

Generally, across the seven activity groups, we found that participation rates for outdoor activities are visiting recreation significantly higher among males, non-Hispanic Whites, young to middle-aged people, people with college education, middle to higher income people, and rural residents.

---

## Invited Paper

### A National Study of Constraints to Participation in Outdoor Recreational Activities

by Gary T. Green, J.M. Bowker, Xiongfei Wang, H. Ken Cordell, and Cassandra Y. Johnson<sup>9</sup>



Gary T. Green

## Introduction

A number of studies have shown that certain groups in American society (e.g., Blacks, women, urban dwellers) can encounter barriers or perceived constraints to participation in outdoor recreation. Early research on constraints focused on racial or gender differences. More recent research has examined the effects of income, education, age, and place of residence (Arnold and Shinenw 1998). However, despite the growth of research on constraints, few studies have examined how social factors (e.g., access, services, health) may constrain participation in outdoor recreation.

This paper extends research of an earlier study (Johnson and others 2001). While this study includes traditionally marginalized groups such as Blacks, women, and rural dwellers, it broadens the focus to include immigrant, Hispanic, Asian/Pacific Islander, low-income and

less-educated populations. It was hypothesized that members of these groups were more likely than the rest of society to perceive their participation in outdoor recreation as being constrained. Eighteen specific constraints, grouped into three general categories—personal, structural, and psychological—were examined. This study focuses on perceived constraints to participation in the respondent's favorite outdoor recreation activities.

## Approach

Data for this study came from the National Survey on Recreation and the Environment (NSRE). The constraints questions to NSRE respondents were preceded by questions about their favorite outdoor recreation activities. Respondents were read a list of reasons people might not participate in favorite outdoor activities and asked for each reason if it had kept them from participating as often as they wanted.

To statistically test whether respondents in each of the minority groups felt more (or less) constrained in pursuit of their favorite outdoor activity, logistic regression equations were developed for each of the constraints. Included in each of these models were age, household income, immigrant status, ethnicity (e.g., Black, Hispanic, Asian/Pacific Islander), gender, region (e.g., South, Central, West), education (e.g., less than high school, bachelor's degree or more), residency (e.g., urban), and setting for favorite activity (e.g., winter, water, dispersed). A statistically significant positive (negative) coefficient on any of these variables indicated that the probability the respective group felt constrained in their participation was higher than (less than) that of the rest of society.

## Results

Analysis revealed that all eighteen constraint models were statistically significant ( $p < 0.05$ ) based on likelihood ratio tests (table 5.8). Results for each population classification variable are presented below.

**Age**—Age was a significant factor in nine of the constraints, but often in opposite directions. Increasing age reduced some constraints (e.g., time and money), while increasing age amplified other constraints (e.g., physical limitations, safety, and health).

---

<sup>9</sup>Gary T. Green, Associate Professor, Warnell School of Forest and Natural Resources, University of Georgia, Warnell School of Forest Resources, Athens, GA; J.M. Bowker, Research Social Scientist, Xiongfei Wang, Former Graduate Research Assistant, Department of Statistics, University of Georgia, Athens, GA, H. Ken Cordell, Pioneering Senior Scientist, and Cassandra Y. Johnson, Research Social Scientist, U.S. Department of Agriculture Forest Service, Southern Research Station, Athens, GA.

**Gender**—Generally, women felt more constrained from participating in their favorite recreation activities than men across all possible reasons. The exception was time constraints, where men reported feeling more constrained than women.

**Immigrants**—Except for not understanding the language, immigrants felt less constrained than people born in the United States for the following reasons: “don’t have enough money,” “inadequate transportation and information,” “crowded activity areas,” “safety and pollution problems,” “outdoor pests,” “feel unwelcome or uncomfortable,” and “household member has disability.” Stodolska (1998) found that immigrants often experienced constraints unlike the general populace (e.g., language barriers) and that many constraints were less important to immigrants because they normally worked more and consumed less of their income, while often confining their leisure engagements to their ethnic communities.

**Income**—Results indicated that lower income households felt more constrained for the following reasons: “don’t have enough money,” “health reasons,” “inadequate transportation,” “no one to do activities with,” “feel afraid in forests,” “pollution problems,” “outdoor pests,” “feel unwelcome or uncomfortable,” “can’t understand the language,” “physically limiting condition,” and “household member has a disability.” These results support previous studies’ findings that people with lower incomes feel more constrained than others.

**Education**—People with less than a high school education felt less time constrained than people with a high school education, and less constrained by inadequate information. The fact that inadequate information was not perceived as a constraint by this group could indicate this group has found a way to circumnavigate this problem, or that they are using facilities and resources close to home of which they are already fully aware.

People with less than a high school education felt more constrained than people who completed high school from participating in their favorite recreation activities because of “inadequate transportation and information,” “health,” “lack of money,” “feel afraid in forests,” “feel unwelcome or uncomfortable,” “can’t understand the language,” “physically limiting condition,” and “household member has a disability.” In general, people with low education and income levels usually have low participation rates and often encounter multiple barriers to participation.

**Blacks**—Blacks felt more hindered from participating in their favorite recreation activities than Whites for the “all of the reasons” except “having no one with whom to do activities.”

**Asian/Pacific Islanders (API)**—Crowded activity areas was the only factor where API felt less constrained than Whites from participating in their favorite recreation activities. API felt more constrained than Whites for these reasons: “don’t have enough time because of my job,” “inadequate transportation,” “facilities and information,” “safety problems,” “feel unwelcome or uncomfortable,” and “feel afraid in forests.”

**Hispanics**—The results indicated that Hispanics felt more constrained from participating in their favorite recreation activities than Whites for the following reasons: “not enough time because of my job,” “safety problems,” “can’t understand the language,” and “feel afraid in forests.” It is important to note this study’s findings for API and Hispanics because previous constraints research has focused on Blacks in comparison to Whites. In comparing the results of Blacks, API, and Hispanics, considerable overlap appears to exist in their perceived constraints to recreation.

**Rural residence**—Results by urban or rural residence revealed that urban dwellers felt less constrained by reasons of “don’t have enough time because of my job and family” and “outdoor pest” than rural dwellers. Urban dwellers were more likely to feel constrained by “inadequate transport,” “crowded areas,” and “safety problems” than were rural dwellers.

**Regions**—In eight cases (e.g., “don’t have enough time,” “health reasons,” “no one to do activities with,” “safety problems,” “inadequate facilities,” “outdoor pests,” “can’t understand the language,” and “feel afraid in a forest”), Southerners felt more constrained from participating in their favorite recreation activities than Northerners felt. However, in the case of inadequate transportation, Southerners felt less constrained than Northerners. Conversely, people who resided in the Central region felt more constrained than Northerners for reasons of “don’t have enough money” and “crowded activity areas.” They felt less constrained by reasons of “don’t have enough time because of family,” “poorly maintained activities,” “pollution problems,” and “outdoor pests.” Westerners felt more constrained by “health reasons” and “physically limiting condition” than Northerners. Westerners felt less constrained than Northerners for reasons of “outdoor pests” and “can’t understand the language.”

**Table 5.8 – Summary of significant likelihood ratio test results for perceived constraints to favorite outdoor recreation activities**

Constraints	Population and setting factors														
	Age	Gender	Immigration	Income	Low education	B.S./ Grad Education	Black	Hispanic	Urban	South	Central	West	Winter	Water	Dispersed
<b>Personal</b>															
Not enough time because of work and long hours	-X	X			-X			X	-X				X	X	X
Not enough time because of family, etc	-X	-X			-X			-X	X	-X			-X		
Personal health reasons	X	-X		-X	X	-X			X		X				
I have a physically limiting condition without equipment	X	-X		-X	X	-X					X			X	
A member of my household has a disability	X	-X	-X	-X	X	-X	X								
Not enough money	-X	-X	-X	-X	X	-X					X				
Inadequate transportation	-X	-X	-X	-X	X	-X	X	X	X	-X					
No one to do activities with	-X			-X	-X		-X	-X	X					-X	
<b>Structural</b>															
Poorly maintained activity areas	-X					-X	X							-X	
Inadequate facilities in activity areas	-X	-X		-X	X	-X	X	X	X						
Crowded activity areas	-X		-X				-X	X	X				X		
Pollution problems in activity areas	-X		-X	-X			X						-X		X

(continued)

Appendix table 5.8 (continued)

Constraints	Population and setting factors														
	Age	Gender	Immigration	Income	Low education	B.S./ Grad Education	Black	Hispanic	Urban	South	Central	West	Winter	Water	Dispersed
Inadequate information on places to do activities	-X	-X	-X	-X	-X		X								-X
I can't understand language on signs or spoken at many outdoor recreation areas	X		X	-X			X	X	X						-X
<b>Psychological</b>															
I am uncomfortable b/c sometimes I feel afraid in forest or other natural settings	X	-X		-X	X		X	X							X
Personal safety problems in activity areas	X	-X	-X				X	X	X						X
I feel unwelcome/uncomfortable at many outdoor recreation areas b/c of who I am			-X	-X	X		X								X
Outdoor pests, e.g., mosquitos, chiggers, or ticks		-X	-X	-X			X	-X	X						-X

Note: X = significant (p≤.05).

Source: USDA Forest Service (2009).

**Activity settings**—In general, the activity setting category (e.g., developed, winter, water, dispersed) had little influence on a respondent’s perceived constraints. Overall, regardless of setting, the most prevalent constraints to participants were: “not enough time because of my job,” “inadequate transportation,” “safety problems,” “physically limiting condition,” “outdoor pests,” “can’t understand the language,” and “feel afraid of a forest.” The least mentioned constraints were “poorly maintained areas” and “crowded activity areas.” Overall, results supported the hypotheses that minorities, women, rural residents, lower income people, and less educated people had higher probabilities of feeling constrained in their participation. Contrary to expectations, results also indicated that immigrants perceived fewer constraints, except for language, than people born in the United States.

## Discussion

Public lands, natural resources, and recreational facilities are there, in part, for the enjoyment, benefit, and recreational participation of all. However, this research has shown that some segments of our society feel more constrained than others from participating in outdoor recreation. Past images of our parks have featured a particular genre of signage, pictures, displays, facilities, programs, services offered, management personnel, and languages spoken. These past images may play a large role in how people today perceive their freedom or feeling of welcome to use those parks. This historic context might partly explain why immigrants, who are often new to this country, perceive fewer constraints to outdoor recreation.

## End Invited Paper

---

## Invited Paper



Deborah Chavez

## Latinos and Outdoor Recreation

by Deborah J. Chavez<sup>10</sup>

The research reported here includes a number of studies conducted in southern California. It was aimed at better understanding the recreation needs and desires of Latino populations. Generally, the findings indicate that Latinos have many of the same recreation needs as other groups, such as places to recreate and reasonable accommodations. But it also indicates they have some unique preferences.

The ethnic and racial profile of the United States is undergoing a major shift. In the decades ahead, people of color will constitute a majority of the population (Shinew and others 2006). Over the last 100 years, few racial or ethnic groups have had as great an impact on the demography of the United States as Latinos (Saenz 2004). Note that “Hispanic” is a term developed by the U.S. Census Bureau, while “Latino” is the term used for this paper, unless referring to Census data. Latinos are measured by the U.S. Census as having Hispanic origins (including Mexican, Central and South American, Puerto Rican, or Cuban heritages). Latinos may be White, African American, or of other races.

The number of Latinos in the United States more than doubled between 1980 and 2000, accounting for 40 percent of the growth in the country’s population during that period (Saenz 2004). While in 1900 there were approximately 500,000 Latinos in the United States, today there are more than 35 million. In 2000, people of Mexican origin were the largest Hispanic group in the United States, followed by Puerto Rican, Cuban, Central American,

---

<sup>10</sup>Deborah J. Chavez, Supervisory Research Social Scientist, Pacific Southwest Research Station, U.S. Department of Agriculture Forest Service, Riverside, CA.