

EXAMINING AFRICAN AMERICAN AND WHITE OUTDOOR RECREATION PARTICIPATION AFTER DEMOGRAPHIC STANDARDIZATION ON SELECTED CHARACTERISTICS

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The "marginality" explanation of differences between the outdoor recreation participation of African Americans and Whites was evaluated using demographic standardization of age, income, and education for a sample of African American and White Illinois residents. After standardization, African American/White differences in outdoor recreation participation were reduced in 12 out of 26 outdoor recreation activities and in the total days of participation across all activities. The results offer limited support for the marginality explanation.

African American and White Participation and the "Marginality Hypothesis"

The differences between White and African American outdoor recreation participation are well documented (Washburne 1978; Edwards 1981; Dwyer and Hutchinson 1990; Nadkarni and

O'Leary 1992; Dwyer 1993b, 1994a). Most results are consistent with the conclusions from a recent analysis of participation by Illinois residents that African Americans are more likely than Whites to participate in sports; but less likely to participate in activities that take place in more remote areas and involve undeveloped settings or water/snow/ice (Dwyer 1993b).

An explanation for the differences in participation in outdoor recreation activities between African Americans and Whites is less well developed and agreed upon. Two explanations have been offered. The "ethnicity" explanation argues that the different participation patterns are attributable to different subcultures. "Marginality," on the other hand, argues that differences in recreation participation are attributable to socioeconomic differences (Washburne 1978). Research has yet to provide a clear understanding of the relative importance of these two explanations for differences in outdoor recreation participation (Wendling 1981; Hutchison 1988; Dwyer and Hutchison 1990).

If the marginality hypothesis is correct, then if two ethnic groups had the same socioeconomic characteristics, the differences between them would be eliminated or reduced if all other things are equal. Such an evaluation is done based on an analysis of data from a survey of the 1989 outdoor recreation participation patterns of Illinois residents.

Data Collection and Demographic Standardization

The data used in this study are from a random telephone sample of 1,000 Illinois residents age 18 and above. Data were collected by the Survey Research Laboratory at the University of Illinois at Champaign-Urbana for the Illinois Department of Conservation. There were 759 responses with sufficient data to be used including:

1. the number of days of participation in 26 recreation activities during the previous 12 months; and
2. their age, education, and income levels.

The 26 activities are shown in Table 1 along with the average days of participation for African Americans and Whites for each activity. Also shown is the sum of days over all activities.

Table 1. Effects of standardization on African American recreation behavior, 1989.

Activity	Mean Days	Mean Days	Mean Days	African American-White Differences Not Standardized	African American-White Differences Standardized
	White	African American	African American Standardized		
Baseball	4.5258	4.2525	7.7021	0.2732	-3.1763
Backpacking	0.2197	0.0303	0.0604	0.1894	0.1592
Basketball	3.2394	5.6566	-6.5183	-2.4172	9.7577
Biking	12.5758	13.0809	2.8022	-0.5051	9.7736
Boating	3.2939	0.2525	0.2508	3.0414	3.0431
Canoeing	0.4258	0.0404	-0.0604	0.3854	0.4861
Downhill Skiing	0.2045	0.0202	0.0020	0.1843	0.2025
Driving for pleasure	15.1652	18.8081	11.8906	-3.6429	3.2745
Fishing	5.8955	0.6566	0.4922	5.2389	5.4033
Golfing	7.8939	0.7677	1.7657	7.1263	6.1283
Hiking	1.2061	0.0808	0.3393	1.1253	0.8667
Horseback riding	0.9606	0.5455	0.2098	0.4152	0.7508
Hunting	0.8227	0.1515	0.7461	0.6712	0.0767
Ice Skating	0.8333	0.1414	0.1618	0.6919	0.6715
Jogging	18.7697	20.8284	35.4671	-2.0587	-16.6974
Swimming in a lake	3.6545	0.3939	0.5156	3.2606	3.1390
Nature observation	6.6939	1.1818	1.3587	5.5121	5.3752
Off Road Vehicles	2.1121	0.4545	1.2480	1.6576	0.8641
Picnicing	3.1924	1.8586	1.3767	1.3338	1.8157
Swimming in a pool	9.7576	1.8182	2.8141	7.9394	6.9435
Recreation Vehicle Camping	1.1606	0.0202	0.0114	1.1404	1.1492
Sailing	0.8849	0.1212	0.2778	0.7636	0.6071
Tennis	2.0697	5.3435	6.3055	-3.2738	-4.2358
Tent Camping	0.5045	0.1717	0.3432	0.3328	0.1614
Walking	53.5136	52.8748	87.5935	0.6389	-34.0798
Cross country skiing	0.3258	0.0101	0.0030	0.3157	0.3229
Total activity days-All activities	162.0485	130.9597	191.4961	31.0888	-29.4476

The mean days of participation in an activity can be decomposed into components using regression techniques.

$$\begin{aligned} \text{Average Number of Days} = & \beta_0 + \beta_{\text{Age}}X + \beta_{\text{Education1}}X + \\ & \beta_{\text{Education2}}X + \beta_{\text{Education3}}X + \beta_{\text{Education4}}X + \beta_{\text{Income1}}X + \\ & \beta_{\text{Income2}}X + \beta_{\text{Income3}}X + \beta_{\text{Income4}}X + \beta_{\text{Income5}}X + \\ & \beta_{\text{Income6}}X + \beta_{\text{Employment1}}X + \beta_{\text{Employment2}}X. \end{aligned}$$

Where:

Income_j = dummy variables for 7 levels of income.

Education_j = dummy variables for 5 levels of education.

Employment_k = dummy variables for 3 levels of employment.

X = average values for the respective variables.

The average days of African American participation in baseball, 4.25, can be represented in a regression equation as:

$$\begin{aligned} 4.25 \gg & 1.79 + (-.02 \times 41.04) + (4.43 \times .17) + (19.37 \times .19) + \\ & (-.15 \times .38) + (1.35 \times .18) + (1.17 \times .57) + (-.83 \times .08) + \\ & (-5.95 \times .27) + (-10.00 \times .02) + (-3.41 \times .22) + (-9.67 \times .02) + \\ & (-3.27 \times .22) + (14.58 \times .10) \end{aligned}$$

Substituting mean income, education, and age for the White sample into the above regression equation estimates the average number of days of participation for African Americans if they had the same levels of income, age, and education as Whites with nothing else changed (e.g., Althaus and Wigler 1972; Iams and Thornton 1975; Jones and Kelley 1984). The participation in baseball by African Americans having the same income, education, and age as Whites becomes:

$$\begin{aligned} 7.70 \gg & 1.79 + (-.02 \times 43.04) + (4.43 \times .07) + (19.37 \times .37) + \\ & (-.15 \times .25) + (1.35 \times .21) + (1.17 \times .57) + (-.83 \times .13) + \\ & (-5.95 \times .12) + (-10.00 \times .01) + (-3.41 \times .16) + (-9.67 \times .02) + \\ & (-3.27 \times .02) + (14.58 \times .01) \end{aligned}$$

This same analysis was performed for all 26 activities and the total days of participation across all activities. The results are summarized in Table 1. In 12 activities standardization for age, education, and income reduced the difference in participation between the two groups was reduced. For 14 activities the difference became larger than before standardization. Prior to standardization there were five activities where African American participation was higher than Whites (basketball, bike, drive, jog, and tennis). After standardization there were four activities where African Americans participation exceeded that of Whites (baseball, jogging, tennis, and walking), plus the total days over all activities. One of the arguments in support of the marginality hypothesis is that the outdoor recreation participation of African Americans is often lower than that of Whites in many activities because of the generally lower socio-economic levels of African Americans. In this analysis, when African Americans are assigned the same average age, income, and education of Whites (i.e., standardization), their participation increases in 15 activities, but decreases in 11 activities.

Eleven activities fit the classic "marginality hypothesis" in that standardization increased African American participation and reduced the difference with Whites. Some of those activities might be expected to fit the marginality model including sailing, golf, and backpacking. There are some other activities, such as pool swimming, where differences in participation do not appear to be a result of marginal status. Standardization reduced participation by African Americans and increased the difference between African Americans and Whites in 10 activities. Some of the activities were urban and might be expected to exhibit such a pattern of behavior such as basketball, bicycling, and picnicking. There also are other activities, that seem quite inappropriate in that category, such as boating and RV camping.

While the pattern of outcomes across the individual activities is not particularly clear, when all activities are considered, there would be an increase in the number of days of participation by African Americans after standardization. Total African American participation exceeds the total for Whites. This result suggests some support for the marginality hypothesis.

Discussion

Limited support is present for the marginality hypothesis. Standardization reduced African American/White differences in 12 of 26 activities; and African American participation increased in 15 activities. There is not a clear pattern of results across the activities. Perhaps the pattern of results across activities would be clearer if additional variables were included in the standardization. Such as urban residence and characteristics of the family.

It is difficult to attribute the remaining differences between African American and White recreation to subcultural differences. The variables examined were "general" in the sense that they were not directly related to recreation. The tendency for African Americans to concentrate their recreation activity close to home has often been attributed to lower incomes, reduced access to transportation, and the desire to recreate in large extended-family groups. Examination of discrimination within the recreation setting might be more fruitful. There is increasing evidence of discrimination as a factor affecting participation patterns of African Americans and other groups (West 1989; Blahna and Black 1993; Gobster and Delgado 1993). Much of the recreation behavior of African Americans could be attributed to efforts to avoid discrimination in the recreation setting.

The fact that standardization produces the highest increases in average days of participation for activities already at relatively high levels of participation for African Americans suggests that the marginality explanation is most valid in instances where barriers are already relatively low or there are subculture preferences for the activities. Neither of these explanations were examined in this research but are suggested by the results.

Summary

This analysis offers limited support for the marginality hypothesis for explaining African American/White differences in days of participation. Income, age, and education standardization increases African American participation in 15 selected outdoor recreation activities and reduces the between group difference in twelve activities. Standardization for additional socio-economic variables such as urban/suburban/rural residence or family size and structure might offer more support for the marginality thesis. There appears to be ample room, however, for the ethnicity thesis as well as discrimination for explaining the African American/White differences in outdoor recreation participation by this sample of Illinois residents.

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