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Regular Paper

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Executive Summary

Individuals recreate to realize desired experiences or benefits. When used for recreational planning, benefits-based management (BBM) is an approach that focuses on understanding and managing for the beneficial outcomes of recreational experiences. Outcome focused management (OFM) builds on this to understand the larger system of recreation facilitation and the wider range of outcomes beyond the individual recreational experience. The challenge for outdoor recreation managers is to determine which outcomes are desired by visitors and work to provide appropriate setting and activity opportunities to help them realize those outcomes. Linking setting characteristics to benefits is complicated by the fact that recreationists are not a homogeneous group. Research has been conducted on different activity and setting preferences, motivations, and constraints to outdoor recreation, comparing and contrasting race and gender differences. However, how desired benefits are linked to specific recreation setting characteristics remains poorly understood. Furthermore, studies of recreation

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opportunity settings often involve a generalized spectrum without addressing many setting characteristics that are important for an increasingly diverse public.

Our study addresses these research needs by investigating the urban demand for private land recreation and the differences in this demand between race and gender groups within the southeastern U.S. Variables of race (African American/Caucasian) and gender (male/female) were analyzed by motivations (beneficial outcome sought), activity preference, preferred setting characteristics, and constraints. Results show that both females and African Americans place greater importance on the more developed setting aspects of the outdoor recreation experience. Furthermore, while the motivations (beneficial outcomes sought) for the different groups were largely consistent, many of the setting characteristics needed to achieve those same benefits were found to be significantly different across gender and race. This study indicates that management should consider an enlarged conception of important setting characteristics to better understand diverse audiences. More investigation is needed regarding how desired benefits are linked to specific recreation settings across user groups.

Keywords

Race, gender, beneficial outcomes, outdoor recreation, planning

Introduction

The recreation experience model posits that individuals recreate to obtain certain outcomes or benefits. More specifically, individuals have motivations and preferences toward participating in activities in settings with their companions to realize desired outcomes (Moore & Driver, 2005). The types of benefits sought by recreationists vary widely and have been studied extensively (Driver, Brown, & Peterson, 1991; Parry & Gollob, 2018; Thomsen, Powell, & Monz, 2018). Benefits include all the outputs of nature-based recreation from the individual experiential benefits to the social, economic, and environmental benefits that accrue to society (Driver, 2008; Stein & Lee, 1995). At the individual level, benefits from the recreational experience include psychological and physiological qualities such as improved self-esteem, increased knowledge of nature, health maintenance, and reduced stress, among many others (Moore & Driver, 2005). The recreation experience preference (REP) scale was developed to assess and categorize these benefits and is the primary tool used to document the benefits of outdoor recreation (Manfredo, Driver, & Tarrant, 1996). The concept of benefits has been expanded beyond the individuals' experiences to include off-site users, local communities, and the resource itself (Driver 2008). Across all categories over 200 benefits of outdoor recreation have been identified (Driver & Bruns, 2008).

Land managers offer the settings that provide opportunities for recreationists to realize their desired benefits. The "opportunity" setting' has been further defined to include social, biophysical, and managerial setting characteristics (Brown, 1984). The Recreation Opportunity Spectrum (ROS) is a system for classifying land and managing recreation. The ROS uses the three setting characteristics to identify lands that could provide a spectrum of opportunity types allowing for a range of experiences (Driver, Brown, Stankey, & Gregoire, 1987; McCool, Clark, & Stankey, 2007). The supply

side mapping of ROS results in six different opportunity settings categories, including Primitive, Semi-primitive Non-motorized, Semi-primitive Motorized, Roaded Natural, Rural, and Urban (Driver, 2008).

Activity-focused management (AFM) was an early recreation management framework that emphasized activity participation rates and activity focused setting provision. This recreation framework was the first step of an evolution of thinking on recreation management with each subsequent model built on lessons learned in their application. Experience-focused management (EFM) was the subsequent model that emphasized how to manage for satisfying recreational experiences (Driver, 2008; Moore & Driver, 2005). EFM specifically required, “relating preferences for experiences both to activity opportunities and the attributes/features of the recreation settings necessary for those activities and experiences to take place. Therefore, it requires very specific delineation of setting attributes that both add to and detract from the quality of specific types of experiences demanded, such as realizing solitude or applying and testing one’s skills.” (Driver, 2008, p. 22). Benefits-based management (BBM) is an outcomes-oriented management model that emerged in the 1990s and has become the prevailing approach and adopted worldwide (Driver, 2008; Parry, Gollob, & Frans, 2014; Stein & Lee, 1995). BBM is an approach that focuses on understanding and managing for the outcomes of recreational experiences (McCool, 2007). As with EFM, this is accomplished by linking both the recreation setting characteristics and activity opportunities to the desired experiences and their outcomes (Driver, 2008). BBM is a tool to analyze or understand the demand for, or what people want out of, outdoor recreation (Cerveny, Blahna, Stern, Mortimer, Predmore, & Freeman, 2011). The most recent iteration of recreation management is outcome-focused management (OFM). OFM encompasses the earlier management strategies and expands on them with the recognition that benefits last well-beyond the recreational experience and extend beyond the recreational setting (Driver & Burns, 2008). OFM outlines a system of recreation facilitators and recognizes a wider variety of recreation providers, stakeholders, users, and beneficiaries (Driver, 2008). Furthermore, OFM identifies both positive and negative outcomes. Like previous models, supply and demand studies are required to understand who their customers are, desired activities and beneficial outcomes, associated setting characteristics, and where they are needed (Driver, 2008). For this paper, we will use the BBM nomenclature since we focus specifically on the experiential benefits sought from on-site users, while still recognizing the larger system and extended benefits of OFM.

BBM has been critiqued by several researchers. More and Kuentzel (1999) find issue with the ubiquitous nature of benefits, making managing for them difficult. They additionally note the cost of developing surveys and studies that investigate benefits that are site and stakeholder specific as impediments to the application of BBM. Cerveny et al. (2011), in their study of recreation management tools used in U.S. Forest Service NEPA planning, note that BBM was a relatively new and unknown recreation management framework and was not frequently applied at the time, but was rated with some potential on their usefulness scale. Parry et al. (2014) developed a study to identify the most salient benefits to recreationists. They identified recreationist types as defined by desired benefits, visitation behavior (to six setting types), and demographics. Through a multi-stage process using a national sample they identified seven major benefits types and six groupings of recreationists. They found that the type of land visited (based on their setting characteristics—urban, rural, front country, middle

country, back country, and primitive—paralleling the ROS) was the primary driver distinguishing each of the recreation motivation groups from the other (Parry et al., 2014). However, more recently, Parry and Gollob (2018) conducted a photo manipulation study suggesting that benefits are relatively flexible across setting types, whereas activity satisfaction is “more stringently tied to recreation settings” (p. 67). These findings suggest that benefits based management may be problematic if the link from beneficial outcomes to setting characteristics is vague or if different groups have different benefit-setting connections. Furthermore, bias may occur if there are race and gender differences in the benefits sought-setting characteristic connections that are masked by a focus on general population or existing recreationist benefits to general setting types (e.g. ROS).

Race and Gender

The challenge for outdoor recreation managers is to determine those setting and activity opportunities to help realize desired outcomes. Research has found there are significant differences in recreational preferences and constraints by race and gender groups that should be considered (e.g., Child et al., 2015; Floyd, Bocarro, & Thompson, 2008; Gobster, 2002; Johnson, Bowker, Green, & Cordell, 2007; Payne, Mowen, & Orsega-Smith, 2002; Virden & Walker, 1999).

Extensive recreation research investigating differences between Caucasians and African Americans has shown consistent findings that pertain to recreation setting preferences. African Americans place greater importance on social interaction and prefer developed and more open areas that contain built/structured amenities (e.g., paved trails, ball fields) (e.g., Dwyer & Hutchison, 1990; Johnson & Bowker, 2004; Kaplan & Talbot, 1988; Philipp, 1993; Stamps & Stamps, 1985; Virden & Walker, 1999).

Studies on gender differences for recreation setting preferences show females have a greater preference for developed and secure settings (e.g., Bialeschki & Hicks, 1999; Ghimire, Green, Poudyal, & Cordell, 2014; Henderson, 1994; Ho et al., 2005; Virden & Walker, 1999). For example, Child et al. (2015) and Lee, Graefe, and Li (2007) both found that females were more likely to consider physical safety when choosing recreation sites. Ghimire et al. (2014) identified personal safety and inadequate facilities as two of several constraints identified by female recreationists. A study by Virden and Walker (1999) on preferences for environmental settings in outdoor recreation found female university students felt a forest environment was more threatening and preferred more visible evidence of management and law enforcement over their male counterparts. In contrast, males revealed a greater preference toward remote natural settings.

Lack of access to quality outdoor recreation opportunities and the relationship between low participation rates of low-income and racial or ethnic minorities is well documented (Shores, Scott, & Floyd, 2007; Taylor, Floyd, Whitt-Glover, & Brooks, 2007; Ussery et al., 2016). For instance, constraints to outdoor recreation have been shown to be higher for females and underrepresented groups (Bustam, Thapa, & Buta, 2011; Wilhelm Stanis, 2009). Perceived constraints to outdoor recreation are heightened for elderly, low-income, minority, or female individuals, and when two or more of these demographic groups are combined, the likelihood of perceiving constraints is intensified (Johnson, Bowker, & Cordell, 2001; Shores, Scott, & Floyd, 2007).

Gomez (2006), in his test of the Ethnicity and Public Recreation Participation model, examined how acculturation, socioeconomic status, subcultural identity, and

perceived discrimination influenced perceived recreation benefits which moderated participation. While their study doesn't differentiate the unique setting characteristic linked to benefits, it highlights the complexity of racial representations, perceived benefits, and resource use. Schelhas (2002) cautions that "the failure to recognize the diverse values and uses that different racial and ethnic groups have for natural resources has the same exclusionary effect as discrimination" (p. 761).

Methods

Study Region

Past research has called for increased minority and gender studies in the Southeast United States as approaches to more effectively engage females and African Americans in forest-based outdoor recreation are important for forest managers (Johnson & English, 2007). In a study by Mowen et al. (2018), non-white respondents reported lower levels of personal and community benefits, indicating some inequalities in providing for all users of local parks and recreation services. Furthermore, Child et al. (2015) identified lack of awareness and safety as significant constraints to outdoor recreation area use by minorities. Regional assessments of African American outdoor recreation interests and constraints should be a focus to understand their low visitation numbers to national forests (Johnson & English, 2007). Additionally, information is needed about other visitors including non-traditional visitors, focusing not only on general information (e.g., age, group number, gender, etc.) but also preferred activities and site amenities (Johnson & English, 2007).

In the southern United States, African American populations are more highly concentrated, accounting for roughly 30% of the population in six southern states (Alabama, Georgia, Louisiana, Mississippi, North Carolina, and South Carolina) (U.S. Census Bureau, 2010). Furthermore, the rural "Black Belt" and various sub-regions such as the Atlanta metropolitan area, have even higher concentrations of African Americans (Johnson & English, 2007). Despite this, and proximity to national forests, African Americans comprise only 5% of visitors to any national forest across in the southern region (NVUM, 2004).

Our study population was selected based on the high concentrations of minorities in urban areas in the southeastern U.S. The rationale was that prior studies have identified discrepancies in urban parks and recreation use and setting preferences, and our research interest with respect to information on minority visitation to national forests and other wildland recreation settings. Our study addresses these regional research needs by examining the urban demand for private land recreation, and the differences between race and gender groups in the Southeastern United States. Specifically, this study examines the effect of race and gender on outdoor recreation preferences for activities, setting attributes, benefits (motivations), and constraints in metropolitan areas across the southeastern region.

Data Collection

This study utilized a quantitative mail survey instrument based on a modified Tailored Design Method (TDM). A public sample of 8,000 individuals was purchased from Survey Sampling International, Inc. This sampling firm uses the Directory Listed database from SSI, an updated version of the residential white page listings. The sample was generated randomly using an nth selection method across each of the eight Met-

ropolitan Statistical Areas. One thousand records were purchased from each of eight urban cores. Bad addresses were eliminated or changed based on a National Change of Address. A total of 900 records from each of the following eight Metropolitan Statistical Areas surrounding the southern “Black Belt” were sampled: (1) Atlanta-Sandy Springs-Marietta, Georgia; (2) Athens-Clarke County, GA; (3) Birmingham-Hoover, AL; (4) Chattanooga, TN-GA; (5) Columbus, GA-AL; (6) Huntsville, AL; (7) Macon, GA; and (8) Montgomery, AL.

Independent variables of race (African American/Caucasian) and gender (male/female) were analyzed for ten categories of dependent variables. The first category asked study participants to identify their favorite activity to participate in away from home in rural settings. The list included 14 activities (viewing natural scenery, walking, other wildlife observation, swimming, family/group gathering, fishing, bird watching, camping, biking/cycling, canoeing/kayaking, visiting agricultural areas, motor sports, hunting, and horseback riding). Next, study participants were presented with six indicators to measure constraints to participation in their favorite activity over the 12-month period prior to the completion of the survey. The six constraint indicators measured were taken from current literature and designed to address two commonly cited constraints, money and time (Shores, Scott, & Floyd, 2007; White, 2008), and issues related to access, crowding, and comfort.

Following the constraint indicators, respondents were asked to rate the importance of 48 setting characteristics within the following categories: amenities and services, social characteristics, trail characteristics, natural characteristics (biophysical quality and biophysical/landscape), preferences for overnight accommodations, and motivations to participate in the activity in the designated setting. These characteristics included the setting constructs of ROS but were designed to elicit a more detailed context than the conventional urban to primitive categories. The attributes include additional natural features and land cover (Morse, Hall, & Kruger, 2009) and a number of specific facilities and managerial characteristics. Motivation indicators represented a cross-section of domains from the recreation experience preference scales, and were related closely to Roggenbuck and Driver's (2000) benefit indicators from a study on non-facilitated uses of wilderness. Finally, demographic data were elicited, including gender and race. All items, 48 setting characteristics and 12 motivations, were rated on 5-point Likert-type scales from least important to most important.

Data Analysis

Categorical data. For categorical data (favorite activity), frequencies were calculated overall and the top seven most popular favorite activities were selected for further analyses using cross tabulations. Statistically significant proportional differences among race and gender groups were identified by chi-square tests (bivariate variables were used for the favorite activities producing 2x2 tests, therefore requiring the use of the Yates's correction for continuity).

Likert-type scale data. Multivariate analyses of variance (MANOVAs) for each of eight categories of continuous dependent variables were performed to identify main and interaction effects of gender and race on each individual dependent variable when examined together. Between-subjects' analyses were then performed and means were analyzed for each dependent variable to discover what were the exact differences.

Results

Survey Response

Completed surveys were received from a total of 1,480 residents for a total response rate of 23% (66.3% male; 33.7% female; 85.6% Caucasian; 12.0% African American). More males and Caucasians responded, which may indicate a higher level of interest in the survey topic among these groups. Respondents from each other race group comprised 2% or less. Respondents having at least some post-secondary education were 81.3% of the surveyed population, with the remaining having no post-secondary education. Over half (55.1%) of survey respondents were between the ages of 45 and 74 with the remaining under 45 (25.0%) and 75 or over (19.9%) (Table 1).

Table 1
Demographic Characteristics of Study Participants

	Frequency	Valid Percent
Gender		
Male	741	66.3%
Female	377	33.7%
Race		
Caucasian	945	85.6%
African American	133	12.0%
Other	26	2.4%
Education		
Did not complete high school	32	2.9%
High school diploma or GED	178	15.9%
Some college but no degree	223	19.9%
Associate degree	96	8.6%
Bachelor's degree	304	27.1%
Graduate or professional degree	269	24.0%
Other	19	1.7%
Income		
Under \$35,000	192	18.4%
\$35,000 - \$49,999	157	15.1%
\$50,000 - \$74,999	244	23.4%
\$75,000 or more	449	43.1%
Age		
20-34	92	8.2%
35-44	184	16.4%
45-54	314	27.9%
55-59	164	14.6%
60-64	130	11.6%
65-74	150	13.3%
75 or older	70	6.2%

Frequency and Chi-square Tests

Overall, the seven most popular favorite primary activities were: family or other group gathering (27.1%), walking/hiking/running/jogging (13.8%), viewing natural scenery (11.8%), fishing (11.5%), swimming (7.8%), camping (6.5%), and hunting (5.4%) (Table 2). Differences were found in preferences for favorite activity by both gender and race. The chi-square test for gender across each of the seven most popular favorite primary activities indicated that the difference in the proportion of males and females was statistically significant for all primary favorite activities except for swimming and camping. The chi-square test revealed statistically significant differences for race for three of the top seven favorite primary activities. Proportionately more African Americans chose family or other group gathering, and proportionately more Caucasians chose camping and hunting as favorite activities (Table 2).

Table 2

Results from Chi-square (Yates's Continuity Correction) Showing Statistically Significant Proportional Differences for Primary Favorite Activity Selection by Gender and Race

	Overall	Gender			Race		
		Yate's Cont. Corr	Male	Female	Yate's Cont. Corr.	Cauc.	Afr. Am.
Family/other group gathering	27.10%	7.67**	21.70%	29.40%	15.65**	22.20%	38.30%
Walking/hiking	13.80%	4.07*	11.20%	15.60%	0.73	12.80%	9.80%
Viewing natural scenery	11.80%	7.60**	9.20%	14.90%	0.61	11.70%	9.00%
Fishing	11.50%	30.74**	15.40%	4.00%	0.73	11.30%	14.30%
Swimming	7.80%	2.38	6.70%	9.50%	0.77	7.80%	5.30%
Camping	6.50%	0.31	6.30%	7.40%	9.83**	7.70%	0.00%
Hunting	5.40%	31.61**	8.90%	0.30%	6.59**	6.90%	0.80%

* Statistical significance at .05 alpha level

** Statistical significance at .01 alpha level

Multivariate and Univariate Analyses of Variance

Eight separate one-way between-groups multivariate analyses of variance were performed to investigate the effect of gender and race on outdoor recreation setting preferences. There were no statistically significant interaction effects which suggest that the two independent variables did not exhibit an interactive relationship. There were statistically significant differences between males and females as well as between Caucasians and African Americans, for the combined dependent variables for seven of the eight multivariate analyses performed.

Univariate between-groups analyses were also conducted to determine which dependent variables had differences between gender and race groups. When the results for each dependent variable were considered independently, a Bonferroni adjusted alpha level was applied (Huck & Cormier, 1996). For each category of setting indicators, the desired alpha level of .05 was divided by the number of dependent variables in the set (Tables 3-6).

Table 3

Effect of Gender on Setting Preferences and Descriptive Data by Gender (Between-Subjects Results)

	F	Sig	Par. Eta Squared	Gender		$\Sigma\mu$
				Male	Female	
Biophysical/Quality (BQ) $\alpha = .008^*$						
Clean air	18.22	0.00	0.02	4.35	4.72	9.07
Clean water	21.788	0.00	0.02	4.32	4.73	9.05
Variety of wildlife	---	---	---	3.56	3.52	7.08
Variety of plant and tree species	8.291	0.00	0.01	3.18	3.54	6.72
Natural scenic beauty	---	---	---	3.80	4.05	6.66
Unmodified natural environment	---	---	---	3.10	2.87	5.97
Biophysical/Landscape (BL) $\alpha = .006^*$						
River or stream (flowing water)	---	---	---	3.47	3.43	6.90
Lake or pond	---	---	---	3.43	3.29	6.71
Woodland/forest	---	---	---	2.99	2.93	5.92
Mixture of open field and forest	---	---	---	2.78	2.89	5.67
Land area bigger than 50 acres	17.527	0.00	0.02	3.00	2.44	5.43
Tree plantation	---	---	---	2.53	2.64	5.17
Open range or pasture	---	---	---	2.35	2.38	4.73
Agricultural farm field	---	---	---	2.10	2.08	4.18
Marsh, wetland or swamp	9.684	0.00	0.01	2.15	1.77	3.92
Facilities/Amenities (FA) $\alpha = .005^*$						
Secure parking	---	---	---	3.92	4.26	8.17
Drinking water	9.692	0.002	0.01	3.82	4.24	8.06
Flush toilets	19.817	0.000	0.02	3.67	4.29	7.96
Cellular phone reception	11.109	0.001	0.01	3.38	3.88	7.26
Hot showers	13.186	0.000	0.01	3.01	3.56	6.57
Picnic tables	---	---	---	3.05	3.35	6.39
Cooking grills	---	---	---	3.06	3.23	6.29
Group shelter	16.728	0.000	0.02	2.77	3.33	6.10
Single track trails (biking or hiking)	---	---	---	2.95	3.04	5.99
Fire rings	---	---	---	2.30	2.35	4.65
Boat launch/access	---	---	---	2.31	1.93	4.24
Management/Development (MD) $\alpha = .006^*$						
Well maintained trail	18.97	0.00	0.02	3.69	4.18	7.87
Ability to reserve lodging	---	---	---	3.74	4.06	7.80
Directional signs	13.475	0.00	0.01	3.66	4.10	7.76
Educational signs and brochures	12.571	0.00	0.01	3.12	3.56	6.69
On-site regulations and controls	9.331	0.00	0.01	3.12	3.51	6.64
Accessibility for physically disabled	10.293	0.00	0.01	2.80	3.25	6.05
Presence of site manager	9.289	0.00	0.01	2.53	2.90	5.42
Recreational equipment rental	9.153	0.00	0.01	2.53	2.89	5.42
Overnight Accommodations (OA) $\alpha = .006^*$						
Hotel, motel, or resort	15.669	0.00	0.02	3.31	3.87	7.18
Equipped cabins (modest)	8.929	0.00	0.01	3.05	3.45	6.50
Family or friends' home	---	---	---	2.83	3.07	5.91
Developed campsite (drive-in)	---	---	---	2.68	2.87	5.54
Bed and Breakfast	18.616	0.00	0.02	2.37	2.94	5.31
Rustic cabins (basic)	---	---	---	2.37	2.59	4.96
Primitive camping	---	---	---	2.24	2.15	4.38
RV hookup	---	---	---	2.09	2.24	4.33
Social/Companionship (SC) $\alpha = .025^*$						
Ability to be in large groups (8 or more)	8.823	0.00	0.01	2.41	2.78	5.19
Rarely hear and see others	---	---	---	2.42	2.55	4.97

*Bonferroni correction used

While differences were found within every setting characteristic category (Table 3), no significant differences were found in the motivations and only two constraints were found to be significantly different between men and women (Table 4). While there were only a few significant differences between Caucasians and African Americans for biophysical quality and biophysical landscape settings, there were significant differences in many setting characteristics under facilities/amenities, management, and overnight accommodations (Table 5). In contrast, there were only a few significant differences found in the motivations and constraints between Caucasians and African Americans (Table 6).

Table 4

Between-Subjects Results of Effects of Gender on Motivation and Constraint Indicators and Descriptive Statistics by Gender

	<i>F</i>	Sig	Par Eta 2	Gender		Sum of Means
				Male	Female	
Motivations $\alpha = .004$						
To get away from the usual demands of life	---	---	---	4.20	4.29	8.49
To do something with my family	---	---	---	4.19	4.20	8.39
To enjoy the sounds and smells of nature	---	---	---	4.02	4.06	8.08
To escape noise and crowds	---	---	---	3.85	3.87	7.72
To be with friends	---	---	---	3.77	3.80	7.57
To explore the area and learn about nature	---	---	---	3.69	3.70	7.39
To promote my physical fitness/exercise	---	---	---	3.62	3.65	7.26
To be close to nature	---	---	---	3.58	3.64	7.21
To experience excitement/adventure	---	---	---	3.63	3.55	7.18
To develop my personal/spiritual values	---	---	---	3.44	3.73	7.17
To learn about the history/culture of the area	---	---	---	3.46	3.50	6.96
To depend on/develop my skills and abilities	---	---	---	3.32	3.02	6.34
Constraints $\alpha = .008$						
Not enough time	---	---	---	3.58	3.70	7.28
Not enough money	17.58	.00	.022	2.71	3.43	6.14
Not enough places near me to do this activity	---	---	---	2.46	2.75	5.21
Didn't know where to go	14.00	.00	.018	1.58	2.04	3.61
Preferred destination was too crowded	---	---	---	1.74	1.76	3.50
Felt unwelcome or threatened	---	---	---	1.45	1.65	3.10

Gender Differences

Under the various settings there were many categories that were ranked significantly higher by females compared to males (Table 3). For example, under biophysical/quality, females ranked the following significantly higher: clean air, clean water, and a variety of plant and tree species (Table 3). Under facilities/amenities, females ranked the following significantly higher: drinking water, flush toilets, cellular phone reception, hot showers, and group shelter. Under management/development, all but one category (ability to reserve lodging) was ranked significantly higher by females. These categories included well maintained trail, directional signs, educational signs and brochures, on-site regulations and controls, accessibility for physically disabled, presence of site manager, and recreational equipment rental. Under overnight accommodations, the following were ranked significantly higher by females: hotel, motel, or resort; equipped cabins; and bed and breakfast.

Furthermore, under social/companionship setting, females rated ability to be in large groups (8 or more) significantly higher than males. Males did rank the following categories significantly higher under the biophysical/landscape setting: land area bigger than 50 acres and marsh, wetland, or swamp area. Lastly, only two constraints to recreation (not enough money and didn't know where to go) were found significantly higher for women (Table 4).

Racial Differences

Under the various settings, there were many categories that were ranked significantly different between African Americans and Caucasians (Table 5). Under biophysical landscape, Caucasians preferred river or stream (flowing water) or woodland/forest landscape while African Americans preferred an open range or pasture or agricultural farm field. Under facilities/amenities African Americans ranked most categories significantly higher than Caucasians, including: secure parking, drinking water, flush toilets, cellular phone reception, hot showers, picnic tables, cooking grills, group shelter, and single track trails. For management/development, African Americans ranked all categories significantly higher than Caucasians (ability to reserve lodging, directional signs, educational signs and brochures, on-site regulations and controls, accessibility for physically disabled, presence of site manager, recreational equipment rental), except for the category "well-maintained trails," which was ranked significantly higher by Caucasians. For overnight accommodations, African Americans ranked all categories significantly higher than Caucasians: hotel, motel, or resort; equipped cabins; family or friends' home; developed campsite; bed and breakfast; rustic cabins; primitive camping; RV hookup. African Americans ranked the ability to be in large groups (eight or more) significantly larger than Caucasians for social companionship. Significant differences in motivation between race included Caucasians wanting to be closer to nature more than African Americans and African Americans wanting to develop personal/spiritual values and to depend on/develop skills and abilities more than Caucasians (Table 6). Significant constraints included African Americans not knowing where to go and feeling unwelcomed or threatened (Table 6).

Discussion

Race explained a large amount of the variance for overall facilities/amenities and management/development indicators. African Americans preferred more developed settings evident by higher ratings on nearly all of the facilities/amenities and management/development indicators. Females also placed greater importance on the developed aspect of the outdoor recreation experience, though to a lesser degree than African Americans when compared to Caucasians. African Americans and females both preferred overnight accommodations of hotels/motels/resorts and bed and breakfasts more than their counterparts. Females were also more concerned with having a variety of plant and tree species, clean air, and clean water.

For both females and African Americans, this greater importance on the developed aspects of the outdoor recreation experience and African Americans feeling unwelcomed or threatened more than Caucasians as a constraint to recreating may be linked to safety concerns based on affective and perceptual /cognitive meanings involving fear, anxiousness, or real or perceived threats (Johnson, 1998; Munson, 1994). In several studies on perceptions of constraints toward outdoor recreation, women were found to feel more constrained by concerns of personal safety and inadequate facilities

Table 5*Effects of Race on Setting Preferences and Descriptive Statistics by Race*

	<i>F</i>	<i>Sig</i>	Par. Eta Squared	Race		$\Sigma\mu$
				Cauc	Afr. Am.	
Biophysical/Quality (BQ) $\alpha = .008^*$						
Clean air	7.125*	0	0.01	4.42	4.65	9.07
Clean water	---	---	---	4.44	4.61	9.05
Natural scenic beauty	---	---	---	4.06	3.79	7.85
Variety of wildlife	---	---	---	3.67	3.42	7.08
Variety of plant and tree species	---	---	---	3.42	3.3	6.72
Unmodified natural environment	---	---	---	3.08	2.89	5.97
Biophysical/Landscape (BL) $\alpha = .006^*$						
River or stream (flowing water)	8.188*	0	0.01	3.62	3.29	6.90
Lake or pond	---	---	---	3.38	3.33	6.71
Woodland/forest	24.98*	0	0.03	3.27	2.65	5.92
Mixture of open field and forest	---	---	---	2.85	2.82	5.67
Land area bigger than 50 acres	---	---	---	2.77	2.67	5.43
Tree plantation	---	---	---	2.5	2.67	5.17
Open range or pasture	12.073	0.001	0.012	2.16	2.57	4.73
Agricultural farm field	15.653	0	0.016	1.87	2.31	4.18
Facilities/Amenities (FA) $\alpha = .005^*$						
Secure parking	17.675*	0	0.02	3.82	4.36	8.17
Drinking water	18.498*	0	0.02	3.74	4.32	8.06
Flush toilets	13.736*	0	0.02	3.73	4.24	7.96
Cellular phone reception	39.244*	0	0.04	3.16	4.1	7.26
Hot showers	11.272*	0	0.01	3.03	3.45	6.48
Picnic tables	25.294*	0	0.03	2.86	3.53	6.39
Cooking grills	68.18*	0	0.07	2.59	3.71	6.29
Group shelter	51.32*	0	0.05	2.56	3.54	6.1
Single track trails (biking or hiking)	11.461*	0	0.01	2.75	3.24	5.99
Fire rings	---	---	---	2.36	2.29	4.65
Boat launch/access	---	---	---	2.2	2.04	4.24
Management/Development (MD) $\alpha = .006^*$						
Well maintained trail	18.466*	0	0.02	4.18	3.69	7.87
Ability to reserve lodging	19.561*	0	0.02	3.61	4.19	7.8
Directional signs	26.726*	0	0.03	3.56	4.19	7.76
Educational signs and brochures	50.242*	0	0.05	2.9	3.79	6.69
On-site regulations and controls	38.341*	0	0.04	2.92	3.71	6.64
Accessibility for physically disabled	76.825*	0	0.08	2.41	3.64	6.05
Presence of site manager	61.39*	0	0.06	2.24	3.18	5.42
Recreational equipment rental	76.461*	0	0.08	2.18	3.24	5.42
Overnight Accommodations (OA) $\alpha = .006^*$						
Hotel, motel, or resort	44.877*	0	0.04	3.12	4.06	7.18
Equipped cabins (modest)	23.961*	0	0.02	2.92	3.58	6.5
Family or friends' home	20.945*	0	0.02	2.63	3.28	5.91
Developed campsite (drive-in)	8.615*	0	0.01	2.57	2.98	5.54
Bed and Breakfast	41.72*	0	0.04	2.23	3.09	5.31
Rustic cabins (basic)	7.532*	0	0.01	2.31	2.64	4.96
Primitive camping	14.527*	0	0.02	1.96	2.43	4.39
RV hookup	10.4*	0	0.01	1.94	2.39	4.33
Social/Companionship (SC) $\alpha = .025^*$						
Ability to be in large groups (8 or more)	47.628*	0	0.04	2.17	3.02	5.19
Rarely hear and see others	---	---	---	2.57	2.4	4.97

and information (Child et al., 2015; Ghimire et al., 2014; Johnson et al., 2001). While not all categories that females ranked higher can be linked to concerns of personal safety and inadequate facilities and information, higher values on more developed facilities and amenities categories follow this trend. Facilities/amenities categories such as cellular phone reception and management/development categories including well maintained trails, educational signs and brochures, directional signs, on-site regulations and controls, and presence of site manager are suggestive of some security concerns.

Table 6*Effects of Race on Motivation and Constraint Indicators and Descriptive Statistics by Race*

	Between-subjects <i>F</i>	Results Sig.	Partial Eta Squared	Cauc.	Race Afr. Amer.	Sum of Means
Motivations $\alpha = .004$						
To get away from the usual demands of life	---	---	---	4.26	4.23	8.49
To do something with my family	---	---	---	4.09	4.30	8.39
To enjoy the sounds and smells of nature	---	---	---	4.07	4.01	8.08
To escape noise and crowds	---	---	---	3.88	3.84	7.72
To be with friends	---	---	---	3.69	3.88	7.57
To explore the area and learn about nature	---	---	---	3.63	3.77	7.39
To promote my physical fitness/exercise	---	---	---	3.48	3.78	7.26
To be close to nature	15.827	.000	.016	3.83	3.39	7.21
To experience excitement/adventure	---	---	---	3.42	3.75	7.18
To develop my personal/spiritual values	17.543	.000	.017	3.31	3.86	7.17
To learn about the history/culture of the area	---	---	---	3.41	3.55	6.96
To depend on/develop my skills and abilities	15.321	.000	.015	2.91	3.24	6.15
Constraints $\alpha = .008$						
Not enough time	---	---	---	3.81	3.47	7.28
Not enough money	---	---	---	2.93	3.21	6.14
Not enough places near me to do this activity	---	---	---	2.53	2.69	5.21
Didn't know where to go	11.309	.001	.014	1.60	2.01	3.61
Preferred destination was too crowded	---	---	---	1.75	1.75	3.50
Felt unwelcome or threatened	21.533	.000	.027	1.32	1.79	3.11

Our study showing African American preference for open range or pasture or agricultural farm field is consistent with other research that shows that overall, African Americans prefer natural environments that are open, well-groomed, and have more structured (i.e., built) amenities (e.g., Johnson & Bowker, 1999; Kaplan & Talbot, 1988; Philipp, 1993; Stamps & Stamps, 1985; Virden & Walker, 1999). Kaplan and Talbot's (1988) study on preferences for nearby natural environments found that African Americans did not prefer settings with dense vegetation or confinement but, rather outdoor settings with built components, openness and visibility (e.g., picnic areas, ball fields). In Wilhelm Stanis et al. (2009) diverse respondents also felt constrained by the lack of availability of desired activity offerings. Additionally, Wallace and Witter (1992) shows a preference for well-lit and supervised recreation settings by African American focus-group participants. Our results showing Caucasians favoring the top seven favorite primary activities more than African Americans are also consistent with national surveys that show African Americans are significantly less likely than Caucasian Americans to engage in forest-based activities such as camping and hiking or water-related activities other than fishing (Johnson, Bowker, & Cordell, 2001).

Negative meanings associated with natural environments caused by fear of wild-life (Taylor, 1989; Wallace & Witter, 1992) or fear of other people could be the basis for these more open, built, and developed preferences (Sasidharan, Willits, & Godbey, 2005). Virden and Walker (1999) suggest a potential association between undeveloped forest environments and recent and past discrimination acts against African Americans. In fact, this association between “wildlands” and African Americans’ historical background (e.g., slavery, plantation agriculture, lynching, and harsh working conditions in the southern forest industry) has created an aversion to visiting some of these places (Johnson & Bowker, 2004). Others, however, attribute less engagement by African Americans in natural settings to desiring a more sophisticated urban, cosmopolitan identity and its representation of achievement and success for many (Martin, 2004).

Recreation Management Implications

It is an important finding that so many of the setting characteristics were found to be statistically significant across demographic groups, while the motivations (beneficial outcomes sought) for the groups largely were not. These findings have implications for the use of benefits based management (BBM) because it may be that outcomes (motivations) cannot be used to differentiate setting preferences across racial and gender lines. A critical element of benefits based management is making the connection between the setting and the ability of the recreationist to realize their desired experiences or beneficial outcomes (motivations) (Stein & Lee, 1995). While Parry and Gollob (2018) found that the benefits-setting connection may be flexible for some outcomes (e.g., you can get physical fitness in lots of different settings), they also found that the coupling between activity and setting and resultant satisfaction is tighter. This is perhaps a reminder not to forget the foundations of activity (AFM) and experience (EFM) when managing a setting. If managing to increase participation of different user groups, identifying the specific activities they prefer and relating those preference to specific setting characteristics and benefits sought might be the level of specificity required (also suggested by Wilhelm Stanis et al., 2009).

Parry et al. (2014), in a national study found common groups of salient recreation benefits that were correlated to six broad categories of recreation setting characteristics that form a spectrum of recreation opportunities (similar to ROS). In this study, we found that setting characteristics can be differentiated at much finer scales. The standard conception of recreation supply differentiated by the ROS spectrum (or those by Parry et al., 2014) may not be sufficient to understand and manage for setting preferences by race and gender differences.

A review by Pierskalla et al. (2004) also had concerns with applying BBM to the case studies they focused on. Those authors found several studies attempting to link recreation setting attributes with benefits had mixed results. McCool et al. (2007) suggest that the Pierskalla et al. (2004) study indicates “much more work needs to be done to understand the recreation production function, measure site attributes, and establish linkages with expected benefits” (p. 104). The recommendations of Driver and Bruns (2008) to conduct supply and demand studies at the local level remains, with the added caveat of linking the benefits to the setting characteristics with specific consideration to racial and gender recreation groups.

Conclusion

We have found the benefit-setting connections to be different across racial and gender groups. Furthermore, we have found that there are a number of additional setting characteristics (beyond the ROS categories) that are important for determining a preferred setting. Therefore, to reduce the potential for structural discrimination, managers must consider not simply which benefits to manage for, but for whom they are managing them. More research on the links between benefits and recreation setting characteristics and the differences between gender and racial groups is important, especially if we want to address low visitation numbers or safety concerns regarding our natural areas. Virden and Walker ask (1999), "Can managers design recreation settings that are more attractive, inclusive, and equitable to different recreation groups?" Floyd (1998) recommends expanding the dependent variables used in recreation research to get a full understanding of preferences and benefits sought by African Americans, rather than simply participation frequency and constraint information. In the same way research has focused on the spectrum of opportunities, it should focus on the benefit-setting connections of a diversity of the public. Finally, returning to OFM, our results indicate that the larger systemic benefits of recreation facilitation might also profit from studies that analyze setting characteristic to outcomes connections across diverse groups and at different scales.

This study had several limitations, including low numbers of African Americans and women and low response rates. The database from which the survey sample was drawn was derived from updated telephone directory lists. These lists may have been exclusive of some groups and may help explain lower response rates for African Americans and females. However, our low survey response rate (23%) and lack of non-response bias check due to budget constraints may caution its generalizability (Bailey, 1994; Dillman, 2000). Despite these limitations, we believe our study highlights an issue for further study within the field of BBM.

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