

Ethnicity and Urban Park Use: A Cross-Cultural Examination of Recreation Characteristics Among Six Population Subgroups

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Introduction

The ethnic minority population of the US continues to increase due to rising minority birth rates coupled with the influx of ethnic immigrants to America's cities, suburbs and towns (Parrillo 1994). Based on present immigration trends, by the year 2050, 22 percent of the US population will be Hispanic and 10 percent will be Asian (US Department of Commerce 1994). Urban ethnic minority groups thus constitute an important and growing user segment of urban and community parks and forests. These parks and forests not only provide diverse opportunities for recreation, leisure, and cultural activities (Chicago Park District 1989; More 1985), but they also serve as alternative access routes to shop or work and connectors between neighborhoods; foster diversity of social relationships in much the same way that they foster biological diversity among flora and fauna (Shafer and Floyd 1997). To better manage urban and community forests and parks, a heightened understanding of the recreational needs and interests of racial and ethnic minority residents they serve is important.

Current demographic trends indicate population growth of racial and ethnic minority groups is increasing considerably faster than the rate for the US population as a whole. If race and ethnic definitions remain the same, and so do immigration, fertility, and mortality patterns, minority groups will continue to grow faster than the non-minority population (Riche 2000). According to current projections, non-Hispanic Whites will make up barely one-half of the total population by 2050 and will lose their majority status by 2060. The US population is presently comprised of 72 % non-Hispanic Whites, 12% non-Hispanic African-Americans, 12% Hispanics, and 4% Asian and Pacific Islanders, and the share of the minority population in the US will rise from 28% in 1999 to 47 % in 2050 (Riche 2000). Over the next 30 years, 82 % of the nation's growth will come primarily from Hispanic, Asian, African-American, and other ethnic minorities (Dwyer 1994; Murdock and others 1990; USDA Forest Service 1994). Based on present immigration trends, by the year 2050, 22% of the US population will be Hispanic, 15% African-American and 10% will be Asian (US Department of Commerce 1994). Most of the ethnic population in the US resides in urban and metropolitan areas – almost 95% of Asian Americans, more than 91% of all Hispanics, and more than 85% of African-Americans are urban residents. Non-Hispanic Whites account for 50% or less of the urban population (Frey 1998). Moreover, in many urban areas, these ethnic and racial “minority” groups outnumber the traditional “White” majority. Indeed, nationwide, ethnic and racial “minority” groups constitute an important and growing user segment of urban parks and forests.

Much of the research examining leisure behavior, including recreation participation rates and patterns of participation, of the US population has relied predominantly on general population samples, consisting usually of a larger proportion of White than non-White respondents (Ewert and others 1991). Despite the undeniable significance of such studies and their contribution to leisure research, they have not provided a sufficient examination of the recreation participation rates and participation patterns of specific ethnic minority groups (Carr and Williams 1993). In order to better understand the forms of ethnic recreation, this study will attempt to investigate differences in outdoor recreation characteristics (recreational group and activity preference) across six population subgroups, i.e., Hispanic/Latino or Hispanic American, Chinese or Chinese American, Japanese or Japanese American, Korean or Korean American, African-American, and Anglo or White groups.

Ethnic diversity will impact the social landscape of urban areas, including the ways in which residents use urban parks and forests for recreational purposes. Past research has shown that ethnic minority groups, in general, differ in their urban park and open space landscape, and natural setting preferences (Kaplan and Talbot 1988; Talbot and Kaplan 1993; Zhang and Gobster 1998), park needs and interests (Gobster and Delgado 1993; Zhang and Gobster 1998), urban park use and leisure participation (Dwyer 1993; Gobster 1998; Hutchinson 1993; Jeong 1999; Taylor 1993), recreation experiences (Carr and Williams 1993; Keefe and Padilla 1987), park visitation patterns and attitudes (Carr and Chavez 1993), and environmental attitudes (Floyd and Noe 1993; Noe and Snow 1990). Overall, these and other studies have investigated urban park use and outdoor recreation preferences of ethnic minority populations by categorizing Hispanics and Asian Americans as homogenous, monolithic segments. Thus, less seems to be understood about the recreational needs and

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patterns of the largest, fastest-growing segments within urban Hispanic (Cuban, Mexican, Puerto Rican, Dominican, etc.) and Asian American (Chinese, Korean, Japanese, Filipino, etc.) populations (Hutchinson 1993), with respect to urban parks and forests.

Since intra-ethnic differences are likely to influence site use and preference, style and meaning of recreational use may also be influenced by such differences (Carr and Williams 1993). For example, differences may be observed in size and composition of the recreation group, reasons for participation, or values toward nature. Studies examining intra-ethnic differences would be invaluable to managers of parks, forests or recreational areas which receive high levels of visitation from ethnic minority groups, with little or no use from Anglo-visitors. Since patterns of participation may vary within a specific recreation activity as well as within and among population subgroups, studies employing large-scale general population surveys for comparing the leisure and recreation participation rates of ethnic groups cannot be generalized to ethnic minorities and immigrants to the US. A more rigorous treatment of the ethnicity concept may add more depth to the understanding of the leisure behavior of the US population (and population subgroups).

The findings from studies concerning leisure behavior of general populations are often non-generalizable to ethnic sub-population groups, since general samples usually consist largely of Anglo respondents who were born in the US. Existing research has been inadequate in explaining how the recreational users' ethnic and sociocultural background affects their recreational experiences. This knowledge gap hinders a manager's ability to provide a high quality recreation experience for his/her recreation resource users by meeting their needs while managing the natural resources for recreational purposes.

Methods

Information to address the above research questions was obtained using a self administered questionnaire mailed to samples of residents in two metropolitan areas located in the eastern United States (Atlanta, GA and Philadelphia, PA). The following ethnic groups were chosen for study: African-American, Hispanic, Chinese or Chinese-American, Japanese or Japanese-American, and Korean or Korean-American. The study also included "White/Caucasian" residents of these cities.

A commercial sampling organization was hired to provide the names and addresses of 750 households within each of the five targeted ethnic groups as well as a random sample of 500 "residents" in each of the two metropolitan areas. The ethnic samples were drawn using a "tract-density-surname" method in which census tracts with concentrations of each of the desired ethnic groups within the metropolitan areas were selected and the households screened in regard to the presumed ethnicity of their surnames. While the method was useful in identifying many subjects in the desired groups, it was also imprecise, and was expected to yield a sizable number of "misidentified" contacts.

Pre-notice letters were sent to the ethnic samples two weeks prior to mailing the questionnaires to screen-out invalid addresses and incorrect ethnicities. Mailing of the questionnaire was followed, at two week intervals, by a reminder postcard, and two additional reminder letters containing duplicate copies of the questionnaire. All survey materials were translated into four languages (including two different Chinese versions) – Spanish, simplified Chinese, traditional Chinese, Korean, and Japanese -- using a back-translation (double-translation) method and made available to subjects within the appropriate ethnic groups.

A substantial proportion (30%) of the obtained addresses proved to be invalid and the letters were returned as undeliverable. Of those that were not returned by the postal service, response rates for the ethnic samples ranged from 20% for the African-American and Hispanic samples in Philadelphia, to 30% for the Chinese-American sample in Atlanta, with an average response rate from all of the ethnic samples of 27%. However, these rates may be misleading since it seems likely that some (and perhaps many) of the households that received the materials simply discarded them if they were not in the targeted ethnic group. Response rates for the random samples of "residents" were slightly higher, with 40% of the sample households in Atlanta and 32% of the Philadelphia households responding. A total of 1513 completed questionnaires were returned in which subjects reported their ethnicity. However, quite a number of the forms were incomplete, and deleting those cases for which the selected variables for this analysis were not available, further reduced the usable sample.

Subjects were asked to specify how they would describe their ethnicity -- Hispanic, Chinese or Chinese-American, Japanese or Japanese-American, Korean or Korean-American, African-American, White/Caucasian, or Other. Respondents who answered "other" or who failed to answer this question were deleted from the analysis. Education was scored from 1 to 6 as follows: 1=did not complete high school, 2=completed high school, no additional formal education, 3= some post high school education, but did not graduate from college, 4=4-year college graduate, 5=some post-baccalaureate education, 6= graduate degree. Household income was assessed in terms of eight categories ranging from "less than \$5,000" (coded 1) to "over \$100,000" (coded 8). The codes were used to index income. Age was measured in years. Gender was dummy-coded, with males as the reference category.

Recreational group characteristics of the population subgroups were assessed by asking “How many of the visits to urban parks and forests (during last 12 months) were conducted . . . alone? . . . with 1 or 2 other people? . . . with 3 or more other people? Response categories for all of these items were scored so that 1=none, 2=some, and 3=almost all. The types of activities in which respondents engaged were measured by asking how often (“none,” “once or twice,” or “three or more times”) during the last 12 months they had done each of the following during their visits to these park areas: Solitary activities (being alone, reading, walking through the park, etc.); Social activities (playing with children, talking with friends, etc.); Food-related activities (picnicking, barbecuing, eating.); Team activities (soccer, basketball, softball/baseball, frisbee.); Outdoor land activities (backpacking/hiking, pleasure driving, camping, etc.); Outdoor water activities (boating/canoeing, fishing, swimming, etc.); Physical exercises (running/jogging/walking, bicycling, rollerblading, etc.); Experiential activities (aerobics, TaiChi, Qigong, yoga, etc.); Community activities (festivals, parties, etc.); Educational activities (animal-/bird-watching, nature study, etc.). Responses were coded for analysis so that 1=none, 2=once or twice, and 3= three or more times.

Results

To analyze the differences in recreational group characteristics and activity preferences among the population subgroups, two MANOVA analyses were carried out using ethnicity as a factor, and gender, age, education, and income as covariates, and recreational group and activity preference as dependent variables. The multivariate F-value for the relationship of ethnicity to the recreational group variable was statistically significant ($F= 2.267, p<.001$). The multivariate F relating ethnicity to the park activity preferences variable was also statistically significant ($F= 2.793, p<.001$).

Table 1 - Frequency and type of park usage, by ethnicity, adjusting for gender, age, income, and education.

Frequency/type Of Park Usage	White/ Caucasian	African American	Hispanic	Chinese	Japanese	Korean	F- value	Prob	
	-----Mean Scores ^a -----								
Number of companions	1.67	1.46	1.54	1.65	1.64	1.59	2.17	.056	
None	2.13	1.92	2.04	2.04	1.83	1.99	2.43	.034	
1 or 2	1.92	2.21	2.12	1.90	1.79	2.03	2.28	.045	
3 or more									

^aFrequency of visits was scored as follows: of visits in the last 12 months, how many of these visits were undertaken . . . ? 1 = none; 2 = some; 3 = almost all.

Few persons of any of the ethnic groups indicated that they visited parks alone. Whites, Hispanics, and Chinese, were the most likely to visit with 1 or 2 other persons. African-Americans and, Hispanics, and, to a somewhat less extent, Koreans, were the most likely to visit with three or more companions. When asked about the frequency of participating in various activities in their park visits, there were both important similarities and significant differences among the ethnic groups (Table 2).

Table 2 - Park activities, by ethnicity, adjusting for gender, age, income, and education.

Activity	White/ Caucasian	African American	Hispanic	Chinese	Japanese	Korean	F-value	Prob
-----Mean Scores ^a -----								
Solitary	1.80	1.86	1.71	1.55	1.66	1.53	3.75	.002
Social	2.24	2.30	2.32	2.14	2.13	2.25	1.37	.233
Food-rel.	1.85	1.99	1.99	1.78	1.71	2.03	3.62	.003
Team	1.49	1.62	1.76	1.45	1.28	1.69	6.72	.000
Outdoor land	1.74	1.53	1.77	1.65	1.47	1.58	3.52	.004
Outdoor water	1.61	1.44	1.55	1.45	1.34	1.43	3.24	.007
Physical exercise	2.14	1.94	2.09	1.92	1.90	2.00	2.45	.033
Experiential	1.06	1.10	1.07	1.18	1.04	1.08	3.33	.006
Community	1.49	1.66	1.64	1.56	1.49	1.50	1.85	.100
Education	1.47	1.27	1.39	1.28	1.21	1.25	5.11	.000

^aHow many times have you done these activities during your park visits in the last 12 months? 1 = none; 2 = once or twice; 3 = three or more times.

Social activities were reported as the most likely activity by subjects in all six ethnic groups, and the incidence of participation in social activities did not differ significantly by ethnicity. Physical exercise and food related activities vied for second place for all ethnic groups, but the level of reported participation in these activities differed, with Whites, Hispanics and Koreans more likely than African-Americans, Chinese and Japanese to participate in physical exercise during their park visits. Koreans, African-Americans, and Hispanics were more likely than Whites, Chinese and Japanese to participate in food related activities in parks.

The least popular activities for all ethnic groups were educational and experiential activities, and here again there were ethnic differences in scores. Chinese respondents reported the greatest participation in experiential activities, while Whites and Hispanics were more likely than the other groups to engage in educational activities. African-Americans and Hispanics reported the highest levels of participation in team sports, while Whites and Hispanics were the most likely to engage in outdoor land and water activities. There were no significant ethnic differences in participation in community activities such as festivals and fairs.

The interactive effects of *ethnicity X gender*, *ethnicity X age*, *ethnicity X education*, and *ethnicity X income* on the dependent variables were tested for statistical significance. For each dependent variable, this was done by converting ethnicity into five dummy variables, computing interaction terms by multiplying these five variables by each of the covariates (gender, age, education, and income), and entering each block of five related interactions into the analysis model containing the main effects. None of these interactions was found to be statistically significant at the .05 level. Thus there was no evidence that the relationships of gender, age, educations, or income to the park usage variables differed by ethnicity of the subject. The MANOVA described above provided data concerning the relationships of gender, age, education, and income to participation levels of the sample members, adjusting for ethnic differences. Although only a small proportion of these associations were found to be statistically significant, given the failure to find significant interactions, these relationships would be expected to be consistent across all of the ethnic categories, representing intra-ethnic variations in park usage.

Table 3 - Frequency and type of park visitation and frequency of park activities, by gender, age, education, and income, adjusting for ethnicity.

Dependent variables	Gender	Age	Education	Income
	-----Partial Eta-----			
Number of comparisons				
None	-.035	.046	.114**	-.074*
1 or 2	.033	-.011	.054	.053
3 or more	.022	.000	-.087*	.020
Park activities				
Solitary	.017	.041	.090	-.044
Social	-.001	-.152***	-.005	.081*
Food related	.007	-.096**	-.048	-.012
Team	-.109**	-.146***	-.034	-.001
Outdoor land	-.039	-.006	-.004	.058
Outdoor water	-.047	-.053	-.074*	.082*
Physical exercise	.012	.057	.032	.050
Experimental	.021	.022	-.035	-.060
Community	.121***	-.042	-.080*	.052
Educational	.003	.038	-.036	-.026

Education was positively related to frequency of visiting alone, and negatively correlated with visiting with 3 or more persons while the net relationship of income to visiting alone was negative. None of the other net relationships of these socio-demographic characteristics (gender, age, education, and income) to when, how long or the number of companions were statistically significant at the .05 level.

Women were less likely than men to participate in Team activities, and more likely to report doing Community activities. Age was negatively related to Team activities, participation in Social activities, and Food-related activities. Education was positively associated with participation in Solitary activities and negatively related to participation in Outdoor water activities and Community activities. Income was associated positively with Outdoor water and Social activities.

Discussion and Implications

The results of this study highlighted several similarities and differences in outdoor recreation characteristics between the population subgroups. African-American, Hispanic/Latino or Hispanic American, Korean or Korean American, and Chinese or Chinese American respondents indicated higher propensities to visit parks and forests in larger groups consisting of members (usually with family and friends) from the same racial/ethnic group, than Anglos or Whites. These findings are in congruence with previous studies (Carr and Chavez 1993; Gobster and Delgado 1993; Pizzini and others 1993) that reported greater tendencies among ethnic individuals to recreate in groups that are larger than the traditional Anglo or White recreation groups. With respect to these findings, recreation resource managers of parks and forests serving ethnic populations should take measures to accommodate larger groups for long durations of time, especially during weekends. This may require the expansion of existing recreational facilities (e.g., pavilions, picnic areas, etc.) and services (e.g., extended timings for security personnel, concession stands, etc.). Increased visitation by large groups for extended durations of time could result in overuse of certain sites, accompanied by the deterioration of the recreational quality of such areas. In order to curb such impacts, urban parks and forests receiving use from ethnic groups would need to adopt ‘crowd control’ measures, especially during weekends, to regulate group size and activities (e.g., group and activity permits, restricted areas, etc.).

Similar to past studies (Chavez and others 1995; Hospodarsky and Lee 1995; Taylor and Winter 1995), it was observed that outdoor land (backpacking/hiking, pleasure driving, camping) and outdoor water (boating/canoeing, fishing, swimming) activities were very popular among Hispanic/Latino or Hispanic Americans. Parks and forests catering to the recreational needs of Hispanic/Latino or Hispanic Americans should focus their efforts on providing more opportunities for hiking and camping especially alongside water bodies such as lakes and streams. This would include the setting up of campsites and hiking trails as well as manmade ponds, lakes and fountains for meeting Hispanic visitors’ outdoor recreation needs.

There was a higher incidence of group-oriented activities such as social activities (playing with children, talking with friends, playing board games, etc.), team activities (soccer, basketball, softball/baseball, Frisbee, etc.), community

activities (festivals, parties, etc.) and food-related activities (picnicking, eating, barbecuing, etc.) among the ethnic groups compared to the Anglos or Whites. Other studies (Taylor 1993; Taylor and Winter 1995, Zhang and Gobster 1998) also reported similar findings. Recreation resource managers in urban areas should consider the importance of social events and celebrations among groups of ethnic origin and the central focus of involving picnicking, playing and relaxing with family members (especially with children) among such groups. The high prevalence of group-oriented, social activities among ethnic groups would suggest the need for larger picnic areas (with more tables and barbecue pits), more game fields/courts for team activities, larger play areas for children, and roofed areas (pavilions and domes) for festivals and other social get-togethers, in parks and forests that receive use from ethnic groups.

While the policy and practice implications of different outdoor recreation characteristics across various ethnic groups are not easily generalizable, it is important to understand that variations do exist and in some cases, can influence an ethnic individual's participation in recreational activities and preferences for certain park features. While it would be impractical to cater to the recreational needs of all individuals of an ethnic group, management systems such as the Recreation Opportunity Spectrum and Benefits Based Management could be modified or adapted to include ethnic preferences in order to provide a range of recreation opportunities to both individual as well as group recreationists, depending on the experience(s) sought by the ethnic group (Shaull and Gramann 1998).

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