

CAMPERS ACROSS THE RECREATION OPPORTUNITY SPECTRUM: A COMPARATIVE EXAMINATION

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Abstract

The purpose of this study was to compare the demographic and behavioral profiles of campers across three distinct types of camping opportunities. Comparing these three campsites will help identify the types of users at each and to assist managers' efforts to better serve the users of these sites. Questionnaires were distributed to 507 persons camping in three different campsites in the Sumter National Forest, in South Carolina. A total of 419 were returned for a response rate of 82.6%. Analysis indicated that there was variation across campsites for all attributes that were examined. These findings illustrate that even though the sites are within close proximity to one another, they offer a diverse range of opportunities and attract an equally diverse group of recreationists. These findings have important implications for natural resource recreation management frameworks such as the Recreation Opportunity Spectrum.

1.0 Introduction and Literature Review

Diversity among recreationists has been recognized as early as the 1960's (Wagar 1963; King 1966; Shafer 1969). Understanding the different types of recreationists and their preferences is critical to managing recreation

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resources. The Recreation Opportunity Spectrum (ROS) provides managers with a tool to manage for this diversity. The ROS outlines different recreation settings from which managers can allocate and plan resources (Manning 1999). Each setting is characterized by managerial, social, and environmental factors (Clark & Stankey 1979). Understanding the visitors who prefer each setting is of critical importance to managing their enjoyment. Yuan and McEwen (1989) conducted a study similar to the current one across three different campsite settings. Their campsites, however, were situated towards the middle of the Recreation Opportunity Spectrum (ROS). They suggested that studies should examine camp settings on the extremes of the spectrum. The current study does that in examining wilderness campers, to walk-in campers, to car campers.

Driver et al. (1987) outlined some principles regarding use of the ROS for managers. This article identifies three components that make up a recreational opportunity: activity opportunities, setting opportunities, and experience opportunities. The purpose of this study was to examine similarities and differences of campers at three different sites within the Sumter National Forest in South Carolina.

2.0 Methods

2.1 Study Area and Study Sites

The study area was near Burrell's Ford on the Chattooga River, which creates the northernmost border between South Carolina and Georgia. Three separate sites were sampled in the study; the Ellicott Rock Wilderness Area (ER), Burrell's Ford (BF) walk-in campground, and Cherry Hill (CH) developed campground. The three study sites are all located within a three-mile radius of each other and are on the Andrew Pickens Ranger District of the Sumter National Forest. Cherry Hill has 27 drive-in campsites with picnic tables, tent pads and has a centrally located bathhouse with running water and electricity. Burrell's Ford is a walk-in area located 350 yards from a parking lot and at the end of a smooth gravel roadbed. Most of the campsites have picnic tables and lantern hangers and there is a centrally located vault toilet with no running water. The campsites are adjacent to the Chattooga River. Ellicott Rock Wilderness Area, part of the National Wilderness Preservation System, is an 8,274-

acre area that encompasses the tri-state border between Georgia, South Carolina, and North Carolina. The first campsites are just over ¼ mile from a parking lot.

2.2 Study Sample

The study population was all overnight campers who visited Ellicott Rock Wilderness Area (ER), Burrell's Ford walk-in campground (BF), and Cherry Hill campground (CH) during the months of May-October, 2003. The study sample was a convenience sample of campers the researchers came into contact with during visits to the sites. Because many campers do not stray too far from the campsite during certain periods (i.e., meals) of their stay, researchers were able to make contact with most campers at CH and BF on any given weekend. Researchers were able to contact a large majority of the total population during the sampling frame. There were a higher proportion of uncontacted campers at ER due to the large area over which campers were distributed.

2.3 Sampling Frame

The sampling frame for surveying was late May 2003 through October 2003. The sites were surveyed on weekends (Friday - Saturday) May 24 through August 30 and October 3 through 25. This sampling frame allowed data collection to capture the most frequently used times of the year. The Friday-Saturday site visits allowed researchers to contact almost all visitors for a given weekend. The rationale behind sampling on these days was that any camper coming in on Friday would, by the nature of camping, be present on Saturday and any camper coming in on Saturday would be present on Sunday. Over the course of the sampling frame, visits were made on selected Sundays to check if any new campers were arriving. During these visits, the researchers observed an insignificant number of campers who had come on Sunday and were not there on Saturday. The researchers also observed that many campers who were present during the week were also present on a weekend. Use patterns in ER were identified by Rutlin (1995). The entry points and trails identified as most heavily used were sampled more often, while the less popular entry points were sampled less often.

2.4 Sample Size and Response Rate

A non-probability convenience sample was conducted and 506 campers were contacted. Three refused to accept the questionnaire. Three hundred and seven (307) questionnaires were completed on-site, while 196

respondents chose to complete the survey later and return it in the postage paid envelope. Of the 196 respondents who took the questionnaire home, 117 (59.7%) returned them. The total number of surveys returned was 424 with a response rate of 83.7%. The breakdown for each site was as follows: 44.3% (188) of the total sample was from CH, 29.3% (124) were from BF, and 26.4% (112) were from ER.

2.5 Analysis

The analysis was performed in two separate phases. The first phase consisted of calculating frequencies for all variables, then cleaning the data for entry error. Once the initial frequencies were checked for data entry errors and were rectified, the frequencies were re-run, and examined. Specifically, the characteristics of the visit and personal information variables were examined. These descriptive statistics gave researchers insight into the characteristics of visitors in the study and of the characteristics of their camping trip. Visitor and visit characteristics were then subjected to either a one way ANOVA procedure using location (ER, BF, CH) as the independent variable or a Chi-square statistics was computed, depending on the type of data (categorical or continuous). The Scheffe's post hoc test was chosen because of its strict criteria for significance (Tibachnick & Fidell 1996). This procedure was utilized throughout the first and second phases of the analysis to determine significant differences among and between the three campsites.

The second phase of the analysis consisted of descriptive and comparative examinations of the theoretical constructs. Items representing a range of services/amenities provided by the campsites were grouped into conceptual categories based on face validity. Internal consistency was assessed using Cronbach's alpha correlations. The service offering item domains were then analyzed by campsite using the one way ANOVA procedure described above. Cronbach's alpha values were calculated for the *a priori* domains for camper motivations, which were measured using Driver's (1977) REP scales. No factor analysis was undertaken due to the proven reliability of the REP domains (Mandfredro et al. 1996). For each domain of camper motivations, a grand mean score was computed. These domain means were examined for face validity and then compared across the three sites using the one way ANOVA procedure. Experience Use History was measured using the procedure outlined by Hammitt, Backlund, & Bixler

(in press), and compared across the sites using ANOVA procedures.

3.0 Results

The respondents were 70.9% male and 29.1% female. The median age was 40, with the youngest person 16 years and the oldest person 79 years. The highest percentages of visitors were from the 20-29 year age range (24.50%). Over 49% of the sample had at least a college degree. An additional 26.7% had either business school, trade school, or some college training. The reported income of the sample was fairly evenly distributed. The largest income group was \$40,000 to \$59,000, with 22.1% percent of respondents. The smallest income group was \$80,000 to \$99,000 represented by 9.4% of respondents. The ethnicity of campers was predominantly white (94.4%). The majority of visitors were from Georgia or South Carolina.

The mean length of stay of campers was 3.1 days. The mean number of people in the group was 4.8 people. The majority of groups (89.7%) were made up of family, friends, or both. Other than camping, viewing scenery (67.9%), day hiking/walking (64.9%), and fishing (52.1%) were common activities in which the respondents participated. Camping and fishing (50.9% and 26.7%, respectively) were the two most common primary activities of the sample. For campers in CH, the two most common activities were camping (56.2%) and fishing (27.6%). In BF a similar breakdown (50.4% and 32.5%) occurred. Ellicott Rock was slightly different with 45.0% camping, 19.8% fishing, and an additional 27.9% stating backpacking as the primary activity. "Swimming in river" was the most commonly reported other activity with 3.5% of the sample.

3.1 Comparison Across Study Sites

A one-way ANOVA procedure with Scheffe's post hoc significance tests, combined with Pearson's Chi Square tests revealed several significant differences in campers across the campsites. Respondent age varied significantly across the three sites. On average, CH campers were 8.5 years older than BF campers and 4.2 years older than ER campers. The group size at ER (5.8) was significantly higher than at CH (4.1). Respondent's gender, education level, group composition, and primary activity all varied significantly across the sites ($p < 0.05$). Income, race/ethnicity, and length of stay, however, were not significant across the three sites.

In total, many variables indicated that different types of people were using each of the different campsites in the study. Campers at CH were significantly older than campers at the other two sites. Burrell's Ford and ER require at least a ¼ mile hike to get to the camping sites. When forced to carry camping equipment down, and then back up the trail, many older people seem to stay away. The percentage of men and women at each site was also different. Females had a slightly stronger presence at CH while males dominated at BF and ER. Education level increased from CH to BF to ER. Income however was not significantly different. At CH, more family groups were represented, at ER more friend groups. Burrell's Ford is between the other two sites on most variables. This would be expected since BF is less developed than CH but more developed than ER.

3.2 Camper Profiles

Cherry Hill—Campers at CH were primarily family groups, and older than at the other two campsites. A majority of campers at CH participated in some hiking/walking, camping, or fishing. Most CH campers stated that camping was their primary activity. Income was evenly distributed with 25.1% of campers reporting \$20,000 to \$39,999, 20.4% reporting \$40,000 to \$59,999, and 19.2% reporting \$60,000 to \$79,999. The majority of CH campers were male; however, more females were represented than at the other two sites. The highest percentage of campers had business/trade school or some college training (29.70%). Nearly all were white.

Burrell's Ford—Campers at BF were split nearly evenly between family and friend groups. Campers at BF were the youngest of all the study sites. A majority of BF campers participated in some hiking/walking, camping, viewing scenery, and fishing. At least 1/4 of the campers participated in backpacking or picnicking. Income was fairly evenly distributed with 10.9% reporting \$20,000 to \$39,999, 27.3% reporting \$40,000 to \$59,999, and 22.7% reporting \$60,000 to \$79,999. Half the campers at BF had at least a college degree. Almost all were white and 70% were male.

Ellicott Rock—Ellicott Rock campers were mostly groups of friends. The majority participated in hiking/walking (66.9%), backpacking (82.1%), camping (89.3%), and viewing scenery (71.4%). Almost the same number of people stated that they participated in backpacking as did camping. Ellicott Rock campers came as part of larger

groups than at the other campsites. Nearly half of the campers at Ellicott Rock made between \$40,000 and \$79,000, with over 1/5 making over \$100,000. Ellicott Rock campers were predominantly male, more so than the other sites, and almost all white.

3.3 Examination of Theoretical Constructs

Nearly all the campground attribute items proved to be significantly different between at least two of the sites. The only service offering desirability scores which were not different were “scenic areas nearby” and “quiet and restful atmosphere.” The 22 service offerings, representing facilities, site attributes, and accessibility were categorized *a priori* into four conceptual domains; developed facilities, parking/roads, privacy, scenic views. One item, “Advance campsite reservation system” was removed due to a lack of fit with the groups. The groups were examined for face validity and then subjected to reliability analysis (Cronbach’s alpha). The developed facilities domain had an alpha of .88, the parking/roads domain an alpha of .82, the privacy domain an alpha of .80, and the scenic domain an alpha of .79. The overall means for the service offering domains indicate the level of desirability of each domain on a scale of 1-5. These domain means are based on the grand mean of items within each of the four service domains. From the domain ANOVA three of four domains proved to be significantly different between all sites. Developed facilities, parking/roads, and privacy were all significantly different ($p < .001$) between the campsites. The scenic domain was not significantly different between any of the sites at alpha level $p < .05$.

The differing desirability of these service offerings between each site comes as no surprise. The literature would indicate that someone camping in a wilderness area would not want paved roads to the campsites or electric hookups. Numerous items and domains in this section were not different. While most of the privacy/solitude items were significantly different, all the by-site means were above 4.5. This would suggest that all campers value solitude and privacy. Whether a camper goes to a wilderness area, or a developed campground, they desire peace and quiet, solitude, and privacy.

3.4 Recreation Experience Preferences

Driver’s (1977) scale of motivation items provides domains from which to research camping motivations. Manfredo & al. (1996) provide a meta-analysis of the

studies in which the REP items have been used. They found the domains to be reliable. They also state that factor analysis is no longer necessary. Reliability tests of the items in this study proved to be acceptable ($< .80$).

When the items were examined individually, one way ANOVA procedures indicated three motivations, which varied significantly across the campsites ($p < .05$). Scheffé’s Post Hoc tests revealed respondents at CH indicated a higher score for the motivation “to get away from crowded areas” than those at BF. Campers at CH and ER indicated a higher score on the item “to experience the solitude/privacy of camping” than those at BF. Respondents at BF scored lower on the item “to learn about the natural history or ecology of the area” than did those at ER. The five domains used for motivations were “family cohesion,” “enjoy nature,” “solitude,” “social,” and “learning.” All the domains proved reliable with coefficients of .79 or higher. The overall means for the domains report the average importance each domain had to the respondent as a reason for their current trip on a scale of 1 to 5. For solitude the overall mean was 4.44 ($sd = .61$); for enjoy nature 4.29 ($sd = .65$); for family cohesion 4.20 ($sd = .73$); for learning 3.69 ($sd = .74$); and for social 3.03 ($sd = .86$). The one way ANOVA revealed only one domain to be significantly different among campsites, the solitude domain for CH was higher than BF. This difference was significant at $p < .05$, indicating that even though CH is a developed campground, campers go there to seek solitude. This was the only significantly different mean among the five motivation domains. Burrell’s Ford was lower than CH or ER in regards to motivation for solitude.

The first major finding of importance was the difference between the domain “social” and the other domains. The grand mean for the social domain was 3.03. When taken literally this indicates that respondents were neutral. An alternative way to interpret this is in light of the other domains, which were all much higher. In light of the other domains, social was a significantly less important motivation for most respondents. The strongest motivational domain score for camping was for “solitude,” with an average score between important and highly important. This finding indicates that campers desire solitude much more than they desire to meet new people. Learning was also low on most respondents’ importance scale. This suggests that the majority of campers do not value meeting people or learning about

nature as much as they do being away and solitude. Another finding is the difference between CH, ER, and BF on the solitude items. Cherry Hill campers desired to get away from crowded areas more so than BF campers. Cherry Hill campers, along with ER campers desired the experience of solitude and privacy more so than BF campers. This data indicates that campers at BF were less interested in escaping crowds and attaining solitude than were campers at CH and ER. None of the other motivation domains were significantly different among the three sites.

3.5 Experience Use History

The respondents showed a large amount of variance in their previous experience camping at the sites. While there was not any significant difference *between* the sites, the number of years and number of times camped at specific sites varied greatly among campers *within* a given site. Very few (4.7%) respondents stated they had been camping at their respective site more than 30 years. The highest response was 50 years. Seven respondents stated that they had camped at their site 100 or more times. These responses lead to the very high standard deviation in the means. When compared across the three sites, none of the EUH variables proved significantly different. There was high variation among the sites, with users ranging from no previous experience to many years of experience, however, there was little variation between the sites. The classification of visitors into the four categories outlined in Hammitt, Backlund, and Bixler (in press) was consistent across all three sites. The overall breakdown was 32.5% beginner, 18.2% visitor, 20.6% local, and 28.7% veteran. Chi-square tests did not reveal any significant differences across the three campsites. The frequency per year variable (total number of times camped/total number of years) was also not different across the sites. The overall mean was 1.56; for CH 1.65, for BF 1.32, and for ER 1.67. The variance for these variables was not extreme, ranging from 1.01 to 1.63.

4.0 Discussion

The analysis revealed numerous differences as well as similarities among campers at the three campsites. These relationships provide a profile of the campers in the three different campsites. The assumption, based on the ROS that as one moves towards the primitive end of the spectrum, the desire for solitude and privacy becomes more important, was not wholly supported.

The camping groups identified in this study seem to be consistent with previous literature on campers. Cordell et al. (1999) found campers to be of three types of groups; retirees in motor homes, younger people camping to reduce the cost of lodging, and people camping to gain access to other activities. In this study, the first and last groups were both well represented. From the data gathered the middle group would be hard to detect. In addition, the study sites were quite remote and far away from any main travel routes. The higher proportion of campers contacted at the developed camping area is a reflection of the increased trend towards developed camping (Cordell et al. 1999).

The results from the REP scales are also consistent with previous findings. The low reported importance of meeting other people has been found previously in studies of wilderness users (Driver et al. 1987). Yuan and McEwen (1989) found that users towards the developed end of the ROS (rural, roaded natural, and semi-primitive motorized) tend to have more positive view of meeting people. This finding was not confirmed in the current study.

4.1 Managerial Implications

The ROS framework proposes that recreation site use is related to user motivations and derived outcomes (Manning 1999). ROS also proposes that recreationists have site preferences in terms of level of facility development (Driver et al. 1987). Some of the basic assumptions of ROS have not received the empirical support they need. One of the assumptions is that users preferences will fall into one of the categories or combinations of categories outlined in the ROS. Manning (1985) criticized the ROS for having limited and inflexible categories and actually decreasing diversity. The findings of this study indicate that users are not distinctly defined in terms of motivations or experience. However, the desirability of certain services and amenities, did distinguish certain users from others. Thus the ROS, in regards to campers, was supported in terms of preferences toward level of facility/service development.

Managers should be aware of the spectrum of facility development preferred by different types of campers. The provision of services for some campers is highly important. If a resource management decision is made to alter the level of development of a camping area, then managers need to understand that a substantial user

shift might happen, with previous campers becoming displaced.

Since the ROS has been adopted by the U.S. Forest Service and the Bureau of Land Management, questions of its validity and usefulness are certainly warranted (Yuan & McEwan 1989). Managers using this framework should synthesize these findings and incorporate them into the overall understanding of the ROS.

The motivations a forest user has can lead to numerous behaviors and affective states. However, the non-significant differences among the majority of the motivations that campers had in adjacent classes in the ROS means that our campers were motivated by similar things. This lack of variation could be due to the similarities of the campsites in the study, or due to the general nature of the motivation items. This finding should not be interpreted in a way that implies wilderness users are the same as developed campground users. Even at the level of development of CH, campers do not care to meet and socialize in large groups of unfamiliar people. Campers can desire solitude, the situation of being away, while in the company of a small group of selected friends and/or family (Westin 1967). They desire to spend time with their families and experience nature. Managers of primitive camping as well as rustic areas, should attempt to manage for solitude of intimate groups at their locations.

The little amount of reported substitution, combined with the neutrally reported willingness to substitute between each of the sites should be noted by managers. Managers of areas where more than one type of camping opportunity exists should not assume that users will switch to another type of camping area. Campers are particular about the amenities they desire (or do not desire). Different settings might not be acceptable to users who have specific preferences for a setting and accompanying amenities.

Integrating data about the characteristics of campground users is important for managers of recreation resources. For managers of diverse areas, knowing the characteristics of the different groups using the resource can provide for more effective management policies. For example, management policy does not need to provide easy access car camping for all campers who desire some level of campground development, some don't mind walking

in a ways, i.e., BF. Campers at this walk-in site were younger and participated more heavily in other activities such as fishing. Areas such as this should be managed to accommodate these walk in camping opportunities. At the more developed site, campers were older and family oriented. Managers should orient developed sites towards this user group. In the wilderness area, group sizes were larger and consisted mainly of friends. These users also desire solitude. Managing for group solitude should be provided by encouraging the larger user groups to camp out of site of other campers.

The profile of the users described in this study should serve as a tool for understanding campers in similar areas. The findings, however, should not be assumed to be valid for campers in areas dissimilar to the ones in this study (i.e., private campgrounds, highly developed campgrounds).

4.2 Further Research

This study only examined differences across setting. Further study should incorporate an examination of different activity types. Also, camping is a unique activity in that for some it might be the end purpose, while for others it might be the means to some other end, such as fishing or boating. Research across different social or managerial settings might yield profiles of users that differ in social and managerial preferences for specific types of campgrounds. The campsites in this study were also fairly close in terms of the ROS camping opportunities they offered. A look at three highly disparate campsites might lead to more variance in the data.

This study was limited to camper's responses to only the questions and items on the questionnaire. A more in-depth look at the preferences and meaning of the resources and settings might lead to greater understanding of the distinction among them. Any future studies should consider the complexity of camper's preferences and motivations. Managers need to have a thorough understanding of their user in order to successfully manage the resource.

5.0 Citations

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