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To Fee or Not to Fee? Satisfaction, Service Quality, and Support of an Entrance Fee of a State Park System

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To fee or not to fee? Satisfaction, service quality, and support of an entrance fee of a state park system

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Abstract

In the past decade, state government appropriation reductions have forced park agencies to seek other sources of revenue to support park operations. To overcome shrinking budgets, many public park agencies embrace private-sector business models and investigate customer satisfaction, service quality, and user fee structures. The purpose of this study was to obtain public input regarding service quality, general satisfaction, and experience use history of state park visitation. A total of 382 Oklahoma state park users completed an online survey and were sorted into Pro-Fee (n = 200, 52%) and No-Fee (n = 182, 48%) groups for one-way multivariate analysis of variance (MANOVA) tests. The researchers found a significant difference between the two groups on service quality, but not on overall satisfaction or behavioral intention (e.g., revisit, recommending the park). When comparing Pro-Fee and No-Fee groups, researchers found no statistically significant variance in visitors' demographics, such as gender, education level, and income, whereas the number of years that had passed since the visitors' first visit showed a significant difference between the groups. The findings of this study provide valuable insight for discussions related to entrance fees and service fees in state park systems.

Keywords: state parks, park entrance fees, satisfaction, service quality, Oklahoma state parks

Introduction

Parks fill an important role in promoting health and well-being in our society because public parks are one of the primary venues for leisure pursuits. Annually, state parks receive nearly double the number of visits experienced at National Park Service properties (Leung, Smith, and Miller 2016). This greater level of visitation at state parks is related to their proximity to population bases as well as the diversity of natural resources, facilities, and services provided at the parks (Leung et al. 2016). Public parks and open spaces are often managed by local, regional, state, and federal government, while others are managed under contracts with nonprofit agencies or profit-oriented businesses. Traditionally, state parks have been managed by government agencies and are considered as a public good. Prior to the recession in 2001, few

state park systems charged entrance or parking fees and most relied heavily on general appropriations from government to support park operations (Eagles 2014). By 2019, nearly all state park systems charged some type of user fees (e.g., camping fees), but a few states, such as Hawaii, Iowa, Tennessee, and Oklahoma, have yet to establish an entrance fee system to support park operation costs (Smith 2019).

In the past decade, the debate over how state parks should be operated and managed has necessitated an ongoing discussion about how to address budget shortfalls. Some state parks explored new approaches to create or increase revenue streams, while others transferred property ownership or closed areas the public to reduce operating costs (Stone 2011). Recently, user fees have become an important revenue source for park management and operation for many government agencies, especially during fiscally strained times (Walls 2013; Eagles 2014). Although charging entrance fees is not a novel concept for revenue generation, implementing or increasing these fees may be controversial due to the historical operation and management philosophies held by these public agencies, especially at state levels (Liu, Wu, and Caneday 2018). Charging entrance fees is often perceived as restrictive to lower-income populations or in conflict with concepts of tax-supported agencies.

Due to the complexity of park services and responsibilities, past research has focused on collecting meaningful and informative data to guide sustainable management practices (Fletcher and Fletcher 2003). To optimize revenue generation, several business-oriented concepts have been infused into government-run parks to further understand visitors' experiences and perceptions toward services. For example, service quality and satisfaction have been applied in the field of parks and recreation management for evaluating service performance and marketing research. Both concepts have been considered strong indicators of profitability and achieving service goals (Fletcher and Fletcher 2003; Lee, Graefe, and Burns 2004; Crilley, Weber, and Taplin 2012). Although some studies utilized service quality and satisfaction interchangeably, the two have distinctive measurements and definitions within a successful business operation. *Service quality* is a specific judgment of services availed and focuses on perceived quality of performance for several attributes, such as park amenities and facilities. *Satisfaction* is evaluated in much broader terms and focuses on visitors' emotional state after experiencing a product, service, or visiting a destination (Lee et al. 2004; Moore, Roger, and Taplin 2015). For example, satisfaction of park visitors could be influenced by weather, water quality, interaction with other users, the quality of service they perceived, and many other factors over which park managers may or may not have control (Lee et al. 2004). In past studies, researchers reported a positive relationship among service quality, customer satisfaction, and behavioral intention (Baker and Crompton 2000; Lee et al. 2004). In parks and protected area research, behavioral intentions are commonly evaluated by individuals' willingness to disseminate positive word-of-mouth about parks and to revisit them in the future (Shu, Crompton, and Willson 2002). More specifically, park visitors' satisfaction was proven a contributing factor to customer retention, loyalty, and acquisition of future revisits (Akama and Kieti 2003), while service quality was found to predict behavioral intention (Lee et al. 2004).

Research has shown that satisfied customers, those receiving high-quality service and feeling positive about a service or product, are, in fact, willing to pay more. Homburg, Koschate, and Hoyer (2005) found that in general consumer behavior, highly satisfied customers, especially those with long-term or cumulative satisfaction, felt good about what they paid for or showed willingness to pay more. Within the park context, Kyle, Absher, and Graefe (2003) found that the more emotional meanings (place identity) a visitor attributes to a park, the stronger the support from the visitor for paying fees, especially in the areas or programs relevant to their recreational interests, beliefs, and attitudes. Moreover, Eng and Niininen (2005) found negative feedback about park attributes had greater influence than positive experiences regarding overall satisfaction. High-quality park management and positive visitor experiences increase the acceptance of initiating or increasing entrance and admission fees (Uyarra, Gill, and Côté 2010).

To date, the Oklahoma state park system is one of the few yet to employ an entrance fee program. To fully investigate the feasibility of such a fee program, a comprehensive study that includes visitor experiences and other contributing factors is warranted. Although willingness to pay for outdoor recreation is a prevalent

research topic in protected area management, few studies have explored the relationship between satisfaction, service quality, and willingness to pay in the context of fees to enter a public park (Eng and Niininen 2005). Furthermore, sociodemographic factors, such as age, household income, nationality, and disabilities, have been identified as influences on willingness to pay and attitudes toward charging fees (Nyaupane, Graefe, and Burns 2007; Uyarra et al. 2010). Investigating possible variation in visitors' perceptions of service quality, satisfaction, and entrance fees, including demographic variables for additional analysis, is instrumental for park management in deciding whether to implement or increase entrance fees. It is particularly important when public park and protected area agencies are struggling with budgetary cuts. Enhanced understanding of perceptions of service quality, satisfaction, and entrance fees allow park management agencies to foresee possible issues and conflicts, prepare a thorough plan to address them, and make better-informed decisions for policy implementation.

The purpose of the present study was to obtain input from recent visitors to an Oklahoma state park on service quality and general satisfaction. Additionally, the researchers sought to obtain visitor characteristics and individual experience use history of state parks information. Specifically, the researchers investigated possible variation on perceived service quality and satisfaction between those who did an did not support an entrance fee. Overall, this study was designed to provide necessary information for researchers and park management professionals to guide decision-making regarding entrance fees.

Methods

Study area and background. The Oklahoma state park system was established in the 1930s, as the formation of state park systems proliferated around the nation following the establishment of national parks. The 1933 Emergency Conservation Work program and the establishment of the Civilian Conservation Corps (CCC) stimulated the creation of state parks. From an initial seven state parks and one state refuge, Oklahoma gradually developed its state park system, which includes 38 properties as of 2019. Created in 1972 during reorganization within the state government, Oklahoma's state park system is currently managed by the Oklahoma Tourism and Recreation Department (OTRD). The mission of OTRD is to advance the quality of life in Oklahoma by preserving, managing, and promoting the state's natural and cultural assets for residents and guests (OTRD, n.d.).

From 2009 to 2017, the Oklahoma state park system experienced a 38% decrease in appropriations. Park operation costs were significantly reduced and an emphasis on generating more revenue has become necessary to avoid discontinuing operations and wholesale park closures (Wertz 2011; Fultonberg 2017). With recent economic trends at the state level, there is increased emphasis on financial self-sufficiency. Therefore, visitor perceptions toward additional fees for visiting a state park have become a subject of increased interest. On average, between 2001 and 2012, Oklahoma state parks operated on a mix of park-generated revenues (52%) and general appropriations (43%). Of those park-generated revenues, 67% came from overnight visitors who were only 15% of the total park visitors (Chien et al. 2013). Beginning in 2016, only one Oklahoma state park was collecting a true entrance fee and a few others charged fees for using designated areas. Under this model, most day visitors do not contribute to park-generated revenue. The idea of charging a general state park entrance fee is relatively new and controversial for Oklahomans; thus, OTRD sought more information to fully evaluate the option.

Data collection. The target population of the study was visitors to Oklahoma state parks. An online survey was developed and facilitated through Qualtrics for data collection. To incorporate a wider range of park users, researchers used a convenience sampling method to invite park visitors to participate in the online survey, including day users, cabin and lodge guests, and campers. The link to the survey was posted continuously on Oklahoma state parks' Facebook page from May to August 2014.

Measurements. The questionnaire was developed based on previous studies of visitor experiences in park settings (Akama and Kieti 2003; Fletcher and Fletcher 2003; Lee et al. 2004; Crilley et al. 2012) and was vetted and approved by OTRD staff. A prefatory statement—"I am willing to pay a general entrance fee to support/improve the park operation, maintenance, and management", with which participants had to either agree or disagree—was designed to identify park visitors' attitudes toward an entrance fee. The purpose

of this statement was to help researchers split research participants into two groups: Pro-Fee (Yes) and No-Fee (No).

The researchers measured service quality using a 10-item instrument, selected and adapted from park-related studies, to reflect the wide range of services provided in the Oklahoma state park system (Fletcher and Fletcher 2003; Crilley et al. 2012). These service items covered park personnel, information, facilities and services, and pricing of goods and services. All statements were measured on a 7-point Likert scale, from "strongly disagree" (1) to "strongly agree" (7). Satisfaction was measured by a holistic statement—"Overall, I am satisfied with my park visit"—to solicit state park visitors' subjective evaluation of overall experience in the state parks. Also included were statements measuring behavioral intentions ("I would like to visit the park again") and willingness to engage in word-of-mouth marketing ("I would recommend the park to others"). All three were measured on a 7-point Likert scale as above.

Finally, the researchers included demographic and visitors' experience variables in the survey. Park visitors' use history (i.e., frequency in the past 12 months and most recent use, length of stay, and group size) and sociodemographic information (i.e., age, gender, education, race, and income) were collected.

Statistical analyses. Researchers used descriptive analysis to identify park visitors' demographics, park usage, overall satisfaction, and support for entrance fees. Researchers then facilitated chi-square analysis and t-tests to determine any sociodemographic and visitor characteristic differences between Pro-Fee and No-Fee groups. In addition, one-way multivariate analysis of variance (MANOVA) was applied to examine whether park visitors' perceived service quality and satisfaction were factors in support of entrance fees (Pro-Fee or No-Fee). The advantage of using MANOVA is the ability to examine a set of two or more dependent variables at one time for an overall significance and to reduce the chance of a false positive (Type I) error (Stevens 2012). If the overall MANOVA is significant, several univariate ANOVAs were performed with Bonferroni correction to adjust *p*-value; researchers divided the statistical significance level of .05 (*p*-value) by the number of analyses on the dependent variable. Two sets of independent variables (service quality and satisfaction) were tested between Pro-Fee and No-Fee groups. Before the analysis, normality, collinearity, equal variance, and homogeneity were tested and deemed appropriate for the analysis.

Results

Demographics and visitor characteristics. A total of 402 participants began the survey (Table 1). Of the 382 who finished it, 200 (52%) were in the Pro-Fee and 182 (48%) in the No-Fee group. Most of the respondents were white (87%), female (64%), held an associate or bachelor's degree (65%), and had an annual household income of more than $50,000 (75%). The mean age was 47 years. Most of these users last visited state parks with family and friends with children (68%), made less than four trips to a park in the past 12 months (51%), and stayed one or two days (56%). Also, the average duration since first visit to an Oklahoma state park was 17 years. The demographic distribution of our research participants was similar to other studies of parks use in Oklahoma done via online survey (Soltani and Caneday 2017; Wu, Liu, and Cox 2018).

When comparing demographic variables of the Pro-Fee and No-Fee individuals, the results of chi-square analysis indicated no statistically significant variance in attitudes toward supporting a park entrance fee between gender, education level, income, or self-described user type. Also, the result of a t-test showed that age is not a statistically significant difference between the two groups [$t(380) = -1.48$, $p = .14$]. On the contrary, the number of years that had passed since the visitors first visit [$t(380) = 3.75$, $p < .001$*] showed a significant difference between the Pro-Fee and No-Fee groups. The No-Fee group reported a longer life experience of visiting state parks ($M = 20.00$, $SD = 16.72$) compared to the Pro-Fee group ($M = 14.85$, $SD = 16.52$).

Differences in perceived service quality and satisfaction between Pro-Fee and No-Fee. The descriptive analysis showed the mean scores of park visitors' perceived service quality ranged from 4.50 to 6.33 on a 7-point Likert scale, indicating a high level of service quality. "I felt secure and safe in the state park" received the highest mean score ($M = 6.33$, $SD = .92$), following by "The state park is clean and well maintained" ($M = 6.18$, $SD = 1.28$) and "The staff members were helpful and friendly" ($M = 6.08$, $SD =$

TABLE 1. Demographics and state park visitation of research participants (*n*=382).

Demographics	Frequency*	Percentage
Gender		
Male	138	36.1%
Female	244	63.9%
Age		
Mean = 47. 25, *SD* = 12.16, Range = 19 to 80		
Education level		
High school or less	127	34.7%
Associate and bachelor's degree	163	44.5%
Graduate degree	76	20.8%
Household income		
$49,999 or less	125	34.6%
$50,000 to $99,999	142	39.3%
$100,000 and more	94	26.0%
Race		
White	340	87.4%
American Indian	40	10.3%
Asian	1	0.3%
Two or more races	2	0.5%
Other	6	1.5%
User type (last trip)		
Day visitor	149	37.9%
Cabin/lodge guest	91	23.2%
Camper	153	38.9%
Frequency of visit (12 months)		
Once	79	20.2%
Twice	66	16.9%
Three times	53	13.6%
Four times	29	7.4%
Five or more	164	41.9%
Days of staying (last trip)		
One day	134	34.4%
Two days	84	21.5%
Three days	67	17.2%
Four days	35	9.0%
Five or more	70	17.9%
Come with (last trip)		
By myself	15	3.9%
Friends/family with children	261	67.1%
Friends/family without children	100	25.7%
Organization	13	3.3%
Years since first visit		
Mean = 17. 28, *SD* = 16.78, Range = 1 to 62 years		

1.35). The mean score of overall satisfaction of park visitors' experience was 6.13 out of 7, while the mean scores of revisit intention and word of mouth were 6.58 and 6.50 respectively (Table 2). In addition, Pearson correlations between main variables were tested with service quality and satisfaction ($r = .70$, $p < .001$), service quality and behavioral intention ($r = .58$), and satisfaction and behavioral intension ($r = .79$, $p < .001$).

Additionally, researchers used separate MANOVAs to examine if (1) state park visitors' perceived service quality (nine items) vary in supportiveness of an entrance fee, and (2) if visitors' satisfaction (three items) vary between the Pro-Fee and No-Fee groups. The results of the overall MANOVA tests indicated a significant difference between the two groups on service quality [$F(10, 371) = 6.19$, $p < .001$, Wilks' Λ =

TABLE 2. Mean and standard deviation of service quality and satisfaction of park visitors.

	Total		No-Fee		Pro-Fee		
Service quality	*M*	*SD*	*M*	*SD*	*M*	*SD*	*p*-value
The state park is clean and well maintained	6.18	1.28	6.06	1.42	6.30	1.12	.07
Restrooms are clean and in proper working order	5.81	1.43	5.70	1.50	5.93	1.37	.11
The price I paid for the services in the park was reasonable	5.71	1.39	5.29	1.50	6.10	1.16	<.001[a]
The parking is adequate in the state park	5.70	1.51	5.51	1.51	5.87	1.49	.02
The staff members were helpful and friendly	6.08	1.35	5.99	1.40	6.17	1.31	.20
I felt secure and safe in the state park	6.33	.92	6.17	.96	6.47	.87	.002[a]
The service I received was worth the money I paid	4.50	1.65	4.30	1.54	4.68	1.72	.03
Food and beverage service in/around the state park is adequate	5.97	1.20	5.87	1.18	6.06	1.21	.12
The directional signs in the state park are adequate and clear	5.75	1.38	5.63	1.22	5.85	1.38	.10
Information about the state park is available and current	5.84	1.33	5.30	1.47	6.25	1.02	<.001[a]
Satisfaction and behavioral intention							
Overall, I am satisfied with my park visit	6.13	1.14	6.01	1.19	6.25	1.08	.05
I would like to visit the state park again	6.58	.82	6.49	.88	6.66	.76	.04
I would recommend the state park to others	6.50	.94	6.43	.97	6.57	.92	.14

Note: [a] Significant level $p < .05/10 = .005$, Bonferroni correction to adjust *p*-value

.857, partial $\eta 2 = .14$] but not with overall satisfaction or behavioral intention [$F(3, 378) = 2.36$, $p = .07$, Wilks' $\Lambda = .982$, partial $\eta^2 = .02$]. Due to the overall statistical significance on combined service quality between the Pro-Fee and No-Fee park users, researchers ran follow up univariate ANOVAs on these attributes. Using Bonferroni methodology to adjust the α level of .005 (.05/10 = .005), there was a statistically significant difference in "The price I paid for the service in the park was reasonable" [$F(1, 380) = 34.65$, $p < .001$, partial $\eta^2 = .08$], "I felt secure and safe in the park" [$F(1, 380) = 10.03$, $p = .002$, partial $\eta^2 = .03$], and "Information about the park is available and current" [$F(1, 380) = 70.92$, $p < .001$, partial $\eta^2 = .11$] between Pro-Fee and No-Fee groups. The Pro-Fee group reported a significantly higher score on these three service quality attributes when compared to the No-Fee group. No significant differences were found between the two groups on the other service quality statements (Table 2).

Discussion and conclusion

The aims of the study were to obtain public input on service quality and general satisfaction to understand experience use history of state park visitation, explore the feasibility of revenue generation from charging an entrance fee, and identify variances between pro-entrance fee and no-entrance fee groups. Overall, results suggested study participants were mostly satisfied with their experience in Oklahoma state parks, loyal to the parks with high repeat visitation, and have long personal relationships with the parks. For example, 63% visited state parks three or more times in the past 12 months and the mean number of years visiting Oklahoma's state parks was 17. Although park visitors are fairly satisfied with their experience at the parks, they also perceived and recognized differences in various service quality attributes. Visitors showed the highest satisfaction on security and safety, whereas "The service I received was worth the money I paid" was scored at 4.50 and ranked lowest of the service quality attributes (Table 2). Some of these attributes were rated between "slightly agree" (5) to "moderately agree" (6), providing indications for future improvement, such as availability of updated state park information, adequacy of directional signs in state parks, and cleanliness of the restrooms. In addition, visitors showed an even distribution of support and nonsupport related to entrance fees (Pro-Fee: 48%; No-Fee: 52%). Age, gender, education, income, or user type were not significant factors related to entrance fee support. Instead, results showed park visitors who

perceived reasonable pricing for current services, feel safe and secured in the parks, and agree that state park information is available and current were more likely to support entrance fees when compared to their counterparts, which is similar to the findings in a previous study (e.g., Park et al. 2006). In addition, the No-Fee group reported a significantly lower score (M = 5.30) regarding the availability and up-to-date information about the state park when compared to the Pro-Fee group (M = 6.25). This is a straightforward indication that ensuring information is available and up to date is essential for the state park system to enhance its service quality. It is also important to utilize different approaches (e.g., printed materials, official websites, social media, etc.) to provide the most current and accurate information for regular park users and new visitors.

Another interesting finding was the relationship between individuals' experiences with the state parks and their support of entrance fees. Early park visitation may be a factor when predicting acceptance of or resistance to new or additional entrance fees. When comparing the number of years that had passed since the visitor's first visit, the Pro-fee group reported roughly six years less than the No-fee group. It is possible that park visitors with early personal experiences at and memories of state parks are less likely to accept the change of starting or increasing park entrance fees. Therefore, if park management is considering charging entrance (or program/experience) fees, such an action will require thoughtful consideration of visitor preferences and perceptions (Kyle et al. 2003). It is important to effectively communicate with current park users and potential visitors about the rationale behind entrance fee programs (whether it involves charging new fees or increasing them). It is also essential to clearly communicate how the fees will be allocated to improve visitor experience and service quality (e.g., whether they will be used for the entire system, specific park facilities, or programs) so that unnecessary misunderstanding and confusion can be avoided (Chung et al. 2011).

State parks are typically perceived as public goods and many public recreation resources offer free access (Eagles 2002; Liu et al. 2018). Operating a state park system or similar recreation amenities during a difficult economic environment often requires management to offset budgets and operate while minimizing effects on programs and access to areas and facilities. Charging entrance or program fees may help make park operations self-sufficient (Walls 2013); however, management should consider various fee options (e.g., individual passes, group passes) and pricing mechanisms (e.g., in-state discounts; waivers for different population segments, such as seniors and low-income family, deemed to be in need) to ensure healthy financial capacity and provide equal opportunities to nearby residents and visitors. Once again, it is important to inform and educate the public as to the reason behind charging entrance fees and identifying services benefiting from these changes.

This study has several research limitations that create opportunities for future research. First, the study recruited research participants via Facebook across various state parks. Thus, any generalization of the results should be done with caution. Using non-random online sampling is not the ideal approach for attaining information from state park users. Research participants were primarily recruited through online surveys via social media postings, which require cautious interpretation. It is possible that the response biases stemming from online convenience sampling might have affected the generalizability of our findings. As a result, our research participants may only represent a certain segment of online users. The demographic profile of survey respondents was similar to that of other studies related to using state parks in Oklahoma (Soltani and Caneday 2017; Wu et al. 2018), but differed from the general Oklahoma population demographic profile. However, given the popularity of social media and the value of online data collection, online surveys continue to prove valuable in obtaining public input for park management and improvements.

Another limitation is that the study utilized a single statement with a dichotomous variable to identify residents' support of state park entrance fees (Pro-Fee vs. No-Fee), perhaps restricting responses from respondents. Additional variables could be considered in future studies: (1) measuring perceived price fairness or perception of equity toward charging fees on public recreational lands might help predict visitors' willingness to pay on various levels (Nyaupane et al. 2007; Chung et al. 2011); (2) identifying the possible impact of entrance fees on different income groups and overall visitation might provide more accurate

information for pricing strategies, even in cases where visitors support entrance fees; and (3) incorporating concepts of loyalty or place attachment could make important contributions to further understanding park visitors who have different personal histories with respect to the destination (Kyle et al. 2003; Moore et al. 2015).

Finally, to understand research participants' experience use history we asked them to categorize their main use during their last trip, either as campers (in this study, 39%), day users (38%), or lodge and cabin guests (23%). It might be beneficial for future studies to use different sampling strategies, such as quota-sampling, to recruit a participant sample in which the proportion of user groups better represents that of the state park users. For example, according to Annual Exchange Information of State Park Directors (Leung et al. 2016), 85% of Oklahoma state park visitors were day users, while 15% were overnight users. Among these overnight users, approximately 60% were campers and 20% were lodge and cabin guests. More efforts are needed to reach day users to attain a representative sample of Oklahoma state park visitors. To do this, an on-site survey (e.g., exit interview or intercept survey) in the parks would be an effective data collection technique.

In conclusion, understanding park visitors' experience, such as service quality and satisfaction, provides valuable information for park management to make informed decisions regarding initiation of or increases to entrance fees. This study offered evidence that park visitors who perceive that reasonable prices are being charged for current services, feel safe and secure while in the park, and agree that state park information is available and current were more likely to support entrance fees when compared to their counterparts. As agencies continue exploring ways to offset operation costs by revenue generation, starting or increasing entrance fees may be a viable option to explore. While considering such an option, it is important to maintain or improve service quality, fulfill customer needs, and provide a satisfactory visitor experience. State parks, a public good, are important to residents and non-residents alike, as they provide an array of opportunities and experiences. Thus, the continued operation of these parks is imperative. While general budget appropriations have decreased, it is important to identify avenues to allow park management to continue providing valuable outdoor education and recreation opportunities to the public. Should initiating or increasing entrance fees for state parks be necessary, business-sector models focused on service quality and satisfaction could aid in improving management of those funds and services.

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