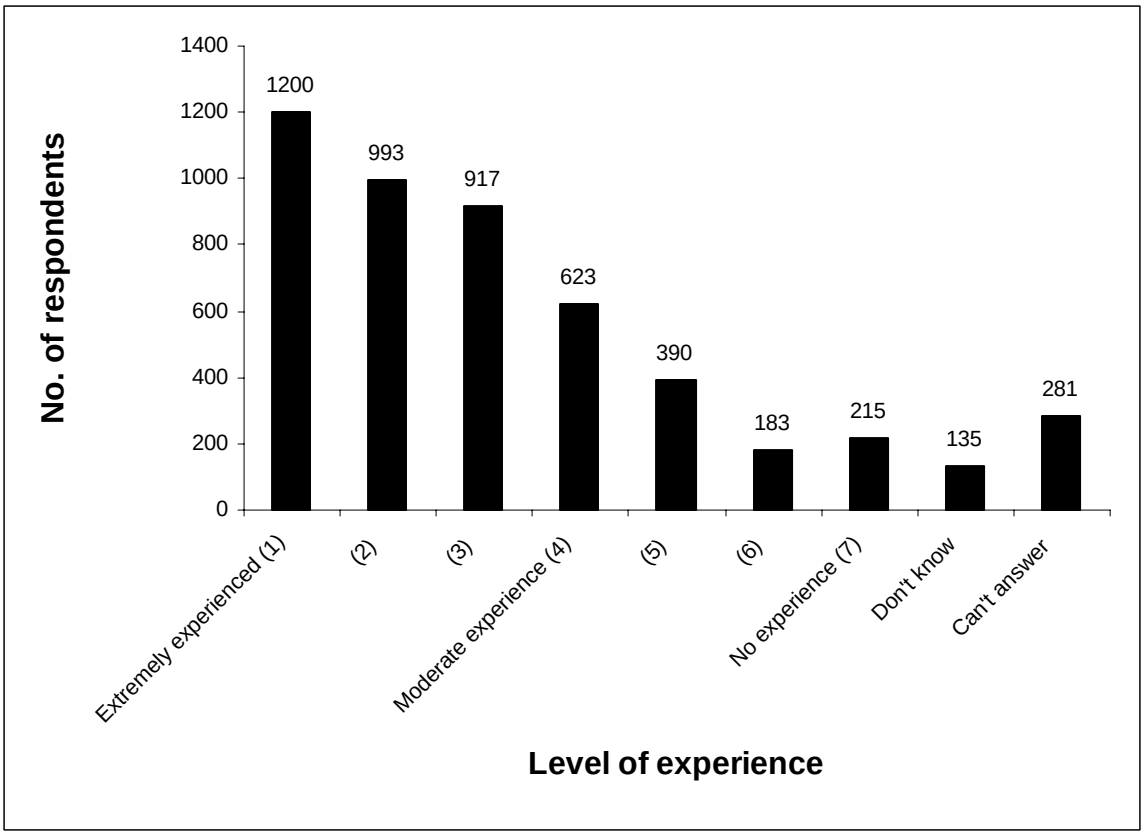

Figure 39.4: Personal level of experience (N=4937)

Preparedness is one aspect of experience, and Figure 39.5 shows how prepared respondents were based on the safety items that they had available during their visit.

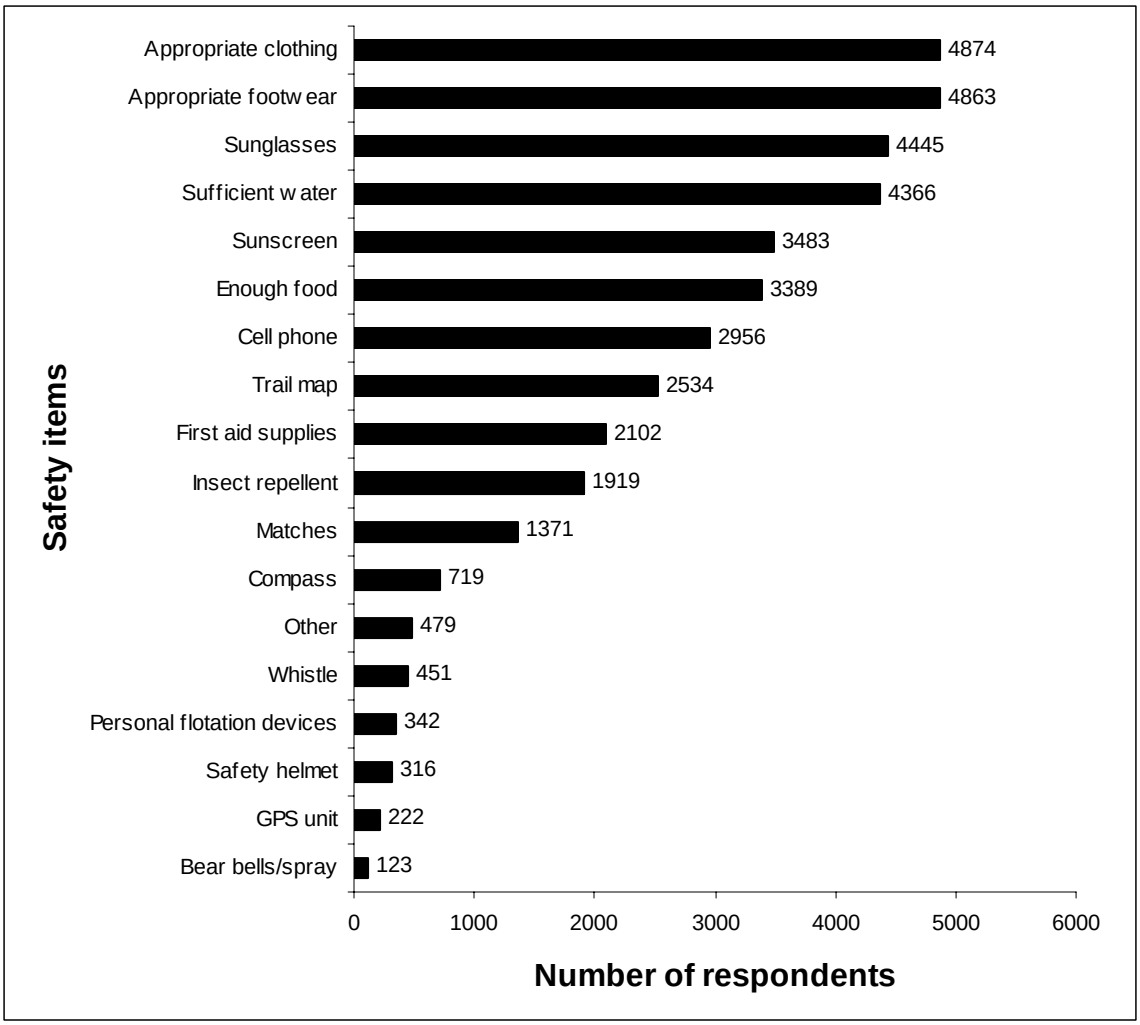

Figure 39.5: Personal safety items (N=5207)

Thirteen percent of respondents expressed concern about suffering an injury or illness while engaged in their primary activity. Without reference to a particular activity, however, Figure 39.6 shows how concerned respondents were about various hazards that might be encountered in their park. Between 5 and 8% of respondents expressed substantial concern, and between 36 and 38% of respondents were somewhat concerned about elemental exposure, motor vehicle accidents, falling, and insects. Evidently, most people had little or no concern about any of these hazards or believed they were not exposed.

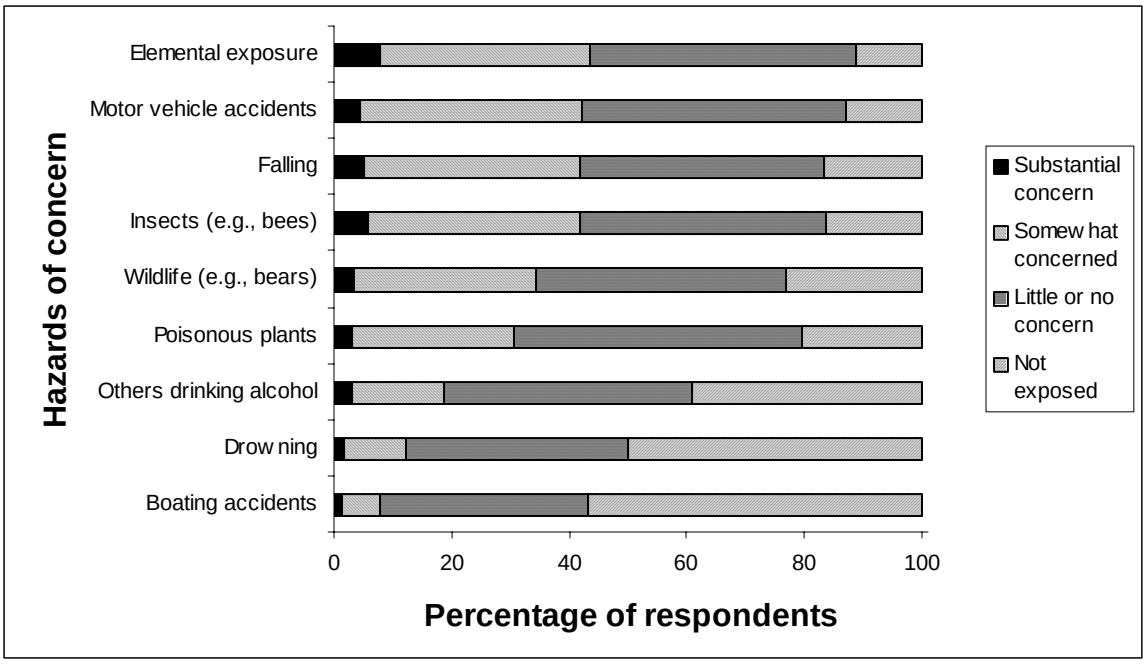

Figure 39.6: Level of concern about various hazards (N=5069-5089)

39.5 Motor vehicles:

Looking at motor vehicles in more detail, we find that 89% of respondents were traveling in privately owned or rented vehicles. Eighty-four percent of respondents spent all of the time in the front seat, and 8% spent some of the time in the front seat. Of these individuals, 55% were driving for all or most of the time and 95% were wearing seatbelts most or all of the time. The majority (96%) of respondents thought that the speed limits in their park were appropriate all or most of the time. Forty-seven percent of respondents never encountered cars that were driving too fast, and 46% encountered speeding cars during some, most, or all of their visit. At some time during their visit, 44% of respondents encountered cars that were driving too slowly. Most (92%) respondents thought that the roads (pavement, plowing, etc.) were in good condition most or all of the time, and 92% thought that hazard-warning signs were adequate most or all of the time. Figure 39.7 indicates how often respondents believed certain conditions made driving on roads more hazardous. Between 3 and 7% of respondents believed that large recreational vehicles, bicycle riders, cars stopping to see the views or wildlife, and pedestrians presented driving hazards all or most of the time, and 29-38% of respondents thought these presented a hazard some of the time. Between 53 and 64% of respondents believed that these were hazards none of the time.

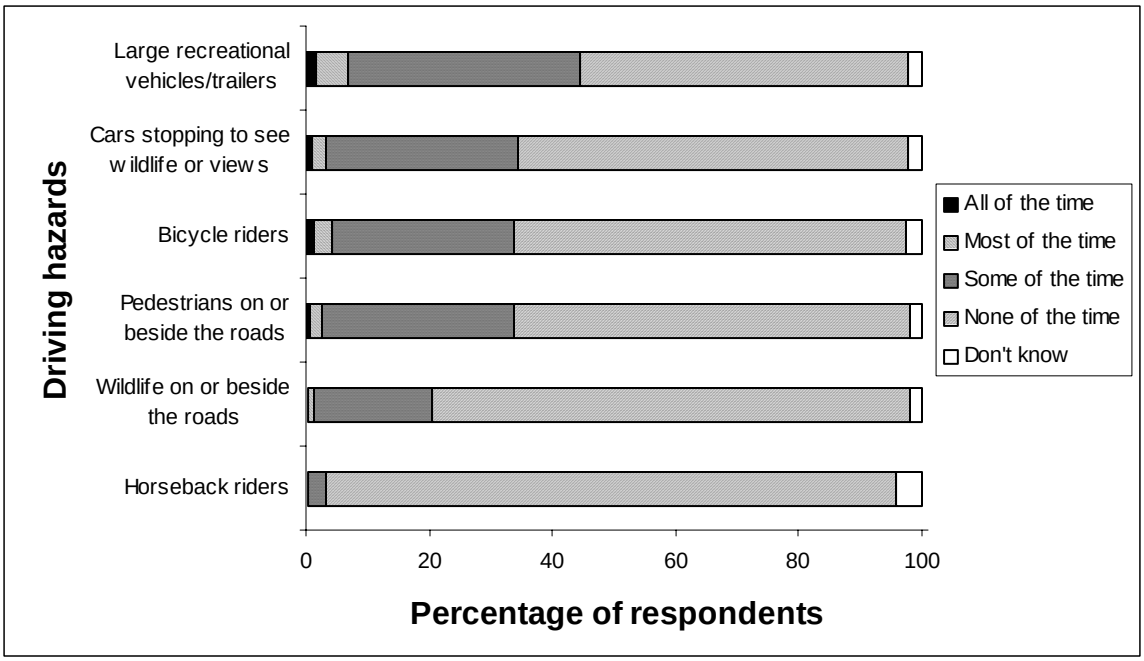

Figure 39.7: How often do these make traveling on roads more hazardous? (N=XX)

39.6 Management issues:
With regard to the primary activity undertaken during their visit, 34% of respondents believed that safety was entirely the responsibility of the visitor, while 43% believed safety was the responsibility of both the visitor and the park staff (Figure 39.8).

The questionnaire also asked if any of their park's safety measures, such as warning signs, fences, regulations) detracted from the visitor's enjoyment of their chosen activity. Figure 39.9 shows that the overwhelming majority (72%) of respondents thought such measures definitely did not detract.

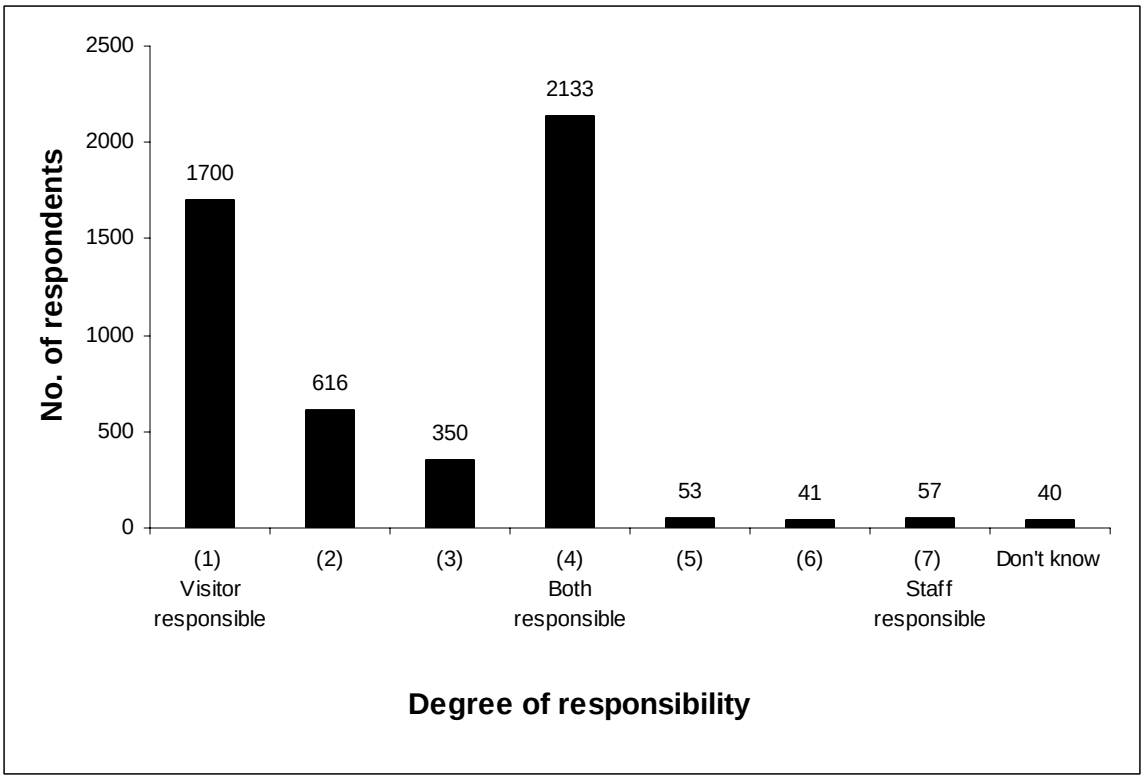

Figure 39.8: Responsibility for safety in chosen primary activity (N=4990)

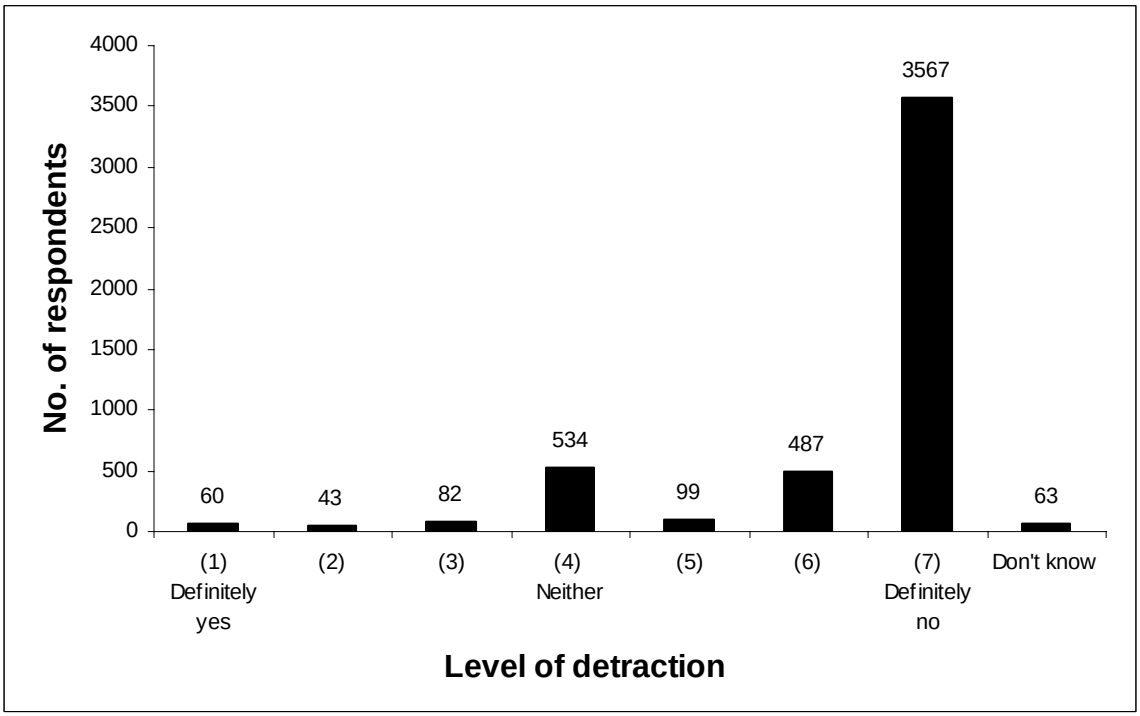

Figure 39.9: Do safety measures detract from visitor enjoyment? (N=4934)

Respondents were also asked about park management more generally, rather than with specific reference to a particular chosen activity. Forty-eight percent of respondents agree or agree strongly that most of the risks visitors face are beyond the control of the National Park Service, 9% disagree or disagree strongly, and 38% neither agree nor disagree. Twenty-four percent of respondents agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to them, 37% disagree or disagree strongly, and 36% neither agree nor disagree. Thirty-six percent of respondents disagree or disagree strongly that the National Park Service should not limit or prohibit activities that may pose a serious risk to participants, 27% agree or agree strongly, and 34% neither agree nor disagree.

The majority of respondents believe their park should have the present amount of:

- rules and regulations about what visitors should and should not do (84%);
- signs warning and advising about hazards (84%);
- brochures and other information warning about hazards (80%);
- restrictions on the number of persons/groups who undertake particular activities (71%);
- park rangers to enforce rules and regulations (70%);
- enforcement of alcoholic beverage restrictions (63%); and,
- safe surfaces on walkways and stairs (81%).

Substantial proportions of respondents, however, believe that there should be more or many more rangers to enforce rules and regulations (19%) and more or much more enforcement of alcoholic beverage prohibitions (14%). A substantial proportion of respondents were more ambivalent about a couple of items, however, and 19% did not know if there should be greater or fewer restrictions on the number of persons/groups who undertake particular activities while 21% did not know if there should be greater or lesser enforcement of alcoholic beverage restrictions.

Among those respondents who were aware of the various sources of information safety in their park, Figure 39.10 indicates the level of helpfulness provided by each source of information. Evidently, respondents find that uniformed park personnel (58%) and directional (67%) and warning (58%) signs are very helpful sources of safety information.

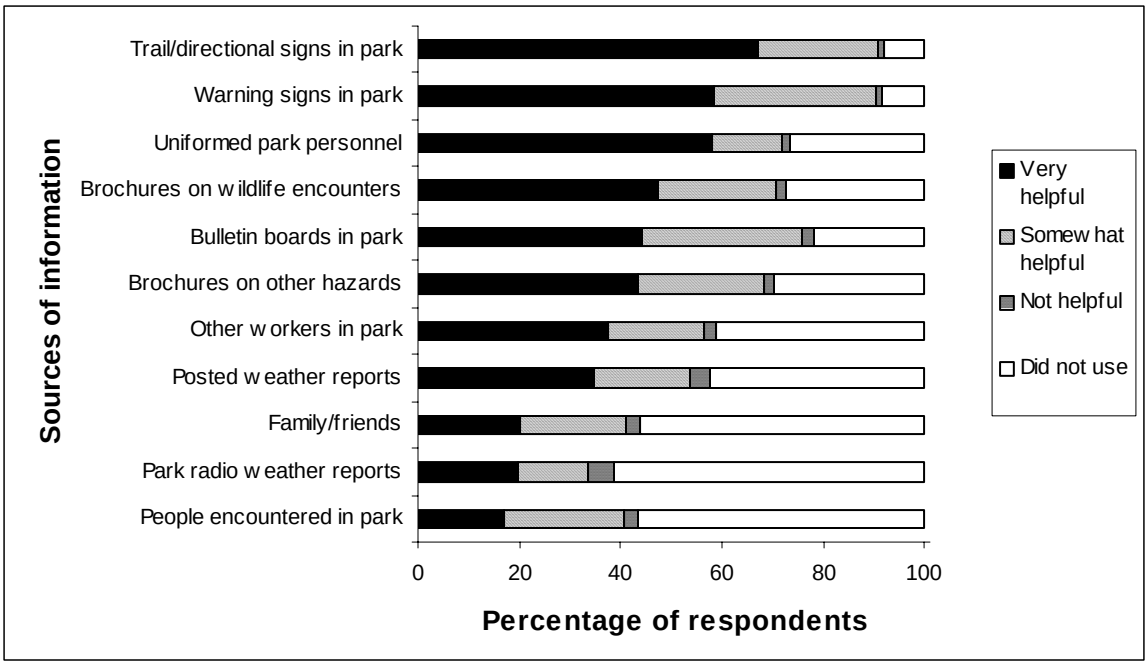

Figure 39.10: How helpful are various sources of safety information (N=2853-4501)

40.0 Conclusions

Section 39 presented a summary of the aggregated responses for all 30 parks in the summer survey. While this summary presents an overall picture of responses at all the parks in the survey, it hides some of the important differences between the parks. In concluding, we try to develop a more "nuanced" summary that presents the big picture, while also trying to tease out some of the more interesting variations between the parks.

40.1 Activities:

Comparing the 30 parks in our sample, we can find many similarities and many differences. The three activities that dominate at most parks include visiting the visitor center, viewing indoor exhibits, and walking to outdoor attractions. These activities, however, are often only adjunct activities and not the primary purpose for many visits. The mix of activities that visitors pursue for most of the time during their visits, however, varies substantially from park to park.

In a previous report entitled "An Analysis of Visitor Accident Risk in the National Park System" the project team used a cluster analysis to group parks with similar accident characteristics. The analysis identified five groups of parks according to the clusters of activities that dominate in terms of visitor accidents: frontcountry activities, backcountry activities, motoring activities, water-related activities, and biking-related activities. Table 40.1 uses these five clusters to organize the survey responses regarding the most popular activities at each park. We can see that walking to outdoor attractions and day hiking dominate in "backcountry parks." These activities are either the most or second most popular activities at all of the backcountry parks, except Denali. The third most popular activities include observing wildlife, visiting the visitor center, and various other unspecified activities.

Cuyahoga Valley was the only park in the biking cluster, and not surprisingly biking is rated as the most popular activity at the park, with visiting the visitor center and walking to outdoor attractions as the second and third most popular activities.

The most popular activities at the "frontcountry parks" are viewing indoor exhibits and walking to outdoor attractions. Attending a park program is the second or third most popular activity at 6 of the 9 parks.

As expected, swimming, boating, and fishing dominate at the five water-related parks. Swimming in lakes, rivers, or the ocean is one of the three most popular activities at all five water-related parks. Other popular activities include visiting the visitor center, viewing indoor exhibits, and walking to outdoor attractions.

The motor vehicle cluster matches the survey response data the least well of any of the clusters, and this is because the survey did not include driving or riding in a motor vehicle as one of the 35 listed activities. Thus, we see a mix of visiting the visitor center, viewing indoor exhibits, walking to outdoor attractions, and day hiking among the five parks in this cluster.

Table 40.1: Popularity of activities by park cluster

Park	Most Popular Activity	Second Most Popular Activity	Third Most Popular Activity	Activity Clusters
ROMO	Walk to o/d attractions	Day hiking	Observing wildlife	Backcountry
BADL	Walk to o/d attractions	Day hiking	Visiting visitor center	Backcountry
CANY	Walk to o/d attractions	Day hiking	Other	Backcountry
YOSE	Walk to o/d attractions	Day hiking	Other	Backcountry
PORE	Walk to o/d attractions	Day hiking	Other	Backcountry
GRTE	Day hiking	Walk to o/d attractions	Observing wildlife	Backcountry
BIBE	Day hiking	Walk to o/d attractions	Other	Backcountry
MORA	Day hiking	Walk to o/d attractions	Visiting visitor center	Backcountry
OLYM	Day hiking	Walk to o/d attractions	Car camping	Backcountry
DENA	Other	Park programs	Observing wildlife	Backcountry
CUVA	Biking (roads/paths)	Visiting visitor center	Walk to o/d attractions	Biking
STLI	Viewing indoor exhibits	Walk to o/d attractions	Visiting visitor center	Frontcountry
LOWE	Viewing indoor exhibits	Walk to o/d attractions	Park programs	Frontcountry
MORU	Walk to o/d attractions	Viewing indoor exhibits	Visiting visitor center	Frontcountry
FOSU	Walk to o/d attractions	Viewing indoor exhibits	Park programs	Frontcountry
LIBI	Walk to o/d attractions	Park programs	Viewing indoor exhibits	Frontcountry
GETT	Walk to o/d attractions	Park programs	Other	Frontcountry
MEVE	Walk to o/d attractions	Park programs	Day hiking	Frontcountry
EVER	Walk to o/d attractions	Observing wildlife	Day hiking	Frontcountry
CAVE	Caving	Viewing indoor exhibits	Park programs	Frontcountry
NATR	Walk to o/d attractions	Visiting visitor center	Viewing indoor exhibits	Motor vehicle
SAGU	Walk to o/d attractions	Visiting visitor center	Other	Motor vehicle
BLRI	Day hiking	Walk to o/d attractions	Viewing indoor exhibits	Motor vehicle
DEWA	Day hiking	Walk to o/d attractions	Visiting visitor center	Motor vehicle
CURE	Fishing (boat)	Fishing (bank/shore)	Motor boating	Motor vehicle
LAME	Visiting visitor center	Swimming (lake)	Walk to o/d attractions	Water
CAHA	Walk to o/d attractions	Swimming (ocean)	Viewing indoor exhibits	Water
ASIS	Swimming (ocean)	Walk to o/d attractions	Visiting visitor center	Water
PAIS	Swimming (ocean)	Other	Walk to o/d attractions	Water
OZAR	Canoeing	Other	Swimming (river)	Water

These survey results do not give us precise estimates for the number of people participating in and the length of time that they engage in particular activities, and these data are not available elsewhere. Nevertheless, the survey results add validity to the groupings identified in the previous cluster analysis. Obviously, one would expect to

find that the higher the number of people engaged in a particular activity, then the higher the number of accidents associated with that activity. This is not, however, a one-to-one relationship, since some activities are inherently more risky than other activities. Without more precise estimates of the numbers of people engaged in a particular activity, the length of time that they are "exposed, " and the number of people injured, it will not be possible to derive more precise risk estimates.

40.2 Level of experience:

Since level of experience has been identified as a significant determinant of personal safety, the questionnaire asked respondents to rate their own level of experience with regard to their primary activity in the park. On a scale of 1 (extremely experienced) to 7 (not at all experienced) most people considered themselves to be relatively experienced in their chosen activity and very few considered themselves to have little or no experience. In some parks, and the "frontcountry parks" in particular (e.g., Getttysburg, Mesa Verde, and Carlsbad Caverns), more respondents tended to indicate that they had less experience, and "didn't know" or "couldn't answer." This may be related to the fact that it is more difficult to rate one's experience in frontcountry activities such as viewing indoor exhibits, walking to outdoor attractions, and participating in park programs. While it may seem irrelevant to ask respondents about their level of experience in activities such as "walking to outdoor attractions" we believe this is valid information. For example, one of the most common causes of accidents in the parks is tripping and falling, which is often a result of uneven surfaces and inappropriate footwear. Experienced visitors would know to wear appropriate footwear for the kind of terrain they expect to encounter. Similarly, heat exhaustion is a common problem at many parks, and one would expect that the more experienced visitors would realize this and wear appropriate clothing and bring adequate supplies of water. We know from the research literature, however, that people tend to be overconfident in their own abilities and may well exaggerate their reported level of experience.

40.3 Visitor preparedness:

As discussed above, there are many ways that visitors can be prepared for the common kinds of problems or hazards that may be encountered in the parks. The survey included a list of 18 items that may be important for the safety of visitors and asked respondents to indicate every item that they had available during their visit. Table 40.2 shows which items respondents identified by park. The numbers of respondents indicating particular items are found in the body of the report, but the purpose of Table 40.2 is to illustrate the overall pattern found in the 30 parks. Clearly, the 30 parks fall into two groups. In one group, respondents consistently checked off sufficient water, trail map, matches, GPS unit, compass, and other safety items. Bear bells/spray was an item that was often but not always checked off in this group. In the other group, respondents checked off all or most of the items on the list. In the first group, sufficient water, trail maps, and matches were checked off by the largest numbers of people, with relatively few identifying GPS units, compasses, and bear bells/sprays. In the second group, the items checked of by the largest numbers of people include sufficient water, appropriate clothing, and appropriate footwear, with smaller numbers of people checking off the other items. This bifurcation

in the sample of parks is curious, and does not seem to relate to any obvious characteristics of the parks or park clusters.

Table 40.2: Safety items by park

Park name	Sufficient water	Appropriate clothing	Appropriate footwear	Enough food	Trail map	Matches	Insect repellent	Cell phone	GPS unit	Compass	Sunglasses	Sunscreen	Safety helmet	First aid supplies	Personal flotation devices	Bear bells/spray	Whistle	Other
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
ASIS	x				x	x			x	x								x
BADL	x				x	x			x	x						x		x
BIBE	x				x	x			x	x						x		x
BLRI	x				x	x			x	x						x		x
CAVE	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CAHA	x				x	x			x	x								x
CANY	x				x	x			x	x						x		x
CURE	x				x	x			x	x						x		x
CUVA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
DENA	x				x	x			x	x						x		x
DEWA	x				x	x			x	x						x		x
EVER	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
FOSU	x				x	x			x	x						x		x
GETT	x				x	x			x	x								x
GRTE	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
LAME	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
LIBI	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
LOWE	x	x	x	x	x	x	x	x			x	x	x	x	x			x
MEVE	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MORA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MORU	x				x	x			x							x		x
NATR	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
OLYM	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
OZAR	x				x	x				x								x
PAIS	x		x			x			x	x						x		x
PORE	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ROMO	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
SAGU	x				x	x			x	x						x		x
STLI	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
YOSE	x				x	x			x	x						x		x

40.4 Visitor concerns:
Table 40.3 shows the percentage of respondents that expressed some concern that they or a member of their personal group might suffer an injury or become ill as are result of their activity in the park. The proportion of respondents expressing such concern ranges from 1% at Lowell to 48% at Big Bend, with an average of 13%. Broadly, it appears that levels of concern are lower in frontcountry parks and higher in back country parks. This is as might be expected given the nature of activities pursued in these parks. Given the large number of accidents associated with motor vehicles, one might expect to see higher levels of concern at parks such as the Natches Trace and Blue Ridge Parkways. The research literature, however, demonstrates that members of the public consistently underestimate the toll taken by motor vehicle accidents and are consistently overconfident about their driving abilities.

40.5 Hazards of concern:
The survey asked respondents to indicate how concerned they were about nine listed hazards on a scale from 1(extremely concerned) to 7 (not at all concerned) regarding the safety of themselves and those in their group. As illustrated in the graphs in the preceding sections, the rankings of the hazards of concern vary substantially from park to park. Table 40.4 attempts to summarize these differences by arranging the parks according to the number of respondent who gave the hazard a rating of 1 (extremely concerned) to 4 (somewhat concerned). For example, at Yosemite 77% of respondents said they were extremely or somewhat concerned about the hazard of falling, compared with 57% who were concerned about motor vehicle accidents, and 56% who were concerned about wildlife attacks. Thus, Table 40.4 identifies the primary concern at Yosemite is falling, the secondary concern is motor vehicle accidents, and the tertiary concern is wildlife attacks.

In reviewing Table 40.4, it is important to notice some of the apparent anomalies. For example, significant numbers of respondents at the Statue of Liberty were concerned about boating accidents, even though boating is not allowed in the park. Of course, the boating accidents of concern here refer to the possibility of accidents on the ferries to the islands. As noted in the preceding sections, the patterns of concerns expressed by respondents seem broadly consistent with the kinds of accidents encountered in the parks. It is “reassuring,” for example to see that the primary concern at the Natchez Trace and Blue Ridge Parkways is motor vehicle accidents. Conversely, drowning and boating fail to rate in the top three concerns at several parks where they are significant contributors to visitor fatalities and injuries, such as Lake Mead, Assateague Island, Cape Hatteras, Point Reyes and the Delaware Water Gap. Furthermore, concern about some hazards, such as wildlife attacks, may be exaggerated in comparison with the actual number of deaths or injuries associated with them. Wildlife attacks are a primary concern at Grand Tetons, Denali, and Padre Island, a secondary concern at Assateague Island, and a teriary concern at Yosemite, Little Big Horn, and the Everglades. In actuality, stings and bites from jellyfish, stingrays, etc. are substantial concerns at Padre Island, Assateague, and the Everglades, so public concern here is justified. Wildlife attacks at the other parks, however, are quite rare. The research literature on perception of risks, however, tells us

that the public often overestimates the likelihood of rare, dramatic kinds of risk events that are often given considerable media coverage.

Table 40.3: Respondent concern by park

Park	Percentage of Respondents Expressing Concern	Activity Clusters
LOWE	1	Frontcountry
LIBI	2	Frontcountry
FOSU	3	Frontcountry
MORU	3	Frontcountry
CURE	5	Motor vehicle
SAGU	6	Motor vehicle
CUVA	7	Biking
DENA	7	Backcountry
BLRI	8	Motor vehicle
GETT	8	Frontcountry
NATR	9	Motor vehicle
STLI	9	Frontcountry
CAHA	10	Water
EVER	10	Frontcountry
ASIS	12	Water
CAVE	13	Frontcountry
LAME	13	Water
OLYM	13	Backcountry
BADL	14	Backcountry
PORE	14	Backcountry
DEWA	15	Motor vehicle
CANY	16	Backcountry
ROMO	16	Backcountry
GRTE	17	Backcountry
MORA	20	Backcountry
OZAR	22	Water
MEVE	23	Frontcountry
YOSE	27	Backcountry
PAIS	29	Water
BIBE	48	Backcountry

Table 40.4: Hazard concerns by park

Hazards	Primary Concern	Secondary Concern	Tertiary Concern
Motor vehicle accidents	LOWE ROMO OLYM NATR BLRI MORU	YOSE MORA GRTE DENA CAHA LIBI GETT LAME	BADL MEVE CURE ASIS
Boating accidents	OZAR	CUVA CURE	STLI
Falling	YOSE MORA BADL MEVE CAVE FOSU	LOWE ROMO PORE STLI CANY BIBE	OLYM BLRI MORU CUVA GRTE DEWA
Drowning	CUVA	OZAR	PAIS
Others drinking alcohol	CURE		OZAR
Wildlife (e.g., bears)	GRTE DENA PAIS	ASIS	YOSE EVER LIBI
Insects (e.g., bees)	CAHA ASIS EVER	OLYM NATR DEWA	MORA CAVE DENA SAGU GETT LAME CANY BIBE
Poisonous plants	PORE DEWA SAGU	BLRI	NATR FOSU
Elemental exposure	LIBI GETT LAME STLI CANY BIBE	MORU BADL MEVE CAVE FOSU PAIS EVER SAGU	LOWE ROMO CAHA PORE

It is also interesting to compare the primary concerns with safety items carried by visitors (Table 40.2 above). While we find that insects were are primary concern at Cape Hatteras and Assateague Island none of our respondents indicated that they had insect repellants with them. Exposure to the elements was a primary concern at Gettysburg, Canyonlands, and Big Bend, but none of our respondents indicated that they had sunscreen with them or that they were wearing appropriate clothing. Falling was a primary concern at Yosemite, Badlands and Fort Sumter but no respondents indicated that they were wearing appropriate footwear for their visit. Perhaps most shocking is that boating was a primary concern at the Ozark National Scenic Riverways, but no one indicated that they had personal flotation devices.

40.6 Motor vehicles:

Motor vehicles present a significant hazard in many of the parks, but the numbers of motor vehicles and the extent to which visitors drive within the park boundaries varies from park to park. Our sample of 30 parks included two parkways (the Blue Ridge Parkway and the Natchez Trace Parkway) where driving dominates, and two other parks where driving is not permitted (i.e., Statue of Liberty/Ellis Island and Fort Sumter). Aside from the latter two parks, over 90% of respondents at all the other parks were traveling in privately owned or rented vehicles. Respondents who were sitting in the front seat of their vehicle as passengers or drivers, were asked a battery of questions about visitor driving habits and concerns. These questions were asked only of those in the front seat of a vehicle because those in the rear seats would likely be less likely and less able to evaluate driving conditions. Table 40.1 shows that response rates differ little among parks. In general, it appears that visitors are very satisfied with the speed limits, road conditions, and hazard warnings in these 30 parks.

An average of 94% of respondents said they were wearing their seatbelts most or all of the time while driving in the park. Reported seatbelt usage varied from 81% in Denali to 100% in the Delaware Water Gap. Seatbelt laws vary from state to state, but these numbers are far above the rates of compliance cited in the literature – of course it is likely that self-reported usage rates exceed actual rates. An average of 96% of respondents, with a range of 91% at Big Bend to 99% at Little Bighorn, indicated that speed limits in the parks were appropriate most or all of the time. The proportions of respondents who thought the roads in the parks were in good condition (i.e., pavement condition, etc.) most or all of the time ranged from 69% at Badlands to 99% at Natchez Trace, with an average of 92% over all 30 parks. The proportions of respondents who thought that the hazard warning signs were adequate all or most of the time ranged from 76% at Lowell to 98% at Denali, with an average of 92% overall.

40.7 Locus of responsibility for park safety

Assignation of responsibility for safety in the respondent's primary activity varied substantially from park to park. At the Statue of Liberty 10% of respondents believed that the visitor is primarily responsible for safety, while 71% believed that both the visitor and park staff are responsible. By contrast, 58% of respondents at Curecanti believed that the visitor is primarily responsible for safety, while 25% believed that both the visitor and the park staff are responsible. Table 40.5 shows that the proportion of

respondents believing that visitors are primarily responsible for safety is approximately inversely related to the proportion of respondents who believe that both visitors and park staff are responsible. Generally, as the proportion of respondents who believe the visitor is primarily responsible increases, the proportion of respondents who believe both visitors and staff are responsible decreases.

Table 40.5: Responsibility for safety by park

Park	Visitor Responsible	Both Visitor and Park Staff Responsible	Activity Clusters
STLI	10	71	Frontcountry
LOWE	13	78	Frontcountry
CAVE	15	68	Frontcountry
FOSU	22	57	Frontcountry
MORU	22	61	Frontcountry
DENA	23	54	Backcountry
EVER	24	49	Frontcountry
BLRI	27	45	Motor vehicle
MEVE	27	54	Frontcountry
GETT	29	51	Frontcountry
PORE	30	41	Backcountry
SAGU	31	49	Motor vehicle
CUVA	34	37	Biking
LIBI	34	48	Frontcountry
CAHA	35	45	Water
OLYM	37	34	Backcountry
ASIS	38	37	Water
MORA	38	36	Backcountry
LAME	40	45	Water
CANY	43	31	Backcountry
DEWA	43	30	Motor vehicle
GRTE	43	27	Backcountry
ROMO	44	30	Backcountry
BADL	45	29	Backcountry
NATR	45	47	Motor vehicle
OZAR	45	40	Water
YOSE	45	29	Backcountry
PAIS	49	34	Water
BIBE	50	22	Backcountry
CURE	58	25	Motor vehicle

It would also appear that respondents place greater responsibility for safety on visitors in backcountry parks, whereas respondents at frontcountry parks place responsibility on both park staff and visitors. This may result from the perception that the risks in frontcountry parks are more "controllable," since visitor activities tend to be less physically rigorous and the venues tend to be more "benign," with many paved walkways, regular stairs, and buildings. Alternatively, it may reflect a real difference in the types of people who visit frontcountry parks, their perceptions, and their expectations.

40.8 Safety measures as detractors:
The survey reveals that most people believe that safety measures such as warning signs, fences, and regulations do not detract from their enjoyment of the parks. In contrast with the responses regarding the locus of responsibility, there is a remarkable level of consistency across the parks with regard to this item. As illustrated in Table 40.6, the proportion of people who said such measures definitely did *not* detract from their enjoyment ranged from 64% at the Delaware Water Gap to 80% at Lowell, with an overall average of 72%.

40.9 Management issues:
The questionnaire included three general questions regarding the management of risk by the National Park Service, irrespective of the primary activity in which the respondent was engaged. On a scale of 1 (strongly agree) to 7 (strongly disagree), respondents were asked to indicate how much they agreed with the following statements:

- *Most of the risk visitors face in the National Parks are beyond the control of the National Park Service*
- *It is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to themselves, no matter how popular the activity may be.*
- *Besides providing appropriate safety information and warnings, the National Park Service should not limit or prohibit activities that may pose serious risks to the participants.*

The proportion of respondents who agreed or agreed strongly (i.e., gave a rating of 1 or 2) and the proportion of respondents who disagreed or disagreed strongly (i.e., gave a rating of 6 or 7) are summarized in Tables 40.7, 40.8, and 40.9 below.

Table 40.7 shows that large proportion of respondents, although rarely a majority, agree or agree strongly that most of the risk visitors face in the National Parks are beyond the control of the National Park Service. The proportion of respondents that agree ranges from 31% at the Statue of Liberty to 72% at Big Bend, with an average of 48% overall. Generally, it would appear that the proportions of respondents agreeing with this statement are lower in the frontcountry parks, where risks may indeed be more controllable because of the nature of the park and the activities therein. The proportions of respondents agreeing with this statement are higher in the backcountry parks, where the risks may be less easily controlled by the Park Service.

Table 40.6: Safety measures as detractors

Park	Percent of respondents saying safety measures did not detract from enjoyment	Activity Clusters
DEWA	64	Motor vehicle
EVER	64	Frontcountry
OZAR	65	Water
LAME	68	Water
MORA	68	Backcountry
STLI	68	Frontcountry
CAHA	69	Water
MEVE	69	Frontcountry
MORU	69	Frontcountry
CAVE	70	Frontcountry
CURE	70	Motor vehicle
BADL	71	Backcountry
FOSU	71	Frontcountry
SAGU	72	Motor vehicle
BIBE	73	Backcountry
DENA	73	Backcountry
LIBI	73	Frontcountry
PAIS	73	Water
ROMO	73	Backcountry
GETT	74	Frontcountry
YOSE	74	Backcountry
BLRI	75	Motor vehicle
CANY	75	Backcountry
CUVA	76	Biking
GRTE	76	Backcountry
OLYM	76	Backcountry
ASIS	78	Water
NATR	79	Motor vehicle
PORE	79	Backcountry
LOWE	80	Frontcountry

Table 40.7 Risks are beyond the control of the National Park Service

Park	Percent of respondents who agree or agree strongly that risks are beyond control of NPS	Percent of respondents who disagree or disagree strongly that risks are beyond control of NPS	Activity Clusters
STLI	31	16	Frontcountry
LOWE	38	15	Frontcountry
GETT	41	9	Frontcountry
LAME	41	5	Water
PAIS	41	10	Water
EVER	43	7	Frontcountry
OZAR	43	12	Water
PORE	43	11	Backcountry
BLRI	44	9	Motor vehicle
CAVE	44	10	Frontcountry
CUVA	44	9	Biking
FOSU	45	9	Frontcountry
LIBI	45	15	Frontcountry
MEVE	46	8	Frontcountry
MORU	47	8	Frontcountry
SAGU	47	7	Motor vehicle
ASIS	49	10	Water
CAHA	49	6	Water
NATR	49	8	Motor vehicle
CURE	50	10	Motor vehicle
DENA	50	8	Backcountry
ROMO	50	7	Backcountry
BADL	53	7	Backcountry
OLYM	53	10	Backcountry
DEWA	54	7	Motor vehicle
MORA	54	9	Backcountry
CANY	55	9	Backcountry
GRTE	57	7	Backcountry
YOSE	59	9	Backcountry
BIBE	72	6	Backcountry

Table 40.8 shows the proportion of respondents who agree or agree strongly that it is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to themselves. The proportion of respondents that agree with this statement ranges from 13% at Big Bend to 40% at the Statue of Liberty, with an average of 25% overall. Conversely the percent of respondents who disagree with this statement ranges from 16% at the Statue of Liberty to 60% at Big Bend, with an average of 37% overall. Generally, it would appear that there is more support for restricting risky activities among respondents at the frontcountry parks than there is among respondents at the backcountry parks, although in no park is there the support of the majority for such actions.

Table 40.9 shows the proportion of respondents who agree or agree strongly that besides providing appropriate safety information and warnings, the National Park Service should not limit or prohibit activities that may pose serious risks to the participants. The proportion of respondents that agree with this statement ranges from 16% at Lowell to 43% at the Delaware Water Gap, with an average of 27%. Conversely, the percent of respondents who disagree with this statement ranges from 18% at Big Bend to 54% at Fort Sumter, with an average of 36% overall. Generally, it would appear that there is greater support for restrictions on risky activities at frontcountry parks, although seldom a majority, and substantial opposition to restrictions at backcountry parks.

The survey asked if respondents thought the parks should have more, less, or the present amount of each of the following:

- rules and regulations about what visitors should and should not do;
- signs warning and advising about hazards;
- brochures and other information warning about hazards;
- restrictions on the number of persons/groups who undertake particular activities;
- park rangers to enforce rules and regulations; and
- enforcement of alcoholic beverage restrictions.

Respondents were asked to rate each item on a scale of 1 (many more or much more) to 5 (many fewer or much less). The proportion of respondents who gave a rating of 1 or 2 (i.e., more/many more or more/much more) and the proportion of respondents who gave a rating of 3 (i.e., present amount) are summarized in Tables 40.10, 40.11, 40.12, 40.13, 40.14, and 40.15 below.

Table 40.10 shows that the proportion of respondents who believe the parks should have the present amount of rules and regulations about what visitors should and should not do varies from 64% at Lake Mead to 91% at Cape Hatteras, with an overall average of 83%. The proportion of respondents who want more or many more rules and regulations ranges from 1% at Mount Rushmore to 18% at the National Scenic Riverways, with an average of 7%. Of the five parks with 10% or more of respondents in favor of more or many more rules and regulations, three (ASIS, LAME, and OZAR) were in the water-related cluster.

Table 40.8 The NPS should prevent risky activities

Park	Percent of respondents who agree or agree strongly that NPS should prevent visitors from activities that pose serious risk	Percent of respondents who disagree or disagree strongly that NPS should prevent visitors from activities that pose serious risk	Activity Clusters
BIBE	13	60	Backcountry
GRTE	17	47	Backcountry
YOSE	17	46	Backcountry
DEWA	18	48	Motor vehicle
PORE	18	39	Backcountry
BADL	20	40	Backcountry
CUVA	20	35	Biking
MEVE	20	35	Frontcountry
MORA	20	44	Backcountry
SAGU	20	36	Motor vehicle
ROMO	22	43	Backcountry
CANY	23	44	Backcountry
CURE	23	37	Motor vehicle
OLYM	23	38	Backcountry
DENA	24	40	Backcountry
LOWE	24	31	Frontcountry
OZAR	24	38	Water
EVER	25	32	Frontcountry
LAME	25	33	Water
BLRI	26	36	Motor vehicle
GETT	27	31	Frontcountry
PAIS	27	32	Water
CAHA	28	33	Water
LIBI	28	32	Frontcountry
MORU	29	30	Frontcountry
CAVE	31	30	Frontcountry
ASIS	34	26	Water
FOSU	35	29	Frontcountry
NATR	36	36	Motor vehicle
STLI	40	16	Frontcountry

Table 40.9 NPS should not prohibit risky activities

Park	Percent of respondents who agree or agree strongly that NPS should not limit/prohibit activities	Percent of respondents who disagree or disagree strongly that NPS should not limit/prohibit activities	Activity Clusters
LOWE	16	45	Frontcountry
STLI	16	47	Frontcountry
OZAR	18	27	Water
EVER	19	39	Frontcountry
FOSU	19	54	Frontcountry
MORU	20	38	Frontcountry
PORE	20	39	Backcountry
GETT	20	41	Frontcountry
LAME	22	33	Water
PAIS	22	34	Water
ASIS	22	36	Water
CUVA	22	36	Biking
CAVE	22	42	Frontcountry
BLRI	24	34	Motor vehicle
SAGU	26	31	Motor vehicle
ROMO	26	36	Backcountry
CURE	26	39	Motor vehicle
LIBI	27	37	Frontcountry
NATR	27	43	Motor vehicle
OLYM	28	35	Backcountry
MORA	29	36	Backcountry
MEVE	30	32	Frontcountry
CAHA	31	39	Water
DENA	33	34	Backcountry
GRTE	36	29	Backcountry
CANY	37	28	Backcountry
BADL	40	30	Backcountry
YOSE	41	27	Backcountry
BIBE	43	18	Backcountry
DEWA	43	34	Motor vehicle

Table 40.10 Number of rules and regulations

Park	Percent of respondents who want present amount of rules and regulations	Percent of respondents who want more or many more rules and regulations	Activity Clusters
MORU	89	1	Frontcountry
FOSU	89	2	Frontcountry
LOWE	90	2	Frontcountry
CAHA	91	2	Water
SAGU	90	3	Motor vehicle
OLYM	84	4	Backcountry
DENA	86	4	Backcountry
PORE	86	4	Backcountry
MEVE	88	4	Frontcountry
BIBE	90	4	Backcountry
DEWA	68	5	Motor vehicle
CURE	80	5	Motor vehicle
GETT	88	5	Frontcountry
BADL	83	6	Backcountry
CANY	84	6	Backcountry
LIBI	85	6	Frontcountry
MORA	85	6	Backcountry
STLI	85	6	Frontcountry
GRTE	87	6	Backcountry
EVER	81	7	Frontcountry
NATR	83	7	Motor vehicle
PAIS	85	7	Water
CAVE	88	7	Frontcountry
BLRI	79	9	Motor vehicle
ROMO	81	9	Backcountry
ASIS	83	10	Water
LAME	64	13	Water
CUVA	76	14	Biking
YOSE	78	14	Backcountry
OZAR	66	18	Water

Table 40.11 shows that the proportion of respondents who believe the parks should have the present amount of warning signs varies from 68% at National Scenic Riverways to 92% at Carlsbad Caverns, with an overall average of 83%. The proportion of respondents who want more or many more warning signs ranges from 4% at Lowell to 26% at the Ozark National Scenic Riverways, with an average of 10%. Generally, the percentage of respondents who were in favor or more or many more signs was higher among backcountry parks. Of the 16 parks in which 10% or more of the respondents were in favor of more or many more signs, only two were frontcountry parks.

Table 40.12 shows that the proportion of respondents who believe the parks should have the present amount of warning brochures varies from 65% at Ozark National Scenic Riverways to 89% at Fort Sumter, with an overall average of 80%. The proportion of respondents who want more or many more brochures ranges from 3% at Lowell and Fort Sumter to 26% at the Everglades and Ozark National Scenic Riverways, with an average of 13%. As with warning signs, we find that the frontcountry parks, except Mesa Verde and the Everglades, have fewer respondents in favor of more or many more brochures. At three of the five water-related parks (LAME, PAIS, and OZAR), however, 20% or more respondents were in favor of more or many warning brochures.

Table 40.13 shows that the proportion of respondents who believe the parks should have the present amount of restrictions on the number of persons/groups who undertake particular activities varies from 55% at Lake Mead to 87% at Fort Sumter, with an overall average of 71%. The proportion of respondents who want more or many more restrictions ranges from 0% at Lowell to 13% at the Yosemite and Mesa Verde, with an average of 6%.

Table 40.14 shows that the proportion of respondents who believe the parks should have the present amount of rangers varies from 52% at Blue Ridge Parkway to 86% at Fort Sumter, with an overall average of 69%. The proportion of respondents who want more or many more rangers ranges from 5% at Lowell to 30% at the Blue Ridge Parkway and Yosemite, with an average of 19%. Generally, the percentage of respondents in favor or more or many more rangers tends to be lower at the frontcountry parks, aside from Gettysburg and the Statue of Liberty.

Table 40.15 shows that the proportion of respondents who believe the parks should have the present amount of enforcement of alcoholic beverage restrictions varies from 46% at Lake Mead to 80% at Fort Sumter, with an overall average of 63%. The proportion of respondents who want more or much more enforcement ranges from 3% at Lowell to 27% at the Ozark National Scenic Riverways, with an average of 14%. Generally, there appears to be greater satisfaction with the present levels of enforcement and fewer respondents in favor of greater enforcement in the frontcountry parks. It is notable that among the 11 parks with 15% of more respondents in favor of more or much more enforcement of alcohol restrictions, we find all 5 water parks and all four motor vehicle parks.

Table 40.11 Number of signs warning and advising about hazards

Park	Percent of respondents who want present amount of warning signs	Percent of respondents who want more or many more warning signs	Activity Clusters
LOWE	88	4	Frontcountry
FOSU	89	4	Frontcountry
MORU	90	4	Frontcountry
DEWA	79	5	Motor vehicle
LIBI	88	5	Frontcountry
NATR	88	5	Motor vehicle
CAVE	92	5	Frontcountry
PORE	83	7	Backcountry
STLI	85	7	Frontcountry
GETT	87	7	Frontcountry
BIBE	90	7	Backcountry
SAGU	85	8	Motor vehicle
CAHA	88	8	Water
MORA	85	9	Backcountry
DENA	82	10	Backcountry
GRTE	83	10	Backcountry
OLYM	84	10	Backcountry
MEVE	87	10	Frontcountry
CURE	81	11	Motor vehicle
BLRI	81	12	Motor vehicle
CANY	83	12	Backcountry
YOSE	83	12	Backcountry
LAME	74	14	Water
ASIS	80	14	Water
CUVA	80	14	Biking
BADL	80	15	Backcountry
EVER	80	15	Frontcountry
ROMO	82	16	Backcountry
PAIS	74	20	Water
OZAR	68	26	Water

Table 40.12 Number of brochures and other information warning about hazards

Park	Percent of respondents who want present amount of warning brochures	Percent of respondents who want more or many more warning brochures	Activity Clusters
LOWE	86	3	Frontcountry
FOSU	89	3	Frontcountry
MORU	87	6	Frontcountry
LIBI	85	7	Frontcountry
CAVE	88	7	Frontcountry
STLI	81	9	Frontcountry
GETT	83	9	Frontcountry
NATR	82	10	Motor vehicle
DENA	85	10	Backcountry
MEVE	85	10	Frontcountry
BIBE	87	10	Backcountry
CAHA	86	11	Water
PORE	78	12	Backcountry
GRTE	83	12	Backcountry
MORA	84	12	Backcountry
CURE	78	13	Motor vehicle
CUVA	78	13	Biking
SAGU	82	13	Motor vehicle
DEWA	73	14	Motor vehicle
CANY	78	14	Backcountry
OLYM	80	14	Backcountry
YOSE	77	15	Backcountry
BADL	79	15	Backcountry
ASIS	77	17	Water
BLRI	68	19	Motor vehicle
ROMO	76	19	Backcountry
LAME	67	20	Water
PAIS	71	24	Water
OZAR	65	26	Water
EVER	69	26	Frontcountry

Table 40.13 Number of restrictions on particular activities

Park	Percent of respondents who want present amount of restrictions on activities	Percent of respondents who want more or many more restrictions on activities	Activity Clusters
LOWE	84	0	Frontcountry
FOSU	87	1	Frontcountry
MORU	78	3	Frontcountry
BIBE	79	3	Backcountry
DEWA	65	4	Motor vehicle
BADL	68	4	Backcountry
PORE	69	4	Backcountry
EVER	73	4	Frontcountry
LIBI	73	4	Frontcountry
GETT	78	4	Frontcountry
CAHA	81	4	Water
PAIS	65	5	Water
SAGU	70	5	Motor vehicle
CUVA	71	5	Biking
NATR	60	6	Motor vehicle
CURE	70	6	Motor vehicle
ASIS	76	6	Water
ROMO	65	7	Backcountry
CANY	60	8	Backcountry
OLYM	65	8	Backcountry
DENA	67	8	Backcountry
BLRI	63	9	Motor vehicle
STLI	74	9	Frontcountry
CAVE	76	9	Frontcountry
LAME	55	10	Water
MORA	70	10	Backcountry
GRTE	72	10	Backcountry
OZAR	68	12	Water
YOSE	65	13	Backcountry
MEVE	73	13	Frontcountry

Table 40.14 Number of park rangers to enforce rules and regulations

Park	Percent of respondents who want present amount of rangers	Percent of respondents who want more or many more rangers	Activity Clusters
LOWE	83	5	Frontcountry
LIBI	83	6	Frontcountry
FOSU	86	8	Frontcountry
MORU	79	9	Frontcountry
MEVE	80	14	Frontcountry
BIBE	75	15	Backcountry
EVER	69	16	Frontcountry
CAHA	77	16	Water
CAVE	80	16	Frontcountry
CANY	65	17	Backcountry
BADL	68	17	Backcountry
NATR	68	17	Motor vehicle
CURE	71	17	Motor vehicle
GETT	74	17	Frontcountry
DENA	64	18	Backcountry
STLI	77	18	Frontcountry
LAME	58	19	Water
PORE	65	20	Backcountry
CUVA	69	21	Biking
DEWA	62	22	Motor vehicle
ROMO	63	22	Backcountry
OLYM	66	22	Backcountry
SAGU	68	22	Motor vehicle
MORA	67	24	Backcountry
ASIS	62	26	Water
GRTE	63	27	Backcountry
OZAR	64	27	Water
PAIS	59	28	Water
BLRI	52	30	Motor vehicle
YOSE	64	30	Backcountry

Table 40.15 Amount of enforcement of alcoholic beverage restrictions

Park	Percent of respondents who want present amount of enforcement of alcohol beverage restrictions	Percent of respondents who want more or much more enforcement of alcohol beverage restrictions	Activity Clusters
LOWE	77	3	Frontcountry
BADL	59	6	Backcountry
LIBI	66	6	Frontcountry
FOSU	80	6	Frontcountry
BIBE	75	7	Backcountry
MEVE	63	9	Frontcountry
DENA	67	9	Backcountry
CAVE	71	10	Frontcountry
STLI	74	10	Frontcountry
MORU	69	11	Frontcountry
MORA	64	12	Backcountry
GETT	67	12	Frontcountry
NATR	56	13	Motor vehicle
PORE	63	13	Backcountry
CUVA	69	13	Biking
CANY	53	14	Backcountry
GRTE	60	14	Backcountry
EVER	61	14	Frontcountry
OLYM	64	14	Backcountry
ROMO	57	15	Backcountry
ASIS	66	15	Water
SAGU	51	17	Motor vehicle
LAME	46	19	Water
CAHA	60	20	Water
CURE	70	21	Motor vehicle
BLRI	55	23	Motor vehicle
DEWA	53	24	Motor vehicle
YOSE	55	24	Backcountry
PAIS	48	25	Water
OZAR	60	27	Water

In summing up, we see that there is strong support across all parks for the present level of management effort in these six areas. There is strong support for increased efforts on

each of these items in some parks. Across the board, there is substantial public support for more rangers, more brochures warning about hazards, and greater enforcement of alcoholic beverage restrictions. There is less support for increases in the restrictions placed on the number of persons/groups who undertake particular activities, and it is on this item that we see the greatest degree of equivocation as evident in the larger proportion of respondents expressing "don't know" as a response.

40.10 Sources of safety information:
Table 40.16 shows which sources of safety information were most popular at each of the 30 parks. The designations "most popular," "second most popular," and "third most popular" are based on the proportion of respondents at each park indicating that this source was "very helpful."

It is apparent that the sources of safety information that most people consistently rate as the most helpful include trail/directional signs, warning signs, and uniformed park personnel. These three sources of information were rated together as the top three in 21 of the 30 (i.e., 70%) of the parks. Trail/directional signs were rated as "very helpful" by most people in 22/30 parks, and appeared as one of the top three sources in 27/30 parks. Uniformed park personnel were rated as "very helpful" by most people at 5/30 parks, and as the second most helpful source at 13/30 additional parks. Uniformed park personnel were among the top three sources at 25/30 parks. Warning signs were rated as the top source of safety information at Padre Island, as the second most cited source at 11 other parks, and the third most cited source at 16 remaining parks.

There were also some notable exceptions to these patterns. Brochures on wildlife encounters were cited as "very helpful" by most people at Assateague Island and Denali; they were the second most popular source of safety information atYosemite and the Grand Tetons, and the third most popular source at Rocky Mountain and the Delaware Water Gap. Other workers in the parks were rated as the second most popular source of safety information at Lowell and Curecanti.

Finally, we would like to conclude by noting some of the differences we observed between the summer and winter surveys conducted at the Everglades, Lake Mead, Mount Rainier, Rocky Mountain, Saguaro, Statue of Liberty, and Yosemite. Overall, the results of the surveys are quite similar. Generally, the most popular activities are the same, although the rank order may change, and in the winter we see that addition of snowshoeing, cross-country skiing, and downhill skiing at Mount Rainier, Rocky Mountain, and Yosemite. There is a noticeable difference in levels of experience in the winter at Rocky Mountain and Mount Rainier, with fewer respondents rating themselves as extremely experienced and somewhat more rating themselves as having no experience. This results from the dominance of snowshoeing as a primary activity at these parks in the winter, and we can infer that many of our respondents are novice showshoers with little or no experience.

Table 40.16 Respondent ratings of sources of safety information:

Park	Most Popular Source	Second Most Popular Source	Third Most Popular Source	Activity Clusters
ASIS	Brochures on wildlife risks	Bulletin boards in park	Warning signs in park	Water
DENA	Brochures on wildlife risks	Uniformed park personnel	Warning signs in park	Backcountry
DEWA	Trail/directional signs	Uniformed park personnel	Brochures on wildlife risks	Motor vehicle
ROMO	Trail/directional signs	Warning signs in park	Brochures on wildlife risks	Backcountry
CUVA	Trail/directional signs	Warning signs in park	Bulletin boards in park	Biking
BADL	Trail/directional signs	Warning signs in park	Uniformed park personnel	Backcountry
BLRI	Trail/directional signs	Warning signs in park	Uniformed park personnel	Motor vehicle
CAHA	Trail/directional signs	Warning signs in park	Uniformed park personnel	Water
CANY	Trail/directional signs	Warning signs in park	Uniformed park personnel	Backcountry
LIBI	Trail/directional signs	Warning signs in park	Uniformed park personnel	Frontcountry
MORU	Trail/directional signs	Warning signs in park	Uniformed park personnel	Frontcountry
NATR	Trail/directional signs	Warning signs in park	Uniformed park personnel	Motor vehicle
BIBE	Trail/directional signs	Uniformed park personnel	Warning signs in park	Backcountry
CAVE	Trail/directional signs	Uniformed park personnel	Warning signs in park	Frontcountry
EVER	Trail/directional signs	Uniformed park personnel	Warning signs in park	Frontcountry
GETT	Trail/directional signs	Uniformed park personnel	Warning signs in park	Frontcountry
GRTE	Trail/directional signs	Brochures on wildlife risks	Warning signs in park	Backcountry
MEVE	Trail/directional signs	Uniformed park personnel	Warning signs in park	Frontcountry
MORA	Trail/directional signs	Uniformed park personnel	Warning signs in park	Backcountry
OLYM	Trail/directional signs	Uniformed park personnel	Warning signs in park	Backcountry
OZAR	Trail/directional signs	Uniformed park personnel	Warning signs in park	Water
PORE	Trail/directional signs	Uniformed park personnel	Warning signs in park	Backcountry
STLI	Trail/directional signs	Uniformed park personnel	Warning signs in park	Frontcountry
YOSE	Trail/directional signs	Brochures on wildlife risks	Warning signs in park	Backcountry
FOSU	Uniformed park personnel	Warning signs in park	Trail/directional signs	Frontcountry
LAME	Uniformed park personnel	Warning signs in park	Trail/directional signs	Water
LOWE	Uniformed park personnel	Other workers in park	Trail/directional signs	Frontcountry
CURE	Uniformed park personnel	Other workers in park	Warning signs in park	Motor vehicle
SAGU	Uniformed park personnel	Trail/directional signs	Warning signs in park	Motor vehicle
PAIS	Warning signs in park	Uniformed park personnel	Trail/directional signs	Water

The other major difference between the summer and winter surveys concerns the locus of responsibility for safety. Table 40.17 shows that there is a general shift in the locus of responsibility from the visitor in the winter towards both the visitor and the park staff in the summer.

Table 40.17 Ratings of responsibility in winter vs. summer surveys

Park	Winter Survey		Summer Survey	
	Visitor Responsible	Both Responsible	Visitor Responsible	Both Responsible
EVER	38	37	24	49
LAME	43	41	40	45
MORA	46	28	38	36
ROMO	59	16	44	30
SAGU	42	35	31	48
STLI	13	65	10	71
YOSE	34	34	45	29
Average	34.38	32	29	38.5

Acknowledgments:

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Appendix 1

Winter Survey Instrument

A Survey of Visitor Safety in the National Park System

FOLD HERE

Visitor Safety Survey
The George Perkins Marsh Institute
Clark University
950 Main Street
Worcester, MA 01610-9979

OMB Approval 1024-0224 (NPS01-002)
Expires: 03/31/02

United States Department of the Interior

NATIONAL PARK SERVICE
Risk Management Division
1849 C Street, NW
Room 7422
Washington, DC 20240

Dear Visitor,

Thank you for participating in this important collaborative study between Clark University and the National Park Service. Our goal is to learn about the activities, expectations, and opinions of visitors to the PARK. This will assist the National Park Service in its efforts to better manage this site and serve you, the visitor.

This questionnaire is only being given to a select number of visitors, so your participation is very important! It should only take about 15 minutes to complete the questionnaire. Your answers will remain strictly confidential. When your visit is over, please complete the questionnaire and drop it in the collection box or seal it with the sticker provided and drop it in any U.S. mailbox.

If you have any questions, please contact Dr. Dominic Golding, Clark University, Worcester, MA 01610; phone (508) 751 4619; e-mail dgolding@clarku.edu.

We appreciate your help.

Sincerely,

Richard C. Powell
Program Manager

PRIVACY ACT and PAPERWORK REDUCTION ACT Statement: 16 U.S.C. 1a-7 authorized collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Your name is requested for follow-up mailing purposes only. When analysis of the questionnaire is completed, all name and address files will be destroyed. Thus the permanent data will be anonymous. Please do not put your name or that of any member of your group on the questionnaire. Data collected through visitor surveys may be disclosed to the Department of Justice when relevant to litigation or anticipated litigation, or to appropriate Federal, State, or local or foreign agencies responsible for investigating or prosecuting a violation of law. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Burden estimate statement: Public reporting burden for this form is estimated to average 15 minutes per response. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Office of Management and Budget, Washington, DC 20503; and to the Information Collection Clearance Officer, WASO Administrative Program Center, National Park Service, 1849 C Street, N.W., Washington, DC 20240.

DIRECTIONS

When your visit is over, one adult in your group should complete the questionnaire. It should only take about 15 minutes. When you have completed the questionnaire, please seal it with the sticker provided and drop it in the collection box at this location or drop it in any U.S. mailbox. We appreciate your help.

PART I

1. Is this your first visit to PARK? **(*Please circle one answer for this and other questions unless otherwise indicated*)**

   1 Yes ⇨ GO ON TO QUESTION 3
   2 No
   8 Don't know/not sure

2. Including this trip, about how many times have you visited this park in the last ten years?
   About _____ times

3. How did this visit to PARK fit into your travel plans? **(*Circle one*)**

   1 this park was primary destination
   2 this park was one of several destinations
   3 this park was not a planned destination

4. When are you answering this questionnaire? **(*Circle one*)**

   1 One or more days after leaving the park
   2 The same day of your visit but after leaving the park
   3 During your current visit before leaving the park

5. How long did you spend in this park during your current visit? (*Circle one*)

   1 Half a day or less (*1-4 hours*)
   2 More than half a day to one full day (*more than 4 hours in a single day*)
   3 More than one day (*including returning to the park on more than one day during your current visit)*
   ⇨ How many days? _____

6. Are you visiting the park by yourself, or with your family, or friends, or with both family and friends?

   1 By self ⇨ GO TO QUESTION 8
   2 With family
   3 With friends
   4 With both family and friends
   8 OTHER

7. How many people are with you on this visit to the park (including yourself, family, friends and infants)? ***(Please fill in all the blanks)***

   Total number of people in your personal group including yourself _____

   Number of children 5 or under _____
   Number of children ages 6 to 12 _____
   Number of teenagers ages 13-17 _____
   Number of adults 18-65 _____
   Number of adults older than 65 _____

PART II

8. On the list below please put a check next to **every activity** you participated in during this visit to PARK. (If you did not do **any** of these activities ⇨ GO TO QUESTION 11.)

[ ] 1 Visiting visitor center
[ ] 2 Viewing indoor exhibits
[ ] 3 Walking to see outdoor attractions
[ ] 4 Participating in program led by park personnel (e.g. talk, walk etc.)
[ ] 5 Day hiking
[ ] 6 Backpacking in back-country
[ ] 7 Car camping

[ ] 8 Technical rock climbing (with special gear)
[ ] 9 Boulder scrambling (without special gear)
[ ] 10 Mountaineering
[ ] 11 Caving

[ ] 12 Mountain biking on trails/off road
[ ] 13 Biking on roads or paths

[ ] 14 Hunting
[ ] 15 Riding horse, mule, etc.
[ ] 16 Packing with horses, mules, llamas, etc.
[ ] 17 Observing birds or other wildlife

[ ] 18 Downhill skiing
[ ] 19 Cross country skiing

[ ] 20 Walking on snow shoes
[ ] 21 Riding snowmobiles

[ ] 22 Swimming in river
[ ] 23 Swimming in lake
[ ] 24 Swimming in ocean

[ ] 25 Fishing from bank or shoreline
[ ] 26 Fishing from boat
[ ] 27 Fishing on ice

[ ] 28 Using a houseboat
[ ] 29 Riding on tour boat or with guide
[ ] 30 Motor boating under your control
[ ] 31 Using a personal watercraft (e.g., jet ski)
[ ] 32 Sailing
[ ] 33 Canoeing
[ ] 34 Kayaking
[ ] 35 White water rafting

[ ] 36 OTHER: _____

_____

9. Which of the activities listed in Question 8 did you do for the most time while you were visiting PARK?

Activity Number: [ ][ ] Activity Name: _____

9a. Did you do this activity . . . ***(Circle one)***

1 by yourself
2 with members of your personal group (i.e., those listed in Question 6)
3 with other people <u>in addition to</u> your personal group or
4 with an organized group?

8 OTHER (please describe) _____

9b. Please rate your personal level of experience in this activity. ***(Circle one)***

Extremely Experienced						Not At All Experienced	*Don't know*	*Can't Answer*
1	2	3	4	5	6	7	8	9

9c. Were you concerned at any time that you or others in your group might suffer an injury or get sick as a result of this activity?

1 Yes
2 No ⇨ GO TO QUESTION 9i

3 Don't know ⇨ GO TO QUESTION 9i

9d. How <u>often</u> were you concerned about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 9f

8 not sure/ don't know ⇨ GO TO QUESTION 9f

9e. How concerned were you at the time about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 9f

8 not sure/ don't know ⇨ GO TO QUESTION 9f

9f. How <u>often</u> were you concerned about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 9i

8 not sure/ don't know ⇨ GO TO QUESTION 9i

9g. How concerned were you at the time about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 9i

8 not sure/ don't know ⇨ GO TO QUESTION 9i

9h. If at any time while you were doing this activity you felt concerned that you or others in your group were in danger of being injured or becoming sick, please describe why you were concerned.

_____

_____

9i. Do you believe that safety for this activity is primarily the responsibility of visitors like yourself or the park staff? ***(Circle one)***

Visitors Responsible			Both Responsible			Park Staff Responsible	Don't know
1	2	3	4	5	6	7	8

9j. Is there anything you believe the park staff could do to help people like you engage in this activity more safely?

_____

_____

9k. Did any of the park's safety measures (e.g., warning signs, fences, regulations) detract from your enjoyment of this activity? ***(Circle one)***

Definitely yes			Neither yes nor no			Definitely no	Don't know
1	2	3	4	5	6	7	8

IF YES, please describe which type of safety measures detracted from your enjoyment:

_____

_____

10. Was there a second activity that you did for a significant amount of time during this visit?

1 Yes
2 No ⇨ GO ON TO QUESTION 11

IF YES, please identify (from the list in Question 8):

Activity Number: ☐☐ Activity Name: _____

10a. Did you do this activity . . . ***(Circle one)***

1 by yourself
2 with members of your personal group (i.e., those listed in Question 6)
3 with other people in addition to your personal group or
4 with an organized group?

9 OTHER (please describe) _____

10b. Please rate your personal level of experience in this activity. ***(Circle one)***

Extremely Experienced						Not At All Experienced	*Don't know*	*Can't Answer*
1	2	3	4	5	6	7	8	9

10c. While you were doing this activity were you concerned at any time that you or others in your group were in danger of suffering an injury or getting sick, as a result of this activity?

1 Yes
2 No ⇨ GO TO QUESTION 10i

3 Don't know ⇨ GO TO QUESTION 10i

10d. How <u>often</u> were you concerned about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 10f

8 not sure/ don't know ⇨ GO TO QUESTION 10f

10e. How concerned were you at the time about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 10f

8 not sure/ don't know ⇨ GO TO QUESTION 10f

10f. How <u>often</u> were you concerned about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 10i

8 not sure/ don't know ⇨ GO TO QUESTION 10i

10g. How concerned were you at the time about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 10i

8 not sure/ don't know ⇨ GO TO QUESTION 10i

10h. If <u>at any time</u> while you were doing this activity you felt concerned that you or others in your group were in danger of being injured or becoming sick, please describe why you were concerned.

_____

_____

10i. Do you believe that safety <u>for this activity</u> is primarily the responsibility of visitors like yourself or the park staff? ***(Circle one)***

Visitors Responsible			Both Responsible			Park Staff Responsible	Don't know
1	2	3	4	5	6	7	8

10j. Is there anything you believe the park staff could do to help people like you engage in this activity more safely?

_____

_____

10k. Did any of the park's safety measures (e.g., warning signs, fences, regulations) <u>detract</u> from your enjoyment of this activity? ***(Circle one)***

Definitely yes			Neither yes nor no			Definitely no	Don't know
1	2	3	4	5	6	7	8

IF YES, please describe which type of safety measures detracted from your enjoyment:

_____

_____

PART III

11. Which type of vehicle did you travel in during your visit to PARK? ***(Circle one)***

1 Vehicle owned or rented by a member of your party ⇨ CONTINUE WITH 12
2 Bus or minivan operated by a company ⇨ GO TO QUESTION 15
8 OTHER ⇨ GO TO QUESTION 15

12. Were you in the front seat of your vehicle when you traveled through the park? ***(Circle one)***

1 Yes, all of the time
2 Yes, some of the time
3 No ⇨ GO TO QUESTION 15
4 Can't remember ⇨ GO TO QUESTION 15

13. How often did the following happen while you were traveling in the park? **(*Circle one* number for each item*)***

How often . . .	All of the time	Most of the time	Some of the time	None of the time	Don't know/ Can't remember
(a) Were you the driver…	1	2	3	4	8
(b) Were you wearing a seatbelt . . .	1	2	3	4	8
(c) Were the speed limits appropriate for safe driving . . .	1	2	3	4	8
(d) Did you encounter cars that were driving too fast . . .	1	2	3	4	8
(e) Did you encounter cars that were driving too slowly . . .	1	2	3	4	8
(f) Were the roads in good condition (pavement, plowing, etc) . . .	1	2	3	4	8
(g) Were the road signs warning of hazards ahead adequate . . .	1	2	3	4	8

14. How often did any of the following make traveling on park roads more hazardous during this visit?

Make traveling on roads more hazardous?	More hazardous . . .				
	All of the time	Most of the time	Some of the time	None of the time	Don't know/ Can't remember
(a) Cars stopping to see wildlife or views	1	2	3	4	8
(b) Pedestrians on or beside the roads	1	2	3	4	8
(c) Wildlife on or beside the roads	1	2	3	4	8
(d) Bicycle riders	1	2	3	4	8
(e) People driving large recreational vehicles or towing trailers	1	2	3	4	8
(f) Horseback riders	1	2	3	4	8

15. Regarding the safety of you and your group during your visit to the PARK, please indicate how concerned you were about the following . . . **(*Circle one* number for each item)**

Concerned about . . .	Extremely Concerned			Somewhat Concerned			Not At All Concerned	Not exposed to this during visit
(a) Motor vehicle accidents	1	2	3	4	5	6	7	9
(b) Boating accidents	1	2	3	4	5	6	7	9
(c) Falling	1	2	3	4	5	6	7	9
(d) Drowning	1	2	3	4	5	6	7	9
(e) Other people drinking alcohol	1	2	3	4	5	6	7	9
(f) Wildlife (e.g., bears, snakes, jellyfish)	1	2	3	4	5	6	7	9
(g) Insects (e.g., bees, wasps)	1	2	3	4	5	6	7	9
(h) Poisonous plants (e.g., poison ivy)	1	2	3	4	5	6	7	9
(i) Exposure to elements (e.g., cold, heat)	1	2	3	4	5	6	7	9

16. Did you or did anyone else in your personal group experience an illness or an injury, or get lost during this visit?

1 Yes ⇨ INDICATE ALL THAT APPLY: ___ illness ___ injury ___ getting lost

2 No ⇨ GO ON TO QUESTION 21

17. Answer the following for just the experiences you report in Question 16.

Did you or a member of your group . . .	For your illness		For your injury		For your getting lost	
(a) receive assistance from NPS staff?	Yes	No	Yes	No	Yes	No
(b) require search and rescue?	Yes	No	Yes	No	Yes	No
(c) require medical treatment?	Yes	No	Yes	No	Yes	No
(d) require medical transportation?	Yes	No	Yes	No	Yes	No

18. IF YES to (c) or (d), what was the nature of the illness or injury?

_____

_____

19. Please indicate to what extent you believe you or the park was responsible for the condition(s) you identify in Question 16.

	Entirely my/our responsibility			Both equally responsible			Entirely park's responsibility	No one's responsibility
(a) Illness	1	2	3	4	5	6	7	9
(b) Injury	1	2	3	4	5	6	7	9
(c) Lost	1	2	3	4	5	6	7	9

20. Please describe what the park could have done to avoid/minimize the condition(s):

_____

_____

PART IV

21. The following items can be important for the safety of park visitors. Please put a check next to <u>every</u> item you had with you during your activity, even if you didn't use it. .

[ ] Sufficient amount of water
[ ] Appropriate clothing for the weather
[ ] Appropriate footwear
[ ] Enough food
[ ] Trail map
[ ] Matches
[ ] Insect repellent
[ ] Cell phone or other communication device
[ ] Global Positioning System (GPS) unit
[ ] Compass
[ ] Sunglasses
[ ] Suntan or sun-block cream
[ ] Safety helmet(s)
[ ] First aid supplies
[ ] Personal flotation devices (lifejackets)
[ ] Bear bells/bear spray
[ ] Whistle
[ ] OTHER specialized equipment (e.g., ice axe, ropes etc.) Please list each:

_____

_____

_____

_____

22. Do you think the PARK should have more, less or about the present amount of each of the following?

Park should have…	MANY MORE	MORE	PRESENT AMOUNT	FEWER	MANY FEWER	DON"T KNOW
(a) Rules and regulations about what all park visitors should and should not do	1	2	3	4	5	8
(b) Signs warning and advising about hazards	1	2	3	4	5	8
(c) Brochures and other information warning and advising about hazards	1	2	3	4	5	8
(d) Restrictions on the number of persons/groups who undertake particular activities	1	2	3	4	5	8
(e) Park rangers to enforce rules and regulations	1	2	3	4	5	8
	MUCH MORE	MORE	PRESENT AMOUNT	LESS	MUCH LESS	DON'T KNOW
(f) Enforcement of alcoholic beverage prohibitions	1	2	3	4	5	8
(g) Safer surfaces on walkways and stairs	1	2	3	4	5	8

23. Here are some ways people can get information about safety in PARK. Please circle the number of an answer for **each item** listed below, even if it does not fit your activities very well.

Ways to get information . . .	(1) Were you aware of this type or source of safety information during this trip?			(2) IF YOU WERE AWARE OF THIS SOURCE OF INFORMATION, how helpful was the information?			
	Yes	No	Not sure	Very helpful	Somewhat helpful	Not helpful	Did not use
(a) Trail/directional signs in park	1	2	3	1	2	3	9
(b) Warning signs in park	1	2	3	1	2	3	9
(c) Bulletin boards in park	1	2	3	1	2	3	9
(d) Park brochures about wildlife encounters	1	2	3	1	2	3	9
(e) Park brochures about other hazards and safety	1	2	3	1	2	3	9
(f) Weather reports posted in park	1	2	3	1	2	3	9

Ways to get information . . .	(1) Were you aware of this type or source of safety information during this trip?			(2) IF YOU WERE AWARE OF THIS SOURCE OF INFORMATION, how helpful was the information?			
	Yes	No	Not sure	Very helpful	Somewhat helpful	Not helpful	Did not use
(g) Weather reports on park information radio station	1	2	3	1	2	3	9
(h) Advice from uniformed park personnel	1	2	3	1	2	3	9
(i) Advice from other people working at store or lodge	1	2	3	1	2	3	9
(j) Advice from people you encountered in the park				1	2	3	9
(k) Advice from family/friends about park				1	2	3	9

24. Please indicate how much you agree or disagree with the following statements:

24a. Most of the risks visitors face in the National Parks are beyond the control of the National Park Service.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

24b. It is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to themselves, no matter how popular the activities may be.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

24c. Besides providing appropriate safety information and warnings, the National Park Service should not limit or prohibit activities that may pose serious risks to the participants.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

25. Did you happen to notice any conditions that might be hazardous (e.g., irregular stairs, uneven walkways) that the park should know about.

    1 Yes
    2 No ⇨ GO TO QUESTION 27

26. Please describe these conditions, including their location:

    _____

    _____

PART V

27. In what year were you born? Year of birth: 19_____

28. Are you female or male?

    1 Female 2 Male

29. What do you consider yourself? (Circle <u>all</u> that apply.)

    1 White
    2 Black or African American
    3 Asian
    4 American Indian or Alaska Native
    5 Native Hawaiian or other Pacific Islander
    6 Hispanic or Latino
    7 Other (please indicate): _____

30. What is highest level of education you have completed? (Circle one.)

    1 Less than High School
    2 Some High School
    3 High School or GED
    4 Technical/Trade School
    5 Some College
    6 College graduate
    7 Graduate School or Masters (for example, MS, MBA, JD)
    8 Doctorate degree (for example, PhD, MD)

31. What is your home zip code? Zip code _____

THANK YOU

Now you have completed the questionnaire, please seal it with the sticker provided and drop it in the collection box at the location where you met the survey interviewer, or drop it in any U.S. mailbox.

Appendix 2

Summer Survey Instrument

A Survey of Visitor Safety in the National Park System

FOLD HERE

Visitor Safety Survey
The George Perkins Marsh Institute
Clark University
950 Main Street
Worcester, MA 01610-9979

OMB Approval 1024-0224 (NPS01-002)
Expires: 03/31/02

United States Department of the Interior

NATIONAL PARK SERVICE
Risk Management Division
1849 C Street, NW
Room 7422
Washington, DC 20240

Dear Visitor,

Thank you for participating in this important collaborative study between Clark University and the National Park Service. Our goal is to learn about the activities, expectations, and opinions of visitors to the PARK. This will assist the National Park Service in its efforts to better manage this site and serve you, the visitor.

This questionnaire is only being given to a select number of visitors, so your participation is very important! It should only take about 15 minutes to complete the questionnaire. Your answers will remain strictly confidential. When your visit is over, please complete the questionnaire and drop it in the collection box or seal it with the sticker provided and drop it in any U.S. mailbox.

If you have any questions, please contact Dr. Dominic Golding, Clark University, Worcester, MA 01610; phone (508) 751 4619; e-mail dgolding@clarku.edu.

We appreciate your help.

Sincerely,

Richard C. Powell
Program Manager

PRIVACY ACT and PAPERWORK REDUCTION ACT Statement: 16 U.S.C. 1a-7 authorized collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Your name is requested for follow-up mailing purposes only. When analysis of the questionnaire is completed, all name and address files will be destroyed. Thus the permanent data will be anonymous. Please do not put your name or that of any member of your group on the questionnaire. Data collected through visitor surveys may be disclosed to the Department of Justice when relevant to litigation or anticipated litigation, or to appropriate Federal, State, or local or foreign agencies responsible for investigating or prosecuting a violation of law. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Burden estimate statement: Public reporting burden for this form is estimated to average 15 minutes per response. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Office of Management and Budget, Washington, DC 20503; and to the Information Collection Clearance Officer, WASO Administrative Program Center, National Park Service, 1849 C Street, N.W., Washington, DC 20240.

DIRECTIONS

When your visit is over, one adult in your group should complete the questionnaire. It should only take about 15 minutes. When you have completed the questionnaire, please seal it with the sticker provided and drop it in the collection box at this location or drop it in any U.S. mailbox. We appreciate your help.

PART I

1. Is this your first visit to PARK? **(*Please circle one answer for this and other questions unless otherwise indicated*)**

   1 Yes ⇨ GO ON TO QUESTION 3
   2 No
   8 Don't know/not sure

3. Including this trip, about how many times have you visited this park in the last ten years?
   About _____ times

3. How did this visit to PARK fit into your travel plans? **(*Circle one*)**

   1 this park was primary destination
   2 this park was one of several destinations
   3 this park was not a planned destination

4. When are you answering this questionnaire? **(*Circle one*)**

   1 One or more days after leaving the park
   2 The same day of your visit but after leaving the park
   3 During your current visit before leaving the park

5. How long did you spend in this park during your current visit? (*Circle one*)

   1 Half a day or less (*1-4 hours*)
   2 More than half a day to one full day (*more than 4 hours in a single day*)
   3 More than one day (*including returning to the park on more than one day during your current visit)*
   ⇨ How many days? _____

6. Are you visiting the park by yourself, or with your family, or friends, or with both family and friends?

   1 By self ⇨ GO TO QUESTION 8
   2 With family
   3 With friends
   4 With both family and friends
   8 OTHER

7. How many people are with you on this visit to the park (including yourself, family, friends and infants)? ***(Please fill in all the blanks)***

   Total number of people in your personal group including yourself _____

   Number of children 5 or under _____
   Number of children ages 6 to 12 _____
   Number of teenagers ages 13-17 _____
   Number of adults 18-65 _____
   Number of adults older than 65 _____

PART II

8. On the list below please put a check next to **every activity** you participated in during this visit to PARK. (If you did not do **any** of these activities ⇨ GO TO QUESTION 10.)

[ ] 1 Visiting visitor center
[ ] 2 Viewing indoor exhibits
[ ] 3 Walking to see outdoor attractions
[ ] 4 Participating in program led by park personnel (e.g. talk, walk etc.)
[ ] 5 Day hiking
[ ] 6 Backpacking in back-country
[ ] 7 Car camping

[ ] 8 Technical rock climbing (with special gear)
[ ] 9 Boulder scrambling (without special gear)
[ ] 10 Mountaineering
[ ] 11 Caving

[ ] 12 Mountain biking on trails/off road
[ ] 13 Biking on roads or paths

[ ] 14 Hunting
[ ] 15 Riding horse, mule, etc.
[ ] 16 Packing with horses, mules, llamas, etc.
[ ] 17 Observing birds or other wildlife

[ ] 18 Downhill skiing
[ ] 19 Cross country skiing

[ ] 20 Walking on snow shoes
[ ] 21 Riding snowmobiles

[ ] 22 Swimming in river
[ ] 23 Swimming in lake
[ ] 24 Swimming in ocean

[ ] 25 Fishing from bank or shoreline
[ ] 26 Fishing from boat
[ ] 27 Fishing on ice

[ ] 28 Using a houseboat
[ ] 29 Riding on tour boat or with guide
[ ] 30 Motor boating under your control
[ ] 31 Using a personal watercraft (e.g., jet ski)
[ ] 32 Sailing
[ ] 33 Canoeing
[ ] 34 Kayaking
[ ] 35 White water rafting

[ ] 36 OTHER: _____

_____

9. Which of the activities listed in Question 8 did you do for the most time while you were visiting PARK?

Activity Number: [ ][ ] Activity Name: _____

9a. Did you do this activity . . . ***(Circle one)***

1 by yourself
2 with members of your personal group (i.e., those listed in Question 6)
3 with other people <u>in addition to</u> your personal group or
4 with an organized group?

10 OTHER (please describe) _____

9b. Please rate your personal level of experience in this activity. ***(Circle one)***

Extremely Experienced						Not At All Experienced	*Don't know*	*Can't Answer*
1	2	3	4	5	6	7	8	9

9c. Were you concerned at any time that you or others in your group might suffer an injury or get sick as a result of this activity?

1 Yes
2 No ⇨ GO TO QUESTION 9i

3 Don't know ⇨ GO TO QUESTION 9i

9d. How <u>often</u> were you concerned about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 9f

8 not sure/ don't know ⇨ GO TO QUESTION 9f

9e. How concerned were you at the time about <u>yourself</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 9f

8 not sure/ don't know ⇨ GO TO QUESTION 9f

9f. How <u>often</u> were you concerned about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 all of the time
2 much of the time
3 some of the time
4 very briefly
5 not at all ⇨ GO TO QUESTION 9i

8 not sure/ don't know ⇨ GO TO QUESTION 9i

9g. How concerned were you at the time about <u>others in your group</u> suffering an injury or getting sick as a result of this activity?

1 extremely concerned
2 very concerned
3 quite concerned
4 somewhat concerned
5 not at all concerned ⇨ GO TO QUESTION 9i

8 not sure/ don't know ⇨ GO TO QUESTION 9i

9h. If at any time while you were doing this activity you felt concerned that you or others in your group were in danger of being injured or becoming sick, please describe why you were concerned.

_____

_____

9i. Do you believe that safety for this activity is primarily the responsibility of visitors like yourself or the park staff? ***(Circle one)***

Visitors Responsible			Both Responsible			Park Staff Responsible	Don't know
1	2	3	4	5	6	7	8

9j. Is there anything you believe the park staff could do to help people like you engage in this activity more safely?

_____

_____

9k. Did any of the park's safety measures (e.g., warning signs, fences, regulations) detract from your enjoyment of this activity? ***(Circle one)***

Definitely yes			Neither yes nor no			Definitely no	Don't know
1	2	3	4	5	6	7	8

IF YES, please describe which type of safety measures detracted from your enjoyment:

_____

_____

PART III

10. Which type of vehicle did you travel in during your visit to PARK? ***(Circle one)***

1 Vehicle owned or rented by a member of your party ⇨ CONTINUE WITH 11
2 Bus or minivan operated by a company ⇨ GO TO QUESTION 14
8 OTHER ⇨ GO TO QUESTION 14

11. Were you in the front seat of your vehicle when you traveled through the park? ***(Circle one)***

1 Yes, all of the time
2 Yes, some of the time
3 No ⇨ GO TO QUESTION 14
4 Can't remember ⇨ GO TO QUESTION 14

12. How often did the following happen while you were traveling in the park? **(*Circle one* number for each item*)***

How often . . .	All of the time	Most of the time	Some of the time	None of the time	Don't know/ Can't remember
(a) Were you the driver…	1	2	3	4	8
(b) Were you wearing a seatbelt . . .	1	2	3	4	8
(c) Were the speed limits appropriate for safe driving . . .	1	2	3	4	8
(d) Did you encounter cars that were driving too fast . . .	1	2	3	4	8
(e) Did you encounter cars that were driving too slowly . . .	1	2	3	4	8
(f) Were the roads in good condition (pavement, plowing, etc) . . .	1	2	3	4	8
(g) Were the road signs warning of hazards ahead adequate . . .	1	2	3	4	8

13. How often did any of the following make traveling on park roads more hazardous during this visit?

Make traveling on roads more hazardous?	More hazardous . . .				
	All of the time	Most of the time	Some of the time	None of the time	Don't know/ Can't remember
(a) Cars stopping to see wildlife or views	1	2	3	4	8
(b) Pedestrians on or beside the roads	1	2	3	4	8
(c) Wildlife on or beside the roads	1	2	3	4	8
(d) Bicycle riders	1	2	3	4	8
(e) People driving large recreational vehicles or towing trailers	1	2	3	4	8
(f) Horseback riders	1	2	3	4	8

14. Regarding the safety of you and your group during your visit to the PARK, please indicate how concerned you were about the following . . . **(*Circle one* number for each item)**

Concerned about . . .	Extremely Concerned			Somewhat Concerned			Not At All Concerned	Not exposed to this during visit
(a) Motor vehicle accidents	1	2	3	4	5	6	7	9
(b) Boating accidents	1	2	3	4	5	6	7	9
(c) Falling	1	2	3	4	5	6	7	9
(d) Drowning	1	2	3	4	5	6	7	9
(e) Other people drinking alcohol	1	2	3	4	5	6	7	9
(f) Wildlife (e.g., bears, snakes, jellyfish)	1	2	3	4	5	6	7	9
(g) Insects (e.g., bees, wasps)	1	2	3	4	5	6	7	9
(h) Poisonous plants (e.g., poison ivy)	1	2	3	4	5	6	7	9
(i) Exposure to elements (e.g., cold, heat)	1	2	3	4	5	6	7	9

15. Did you or did anyone else in your personal group experience an illness or an injury, or get lost during this visit?

1 Yes ⇨ INDICATE ALL THAT APPLY: ___ illness ___ injury ___ getting lost

2 No ⇨ GO ON TO QUESTION 20

16. Answer the following for just the experiences you report in Question 15.

Did you or a member of your group . . .	For your illness		For your injury		For your getting lost	
(a) receive assistance from NPS staff?	Yes	No	Yes	No	Yes	No
(b) require search and rescue?	Yes	No	Yes	No	Yes	No
(c) require medical treatment?	Yes	No	Yes	No	Yes	No
(d) require medical transportation?	Yes	No	Yes	No	Yes	No

17. IF YES to (c) or (d), what was the nature of the illness or injury?

_____

_____

18. Please indicate to what extent you believe you or the park was responsible for the condition(s) you identify in Question 15.

	Entirely my/our responsibility			Both equally responsible			Entirely park's responsibility	No one's responsibility
(a) Illness	1	2	3	4	5	6	7	9
(b) Injury	1	2	3	4	5	6	7	9
(c) Lost	1	2	3	4	5	6	7	9

19. Please describe what the park could have done to avoid/minimize the condition(s):

_____

_____

PART IV

20. The following items can be important for the safety of park visitors. Please put a check next to <u>every</u> item you had with you during your activity, even if you didn't use it. .

[ ] Sufficient amount of water
[ ] Appropriate clothing for the weather
[ ] Appropriate footwear
[ ] Enough food
[ ] Trail map
[ ] Matches
[ ] Insect repellent
[ ] Cell phone or other communication device
[ ] Global Positioning System (GPS) unit
[ ] Compass
[ ] Sunglasses
[ ] Suntan or sun-block cream
[ ] Safety helmet(s)
[ ] First aid supplies
[ ] Personal flotation devices (lifejackets)
[ ] Bear bells/bear spray
[ ] Whistle
[ ] OTHER specialized equipment (e.g., ice axe, ropes etc.) Please list each:

_____

_____

_____

_____

21. Do you think the PARK should have more, less or about the present amount of each of the following?

Park should have…	MANY MORE	MORE	PRESENT AMOUNT	FEWER	MANY FEWER	DON"T KNOW
(a) Rules and regulations about what all park visitors should and should not do	1	2	3	4	5	8
(b) Signs warning and advising about hazards	1	2	3	4	5	8
(c) Brochures and other information warning and advising about hazards	1	2	3	4	5	8
(d) Restrictions on the number of persons/groups who undertake particular activities	1	2	3	4	5	8
(e) Park rangers to enforce rules and regulations	1	2	3	4	5	8
	MUCH MORE	MORE	PRESENT AMOUNT	LESS	MUCH LESS	DON'T KNOW
(f) Enforcement of alcoholic beverage prohibitions	1	2	3	4	5	8
(g) Safer surfaces on walkways and stairs	1	2	3	4	5	8

22. Here are some ways people can get information about safety in PARK. Please circle the number of an answer for **each item** listed below, even if it does not fit your activities very well.

Ways to get information . . .	(1) Were you aware of this type or source of safety information during this trip?			(2) IF YOU WERE AWARE OF THIS SOURCE OF INFORMATION, how helpful was the information?			
	Yes	No	Not sure	Very helpful	Somewhat helpful	Not helpful	Did not use
(a) Trail/directional signs in park	1	2	3	1	2	3	9
(b) Warning signs in park	1	2	3	1	2	3	9
(c) Bulletin boards in park	1	2	3	1	2	3	9
(d) Park brochures about wildlife encounters	1	2	3	1	2	3	9
(e) Park brochures about other hazards and safety	1	2	3	1	2	3	9
(f) Weather reports posted in park	1	2	3	1	2	3	9

Ways to get information . . .	(1) Were you aware of this type or source of safety information during this trip?			(2) IF YOU WERE AWARE OF THIS SOURCE OF INFORMATION, how helpful was the information?			
	Yes	No	Not sure	Very helpful	Somewhat helpful	Not helpful	Did not use
(g) Weather reports on park information radio station	1	2	3	1	2	3	9
(h) Advice from uniformed park personnel	1	2	3	1	2	3	9
(i) Advice from other people working at store or lodge	1	2	3	1	2	3	9
(j) Advice from people you encountered in the park				1	2	3	9
(k) Advice from family/friends about park				1	2	3	9

23. Please indicate how much you agree or disagree with the following statements:

23a. Most of the risks visitors face in the National Parks are beyond the control of the National Park Service.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

23b. It is the responsibility of the National Park Service to prevent visitors from undertaking activities that may pose a serious risk to themselves, no matter how popular the activities may be.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

23c. Besides providing appropriate safety information and warnings, the National Park Service should not limit or prohibit activities that may pose serious risks to the participants.

Strongly agree			Neither			Strongly disagree	Don't know
1	2	3	4	5	6	7	8

24. Did you happen to notice any conditions that might be hazardous (e.g., irregular stairs, uneven walkways) that the park should know about.

    1 Yes
    2 No ⇨ GO TO QUESTION 26

25. Please describe these conditions, including their location:

    _____

    _____

PART V

26. In what year were you born? Year of birth: 19_____

27. Are you female or male?

    1 Female 2 Male

28. What do you consider yourself? (Circle all that apply.)

    1 White
    2 Black or African American
    3 Asian
    4 American Indian or Alaska Native
    5 Native Hawaiian or other Pacific Islander
    6 Hispanic or Latino
    7 Other (please indicate): _____

29. What is highest level of education you have completed? (Circle one.)

    1 Less than High School
    2 Some High School
    3 High School or GED
    4 Technical/Trade School
    5 Some College
    6 College graduate
    7 Graduate School or Masters (for example, MS, MBA, JD)
    8 Doctorate degree (for example, PhD, MD)

30. What is your home zip code/country? Zip code _____/Country _____

THANK YOU

Now you have completed the questionnaire, please seal it with the sticker provided and drop it in the collection box at the location where you met the survey interviewer, or drop it in any U.S. mailbox.

Appendix 3

Script for Initial Visitor Contact

Script for Initial Visitor Contact:
Survey on Visitor Safety in the National Park System

Hello. My name is (_____). I am involved in a cooperative study by the National Park Service and Clark University to learn more about visitor safety in PARK NAME. Your participation in this study is strictly voluntary and all information collected will remain confidential.

Have you or your party already been contacted for this study? (*If yes, thank them for helping and contact another group*).

I would appreciate it if one of the adults (age 16 years or older) in your party would complete a brief mail-back questionnaire (*show to those present*). The questionnaire will take about 15 minutes to complete. Do you want to participate?

IF NO: Thank you. Could you tell me briefly why you do not wish to participate?

IF YES: Thank you. Which one of the adults will complete the questionnaire for the group? I would appreciate it if you could give me some information about you and your group by completing this form. It will take less than two minutes.

After your visit, please complete the survey, seal it with the sticker provided, and drop it in the collection box at this location, or drop it in the mail. The return postage has been paid.

THANK YOU FOR YOUR HELP!

Appendix 4

Individual Information Form

Individual Information Form
Survey on Visitor Safety in the National Park System

(1) What is your name: _____

(2) What is your permanent address:

Street: _____
City/State _____
5-digit zip code (or country) _____

(3) With what kind of group are you traveling: (Please check all that apply)
[ ] self
[ ] family
[ ] friends
[ ] other (please describe: _____)

(4) How many people are in your personal group, including yourself? _____ people

(5) Is this your first visit to PARK?
[ ] Yes [ ] No

(6) How long do you intend to visit this park? _____ hours / days

(7) What is your gender? [ ] Female [ ] Male

(8) In what year were you born? Year of birth: 19 ____

To be completed by interviewer:

Date: _____ Time: _____ Group #: _____

Interviewer: _____ Location: _____ Survey #: _____

PRIVACY ACT and PAPERWORK REDUCTION ACT Statement: 16 U.S.C. 1a-7 authorized collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Your name is requested for follow-up mailing purposes only. When analysis of the questionnaire is completed, all name and address files will be destroyed. Thus the permanent data will be anonymous. Please do not put your name or that of any member of your group on the questionnaire. Data collected through visitor surveys may be disclosed to the Department of Justice when relevant to litigation or anticipated litigation, or to appropriate Federal, State, or local or foreign agencies responsible for investigating or prosecuting a violation of law. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Burden estimate statement: Public reporting burden for this form is estimated to average 2 minutes per response. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Office of Management and Budget, Washington, DC 20503; and to the Information Collection Clearance Officer, WASO Administrative Program Center, National Park Service, 1849 C Street, N.W., Washington, DC 20240.

Appendix 5

Follow-up Mailings

First Follow-up Postcard
Survey on Visitor Safety in the National Park System

Dear Visitor,

Last week we contacted you while you were visiting PARK NAME. At that time, you agreed to complete a questionnaire regarding your activities and experiences at PARK NAME.

As of today, we have not yet received your completed questionnaire. If you have mailed it to us, thank you! If not, please mail it today. Only a small number of visitors were contacted for this study, so your opinions are very important to us.

If you have any questions or need another copy of the survey, please contact Dr. Dominic Golding, Clark University, Worcester, MA 01610; phone (508) 751 4619; e-mail dgolding@clarku.edu.

Thank you!

Richard C. Powell
Program Manager
Risk Management

Second Follow-up Letter to Non-respondents
Survey on Visitor Safety in the National Park System

Dear Visitor,

Four weeks ago we contacted you while you were visiting PARK NAME. At that time, you agreed to complete a questionnaire regarding your activities and experiences at PARK NAME.

As of today, we have not yet received your completed questionnaire. If you have mailed it to us, thank you! In the event that you have misplaced the questionnaire or it has gone astray in the mail, we enclose another copy. Please take a few moments to complete the questionnaire and return it in the pre-paid envelope. Only a small number of visitors were contacted for this study, so your opinions are very important to us.

If you have any questions, please contact Dr. Dominic Golding, Clark University, Worcester, MA 01610; phone (508) 751 4619; e-mail dgolding@clarku.edu.

Thank you!

Richard C. Powell
Program Manager
Risk Management