

MANAGEMENT IMPLICATIONS OF CHANGES IN RECREATION ACTIVITY MOTIVATION ACROSS PHYSICAL SETTINGS

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Abstract.—Outdoor recreation management frameworks suggest that a diverse set of recreation opportunities is necessary to meet the needs and desires of a diverse population of recreationists. Managers of recreation resources must understand recreational demand if they wish to provide high-quality recreation opportunities to their users. The purpose of this study was to examine possible relationships between recreational activity choice, setting choice, and motivations among adult U.S. citizens who participated in one of four activities: hiking, walking, sightseeing, and camping in developed campgrounds. Data used in this study came from the National Survey on Recreation and the Environment. Between-groups analysis of variance was used to test for differences in mean importance scores for 13 motivations across seven environmental settings. Significant differences were found between motivation importance scores across the seven environmental settings for three of the four study activities. Results and implications are discussed.

1.0 INTRODUCTION AND BACKGROUND

Understanding people's motivations for participating in outdoor recreation activities has been a primary interest of many contemporary outdoor recreation researchers and managers. Manning (1999) explained that, historically, methods for measuring recreation use and demand often focused on descriptive variables, such as participation rates for specific activities within

specific settings. In the late 1960s and 1970s, however, many recreation professionals became aware that while descriptive information on participation in outdoor recreation activities is useful, it has limited potential for truly understanding public demand for and quality of outdoor recreation opportunities because it ignores many aspects of the recreation experience. Driver and Toucher (1970) proposed a behavioral approach to recreation management, which has been widely adopted among recreation professionals and organizations. The behavioral approach to recreation management defines recreation as an experience that results from participation in recreational engagements. Participation in an activity is merely one of several aspects of the overall recreational experience. This approach is based on expectancy theory, which suggests that people pursue specific recreational activities within specific settings in order to realize some set of psychological outcomes/benefits (Manning 1999).

As explained by Manning (1999), early researchers adopting the behavioral approach to recreation management aimed their examinations towards a better understanding of the reasons that people choose to participate in recreational engagements, the satisfactions that people receive from those engagements, and the long-term benefits that are realized by individual recreationists, groups, and society in general. Four levels or hierarchies of demand for outdoor recreation have been identified (Driver and Brown 1978, Haas et al. 1980, Manning 1999). The first level simply describes a demand for opportunities to participate in specific recreational activities, such as camping, hiking, or fishing. The second level involves a demand for the settings in which outdoor recreational activities take place. Recreational settings are often discussed in terms of three dimensions: managerial, social, and environmental/physical. Different combinations of each of these three setting dimensions represent distinct recreational opportunities, each potentially providing recreationists with a different type of recreational experience. This approach is an underlying theme of the widely adopted Recreation Opportunity Spectrum (ROS) concept,

which suggests that different types of settings should be provided to meet the needs and preferences of a diverse population of recreationists and ensure the provision of high-quality public recreation opportunities (Driver and Brown 1978, Clark and Stankey 1979).

The third level of demand for outdoor recreation involves understanding individuals' motivations for participating in recreational activities within various settings. Much research has been conducted to identify people's recreational motivations. In the 1970s, Driver and associates began compiling a list of several scale items that were meant to encompass the range of motivations that people have for recreation participation (Manning 1999). These scales, also known as the Recreation Experience Preference (REP) scales consisted of 21 domains (e.g., achievement, autonomy, risk taking, learning, enjoying nature, creativity), with each domain consisting of additional subdomain scale items. The REP scales have been widely adopted for measuring motivations for outdoor recreation, and the motivations examined in this study were chosen based on previous REP research. The fourth and final level of demand for outdoor recreation involves understanding the higher-order benefits that individuals and society derive from recreation participation. These benefits could be personal, social, economic, or environmental in nature.

Much research has attempted to understand the relationships among the four levels of demand described above, although further inquiry is needed (Manning 1999). The purpose of this study was to examine possible relationships among the first three levels (recreational activity choice, setting choice, and motivations). Several researchers have examined the relationships among these levels of demand but most have operationalized the recreational setting based on ROS descriptors or other similar classifications (e.g., level of development, number of people/social atmosphere). Unlike previous research, this study attempted to examine differences in motivations across very broad and general categories of environmental settings (e.g., forest, grassland, coastal waters) without consideration of site-specific attributes regarding the social or managerial settings dimensions. Such an operationalization provided an opportunity

to better understand the possible relationships among environmental setting, recreation activity choice, and motivations.

2.0 METHODS

Data used in this study came from the National Survey on Recreation and the Environment (NSRE). The NSRE is a nationwide, household, random-digit-dialed telephone survey of Americans 16 years of age and older. It gathers information about people's recreational habits, recreational trends, and environmental attitudes and behaviors. The NSRE is co-sponsored by the U.S. Forest Service, the University of Georgia, and other agencies, and is part of a long-term series of surveys that have been periodically conducted since the creation of the Outdoor Recreation Resources Review Commission in the mid-20th century. Data used in this study came from the most recent surveys, which took place in 2005 and 2008.

Three NSRE variables were included in this study: primary outdoor recreation activity, recreational setting choice, and motivations for recreational engagements. Respondents received a list of more than 80 outdoor recreation activities and were asked to indicate which they had participated in within the past year. Respondents were then asked:

Of all the outdoor recreation activities you participated in during the last 12 months, which do you consider to be your main activity?

Respondents then received a list of seven broad setting categories and asked to indicate which of the settings they had visited for their main activity. The question read as follows:

In which of the following settings did you mainly do this activity?

- 1) Coastal waters, including bays, beaches, or the ocean
- 2) Inland freshwater lakes, rivers, streams, or ponds
- 3) A forest
- 4) Open grasslands or meadows with few or no trees
- 5) An urban or suburban park
- 6) Desert

Table 1.—Between-groups ANOVA to identify differences in motivations to go Sight Seeing in seven settings

Motivation	df	F	P	Mean	SD
Be with family	7	1.03	.41	4.33	1.11
Be outdoors	7	0.76	.62	4.29	1.00
Get away from the demands of life	7	1.65	.13	4.22	1.14
Experience nature	7	0.92	.48	3.97	1.16
Be with friends	7	0.31	.94	3.85	1.29
See wildlife I have not seen before	6	1.14	.34	3.68	1.31
View wildlife	6	1.17	.32	3.52	1.25
For health reasons	7	0.92	.48	3.09	1.64
Physical exercise or training	5	1.09	.37	2.94	1.48
Near my home	7	1.10	.36	2.93	1.80
Have a challenging outdoor experience	7	0.80	.58	2.83	1.57
Improve outdoor skills and abilities	6	0.85	.53	2.52	1.41
Be alone	7	1.24	.28	2.38	1.51

*significant at the .05 level

7) Mountains

8) Other

9) Don't know

10) Refused

11) To view wildlife

12) To improve outdoor skills and abilities

13) To have a challenging outdoor experience

Finally, respondents were asked to provide information about their motivations for choosing each setting for their main activity. Importance scores for 13 motivation items were gathered using a 5-point Likert-type scale. Exact phrasing of the question was as follows:

From the following list of motivations or reasons, would you please tell me on a scale from 1 to 5, with 1 being 'Not At All Important' and 5 being 'Very Important', how important was each motivation or reason in choosing [setting] to [activity]?

1) Near my home

2) To experience nature

3) To get away from the demands of life

4) To see wildlife I have not seen before

5) To be with family

6) To be alone

7) To be with friends

8) To be outdoors

9) For health reasons

10) For physical exercise or training

Between-groups Analysis of Variance (ANOVA) was used to test for differences in motivation importance (dependent variable) across seven settings (independent variable) for four different activities (grouping variable). The four activities chosen for analysis in this study were sight seeing, hiking, walking, and camping in developed campgrounds. These four were selected because they commonly occur across a variety of different environmental settings.

3.0 RESULTS

Table 1 displays the ANOVA results for the activity of sight seeing. As shown, none of the ANOVAs were significant, indicating that the importance of motivations for choosing environmental settings for sightseeing did not differ across the seven settings.

Table 2 displays the ANOVA results for hiking across seven settings. The importance of two motivations significantly varied across settings: for health reasons ($p = .01$) and to be near my home ($p < .01$). Unfortunately, cell counts were insufficient to perform post-hoc analysis and we could not identify exactly where those differences existed.

Table 2.—Between-groups ANOVA to identify differences in mMotivations to hike across seven settings

Motivation	df	F	P	Mean	SD
Be outdoors	7	0.88	.52	4.82	0.51
Experience nature	7	0.90	.50	4.75	0.57
Get away from the demands of life	7	1.10	.36	4.41	1.06
Physical exercise or training	7	0.84	.55	4.08	1.06
For health reasons	7	2.72	.01*	3.87	1.36
View wildlife	7	0.77	.61	3.80	1.12
Be with family	6	1.41	.21	3.66	1.50
Have a challenging outdoor experience	7	0.91	.50	3.54	1.21
Be with friends	7	0.86	.53	3.48	1.34
See wildlife I have not seen before	7	0.52	.81	3.36	1.35
Improve outdoor skills and abilities	7	1.09	.37	3.11	1.29
Near my home	7	3.36	.00*	2.89	1.34
Be alone	6	1.14	.34	2.54	1.33

*significant at the .05 level

Table 3.—Between-groups ANOVA to identify differences in motivations to Camp in Developed Areas in seven settings; setting is the independent variable and motivation is the dependent

Motivation	df	F	P	Mean	SD
Be outdoors	6	1.75	.12	4.71	0.75
Get away from the demands of life	7	1.07	.38	4.49	1.03
Be with family	7	1.38	.22	4.35	1.30
Experience nature	7	2.44	.02*	4.13	1.05
Be with friends	7	1.05	.40	3.78	1.41
View wildlife	6	1.15	.34	3.62	1.20
See wildlife I have not seen before	7	1.44	.20	3.48	1.30
For health reasons	6	0.83	.54	3.45	1.64
Physical exercise or training	7	0.46	.85	3.26	1.27
Have a challenging outdoor experience	7	1.48	.18	2.82	1.29
Improve outdoor skills and abilities	6	2.06	.06	2.78	1.20
Be alone	7	0.75	.62	2.42	1.52
Near my home	6	1.27	.28	2.35	1.20

*significant at the .05 level

Table 3 displays the ANOVA results for camping in developed campgrounds. Only the motivation to experience nature significantly differed across the study settings ($p = .02$). However, the p-value for the motivation to improve outdoor skills and abilities was 0.06, suggesting possible differences between settings. Again, cell counts were not sufficient to perform post-hoc analysis for the activity of camping, so we could not determine which specific settings differed in importance scores for the motivation to experience nature.

Table 4 displays the ANOVA results for walking. The importance of several motivations to walk differed across the study settings. Significant differences were found between the following motivations to walk: to experience nature ($p < .01$), to be near my home ($p = .02$), to be with friends ($p = .01$), to view wildlife ($p < .01$), to view wildlife not seen before ($p < .01$), and to have a challenging outdoor experience ($p = .01$). The motivations to be alone and to get away from the

Table 4.—Between-groups ANOVA to identify differences in motivations to walk in seven settings

Motivation	df	F	P	Mean	SD
Be outdoors	7	1.49	.16	4.52	0.90
For health reasons	7	1.46	.17	4.41	1.07
Physical exercise or training	7	1.06	.38	4.25	1.12
Get away from the demands of life	7	1.89	.06	4.03	1.37
Experience nature	7	7.49	.00*	3.91	1.33
Near my home	7	2.34	.02*	3.77	1.44
Be with family	7	0.98	.44	3.59	1.58
Be with friends	7	2.47	.01*	3.28	1.52
View wildlife	7	4.69	.00*	3.17	1.44
See wildlife I have not seen before	7	5.35	.00*	2.97	1.59
Improve outdoor skills and abilities	7	1.06	.38	2.95	1.69
Have a challenging outdoor experience	7	2.50	.01*	2.80	1.54
Be alone	7	1.90	.06	2.62	1.66

*significant at the .05 level

Table 5.—Post-hoc analysis to identify specific differences in mean motivational scores across different types of settings, for the activity of walking; setting is the independent variable and motivation is the dependent

	Setting							
	(a) Coastal waters	(b) Inland freshwater	(c) Forest	(d) Grasslands	(e) (Sub) Urban park	(f) Desert	(g) Mountains	(h) Other
Motivation to Walk								
1 Near my home	3.1 ^{eh}	3.7	3.6	3.5	3.9 ^{ag}	3.7	3.1 ^{eh}	3.9 ^{ag}
2 Experience nature*	4.4 ^{eh}	4.3 ^h	4.6 ^{eh}	4.0	3.8 ^{ac}	3.4	3.9	3.2 ^{abc}
3 Get away from the demands of life	4.3	4.2	4.0	4.1	4.0	4.0	4.6 ^h	3.6
4 See wildlife I have not seen before	3.5 ^{eh}	3.4 ^{eh}	3.4 ^{eh}	3.6 ^{eh}	2.7 ^{abcd}	3.1	3.5 ^h	2.5 ^{abcdg}
5 Be with family	3.9	3.4	3.4	3.4	3.5	4.1	4.1	3.4
6 Be alone	2.6	2.4	3.1	3.1	2.4	3.1	2.2	2.6
7 Be with friends	3.6 ^{dh}	3.4 ^d	3.1	2.6 ^{abeg}	3.3 ^{dh}	2.5	3.6 ^d	2.8 ^{ae}
8 Be outdoors	4.5	4.8	4.6	4.7	4.4	4.3	4.5	4.3
9 For health reasons	4.2	4.4	4.1	4.3	4.4	3.9	4.3	4.5
10 Physical exercise or training	3.9	4.2	4.2	4.3	4.2	3.7	4.1	4.4
11 View wildlife	3.6 ^{eh}	3.7 ^{eh}	3.5 ^{eh}	3.5 ^{eh}	3.0 ^{abcd}	3.7 ^h	3.2	2.7 ^{abcdf}
12 Improve outdoor skills and abilities	2.7	2.9	2.9	3.3	2.8	3.3	3.5	3.2
13 Have a challenging outdoor experience*	3.1 ^f	3.1 ^f	2.6 ^f	3.0 ^f	2.7 ^f	1.3 ^{abcdegh}	3.0 ^f	3.0 ^f

*Tanhane's T2 used due to unequal variances; LSD used for all other post-hoc analyses.

For those motivation means that were significantly different across settings, superscript letters identify the setting groups (columns) between which differences in mean motivation scores existed (rows). For example, the cell value "3.1^{eh}" indicates that the mean of 3.1 was significantly different from the mean scores reported in the urban park (column e) and other (column h) setting categories.

demands of life approached significance at the $p < .05$ level, but were not included in the post-hoc analysis.

Table 5 displays the post-hoc analyses to show specific differences in motivation importance scores when choosing settings for the activity of walking. As shown,

the mean importance score for the motivation to be near my home was significantly lower for coastal water settings (mean = 3.1) than for (sub)urban park settings and other settings (mean = 3.9). The mean importance scores of the motivation to experience nature were significantly higher when choosing to walk in coastal water and

forest settings (means = 4.4 and 4.6, respectively) than when choosing (sub)urban park and other settings (3.8 and 3.2, respectively). For the motivation to see wildlife not seen before, the mean importance scores were significantly lower when choosing to walk in (sub)urban park settings than when choosing several of the other settings. The same pattern was true for the general motivation to view wildlife (i.e., the motivation was more important when choosing to walk in coastal water, inland freshwater, forest, and grassland settings than when choosing to walk in [sub]urban park and other settings). Mean importance scores for the motivation to be with friends were significantly higher when choosing to walk in mountain, costal water, inland freshwater, and (sub)urban park settings (means = 3.6, 3.6, 3.4, and 3.3, respectively) than when choosing to walk in grassland settings (mean = 2.6). These results may indicate that the American population perceives walking in grasslands as a less social experience than walking in other outdoor settings. Finally, the mean importance scores for the motivation to have a challenging outdoor experience were significantly lower when choosing to walk in a desert setting (mean = 1.3) than when choosing to walk in all of the other settings examined in this study. These results suggest that the American population typically may not seek as challenging an outdoor experience when walking in desert settings than they would when walking in other outdoor environmental settings.

4.0 DISCUSSION

The results of this study suggest that motivations can differ in importance when choosing settings for specific recreation activities. Participants in three of the four activities examined in this study reported significant differences regarding the importance of many motivations for choosing setting-activity combinations. As can be seen by examining the results in Tables 1 through 4, the motivations with the highest mean importance scores were similar across all study activities. That is, the motivations to be with family, to be outdoors, to get away from the demands of life, to experience nature, and for physical exercise or health reasons were all common among the top few most important motivations for choosing a setting for an activity. These results are not surprising, as the most

important motivations tended to be those that could be easily fulfilled through participation in various activities within several different outdoor settings (e.g., the motivation to be outdoors could easily be fulfilled in any outdoor recreational setting). Mean importance scores of motivations that did differ across settings tended to be those that were secondary to the above-mentioned motivations of highest importance. However, researchers should use caution when interpreting these results. As Manning (1999) pointed out, people attempt to fulfill several motivations during their recreational pursuits and many general motivations seem to be almost universal to outdoor recreation activities and settings. Consequently, recreation professionals wishing to provide the public with recreational opportunities that will fulfill their motivations should not discount these secondary motivations. Rather, secondary motivations that differ across settings might be most useful to managers wishing to align their services with the needs and preferences of the public.

Several of the mean importance score differences for motivations were found between the (sub)urban park setting and many of the other, perhaps less-developed, settings. That is, a respondent might associate a (sub)urban park setting with a higher amount of development than other settings in this study, such as coastal and freshwater, mountain, desert, forest, and grassland settings. As many of the differences found in this study were between (sub)urban park settings and a variety of other study settings, the results may lend support for the setting operationalizations outlined in the ROS framework (i.e., managerial and social and physical setting descriptors).

More research is needed to better understand the relationships among the four levels of recreational demand proposed by Driver and associates: activities, settings, motivations, and higher-order benefits. Analyses such as those reported in this study could be useful to managers wishing to examine the comparability or substitutability of various recreational settings with the idea of providing similar or different types of recreational experiences. In general, the results of this study suggest that while the importance of some motivations for

choosing settings for specific activities significantly differs across broad environmental settings, the motivations with the highest importance for choosing activity-setting combinations did not. More research is needed to examine the motivations of people engaging in outdoor recreational activities not included in this study.

5.0 CITATIONS

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