

SOCIAL EQUITY CONCERNS AND BARRIERS TO ACCESS IN KENTUCKY STATE PARKS

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Abstract

The mission of many parks includes language to ensure a diversity of resources is retained for the public good and that resources and facilities are available to all. Such missions encourage provision of equitable opportunities and access to parks and serves as a reminder to continue seeking ways to connect citizens with natural and historical resources. This pilot study sought to understand potential issues related to access equity through identifying visitors' perceptions of barriers to access to Kentucky State Parks. Kentucky State Park visitors did not find any of the statements within the barriers to access instrument to be related to limited visitation. While overall access limitations seemed to be of little concern, the researchers found significant barrier perception differences when comparing groups based on age and race variables. Further inquiry is necessary regarding differences among people of different ages and races to enhance overall understanding of visitation constraints.

1.0 Introduction

Most United States state park systems are mandated, explicitly or implicitly, to ensure equitable access and opportunities for all citizens within their respective state. This includes specific introspection about social access equity to assure the original intent of the park system is being met. For instance, Kentucky State Park System's mission is "to stimulate economic development in rural areas through tourism, to provide quality recreation opportunities for residents and visitors throughout the Commonwealth, and to preserve and interpret Kentucky's significant natural, cultural, and historic resources" (Tourism, Arts, and Heritage Cabinet, 2010, p.4). Kentucky's demographic profile consists of 86.3% Caucasians, 7.7% African Americans, and 3.1% Hispanics; and, approximately 17.8% of the population lives in poverty (Cubit, 2013). Providing quality recreation opportunities for residents includes eliminating of discrimination against citizens of any race, economic status, or social status. "However, a disparity in access to physical activity facilities and resources has been

documented among low-income and racial/ethnic minorities” (Taylor, Floyd, Whitt-Glover, & Brooks, 2007, p. S51).

According to Taylor et al. (2007), 80% of the population in the United States uses some form of public parks frequently and are benefiting from using those parks. These benefits include enhanced mental and physical states, social and psychological wellbeing, and benefits to the community (McMeekin, Hancock, & Bahn, 2008). McMeekin et al. (2008) state parks and recreation “provide opportunities for building relationships of trust and the development of physical aptitude and life skills, such as communication and conflict resolution” (p. 17); and, “may also lead to greater peer acceptance, broader participation in community activities, increased self-esteem, improved school attendance and academic performance, a sense of belonging and achievement, and greater life satisfaction” (p. 18).

The benefits associated with individuals participating in recreation at public parks are well documented; however, equitable access to these benefits is still in question. Ensuring equitable access to the public parks system is important so that all individuals have the opportunity to experience outdoor recreation, and that they are not discriminated against due to race, economic status, or social status. The purpose of this research is to identify barriers associated with equitable access to state parks, and to identify demographic variables that may be of concern related to equitable access for all Kentucky citizens.

2.0 Methods

2.1 Site selection

Five research sites were chosen for this pilot study to understand perceptions of equitable access by visitors to Kentucky’s state parks in the Appalachian region. These sites were selected as they are located directly adjacent to the western edge of the Appalachian Mountains in Kentucky. The researchers, with the help of Kentucky State Park staff, selected five research sites, including two resort parks, two historical parks, and one recreation park. Cumberland Falls State Resort Park, located in south central Kentucky in McCreary County, is completely embedded in the Daniel Boone National Forest. This state park is home to a 44-foot natural waterfall nicknamed the Niagara of the South. The park is home to a rare but renowned occurrence of a moonbow, which attracts many visitors and makes the park truly unique among all public recreation areas in Kentucky and the nation (Cumberland Falls, 2014).

Located in the Red River Gorge area of the Daniel Boone National Forest in Kentucky, Natural Bridge State Resort Park includes areas in Powell and Wolfe Counties. The park is named after the major attractions located in the park and Red River Gorge, naturally occurring sandstone arches that draws thousands of visitors per year, but also includes other natural rock formations that are unique to the area (Natural Bridge, 2014). As typical with resort parks in Kentucky, Natural Bridge and Cumberland Falls feature lodges with multiple rooms, meeting spaces, and dining opportunities. In addition, Kentucky resort parks often offer cottages or cabins and various camping opportunities for overnight visitors. These parks typically offer a variety of recreation opportunities that are common to all parks and some unique to the resort park specifically.

White Hall State Historic Site is located in central Kentucky in Madison County near Richmond, Kentucky. White Hall is the former home of Cassius Marcellus Clay, a famed abolitionist and prominent Kentuckian (White Hall-Clermont Foundation 2014). The home was renovated in the 1860s and became part of the state park system in 1968. After significant restoration and preservation, it opened to the public in 1971 (White Hall, 2014). Also in Madison County and located near White Hall State Historic Site is Fort Boonesborough State Park. Fort Boonesborough has many different attractions on site, including a re-creation of the original fort established by Daniel Boone in 1775. While the recreated fort is not on the original fort site, it is close, and offers educational and recreation opportunities to visitors and students throughout the year. The Kentucky River Museum is also on site as are many recreation opportunities.

2.2 Survey design

To identify perceived barriers by visitors to state parks, the researchers utilized a previously validated instrument by Searle and Jackson (1985). This instrument features thirteen statements (Figure 1) related to typical barriers to visitation to natural areas and parks. For each statement, respondents rated their agreement with each statement using a typical five-option Likert scale, ranging from strongly disagree to strongly agree.

Respondents were also asked to provide information related to their visit(s) to the park. Information sought included how often they visit, how long ago (in years) was their first visit to the park, how far they traveled (miles) to visit the park, and visitor type. Visitor type options included day user, tent camper, RV camper, group camper, and lodge and cabin guests. All respondents also were asked to provide demographic information, including age, sex, race, ethnicity, level of education, and income. The researchers also analyzed demographic information to identify discrepancies between the research sample and the demographic profile of Kentucky. This allows researchers to identify any specific categories of people who are under-represented, perhaps providing information related to populations without equitable access to state park resources.

2.3 Survey facilitation and sampling

The researchers visited each of the five research sites three times to solicit volunteer respondents. The three visits to each park were distributed across the subsegments of the week, with one of the visits during Saturday or Sunday, another visit during Monday through Wednesday segment, and a third visit during Thursday or Friday. While each park differed in physical geography, programming, and use patterns, the research team sought to approach visitors during down time or after the conclusion of an activity. This included approaching day use visitors as they were leaving the major areas of the park or the park itself. Further, due to these factors, specific sampling locations were quite different for each park, dependent on visitor flow to certain areas, and programming. For example, visitors leaving Cumberland Falls State Resort Park were often best approached as they walked to their vehicle after seeing the falls.

To ensure random sampling, researchers approached every third adult visitor to solicit participation in the research study. If a group was encountered, the adult with the most recent birthday was asked to complete the survey. As researchers approached potential respondents, the researchers introduced themselves, introduced the research project, and asked the potential

respondent if they would be willing to take the survey. Included in this introduction were the purpose of this research study and the estimated time needed to complete the survey. If the potential respondent declined, the researcher thanked them for their time and politely moved on to the next potential respondent. If the respondent agreed, the researcher gave the participant the option to complete the survey using a clipboard or to orally respond to the survey, with the researcher marking the answers. Providing two options enabled respondents to complete the paper survey in a way that was most comfortable to them. As estimated, surveys completed by the respondent in writing took less than ten minutes while surveys completed orally by the respondent took much longer, depending on the conversation length and flow. At the completion of the survey, the researchers thanked the participant and moved on to the next third adult they encountered that was not part of the previous adult respondent's group.

The data was entered into SPSS 21 for statistical analysis, which included frequency distributions and means for each of the scaled items. Analysis of Variance (ANOVA) was conducted to determine if differences existed between the demographic categories and perceived constraints to participation in park visitation.

3.0 Results

In total, researchers approached 452 adult visitors (18 and older), with 284 state park visitors agreeing to participate. The researchers encouraged each participant to complete the survey, but a few respondents did not complete a number of questions for various reasons. Therefore, the response rate for the entire study was 57.7% based on 261 completed surveys. As seen in the following information, if the respondent completed a specific section of the survey, that aspect was included in analysis. Much of the survey participation occurred at the two larger parks (Cumberland Falls – n=139 and Natural Bridge – n=118), with the smaller parks having much less total visitation and thus less representation in this sample. Lower survey participation numbers were due to lower visitation at those parks during the data collection period.

Answers to the survey question seeking trip mileage information varied widely. The lowest mileage report was zero, and the highest mileage was 250, with an mean of 72 miles. Participants also reported how many years have lapsed since their first visit to the state park. Many users reported the survey contact visit as their first, while the maximum number of years reported was 50. The mean number of years between their first visit to the park and this visit was 14.25. In addition to this information, visitors were asked how many times per year they visited this park. Again, for many users this was their first visit, but many visitors reported repeated visits, up to 50 visits per year. The mean number of visits per year was 7.7. The researchers interpret these results to show that a wide diversity of park visitation patterns, as the distance traveled, visits per years, and longevity of continual visits ranged significantly.

In addition to these results, researchers also collected demographic information from participants. Visitors self-reported a wide range of ages, with a mean age of 36.02. U.S. Census (2010) reports that 56.4% of Kentucky's population is between the age of 18 and 65, and people reporting ages between 18-64 make up 80.1% of the total adult population. When comparing to the ages reported in this study, the researchers believe the age range of the respondents is congruent with the age range of the entire Kentucky population. Kentucky's

population consists of 50.7% females (U.S. Census, 2010) and females represented 48% of the respondents in this study. Respondents identifying themselves as being Hispanic or Latino in ethnicity was 4% (N=11), similar to the number of Kentucky residents (3.2%) identifying as such (U.S. Census, 2010). Often discussed with ethnicity is race. The racial makeup of respondents in this study was quite similar to the overall Kentucky population. The only difference that merits discussion is that, within this study, respondents self-identified as Black/African American only 2% of the time, whereas Kentucky census data report 8.1% as Black/African-American. This may merit additional discussion and research.

Respondents in this study reported higher education attainment levels than that of the overall Kentucky adult population (U.S. Census, 2010). Nearly all research respondents attained at least a high school education or equivalent. While this is certainly higher than the mean for adults in Kentucky, a larger contrast exists for respondents reporting levels of higher education (n=100, 38%) than that of the total adult population of Kentucky (21%). This finding aligns with previous research, as park visitors have been found to attain higher levels of education and are known to have higher incomes than the general population (Chung, Kyle, Petrick, & Absher, 2011; Kaczynski, Wilhelm Stanis, Hastmann, & Besenyi, 2011). Visitors who responded to the survey also had a higher mean income (\$56,000) than the Kentucky adult population (\$43,000).

Respondents also were asked to complete an assessment of perceived barriers related to park visitation. A total of 268 participants rated their agreement with each of the 13 barrier statements included in the instrument. As seen in Table 1 below, the mean response scores were concentrated around 2, meaning the mean response was to disagree with each statement, and with the overall mean score of 1.92, the respondents in this study did not agree with any of the barrier statements.

Table 1
Visitor Response Means for Recreation Barriers at Kentucky State Park

Statement	Mean
Going to a state park is too physically demanding.	1.93
I have no one to go with me to a state park.	1.93
There are no state parks near me to go visit.	1.90
Going to a state park involves too much risk.	1.81
My family and friends are not interested in going to a state park.	1.99
Going to a state park is too costly.	1.94
I do not like nature.	1.47
I cannot participate in nature-based activities.	1.68
Family commitments keep me from going to a state park.	1.94
The expenses of traveling and staying at a state park are too great.	2.19
I do not know what to expect from a state park.	1.95
I have no time to go to a state park.	2.12
I have no information about the state parks and what they offer.	2.16
Mean	1.92

Note: Based on a 5 point scale 1=Strongly Disagree, 5 = Strongly Agree

To gain a better understanding of the perceptions of barriers, the researchers analyzed the data by running several ANOVA with the perceptions of barriers statements being dependent variables. Independent variables used for ANOVA included income, education, user type, age, and race and ethnicity. All assumptions necessary for ANOVA were met. Perceptions of barriers across various levels of income, education, and user type were not significant. However, race/ethnicity ($F=7.25$, $p=0.08$) and age ($F=2.95$, $p=0.02$) were variables that showed significant differences across the levels of the variable.

When considering race and ethnicity of participants, the researchers found that visitors self-identified as White/Caucasian were significantly less likely to perceive barriers to park visitation than respondents self-reporting as any other race option. Additionally, the researchers organized participants into five age groups (18-24, 25-34, 35-44, 45-55, & 55+) based on their age selected. Using ANOVA, perceptions of barriers across these age groups was found to be significantly different. A Tukey post-hoc analysis revealed the age group 25-34 was significantly different in their perceptions of barriers when compared to the users that selected ages 55 and older, thus participants falling within the age range of 25-34 were significantly more likely to have a higher overall perception of barriers present when compared to participants 55 years of age or older.

4.0 Discussion and conclusion

As stated previously, demographic profiles of the respondents in the study were closely aligned with the overall demographics of the population of Kentucky. While some differences may warrant discussion, such as mean income of a state park visitor when compared to that of the Kentucky population, income was not found to be a significant factor when investigating perceptions of barriers. The same is true for other demographic variables such as education, sex, distance to the park, history of visitation, visits per year, and park user type. Such information is indeed a positive finding, as these factors are not an issue related to social equity and providing access to the state parks included in this pilot study. Based on this data and interpretation, the researchers believe there are no significant changes that need take place to target markets or increase visitation based on these demographic variables.

Two specific demographic variables warrant further investigation. The first is age, as different age groups were found to be significantly different related to park visitation barriers. Young adults perceived more barriers to be in place than did senior adults. While differences certainly exist between these two groups, the overall perceptions of barriers are quite low using the current barrier instrument. This is also the case when considering the other demographic variable, race, as it pertains to barrier perception. In this study, White/Caucasian ($n=227$) respondents reported significantly lower perceptions of barriers when compared to all other (non-White) respondents ($n=34$).

To identify factors that potentially hinder park visitation to Kentucky State Parks, the researchers used Searle and Jackson's (1985) perceptions of barriers to park visitation instrument. This instrument is one used by many previous researchers (Zanon, Doucouliagos, Hall, & Lockstone-Binney, 2013; Jovanovic, Dragin, Armenski, Pavic, & Davidovic, 2013) to determine if significant differences exist between various user groups about their barriers to park visitation. As previously mentioned, the overall perceptions of barriers in this study were quite low. Research participants did not rate any of the barriers statements in the

instrument as being significant barriers to visiting the state parks in this study. The researchers believe this finding to be an outcome of the consistent value placed on providing a state park system that ensures equitable access to all Kentucky residents.

Nicholls (2001) four nodes of social equity are equality, demand, compensatory supply, and market forces. Through this research study, the researchers feel that all aspects of Nicholls' equality are addressed by Kentucky State Parks. To accommodate for access equitably, Kentucky's state parks are distributed quite equally across the state, with no Kentucky resident being more than 50 miles from a state park property (D. Bonfert, personal communication, February 17, 2014). This allows for resource allocation so that all potential participants have equal opportunities for access.

The second and third components of social equity are compensatory supply and demand, where the supplier focuses more supply in higher need areas and supplies more where demand is greater, respectively. As noted in analysis and results, no respondents felt as there were barriers to access. Thus, areas of higher need and demand are being met by the Kentucky State Park system. The last social equity aspect address is market forces. Further research is necessary to identify the visitor types to these parks with higher resource demands; these parks may serve a much more diverse visitor type than do other state parks.

Based on the findings, the researchers recommend further inquiry to determine where state park visitation barriers may exist for various Kentucky residents. Specifically, young adults and non-White respondents were more likely to note higher levels of barriers to park visitation, yet the instrument did not provide the information necessary to determine where or why these barriers exist. The researchers specifically recommend a qualitative research approach to determine what these barriers might be; such inquiry may provide in-depth information to ascertain specific areas of concern. In review, the researchers believe areas of improvement exist within the Kentucky State Park system, as evidenced by findings in this study; however, the Kentucky State Park system is proactive in ensuring that all residents are able to visit natural and historical areas across the commonwealth. This study examined constraints for those who were visiting the parks and may ask as a good first step in answering what constraints may be perceived for those who do not go to parks. However, we suggest further study of constraints to park visitation those who do not visit, as this may be a more true understanding of visitation constraints and perhaps insight of barriers to involvement in specific activities or resources within the park.

5.0 References

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