

Segmentation of Outdoor Recreationists: A Comparison of Recreationists' Perceptions of Importance and Satisfaction Across Activities

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Abstract: The purpose of this study was to explore levels of importance and satisfaction with various attributes of customer service among selected segments of outdoor recreationists. The study also examined the nature of the relationships between satisfaction attributes and overall satisfaction. These relationships were tested for four dimensions of satisfaction (facilities, services, information, and recreation experience), across three water-based user groups (ramp users, campers, and day users). This study builds on previous customer satisfaction research conducted by both consumer behavior specialists and recreation researchers. In congruence with previous research on customer satisfaction, many of the constructs associated with quality in a recreation environment are intangible, elusive, and extremely difficult to measure. Study results showed that there are significant differences between different segments of users in reported levels of importance and satisfaction with various aspects of a recreational visit, but the nature of the relationships between the various domains and overall satisfaction varies little across the user segments.

INTRODUCTION

Recreation satisfaction has been examined from many different perspectives. Satisfaction has been identified as the principle product of the recreation experience (Driver & Tocher, 1970) and the major goal of recreation resource management (Lucas & Stankey, 1974). Zeithaml and Bitner (1996) describe satisfaction as a broad evaluation of a product or service that is influenced by perceptions of service quality, product quality and price, and other factors.

The notion of different levels of importance and satisfaction for distinctly different market segments or recreation user groups is examined in this paper. In a 1981 effort, Graefe identified different subgroups of anglers based on socio-economic differences, reasons for fishing, and participation levels. As early as 1978, Tinsley and Kass conducted research that focused on the differences in leisure activity needs between males and females, finding that leisure activities differ in their need satisfying properties.

Kuss, Graefe and Vaske (1990) examined the different needs of diverse user groups in outdoor recreation settings, based on the notion that a single management strategy cannot satisfy all visitors. This research effort attempted to develop visitor typologies, based on participation rates, preferences, demographics, and geographical

location. Andereck and Caldwell (1994) examined segmentation in a public zoo setting, remarking that "understanding the diversity of participant needs and desires allows organizations to manage resources in the most efficient manner" (p. 19). Donnelly, Vaske, DeRuiter, and King (1996) pursued the notion of person-occasion segmentation, which focuses on not only the different user groups visiting the recreation area, but the different natural resource attributes of the area that they were visiting. Howat, Absher, Crilley and Milne (1996) measured visitor characteristics, demonstrating that variables such as gender, age, and disability status impact overall satisfaction levels of users to sporting events and leisure centers in Australia and New Zealand.

BACKGROUND

The purpose of this study was to explore the nature of customer satisfaction at US Army Corps of Engineers outdoor recreation settings. Data were collected as part of a larger study of customer satisfaction levels funded by the US Army Corps of Engineers Recreation Research Program. The parent study ran from mid 1995 to mid 1998, and resulted in a nationwide study of customer satisfaction levels at Corps lakes. Particular attention was placed on ensuring that the study was carried out at recreation sites dispersed throughout

the country to capture the satisfaction levels of the Corps' nationwide water-based recreation customers.

Ten of the US Army Corps of Engineers' 465 lakes, located in ten different states, were selected for this study. These ten lakes were selected because of their broad range of surrounding populations, their dispersed geographical locations, their relatively high usage rates, and their representativeness of Corps recreation users in the United States.

A random sample of 2,933 recreationists at Corps of Engineers lakes were selected to participate in this study. The sample was stratified and conducted on-site at 67 individual recreation sites at the participating lakes. The interviews were collected in entirety through on-site, face-to-face interviews. Respondents were approached by the interviewers while they were in a recreation setting, such as a campground, boat ramp area, or day use area (beach, picnic area, etc.). Refusals were very limited (29 returned refusal sheets) due to the on-site methodology of the study.

The visitors were asked what recreational activities they were pursuing and then asked to rank those activities by listing their primary, secondary, and tertiary activities by level of importance. The respondents were categorized accordingly, falling into one of three primary user segments (ramp use, camping, or day use). Of the 2,933 respondents interviewed, 35% reported that their primary activity was day use, another 35% indicated that camping was their primary activity, and 30% reported ramp-use as their primary activity (Table 1).

Activity	N	%
Ramp use	720	30.3
Camping	820	34.5
Day use	837	35.2

Table 1. Primary Activity Frequencies.

INSTRUMENTATION

This study was designed to measure visitors' expectations and satisfaction with facilities, services, information, and their recreation experience. Customer satisfaction was measured using a battery of 19 items patterned after instruments developed by Parasuraman, Zeithaml, and Berry (1985) for use in consumer research, and MacKay and Crompton (1990) and Howat, Absher, Crilley and Milne (1996) in the outdoor recreation field. These researchers used several "domains" under which a battery of items was nested. The number of domains has ranged from three to ten, and the number of customer service items has ranged from 11 to 77 in different studies.

In this study, 19 items under four different domains were used to attempt to explain overall

satisfaction (Table 2). Respondents were asked to rate both the importance of and their satisfaction with the attributes using a five point Likert scale ranging from "not at all important" to "extremely important" and "not at all satisfied" to "extremely satisfied."

To identify specific areas of satisfaction, each of the 19 items represented one of four satisfaction domains (facilities, services, information, and recreation experience). The satisfaction level associated with each of these four domains was also measured using a 5-point Likert scale. The final satisfaction measure was an overall measure of satisfaction, designed to query visitors as to their satisfaction with their overall experience on that visit. A 10-point scale, ranging from "1" to "10" (where 1 is worst and 10 is best) was used to measure overall satisfaction.

RESULTS

The mean importance and satisfaction scores were relatively high, with the highest importance score (safety and security at the area; mean = 4.50) found in the services domain, followed closely by appearance and maintenance of the area (4.47), in the facility domain (Table 2). The lowest importance scores were noted for the information domain, with the lowest individual item being nature/historical information about the area (3.33). The highest satisfaction indicator was found in the services domain (courteous and friendly staff; 4.34). The lowest satisfaction score was the same as the lowest importance item (nature/historical information about the area; 3.73).

Comparison of User Groups

For the purpose of this paper, recreation users were asked to indicate what their primary activity was (ramp use, camping, or day use) on the day they were interviewed at the recreation site (see Table 1). One-way analysis of variance was used to compare satisfaction levels for various aspects of the trip experience. Sheffe's post hoc analysis was used to examine the multiple comparisons of the mean scores.

Significant differences were noted for satisfaction within all four customer service domains (Table 3). In each case, the campers showed the highest mean scores among the three user groups. The greatest differences were noted in satisfaction with services. Campers showed the highest scores for this measure (mean = 4.28), followed by day users (4.09) and ramp users (4.06). Satisfaction with information showed the second greatest degree of difference across the three user groups, with campers (4.14) indicating the highest mean scores for this item, and no significant difference noted between ramp users (3.98) and day users (3.97). Similarly, campers showed the strongest satisfaction levels for satisfaction with

Satisfaction Domain	Item	Mean Importance	Mean Performance
Facilities	Accessibility for those with disabilities	3.67	3.88
Facilities	Sufficient number of recreation areas	4.24	4.04
Facilities	Appearance and maintenance of the area	4.47	4.26
Facilities	Value for fee paid	4.08	4.19
Services	Availability of staff to answer my questions	3.65	3.97
Services	Visibility of staff	3.72	4.05
Services	Safety and security at the area	4.50	4.27
Services	Courteous and friendly staff	4.24	4.34
Services	Opportunity to offer suggestions to the staff	3.60	3.97
Services	Adequate ranger/visitor assistance patrols	4.14	4.20
Information	General information about the area	3.56	3.89
Information	Nature/historical information about the area	3.33	3.73
Information	Safety information	3.98	3.94
Information	Ease of obtaining information	3.85	4.03
Information	Current and accurate information	3.92	4.04
Experience	Opportunity to recreate without feeling crowded	4.21	4.09
Experience	Opportunity to recreate without interference from other visitors	4.15	4.11
Experience	Compatibility of recreation activities at the area	3.87	4.11
Experience	Places to recreate without conflict from other visitors	4.35	4.26

Table 2. Mean Importance and Satisfaction Scores for Customer Service Items.

One-way ANOVA	Ramp Users	Campers	Day Users	F Value
	Mean Values			
Satisfaction with Facilities	4.18 ^a	4.30 ^b	4.27 ^{ab}	4.84**
Satisfaction with Services	4.06 ^a	4.28 ^b	4.09 ^a	18.78***
Satisfaction with Information	3.98 ^a	4.14 ^b	3.97 ^a	11.30***
Satisfaction with Recreation Experience	4.32 ^a	4.42 ^b	4.35 ^a	4.60**

***= Significant at $p < .001$ **=Significant at $p < .01$ * =Significant at $p < .05$

a Means with different superscripts differ significantly at the .05 level

Table 3. Comparison of Satisfaction with Facilities, Services, Information, and Recreation Experience Domains, by Type of User.

facilities (4.30), followed closely by day users (4.27). The ramp users (4.18) were significantly less satisfied with facilities than the campers (4.30). The smallest differences were noted for satisfaction with the recreation experience, although campers again showed a slightly higher satisfaction score (4.42) than day users (4.35) and ramp users (4.32).

Further analyses compared the individual satisfaction attributes across the three user groups. Significant differences were noted between the three groups for each of the 19 importance items (Table 4). A clear pattern of campers reporting significantly different perceptions of importance was noted. Campers reported the highest

importance scores for 16 of the 19 items, although one item was matched in importance by the ramp users. The accessibility for persons with disabilities stood out as being significantly more important to the day users (3.80) and campers (3.76) than to the ramp users (3.46). This item was an anomaly among the 19 items in that only a small proportion of respondents reported that they had a disability and answered the question.

The day users showed the lowest importance scores for 12 of the 19 items, while the ramp users reported the lowest importance scores for the remaining seven items. Only one clear pattern emerged across the four domains, with the day users

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<i>One-way ANOVA</i>	Ramp Users	Campers	Day Users	
	Mean Values			F Value*
Facilities Domain				
Accessibility for those with disabilities	3.46 ^a	3.76 ^b	3.80 ^b	11.63
Sufficient number of recreation areas	4.21 ^a	4.37 ^b	4.08 ^c	26.68
Appearance and maintenance of the area	4.39 ^a	4.57 ^b	4.43 ^c	15.69
Value for fee paid	4.06 ^a	4.25 ^b	3.95 ^a	21.59
Services Domain				
Availability of staff to answer my questions	3.61 ^a	3.94 ^b	3.46 ^c	44.75
Visibility of staff	3.70 ^a	3.98 ^b	3.48 ^c	50.88
Safety and security at the area	4.40 ^a	4.61 ^b	4.44 ^a	21.55
Courteous and friendly staff	4.15 ^a	4.37 ^b	4.16 ^a	20.84
Opportunity to offer suggestions to the staff	3.66 ^a	3.74 ^a	3.34 ^b	35.26
Adequate ranger/visitor assistance patrols	4.13 ^a	4.38 ^b	3.95 ^c	46.65
Information Domain				
General information about the area	3.46 ^a	3.75 ^b	3.48 ^a	22.30
Nature/historical information about the area	3.14 ^a	3.42 ^b	3.33 ^a	11.94
Safety information	3.93 ^a	4.12 ^b	3.87 ^a	15.31
Ease of obtaining information	3.80 ^a	4.00 ^b	3.72 ^a	21.83
Current and accurate information	3.93 ^a	4.03 ^a	3.80 ^b	13.51
Recreation Experience Domain				
Opportunity to recreate without feeling crowded	4.25 ^a	4.30 ^a	4.11 ^b	10.92
Opportunity to recreate without interference from other visitors	4.21 ^a	4.18 ^a	4.06 ^b	5.94
Compatibility of recreation activities at the area	3.90 ^a	3.90 ^a	3.77 ^b	8.50
Places to recreate without conflict from other visitors	4.39 ^a	4.42 ^a	4.24 ^b	13.19

*= All F Values Significant at $p < .001$.

^a Means with different superscripts differ significantly at the .05 level

Table 4. Comparison of Importance of Individual Customer Service Items, by Type of User.

<i>One-way ANOVA</i>	Ramp Users	Campers	Day Users	
	Mean Values			F Value
Facilities Domain				
Accessibility for those with disabilities	3.81	3.92	3.91	1.80
Sufficient number of recreation areas	3.93 ^a	4.11 ^b	4.13 ^b	10.24***
Appearance and maintenance of the area	4.24	4.34	4.26	3.26*
Value for fee paid	4.10 ^a	4.28 ^b	4.23 ^b	8.65***
Services Domain				
Availability of staff to answer my questions	3.94 ^a	4.16 ^b	3.83 ^c	29.94***
Visibility of staff	3.97 ^a	4.19 ^b	3.86 ^c	30.87***
Safety and security at the area	4.20 ^a	4.43 ^b	4.18 ^a	27.15***
Courteous and friendly staff	4.28 ^a	4.46 ^b	4.24 ^a	19.33***
Opportunity to offer suggestions to the staff	3.95 ^a	4.09 ^b	3.76 ^c	26.40***
Adequate ranger/visitor assistance patrols	4.15 ^a	4.36 ^b	4.07 ^a	25.12***
Information Domain				
General information about the area	3.83 ^a	4.00 ^b	3.83 ^a	11.44***
Nature/historical information about the area	3.68	3.76	3.70	1.43
Safety information	3.90 ^a	4.05 ^b	3.81 ^a	14.99***
Ease of obtaining information	3.98 ^a	4.21 ^b	3.87 ^c	34.91***
Current and accurate information	4.00 ^a	4.19 ^b	3.89 ^c	27.01***
Recreation Experience Domain				
Opportunity to recreate without feeling crowded	3.96 ^a	4.20 ^b	4.02 ^a	13.73***
Opportunity to recreate without interference from other visitors	3.98 ^a	4.22 ^b	4.09 ^c	14.42***
Compatibility of recreation activities at the area	4.07 ^a	4.16 ^b	4.06 ^a	4.16*
Places to recreate without conflict from other visitors	4.16 ^a	4.34 ^b	4.23 ^a	10.11***

***= Significant at $p < .001$ **=Significant at $p < .01$ *=Significant at $p < .05$

^a Means with different superscripts differ significantly at the .05 level

Table 5. Comparison of Satisfaction with Individual Customer Service Items, by Type of User.

Independent Variable	Ramp Users		Campers		Day Users	
	R	Beta	R	Beta	R	Beta
Satisfaction with Facilities	.27***	.07	.33***	.15*	.36***	.16*
Satisfaction with Services	.22***	-.00	.28***	.04	.35***	.12*
Satisfaction with Information	.30***	.16*	.33***	.14*	.38***	.16*
Satisfaction with Recreation Experience	.31***	.18*	.33***	.16*	.30***	.06
	R ² = .12		R ² = .15		R ² = .17	
	F = 23.22***		F = 36.00***		F = 42.16***	

Dependent Variable = Overall Satisfaction

***= Significant at $p < .001$

Table 6. Multiple Regression of Overall Satisfaction with Facilities, Services, Information, and Recreation Experience Domain Satisfaction, by Type of User.

reporting the lowest mean importance scores for all four of the recreation experience items. Ramp users (mean = 4.21) and campers (mean = 4.18) indicated that the opportunity to recreate without interference from other visitors was more important to them than the day users (mean = 4.06). This same pattern held true for the remaining items within the recreation experience domain.

The examination of the item satisfaction scores showed some interesting patterns across the three user groups. As was noted in the importance analysis, the campers continued the trend of showing the highest mean satisfaction scores (Table 5). This was the case for all but one of the satisfaction items, where the day users showed higher satisfaction scores for "sufficient number of recreation areas." Several patterns emerged within the domains for the satisfaction items. The day users showed the lowest mean satisfaction scores for all six of the service items and three of the five information items (one item tied for lowest mean score between the ramp users and the day users). The ramp users showed the lowest satisfaction scores for all of the facilities items and for three of the four recreation experience domain items. As with the importance scores, the campers usually stood out as the most distinct group.

Predicting Overall Satisfaction

To understand the extent to which each of the domains was related to overall satisfaction, the four domain satisfaction scores were regressed against overall satisfaction for each of the three user groups (Table 6). In each instance there were at least two significant predictors of overall satisfaction, although the significant predictors varied for the three groups.

An examination of the ramp users showed that the recreation experience domain ($Beta = .18$) and the information domain ($Beta = .16$) were significant predictors of overall satisfaction. This model accounted for about 12% of the variance associated with overall satisfaction. The campers showed significant effects for the recreation experience domain ($Beta = .16$), the facilities domain ($Beta = .15$), and the information domain ($Beta = .14$). These independent variables accounted for about 15% of the variance in overall satisfaction. Day users' results also indicated three significant predictors of overall satisfaction. The facilities domain ($Beta = .16$), information domain ($Beta = .16$), and services domain ($Beta = .12$) together accounted for 17% of the variance associated with overall satisfaction.

One pattern that emerged from these regression models was that all three user groups showed a significant effect from the information domain. The facilities domain showed a significant influence for both the campers and the day users, while the ramp users and the campers showed a significant influence from the recreation experience domain.

The services domain was significant for only one user group (day users).

A Fisher's Z test was used to test the significance of the differences between the correlations for the three different user groups. Few significant differences were noted between the three user groups. In the comparison of ramp users and day users, only the services domain score showed a significant difference ($Z = 2.69$, $p = .007$). Satisfaction with services was more strongly correlated with overall satisfaction for day users ($r = .35$) than for ramp users ($r = .22$). No other significant differences were found between the user groups with respect to the correlations between overall satisfaction and satisfaction with each of the domains.

CONCLUSIONS

This study examined three distinct recreation user groups to better understand the levels of importance and satisfaction for a battery of 19 items within four customer service domains. Respondents were segmented based on their self-described primary recreation activity (ramp use, camping, or day use). This was done to determine if the satisfaction model hypothesized in this study was an adequate measure of customer satisfaction for the three primary activities (ramp use, camping, or day use) that typically occur at Corps of Engineers recreation areas.

One clear pattern that emerged is that the campers were often significantly different from the ramp users and day users regarding their importance and satisfaction levels. When examining the individual satisfaction items and domains, one may note that a camper might have a completely different need associated with an item such as adequate ranger/visitor assistance patrols or visibility of staff than would a ramp user or day user. Campers are different from ramp users and day users in one key aspect: they sleep at the recreation site in tents, recreational vehicles, cabins, etc. Perhaps this commitment to stay at the recreation site leads to a closer evaluation of the importance variables, resulting in higher importance item ratings.

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