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Cultural Diversity of Los Angeles County Residents Using Undeveloped Natural Areas

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Abstract

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A model of ethnic participation at undeveloped natural areas was developed and tested. The proposed model included the constructs of socio-economic status, perceived discrimination, assimilation, and ethnicity. Undeveloped natural areas were defined as being located outside of cities and primarily natural in composition. A telephone survey of a stratified random sample of Los Angeles County residents resulted in 894 interviews. The results demonstrate the multi-dimensional and complex nature of outdoor recreation participation. Despite close proximity and low entrance fees compared to commercial recreation facilities, the majority of residents did not spend even a half day at a National Forest or Park, or other undeveloped natural areas. These data suggest that public wildland agencies must be proactive by creating new programs and expanding existing intervention projects, or they risk not being able to show that publicly funded natural resources are used by most Americans.

Retrieval Terms: barrier, ethnicity, motivation, parks, recreation, tourism

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In Brief

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Retrieval Terms: barrier, ethnicity, motivation, parks, recreation, tourism

The overall purpose of the study was to determine differences in barriers and motivations to actual recreational use of undeveloped natural areas, such as National Forests, by ethnically diverse urban residents. Information for the study came from a telephone survey of a stratified quota sample of Los Angeles County residents in which data were gathered from both *users* and *non-users* of undeveloped natural areas. A total of 894 interviews were completed. Data were collected from four broad ethnic groups: 20.0 percent African-American respondents, including U.S. (97.8 percent) and non-U.S. (2.2 percent) citizens; 16.2 percent Asian respondents, including Asian and Asian-Americans (U.S.=31.0 percent, non-U.S.=69.0 percent); 30.9 percent Latino respondents of Latin descent, including U.S. (47.4 percent) and non-U.S. (52.6 percent) citizens; and 30.5 percent white respondents, including Europeans and European-Americans (U.S.=89.7 percent, non-U.S.=10.3 percent). Respondents tended to be young—49.0 percent were 18-34 years old; moderately educated—62.1 percent had at least some college or more; and of low to moderate income—64.9 percent were from households earning less than $50,000. More than 52 percent of Latino respondents and 69 percent of Asian respondents were not born in the U.S.

About 1 in 3 survey respondents *did not take any leisure trip* between May 1 and August 31, 1994, suggesting a significant number of residents had substantial barriers to travel. About 4 out of 10 residents of Los Angeles County took a trip in which they *visited an undeveloped natural area*. Another 1 in 3 respondents took a leisure trip but *did not visit an undeveloped natural area*. This means that less than half of Los Angeles County residents visited a National Forest, State park, or open space preserve outside of a city during the height of the travel season for even 1-hour excursions.

When using unadjusted survey data, visitation to wildland areas varied significantly by ethnic group, with 44 percent of white respondents visiting natural areas during the study period, 34 percent of Asian respondents, 27 percent of Latino respondents, and 21 percent of African-American respondents. This natural area visitation pattern was found, through further analysis, to be influenced by significant differences in household income, education level, and other factors.

By using unadjusted data, several sub-groups were identified within Los Angeles County that were significantly less likely to visit undeveloped natural areas (less than 25 percent visited). These subgroups might warrant special efforts or programs by wildland management agencies to encourage participation: African-Americans in general, but especially females and those with lower education level; younger Latinos and those who are not U.S. citizens and have lower income and education levels; and Asians with low income. Sub-groups with the highest levels of visitation to undeveloped natural areas (more than 45 percent visited) were white in general, especially young adults, males, and those with high income levels; Asian citizens in general and those with high income; and Latinos with high education and income levels.

Another objective of the research was to develop and test a model of visitation to undeveloped natural areas, incorporating the variables of socio-economic status, ethnicity, assimilation into American society, and perceived discrimination. Logistic regression results suggested it was an accurate predictive model, and all four proposed model constructs showed statistical or substantive significance.

Model results showed that after statistically adjusting for the effects of model variables as a group, respondents significantly less likely to visit an undeveloped natural area were those with low levels of socio-economic status, low levels of assimilation, who had moderate to high perceived discrimination, and who were of African-American ethnicity. There were no significant differences between

Asian, white, and Latino respondents in their probability of visiting an undeveloped natural area if intervening variables remained constant. In other words, Asian, white, and Latino respondents of similar status, assimilation and perceived discrimination are equally likely to visit wildlands, compared to African-American respondents who are less likely.

Another finding from model testing was the importance of perceived discrimination in undeveloped natural area visitation. All "minority" ethnic groups were more likely to express the belief that discrimination was an issue, compared to their white respondent counterparts. In addition, model results showed that perceived discrimination was a significant predictor of visitation even after controlling for respondent income and education. The results are unique because they invalidate the commonly held assumption that discrimination is an urban park issue that does not impact rural recreation areas. Analysis of barriers to participation suggests that discrimination is perceived to occur within undeveloped natural areas, not just en route to them. Further research is needed to ascertain more precisely the types, sources, and locations of discriminatory behavior.

The survey also asked respondents to agree/disagree with 17 statements describing barriers that may have affected their travel during the spring and summer 1994. The importance of each barrier was broken down into three types of travelers: respondents who did not take a leisure trip away from home, persons who traveled but did not visit a natural area, and respondents who visited a natural area. The constraint was asked to each of the three groups in a somewhat unique context. For example, the constraint *not safe* was phrased as "Travel and vacation areas are not safe" and asked to persons who did not take any trip. To respondents who took a trip but not to an undeveloped natural area, the question was phrased as "Undeveloped natural areas are not safe." Finally, persons who visited a natural area were asked "Undeveloped natural areas are not safe and this limited my stay or activities in them." The most constraining barriers for all three groups were *lack of free time*, *few friends travel or recreate in (natural) area, nearby destinations were too crowded, their financial situation*, and *don't know where to go/what to do*.

Findings clearly demonstrate the multi-dimensional and complex nature of outdoor recreation participation. Even though undeveloped natural areas, such as the Angeles and San Bernardino National Forests, are within 60 miles of any Los Angeles County resident, and there is little or no cost for entrance fees to undeveloped natural areas (daily per car entrance charges at fee sites on National Forest normally are under $10), not all residents or ethnic groups visited these public lands in equal numbers. Model results showed that the decision to visit an undeveloped natural area is more than just a transportation and income issue. Ethnic group preferences, assimilation, resident education, and perceived discrimination all influenced participation in outdoor recreation within undeveloped natural areas.

To encourage visitation by those residents of Los Angeles County that have very low participation rates, intervention strategies can be developed by wildland management agencies. A promising strategy is providing leadership and resources for organizing clubs, special programs or school outings for urban youths, or developing family programs that encourage friends and family members to recreate together. Some persons do not come from families that have historically visited natural areas; thus, there is a need to provide encouragement to get started and pass on the benefits of wildland recreation.

In summary, substantially less than half of Los Angeles County respondents visited an undeveloped natural area during the summer 1994. Despite the close proximity and low entrance fees, compared to commercial recreation facilities, the vast majority of residents did not spend even a half day at a National Forest or Park, wildlife refuge, open space preserve, or other undeveloped natural areas located outside a city. These data suggest that public agencies that manage wildland resources must be proactive by creating new programs and expanding existing intervention projects that encourage visitation and communicate to residents about the opportunities and benefits of outdoor recreation in undeveloped natural areas. Otherwise, data will show that publicly-funded natural resources are not used by most residents.

Introduction

With more than half of the nation's population projected to be "of color" by the year 2050 (McLeod 1993), there is a distinct possibility that significant changes will occur in current outdoor recreation use patterns. A growing body of literature suggests that "the way in which people engage in outdoor recreation in wildland settings, the meanings that such experiences have for people, and the way the land is managed will continue to change because of the increased ethnic and cultural diversity" (Tierney and Dahl 1994, p.1). This demographic change provides wildland managers with the challenge and opportunity to adapt current practices and to develop unique programs and delivery systems by which to serve the growing ethnic population.

An important challenge raised by changing population composition is to determine whether differences exist, and if so, the types of differences between various ethnic groups and current, dominant users in the recreational use of natural, relatively undeveloped resources in National Forests—including urban-proximate forests, parks, and open space areas. Theory development in this area of research has been hindered by data sampling methods. Almost all research has gathered information only at recreation sites. This means that data from non-users have been missing. A goal of this study was to identify and collect information from both users and non-users of undeveloped natural areas.

Conflicting findings reported in previous research about ethnic group differences reinforced the need to understand more clearly the motivations, values, and behaviors of users and non-users from various ethnic groups. Studies showing between-group differences (Dwyer and Gobster 1992, Dwyer 1994) found that African-Americans had lower participation rates in dispersed outdoor recreation activities, such as camping and hiking, and were more likely than whites to participate in urban-oriented activities that were closer to home. Taylor (1992), who conducted a study of visitors to New Haven parks, found African-Americans and whites exhibited differences in resource values and recreation behaviors. However, these studies did not survey non-users.

Conversely, other studies did not find significant differences in behavior and values between ethnic groups. Barro and Rodriguez (1989) did not find significant differences between Hispanic and Anglo persons in their intention to observe wildlife, while Philipp (1993) found an overall high association between blacks and whites on attractiveness of various tourist destinations.

Within-group differences have been shown by researchers such as Pfister (1990), who found large variation in outdoor recreation use within the Hispanic ethnic group. Edwards (1981) found that African-American leisure behavior varied between blacks living in predominantly white neighborhoods from those living in predominately African-American neighborhoods. In addition, Carr and Williams (1993) found ethnic identity related to ancestral membership, generational status, and acculturation for Hispanics influenced outdoor recreation participation. Our study also examined within-group differences on motivations, barriers, and recreation use with the goal of understanding more clearly the bases for within-group differences.

One frequently cited theory for differences in ethnic group recreation participation is socio-economic status or marginality (Washburne 1978). Studies by West (1989) and Floyd and others (1993) suggested that low participation of minorities in outdoor recreation is caused by economic constraints and limited transportation to recreation sites.

In comparing recreational use of Hispanic and Anglo-Americans in Arizona, Floyd and others (1993) also showed that level of education was

strongly related to participation patterns. They found that Mexican-Americans with higher levels of education have a greater likelihood of visiting outdoor recreation areas frequented by their Anglo counterparts. In comparing French and English-Canadians, Richardson and Crompton (1988) found level of education and age played a more important role than income in selection of vacation destinations.

A second factor postulated to influence ethnic differences in wildland recreation use is discrimination. West (1989) found that blacks were more likely than whites to feel unwelcome or uneasy in Detroit parks, and this resulted in lower use. He attributed low use to interracial factors, such as racism. Chavez (1990) reported that perceived discrimination was more frequently cited by Hispanic recreation users in southern California National Forests. However, Floyd and others (1993) did not find any obvious relationship between perceived discrimination and recreation use patterns in Arizona outdoor recreation sites. These conflicting results suggest there is a need for additional research into this factor.

Another causal agent that has been shown to influence outdoor recreation is an ethnic group member's level of assimilation. Yinger (1981) defined assimilation as "a process of boundary reduction that can occur when members of two or more societies or smaller cultural groups meet" and begin to adopt similar values or beliefs. The process of assimilation ranges from isolated brief interactions and exchange to thorough fusion of the groups. Floyd and others (1993) concluded that as assimilation or the degree of social intimacy between minority groups and majority group increased, the differences in recreation patterns decreased. Carr and Williams (1993) found that ancestry, generational status, and acculturation strongly influenced Hispanic group recreation behavior.

A final explanation for differences in outdoor recreation is ethnic identity, defined by Phinney (1990) as "that part of an individual's self-concept which derives from his/her knowledge of their membership in a social group together with the value and emotional significance attached to that membership." Irwin and others (1990) and Pfister (1990) found that ethnic identity was an important factor in both travel and recreation use pattern differences. Tierney (1994) showed that the trips selected for vacations varied with African-American respondent level of ethnic identity. This factor seems particularly appropriate in determining within-ethnic group differences in recreation participation.

The numerous, sometimes conflicting explanations for between-ethnic group differences in wildland recreation use, as well as the concerns for within-group differences, suggests there is a need for a comprehensive model incorporating elements of several theories and past research efforts. Such an ethnic recreation participation model, combined with robust statistical analysis, would show if there are differences in ethnic group recreation participation and the most significant causal factors.

An alternative approach to understanding cultural diversity in outdoor recreation participation is through the identification of motivations and barriers associated with the recreation use of natural areas. Driver and Peterson (1976) synthesized numerous studies on the benefits and motivations of outdoor recreation for the President's Commission on Americans Outdoors. Motives for recreation use have been measured through a recreation experience preference scale, which identified 19 desired psychological outcomes (Driver and others 1991). These scales have been used to identify subgroups of users engaged in the same activity, but who participate in it for different reasons. Such an approach could also help explain differences between use of undeveloped natural areas.

Another factor affecting use of undeveloped natural areas consists of an

array of constraints. Norman (1991) identified over 25 common barriers to outdoor recreation. McLeod (1993) suggested that ethnic "minorities" may be more willing to visit recreation areas if there were more people of their ethnicity working at a recreation site. Tierney (1992), in a study of vacation travel patterns, showed that several barriers, such as lack of traveling companions and lack of information on where to go for natural area vacations, varied among ethnic groups. These studies suggest there is a need to include a comprehensive set of barriers in a study of ethnic recreation participation to better explain why differences in use occur.

This study determined differences in barriers and motivations to actual recreational use of undeveloped natural areas, such as National Forests, by ethnically diverse urban residents in Los Angeles County; and it developed a model of outdoor recreation participation to test if general demographic and ethnic group identity / discrimination factors affected use patterns.

Methods

A telephone survey of Los Angeles City and County adult residents was implemented between November 1994 and January 1995. With a 1990 Census population of more than 8,863,164 residents, Los Angeles County was selected because it is the source area for many visitors to forests and parks throughout the west, because of its proximity to several nearby (within 30 miles of most residents) National Forests (Angeles, Los Padres and San Bernardino) and other large undeveloped natural areas, and because of the great ethnic diversity of its population. Sampling of a source area, instead of interviewing at a specific forest or park site, was the selected method to obtain information about both *users* and *non-users* of undeveloped natural areas. Previous studies conducted at recreation areas have excluded interviews of persons who do not visit these areas. An important goal of this research was to compare non-users and users.

Another study objective was to determine if there were differences in recreation use, barriers, and motives between and within different ethnic groups. The definition of ethnicity used in this study is based on Hutchison (1987) who stated that ethnicity refers to "common ancestry, language, religion or cultural traditions" (p.12). Race, in contrast, refers to physical characteristics. Previous studies at recreation sites have suggested there are differences in the use of natural areas based on a user's ethnicity (Carr and Williams 1993, Dwyer and Gobster 1992, Hutchison 1987), socio-economic status (Floyd and others 1993, West 1989), and other factors (Philipp 1993). Pfister (1990) found large differences in outdoor recreation use within the Hispanic ethnic group. Therefore, a stratified random sample was developed to over-sample and acquire large enough sample sizes from ethnic groups with relatively smaller representation in the area's population, such as Asians. A review of the 1990 Census for Los Angeles County showed that the actual breakdown of ethnic group population included whites—45.6 percent of the population; Hispanics—33.1 percent; Asian Pacific Islanders—10.8 percent; and African-Americans—10.8 percent. Because of the established categories, and our budget constraints, we gathered data from four broad ethnic groups: African-American respondents, including U.S. (97.8 percent) and non-U.S. (2.2 percent) citizens; Asian respondents, including Asian and Asian-Americans (U.S.=31.0 percent, non-U.S.=69.0 percent); Latino respondents of Latin descent, including U.S. (47.4 percent) and non-U.S. (52.6 percent) citizens; and white respondents, including Europeans and European-Americans (U.S.=89.7 percent, non-U.S.=10.3 percent). Completion targets were set for the four ethnic groups and interviewing stopped for an ethnic group after a

particular group target was met. The completion targets were: 300 (28.6 percent) white respondents, 300 (28.6 percent) Latino respondents, 225 (21.4 percent) African-American respondents, and 225 (21.4 percent) Asian respondents.

Respondents were asked to self-identify which of these four primary ethnic study groups, as well as Indian or Native American, other ethnic groups, or a mixture of ethnic groups, best described their ethnic background. Respondents citing other or mixed ethnic groups were asked to describe their ethnic background in more detail. Persons of mixed ethnicity were asked to list their primary background. Interviewers then placed respondents into the available ethnic categories based on the first mentioned or primary ethnic group. If the respondent was of an ethnic background other than one of the four study groups, then he/she was thanked and the interview stopped.

An important survey concern with sampling diverse cultures is the language of the interview. We minimized bias against non-English speakers by translating the survey into, and making interviews available, in English, Spanish, and Mandarin. If there appeared to be a problem with the respondent not understanding English upon the initial contact, interviewers were instructed either to provide the survey in Spanish or Mandarin (if bilingual), or end the call after recording the respondent's name and general language family for later call back. Respondents with Latino or Asian language preferences were called back by a trained interviewer fluent in English and either Spanish or Mandarin. An attempt was always made to recall the original respondent, rather than another English speaker in their household.

Respondents were selected from a random sample of all listed telephone numbers in Los Angeles County. The random sample was provided by Survey Sampling Inc., a national database management company. Interviews were conducted by the staff of the Public Research Institute at San Francisco State University. Three call backs were attempted before a selected number was dropped. To ensure accuracy, between 10 and 15 percent of all respondents were verified by supervisor call back.

At the beginning of the interview respondents were asked if they took a recreational or leisure trip away from their home from May through August 1994. If they took a trip, respondents were asked if they visited an "undeveloped natural" area. An undeveloped natural area was described to respondents by the following statements:

> We are NOT interested in trips to a city where there were highly developed recreation sites, such as city parks and beaches, zoos, festivals, and theme parks. We are interested in trips to areas located outside cities where you visited undeveloped natural areas, such as National and State forests, open space areas, protected areas or nature preserves. These areas could have campgrounds, lakes, access roads, visitors centers, and trails.

The intent was to allow for a relatively broad definition of what constituted an undeveloped natural area.

Visitation, as defined in this study, was simply taking a trip to an undeveloped natural area of any length. Visitation is further disaggregated into two types of trips. First, **excursions** or non-vacation outings were described as being of less than 4 consecutive days. Second, **vacations** were described as "work free periods of 4 or more consecutive days where most time was spent in leisure activities." Survey questions asked respondents if they took a summer vacation, its length, the vacation type (among eight options), if they visited an undeveloped natural area, if their vacation involved travel of more than 100 miles from home,

how important vacations were, and the number of vacations they took in the last 2 years.

Respondents who visited a natural area were also asked about their most recent trip. They named the two primary activities in which they participated when at natural areas, number of days in natural areas, the natural area name, and the nearest city/town. Similar information was gathered for persons who did not visit natural areas. Identical data were gathered for short outings of less than 4 consecutive days. This approach allowed us to gather data from three key groups:

- Persons who **did not take any leisure trip** during the summer;
- Persons who **traveled but did not visit an undeveloped natural area** in the summer;
- Persons who **visited an undeveloped natural area** on a vacation or shorter excursion.

Each of these groups was asked to identify barriers or constraints to travel. A consistent set of 18 barriers statements, developed from past research (Norman 1991, Tierney 1992) and the pre-test, was asked of each group but in a slightly different context. For example, the group that did not take a leisure trip away from home was asked if any of the barriers "prevented them from traveling away from home" during the summer. The group that took a leisure trip but did not visit a natural area was asked if the barrier "prevented them from taking a trip to an undeveloped natural area." Finally, the group of persons who did visit a natural area was asked if any of the barriers "limited their stay or activities within the natural area." Respondents were read a barrier statement and then asked if they strongly agreed, agreed, neither agreed nor disagreed, disagreed, or strongly disagreed with the statement.

One barrier question directly related to the achievement of study objectives was perceived discrimination in travel. Respondents were asked to agree or disagree with two statements: "Persons of your ethnic background are discriminated against when they travel," and "You often do not feel welcome when traveling on vacation." Responses to these statements were combined to create a discrimination scale.

Another barrier question related to ethnicity asked respondents about the composition of the workforce at travel destinations and if this influenced their plans to visit. Respondents were asked to agree or disagree with the statement, "You'd be much more likely to travel if more persons of your ethnic background worked in or visited travel destinations."

A similar approach to that used for constraints was also used for the identification of motivations for vacation travel, except that no information on motives was garnered from the group that did not take any leisure trip during the summer. A consistent set of 16 motive questions derived from previous research (Driver and others 1991) was asked, as well as an open-ended question about other important reasons for travel. Respondents were asked to rate the importance of each motive on a five point scale, ranging from extremely important, very important, important, somewhat important, or not at all important.

A particularly relevant motive for this study was the concept of travel to retain a person's cultural heritage. Floyd and others (1993) suggest that "leisure may play a critical role in maintaining subcultural identity in a multicultural society" (p. 9). This construct was measured in this study by asking respondents who vacationed the importance of "maintaining ties with your cultural roots."

The value and significance attached to membership in an ethnic group has been defined as a person's ethnic identity (Phinney 1990). Ethnic identity was determined for each respondent by asking them to agree or disagree with the statements: "Do you feel a great sense of attachment to your ethnic group?" and "Do you take great pride in your ethnic group?" Responses to these two questions were combined to develop an ethnic identity scale.

Two other constructs that are relevant to this study are acculturation and assimilation. Assimilation and acculturation constructs were operationalized by respondent citizenship and ancestry. The collection of these data was particularly sensitive during the survey because Proposition 187, an initiative to limit California State government services to illegal immigrants, had just received voter approval. Respondents were promised that responses to the survey were confidential. Respondent citizenship was not asked directly because of the uneasiness related to Proposition 187. Instead, they were asked their country of birth and that of their father, mother, grandparents, and spouse. These data were used to identify citizenship and ancestry. Citizens of the U.S. were defined as respondents who were born in the U.S. or whose parents or spouse were born in this country. Ancestry was identified as either native (both of respondent's parents born in the U.S.), mixed (born in U.S. with at least one parent born in the U.S.), or non-native (neither respondent or his/her parents born in U.S.).

Demographic data collected included respondent age, education, gender, and household income in 1993. The survey questionnaire was pre-tested in November 1994. Changes in the wording of some questions, the addition of two new barrier responses, and overall shortening of the survey were made based on pre-test results (*appendix A*).

Reliability analysis was used to determine the internal consistency and validity of derived scales for ethnic identity and perceived discrimination. Alpha level for the perceived discrimination scale was 0.6577, while it was 0.7582 for ethnic identity. These statistics suggest that the scales are reliable. The statistical analysis used two broad approaches. The first used chi-square and one-way analysis of variance (ANOVA) to assess between- and within-group comparisons, such as differences between the four ethnic groups in the important time commitments barrier. This approach was exploratory and provided insights for interpreting the second approach. The second approach was logistic regression, a multi-variate procedure that studies the effects of all independent variables simultaneously. The latter process is a more accurate estimate of the influence of variables, such as income and education.

Chi-square and one-way ANOVA were used to assess the relationship between independent variables and leisure travel patterns and visitation to undeveloped natural areas. Significant differences were defined as a probability of 0.05 or less.

To acquire an accurate estimate of the actual population characteristics of Los Angeles County residents it was necessary to adjust for the over-sampling of some ethnic groups and under-sampling of others. For example, the population of European-Americans or whites in the 1990 Census of Population (U.S. Bureau of Census 1993) was 46 percent, while they made up 31 percent of the sample. Adjustments were made by weighting cases for analysis based on ethnicity. Weighting was accomplished by drawing a sub-sample (n=390) from the total data in proportion to the actual ethnic group population in the study area. Cases were randomly selected for inclusion in the sub-sample until the percentage of each of the four ethnic groups was equal to their proportion in the 1990 Census for Los Angeles County. Weighted data were only used for descriptive statistics of these variables: taking a leisure trip, visitation to natural areas, taking an excursion, and taking a vacation. Results for these specific variables are presented

for both weighted and unweighted samples. Unweighted data were used for all between and within-group comparisons.

The model of factors that influence participation in leisure travel and use of undeveloped natural areas was analyzed by using logistic regression. This method was selected because the dependent variables were categorical and had only two values, participation or no participation. Logistic regression directly estimates the probability of an event occurring by using a maximum-likelihood method.

Results

A total of 7,775 calls were attempted, with 39.7 percent eligible respondents. Ineligible respondents included calls where there was no answer, to persons who were contacted and scheduled a call back but later could not be reached, to businesses or disconnected numbers, or to people who were of an ethnic group whose completion target had already been met. A total of 894 interviews were completed, for a response rate of 29 percent.

This level of response was primarily a result of the unanticipated high numbers of persons who refused to be interviewed. Factors that may have influenced refusals included the length of the interview (respondents were told it would take 12 minutes and it actually averaged 13 minutes), some of the interview period coincided with the Christmas holiday season, and there was a high refusal rate by members of some ethnic groups, especially Asian-Americans. An additional factor may have been a reluctance to participate by non-citizens after the passage of Proposition 187, a new California initiative that limits public services to non-citizens.

The lower than anticipated response rate raises an important question: Is the sample representative of Los Angeles County residents? Because we do not have information on non-respondents, we addressed this issue by determining if survey respondents are similar to the adult population of Los Angeles County. U.S. Census Bureau databases were used to identify educational achievement, age, and household income characteristics of Los Angeles County residents, broken out by four racial/ethnic groups in this study. Findings demonstrate that the sample is quite similar to the actual population education, age, and income characteristics (*appendix B*). Therefore, we believe the sample is representative of the Los Angeles County population, and survey results can be extrapolated to the county as a whole.

Respondent Ethnicity and Ethnic Identity

The ethnic breakdown of respondents illustrates that the sample represented a wide cross section of ethnic groups (*fig. 1*). Out of a total sample size of 894 persons, 30.9 percent identified themselves as Mexican-American, Hispanic, Chicano, Latino or Spanish descent; 30.5 percent were white or European-American; 20.0 percent were black or African-American; 16.2 percent Asian or Pacific Islander; 0.7 percent were other ethnic groups; and 1.7 percent stated they were a mixture of ethnic groups.

The ethnic identity of respondents was determined from the sum of the variables of ethnic pride and attachment. Eighty-six percent of African-American respondents, 78.6 percent of Latino respondents and 69.9 percent of Asian respondents reported a high level of ethnic identity, while this figure was 45.6 percent of white respondents (*fig. 2*). There were significant differences in ethnicity identity between the four ethnic groups (chi-square=121.55, sig.=0.000, n=890).

Figure 1 — Respondent ethnicity (percent) (n=894).

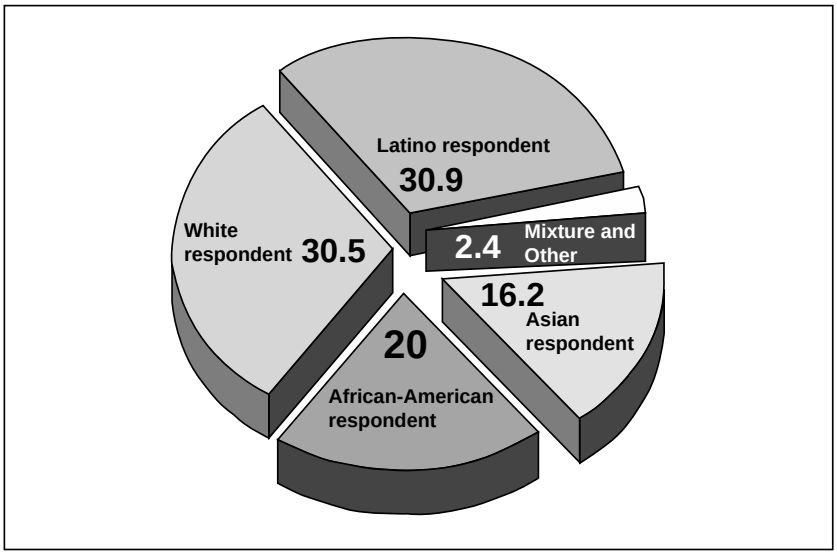
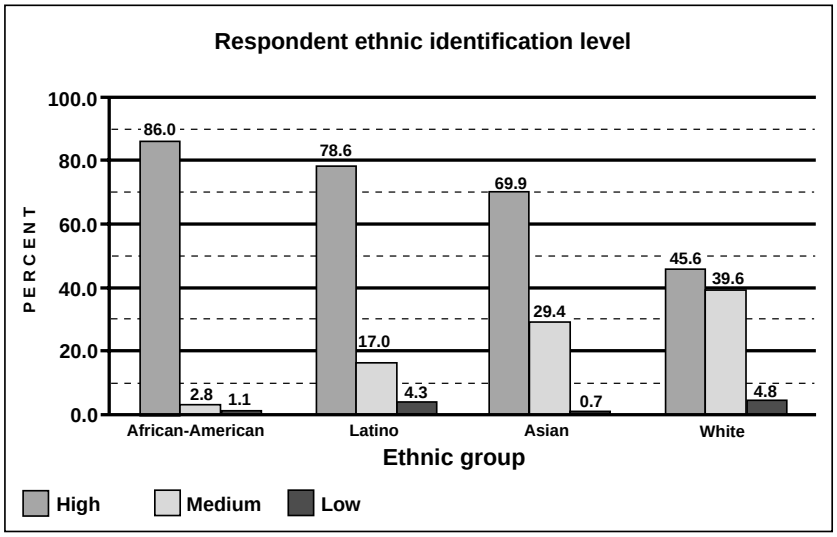


Figure 2 — Respondent ethnic identification level by ethnic group.



Respondent Demographic Characteristics

Almost half (49.0 percent) of the respondents were between the ages of 18 and 34 years (*table 1*). This suggests a relatively young group of residents were interviewed. However, there were significant differences in age between the ethnic groups (chi-square=55.13, sig.=0.000). Over 62 percent of Latino respondents and 53.8 percent of Asian respondents were between 18-34 years old, compared to 35.9 percent of white respondents. White respondents had the largest percentage of respondents (23.8 percent) in the senior age group, while the Latino respondent group had the lowest (8.0 percent).

Highest education attainment for all respondents varied from some college (25.7 percent), college graduates (22.7 percent), to high school graduates (22.3 percent). These data suggest a wide range of educational attainment among respondents. Again, there were significant differences between the ethnic groups (chi-square=183.52, sig.=0.000). About 31 percent of Latino respondents were high school graduates compared to Asian (15.9 percent) and white (16.1 percent) respondents. More than 37 percent of Asian respondents and 27 percent of white respondents were college graduates, compared to 12.3 percent of Latino and 20.1 percent of African-American respondents.

Table 1—Respondent demographic characteristics.

Characteristic	African-American	Latino	Asian	White	Total
	percent				
Age (n=873)					
18-34 years	44.7	62.3	53.8	35.9	49.0
35-44	26.3	20.6	22.8	24.9	23.4
45-55	10.1	8.7	11.7	15.4	11.5
55 or older	18.3	8.0	11.0	23.8	15.8
Refused	0.6	0.4	0.7	0.0	0.3
Education Level (n=873)					
Grade school or less	2.2	13.0	0.7	0.0	4.6
Some high school	6.1	14.5	5.5	3.7	7.8
High school graduate	24.0	31.2	15.9	16.1	22.3
Trade or technical school graduate	5.0	7.6	2.8	3.3	4.9
Some college	31.8	17.0	20.7	32.2	25.7
College graduate	20.1	12.3	37.2	27.1	22.7
Some graduate/professional school	2.8	1.4	4.8	7.0	3.9
Completed graduate school	7.3	2.5	11.7	10.6	7.7
Refused	0.6	0.4	0.7	0.0	0.3
Household income in 1994 (n=810)					
Under $25,000	31.3	53.3	29.0	15.0	32.7
$25,000-$49,999	39.1	26.8	29.7	34.1	32.1
$50,000-$74,999	16.8	8.3	17.2	22.3	15.9
$75,000-$99,999	3.9	3.6	4.8	12.1	6.6
Over $100,00	5.0	1.4	6.2	9.5	5.7
Refused	3.9	6.5	13.1	7.0	7.0
Gender (n=873)					
Male	44.7	41.3	42.8	47.6	44.6
Female	55.3	58.7	57.2	52.4	55.4
Marital status (n=869)					
Single	48.6	38.8	48.3	38.1	42.2
Married	30.7	51.4	44.1	49.1	45.4
Divorced	9.5	5.1	6.2	7.3	6.7
Separated	3.9	2.9	0.0	1.1	2.0
Widowed	6.7	1.4	1.4	3.7	3.2
Refused	0.6	0.4	0.0	0.7	0.4

Household income for all respondents tended to range from low and lower middle class levels, with 32.7 percent of respondents from households earning less than $25,000 in 1993, 32.1 percent had incomes between $25-$50,000, while 15.9 percent had incomes of $50-$75,000. There were significant differences in household income between the ethnic groups (chi-square=130.80, sig.=0.000).

Over half of Latino respondents reported incomes of less than $25,000, compared to 15.0 percent of white and 29.0 percent of Asian respondents. More than 12 percent of white respondents showed incomes of between $75-$99,000, compared to 3.6 percent of Latino, 3.9 percent of African-American and 4.8 percent of Asian respondents.

More than 55 percent of all respondents were females, while 44.2 percent were males. There were no significant differences in gender between the four ethnic groups (chi-square=2.37, sig.=0.498).

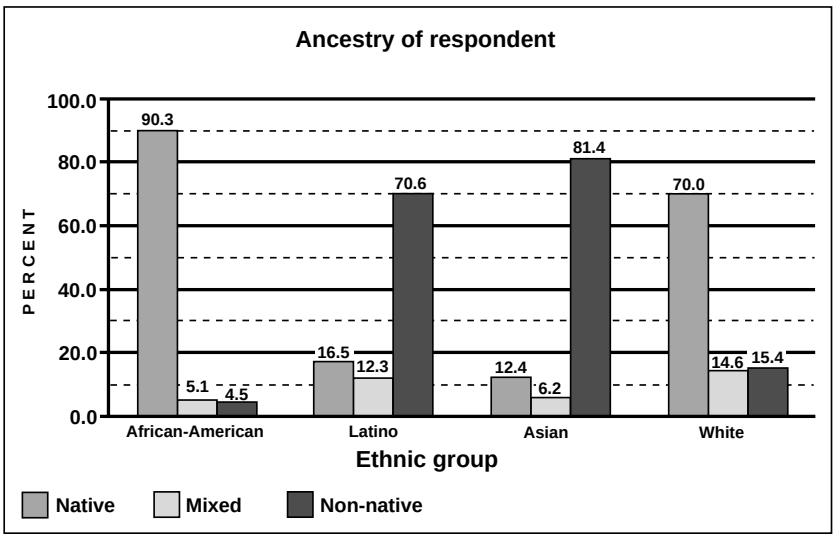
Most respondents were either married (45.4 percent) or single (42.2 percent). Few were divorced, separated or widowed. However, there were significant differences in marital status between the ethnic groups (chi-square=40.25, sig.=0.000). Latino respondents were most likely to be married (51.4 percent), compared to African-American respondents (30.7 percent). African-American and Asian respondents were most likely to be single (48.6 and 48.3 percent, respectively). There was an average of 3.2 persons per household. Many of the households (43 percent) did not have any children under age 18 living at home.

Ancestry and Citizenship

Almost half of all respondents were native to the U.S., while 41.6 percent were non-native and 10.8 percent had parents of mixed nationality. There are significant differences in ancestry among different ethnic groups (chi-square=417.3, sig=0.000, n=862). For example, over 90 percent of African-American respondents were native, while 81.4 percent of Asian respondents were non-native (*fig. 3*).

Citizens of the U.S. were defined as respondents who were born in the U.S. or whose parents or spouse were born in this country. Over 68 percent of all respondents were U.S. citizens. There were significant differences in citizenship status between the ethnic groups (chi-square=277.2, sig.=0.000, n=869). Nearly 70 percent of Asian respondents were not citizens, while 52.6 percent of Latino respondents, 10.3 percent of white respondents, and only 2.2 percent of African-American respondents were not citizens (*fig. 4*).

Figure 3 — Ancestry of respondent by ethnic group.



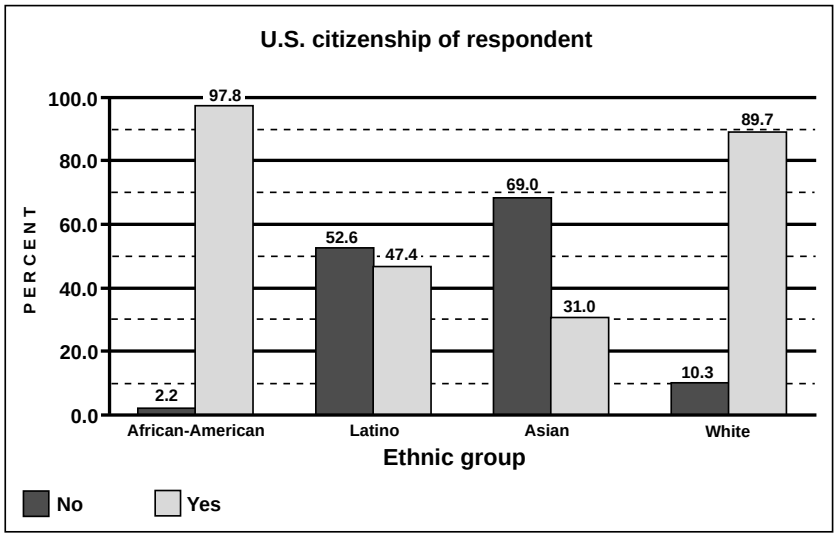


Figure 4 — U.S. citizenship of respondents by ethnic group.

Use of Undeveloped Natural Areas

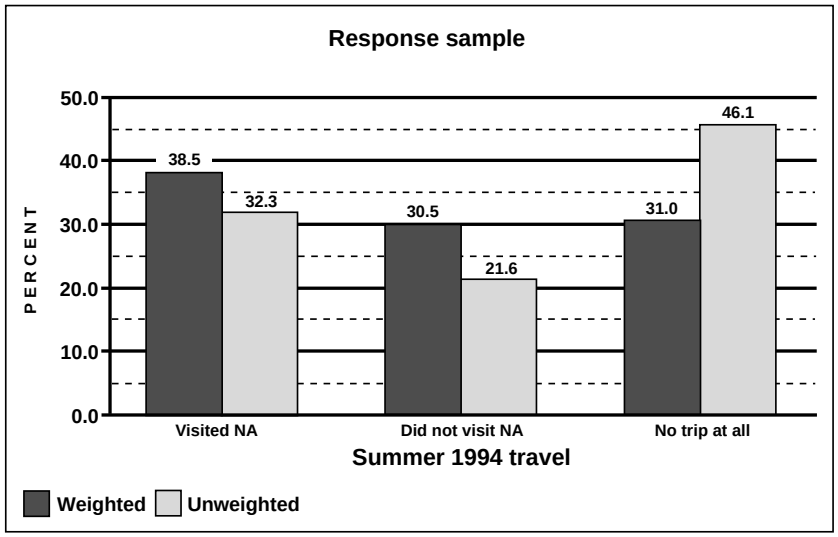
Respondents were asked to state if they traveled away from home primarily for recreation or leisure purposes between May and August 1994. If they did undertake leisure travel, then they were asked if they visited an undeveloped natural area during either a short excursion (less than 4 days in length) or during a vacation (4 or more continuous days). An undeveloped natural area was described as "We are NOT interested in trips to a city where there were highly developed sites, such as city parks and beaches, zoos, festivals, or theme parks. We are interested in trips to areas located outside cities where you visited undeveloped natural areas or nature preserves. These areas could have campgrounds, lakes, access roads, visitor centers, and trails."

These responses were then divided into statistics for both weighted and unweighted samples, and the use of natural areas was disaggregated by demographic categories and ethnic groups. The weighted sample results were adjusted for over-sampling and more accurately reflect the actual characteristics of Los Angeles County residents. Unweighted data reflect the characteristics of the survey sample, which includes a higher proportion of Asian and African-American respondents, than those found in the 1990 Census of Population for Los Angeles County.

The data for the **weighted** sample showed an estimated 31.0 percent of Los Angeles County residents did **NOT** take a leisure trip during the summer 1994 (*fig. 5*). About 38.5 percent of county residents were estimated to have **visited a natural area**, while the remainder (30.5 percent) traveled away from home but did not visit an undeveloped natural area either on a vacation or a short excursion. This suggests that about 4 in 10 county residents visited an undeveloped natural area on either a short excursion or vacation during the summer 1994. Surprisingly, about one-third of respondents did not take any leisure trip at all.

A much higher proportion of respondents did not take any leisure trip. The weighted percentage for visiting natural areas is higher than the unweighted percentage because white respondents were under-represented in the survey, and they were much more likely to travel and visit natural areas than were other ethnic groups that were over-sampled.

Figure 5 — Summer 1994 travel of respondents from home and visiting undeveloped natural areas (NA): weighted (n=894) and unweighted (n=390) samples.



Short Excursion Characteristics

Persons who took a leisure trip were asked if any of these visits were less than 4 days long. The weighted and unweighted percent of county residents who visited an undeveloped natural area on a short excursion were estimated along with several key characteristics of respondents' most recent short excursion to an undeveloped natural area (*table 2*). Respondents who did not visit a natural area were asked if they visited a developed area during an excursion. The characteristics of respondents (unweighted sample) most recent excursion to a developed site were also determined (*table 2*). Short natural area excursions were most commonly 2-3 days away from home, with 1-2 days spent in natural areas. Trips to developed areas were longer and were more frequently to out-of-state and international destinations. Over 77 percent of natural areas visited were in California, while 45.5 percent of developed trips were in California. The most popular activities in natural areas were hiking, walking, and fishing; in developed areas, they were sight-seeing, gambling, and swimming.

Vacation Characteristics

All respondents were asked about the importance of vacations (4 or more consecutive days) away from home to their lifestyle. In the unweighted sample, about 23 percent stated they were extremely important, 26.0 percent very important, 24.9 percent important, 16.8 percent somewhat important, and 8.4 percent not at all important. This suggests that about 5 in 10 respondents believed that vacations were very important to their lifestyle, while 1 in 10 said they were unimportant.

Next, respondents were asked how many vacations they had taken in the last 2 years. For the weighted sample, 21.9 percent had not taken any vacations in the past 2 years, 42.6 percent had taken one or two trips, while 25.9 percent took three to five vacations and 9.6 percent took six or more vacations (*fig. 6*). There is little difference in the distribution of vacations between the weighted and unweighted sample. Results suggest that two vacations a year are still most common.

The characteristics of vacations taken by persons who visited natural areas and those who did not were compared (*table 3*). In the weighted sample, 59.0 percent of respondents visited a natural area on a vacation, while 41.0 percent did not. Again, a higher percentage of respondents in the weighted sample visited natural areas than in the unweighted sample.

Table 2—Short excursion characteristics.

	Visited natural area	Did not visit natural area
	---------- *percent* ----------	
Took a short excursion		
Weighted sample (n=212)	57.5	42.5
Unweighted sample (n=312)	58.6	41.4
For those who took a short excursion		
Total number of days away from home (unweighted sample only)		
1/2 or less	9.4	8.2
1/2–1	20.6	10.3
1/2	28.8	22.6
2-3	41.2	59.0
Number of days in natural area (unweighted sample only)		
1/2 or less	15.9	N/A
1/2–1	27.6	N/A
1	31.2	N/A
2-3	25.3	N/A
Location of area visited (unweighted sample only)		
California	77.1	45.5
Other state	21.2	45.9
International	1.8	8.8
Five top recreation activities (unweighted sample only)		
1	Hiking	Sightseeing
2	Walking	Gambling
3	Fishing	Swimming
4	Sightseeing	Hiking
5	Camping	Shopping

For the unweighted sample, there was little overall difference in the length of vacations—1 week was the most common length. One week was also the most common number of days spent in natural areas. Natural areas visited were more likely to be found in California, while other sites were usually in other states. Hiking, walking, sightseeing and fishing were most the most popular activities in natural areas, while sightseeing, visiting friends and relatives, walking and swimming/beach were most commonly undertaken outside natural areas.

Overall, the most popular vacation type was visiting friends and relatives (*fig. 7*). However, those visiting undeveloped natural areas were much more likely to be on a natural area vacation (42.6 percent) or a touring vacation (14.8 percent). Compared to natural areas visitors, respondents who did not visit natural areas were more likely to be visiting friends or relatives (41.4 percent), on a city vacation (23.1 percent), or on a theme park vacation (5.5 percent). Almost half of all respondents who visited a natural area were on vacation to view parks, forests, or other natural areas.

Figure 6 — Number of vacations by respondents in past 2 years: weighted and unweighted samples (n=391).

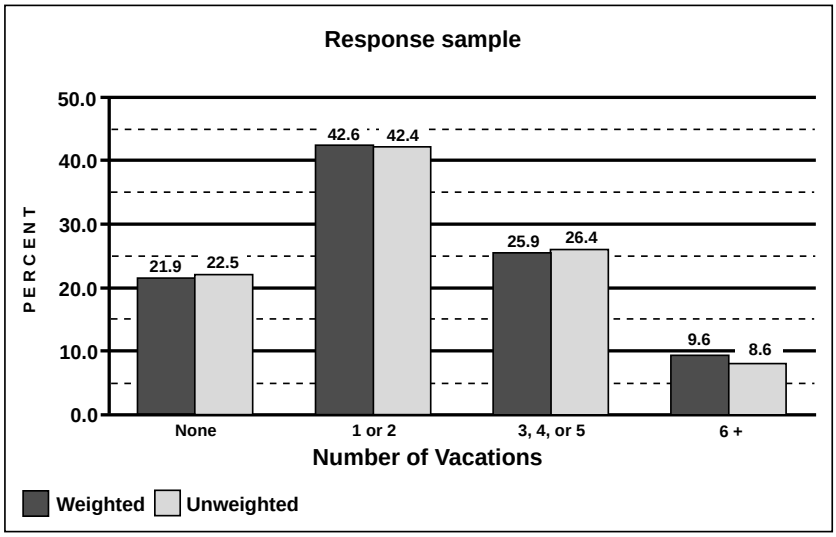


Table 3—*Vacation characteristics.*

	Visited natural area	Did not visit natural area
	percent	
Took a vacation		
Weighted sample (n=283)	59.0	41.0
Unweighted sample (n=391)	53.4	46.5
For those who took a vacation		
Total number of days away from home (unweighted sample only)		
4-7	70.0	61.5
8-14	19.6	23.7
15-21	3.9	8.2
22 or more	6.1	6.6
Number of days in natural area (unweighted sample only)		
1 or less	12.3	N/A
2-3	26.4	N/A
4-7	46.2	N/A
8-14	10.4	N/A
15 or more	4.7	N/A
Location of area visited (unweighted sample only)		
California	52.2	38.5
Other state	35.9	49.5
International	12.0	12.1
Five top recreation activities (unweighted sample only)		
1	Hiking	Sightseeing
2	Walking	Visiting Friends
3	Sightseeing	Walking
4	Fishing	Swim/beach
5	Camping	Gambling

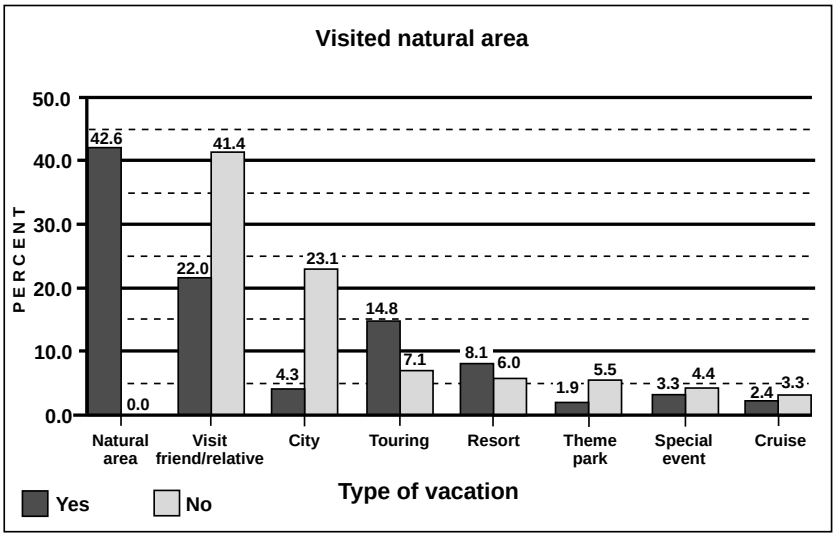


Figure 7 — Respondent visitation to natural areas by other types of vacations (n=390).

Influence of Demographic Characteristics on Leisure Travel Patterns

There were significant differences (chi-square=16.24, sig.=0.039, n=868) between age groups in the use of undeveloped natural areas and leisure travel behavior (*fig. 8*); only unweighted data are used in these analyses. Visitors to natural areas were relatively evenly distributed among three age groups, with about one-third visiting from the 18-34, 35-44 and 45-55 age groups. However, the 55 or older age group was the least likely to visit a natural area, with 26.2 percent visiting in the summer 1994. Thus, natural area visitors are equally likely to be from any adult age group, except for the senior cohort.

The youngest group was the least likely to take any leisure trip (49.5 percent), while the 35-44 cohort was the most likely to take a trip (40.7 percent did not take a trip). This finding suggests that youths have more constraints or less of a desire for leisure travel than older groups, including seniors.

Leisure travel to destinations other than natural areas was most frequently undertaken by the senior (29.1 percent) and the 35-44 (25.8 percent) age groups. Again, the youngest age group was least likely to visit other destinations (16.7 percent).

There were significant differences in respondent leisure travel patterns and education levels (chi-square=73.07, sig.=0.000, n=868). The data show that

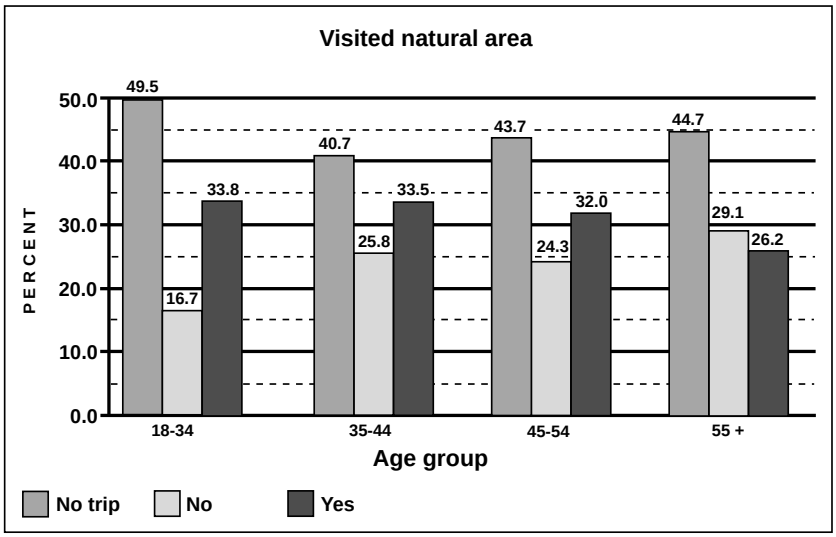


Figure 8 — Respondent leisure patterns by age group.

respondents with the highest education attainment were the most likely to visit a natural area, while those with the lowest education were least likely to visit (*fig. 9*). For example, over 52 percent of persons with a high school degree or less did not take a pleasure trip, compared to 20 percent of those with graduate degrees. The trend is clear: those least likely to travel for pleasure were those with the least educational achievement.

Household income also influenced leisure travel patterns (chi-square=94.25, sig.=0.000, n=851). Over 55 percent of respondents with a household income level of $75-$99,999 per year visited a natural area, compared to 17.1 percent of those with an income level of under $25,000. There appears to be an almost linear relationship between income and visitation: the higher the income the greater likelihood of visiting a natural area (*fig. 10*).

Respondents least likely to take any leisure trip were also those with the lowest household income. More than 45 percent of those with household incomes of less than $49,999 did not travel for pleasure. However, about one-third of respondents from the top income level of $100,000 or more per year did not take a leisure trip. It appears that factors other than household income limited participation at the highest income level.

There were significant differences (chi-square=16.28, sig.=0.000, n=869) in leisure travel patterns by respondent citizenship. Respondents who were not

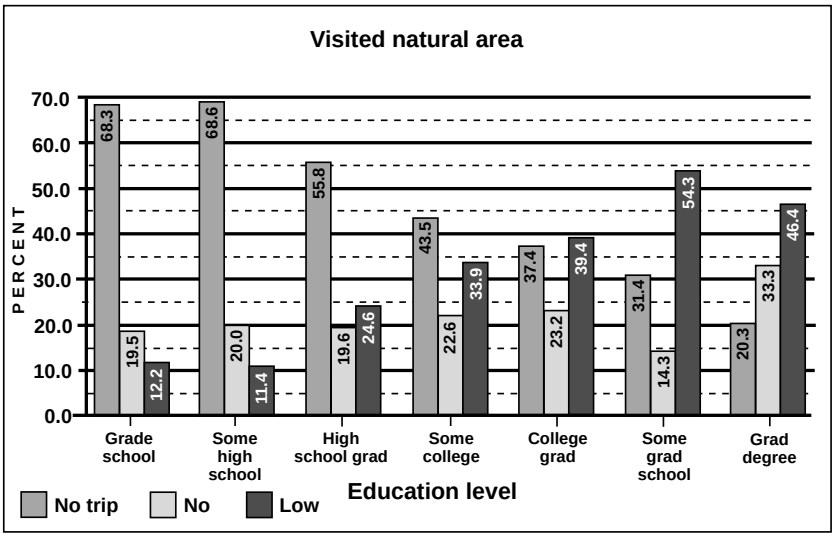


Figure 9 — Respondent leisure patterns by education level.

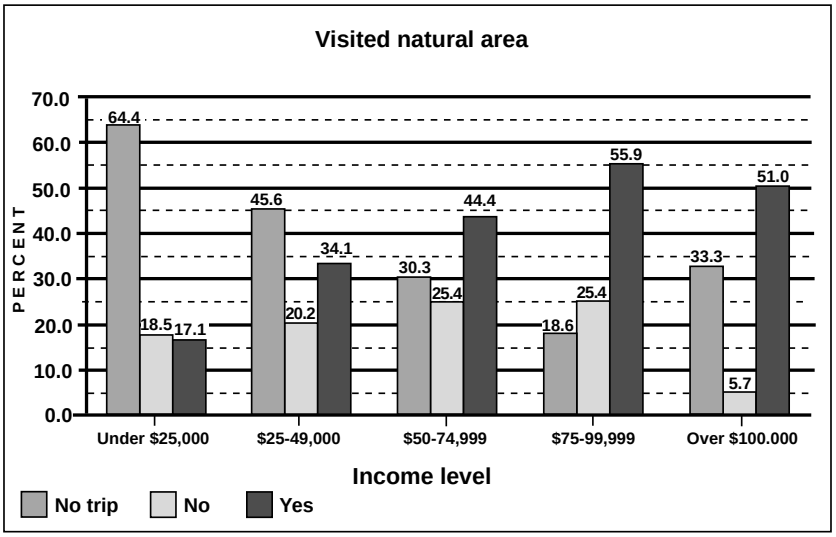


Figure 10 — Respondent visitation leisure patterns by income level.

citizens were the most likely (55.5 percent) not to take a leisure trip, compared to citizens (41.6 percent). U.S. citizens were more likely to visit a natural area (35.9 percent) than were non-citizens (24.6 percent) (*fig. 11*).

There were significant differences (chi-square=6.82, sig.=0.032, n=864) in leisure travel patterns by gender. Compared to males (43.7 percent), females were more likely (56.3 percent) not to take any leisure trip or visit non-natural areas (61.7 percent versus 38.3 percent) (*fig. 12*). However, about an equal percent of male (50.2 percent) and female respondents (49.8 percent) visited a natural area. These data suggest that there is no large gender difference in overall visitation to natural areas.

Demographic characteristics of the ethnic groups varied considerably, and these demographic factors have been shown to significantly influence leisure travel patterns (chi-square=51.33, sig.=0.000, n=868). Only unweighted data were used to show differences in visitation to undeveloped natural areas between the four ethnic groups. A simple cross-tabulation did not adjust for socio-economic differences; but a multivariate analysis was used to adjust for differences in the remaining demographic variables. Given these considerations, the data suggest that white respondents were the most likely to visit undeveloped natural areas (43.6 percent), followed by Asian respondents (33.8 percent), Latino respondents (27.2 percent), and African-American respondents (20.7 percent) (*fig. 13*).

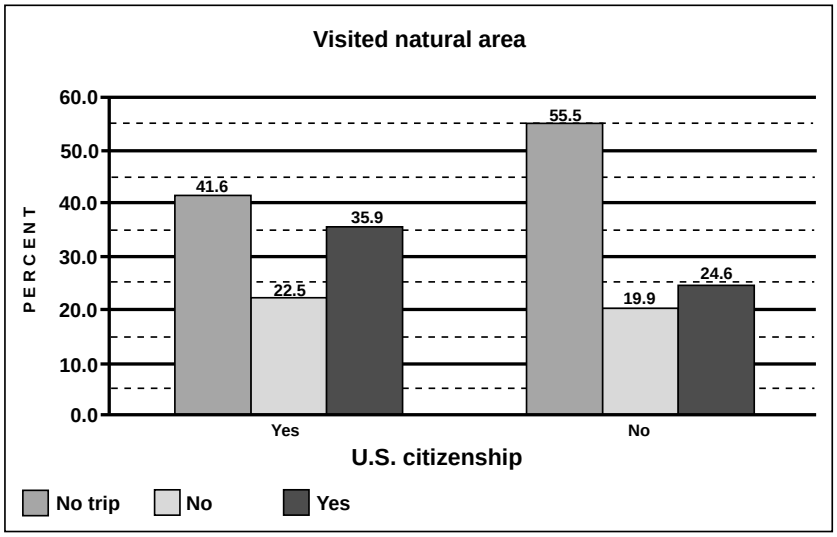


Figure 11— Respondent leisure patterns by U.S. citizenship.

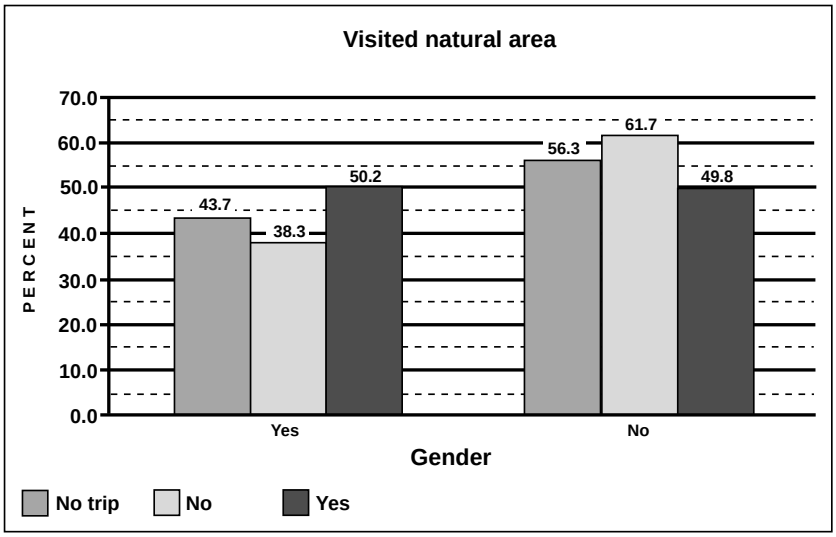
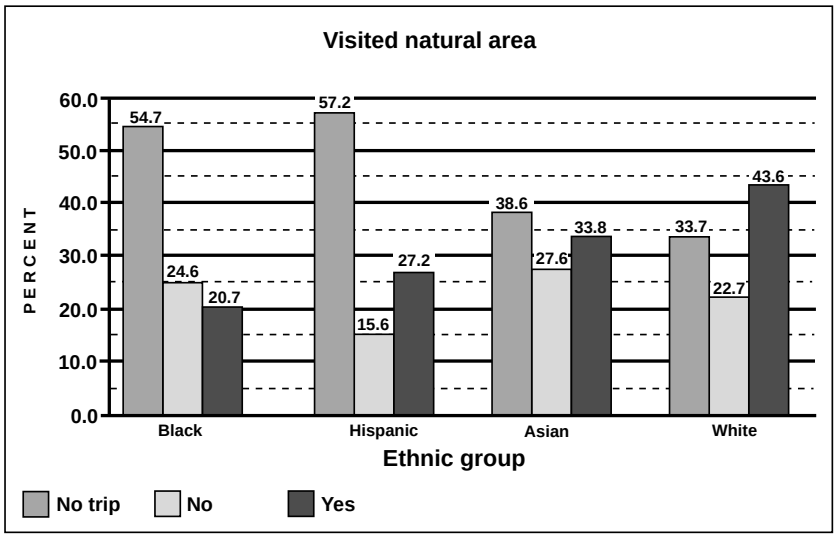


Figure 12 — Respondent leisure patterns by gender.

Figure 13—Respondent leisure patterns by ethnic group.



Latino respondents were the ethnic group least likely to take any leisure trip (57.2 percent), followed by African-American respondents (54.7 percent), Asian respondents (38.6 percent), and white respondents (33.7 percent). These data suggest that a respondent's ethnic background could play an important role in the likelihood of visitation to undeveloped natural areas.

Influence of Ethnicity and Other Socio-Demographic Characteristics on Leisure Travel Patterns

Differences within ethnic groups in leisure travel patterns were analyzed. Each ethnic group was studied individually to determine if leisure travel pattern characteristics varied with respondent demographic characteristics of age, education and household income level, gender, and citizenship.

African-American Respondents

Leisure travel patterns by African-American respondents were examined (differences were not significant, chi-square=4.74, sig.=0.784). The 18-34 year old group were somewhat more likely to visit a natural area (25.0 percent) versus those 55 and older (15.2 percent) (*table 4*).

The education level of African-American respondents had an influence on leisure travel patterns (chi-square=10.49, sig.=0.105). Those with the least education were also the least likely to take any leisure trip (62.7 percent) and least likely to visit a natural area (11.9 percent), compared to those with graduate or professional schooling (27.8 and 38.9 percent, respectively).

The influence of household income on leisure travel patterns was examined (chi-square=8.56, sig.=0.199). Visitation to natural areas was highest (28.3 percent) among those with household income levels of $50,000 or more, and least likely with respondents from households with $25,000 or less (12.5 percent). A similar pattern was found for respondents who did not take any leisure trip. More than 66 percent of the persons from households earning less than $25,000 did not take any trip, while 43.5 percent of upper income African-American respondents did not take any trip.

Only 4 percent of African-American respondents were not U.S. citizens, so the cell sizes for non-citizens were too small to allow for within-group analysis.

The influence of gender on leisure travel patterns was examined (chi-square=4.24, sig.=0.120). There were also high, but not significant, differences in visitation to natural areas between males and females. More than 27 percent of

Table 4—Demographic and leisure characteristics of African-American respondents.

	No trip taken	No visit to natural area	Visited natural area
	---------- *percent* ----------		
Age (n=178)			
18-34 years	56.3	18.8	25.0
35-44	53.2	27.7	19.1
45-55	55.6	27.8	16.7
55 or older	51.5	33.3	15.2
Education level (n=178)			
High/trade school graduate or less	62.7	25.4	11.9
College graduate or some college	53.8	22.6	23.6
Graduate/professional school	27.8	33.3	38.9
Household income (n=172)			
Under $25,000	66.1	21.4	12.5
$25,000-$49,999	55.7	24.3	20.0
$50,000 or more	43.5	28.3	28.3
U.S. citizenship (n=178)			
Yes	55.2	25.3	19.5
No	N/A[1]	N/A	N/A
Gender (n=179)			
Male	51.3	21.3	27.3
Female	57.6	27.3	15.2

[1] Data not available due to small number of cases in cells.

African-American respondent males visited a natural area, compared to only 15.2 percent of females. The percentage of males and females taking trips who did not visit natural areas and those who did not take any leisure trip was similar.

In summary, it appears that African-American respondents more likely to visit natural areas were males with high education levels and who came from households with high income (more than $50,000 per year). The youngest age group tended to visit natural areas most frequently.

Latino Respondents

Differences by age for leisure travel patterns were not significant (chi-square=11.17, sig.=0.192). Visitation to natural areas by Latino respondents followed a different pattern than African-American respondents in that visitation to natural areas was lowest among the younger age cohorts and greatest among the oldest groups (*table 5*). Less than 24 percent of the 18-34 year old group visited a natural area, versus 36.4 percent of those respondents 55 and older.

Differences in leisure travel patterns were found by education level (chi-square=32.7, sig.=0.000). Those with the least education were the least likely to visit natural areas. Only about 18 percent of respondents with the least education took a leisure trip to a natural area, compared to 43.2 percent of those with at least some college education.

Visitation to natural areas was also significantly influenced by household income level (chi-square=41.76, sig.=0.000). Latino respondents with the income level of $50,000 were more likely (51.4 percent) to visit natural areas than were

respondents from households with $25,000 or less (14.3 percent). The pattern was reversed for respondents who did not take any leisure trips, with those of the lowest income more likely (72.8 percent) not to take any trip, compared to those with the highest income category (24.3 percent).

U.S. citizenship also had a significant impact on visitation to natural areas, although this may simply reflect the overall lower income and education levels of recent immigrants (chi-square=17.15, sig.=0.000). About 36.9 percent of Latino respondents who were U.S. citizens visited natural areas, compared to 18.1 percent of respondents lacking citizenship (*table 5*). More than 68 percent of non-citizens did not take any leisure trip in the summer 1994.

There was very little difference in use of natural areas based on respondent gender (chi-square=0.189, sig.=0.909). More than 27 percent of both male and female Latino respondents visited natural areas, while about 56 percent did not take any leisure trip.

These within-group findings for Latino respondents suggest that the most likely respondents to visit a natural area were U.S. citizens who had higher education and income levels. The youngest age cohort (18-34 years) was the least likely to take a leisure trip or visit a natural area, while the most senior group (55+ years) was the most likely to visit a natural area.

Asian Respondents

Leisure travel pattern differences based on age were non-significant (chi-square=5.56, sig.=0.969). Visitation to natural areas by Asian respondents was

Table 5—*Demographic and leisure characteristics of Latino respondents.*

	No trip taken	No visit to natural area	Visited natural area
	percent		
Age (n=275)			
18-34 years	62.8	13.4	23.8
35-44	45.6	24.6	29.8
45-55	50.0	16.7	33.3
55 or older	54.5	9.1	36.4
Education level (n=276)			
High/trade school graduate or less	67.8	14.2	18.0
College graduate or some college	35.8	21.0	43.2
Graduate/professional school	45.5	0.0	54.5
Household income (n=276)			
Under $25,000	72.8	12.9	14.3
$25,000-$49,999	43.2	14.9	41.9
$50,000 or more	24.3	24.3	51.4
U.S. citizenship (n=274)			
Yes	44.6	18.5	36.9
No	68.8	13.2	18.1
Gender (n=276)			
Male	56.1	16.7	27.2
Female	58.0	14.8	27.2

lowest among the senior age cohort, and there were relatively small differences between other age groupings Table 6—Demographic and leisure characteristics of Asian respondents *(table 6)*. For example, 42.4 percent of the 35-44 age group visited a natural area, while 18.8 percent of the 55 or older group visited. There was almost no difference between any age cohorts in their rates for taking a leisure trip. More than 43 percent of 55 or older seniors took a trip but did not visit a natural area. Caution should be used interpreting these numbers because the sample has only 16 respondents in the 55 or older cohort, so some cell sizes are small. The chi-square value of 5.56 was not significant (sig.=0.696).

Like age, education level of Asian respondents had a large but not statistically significant influence on leisure travel patterns (chi-square=9.90, sig.=0.128). The trend was clear that those with the least education were the least likely to take a leisure trip and visit natural areas. Only 25.0 percent of those with the least education visited a natural area, compared to 45.8 percent with the highest level of educational attainment.

Asian respondents with a household income level of $50,000 were much more likely (53.7 percent) to visit natural areas than were respondents from households with $25,000 or less (21.4 percent). The pattern was reversed for respondents who did not take any leisure trips, with those of the lowest income being much more likely (50.0 percent) not to take any trip, compared to those with the highest income category (19.5 percent). The chi-square value for leisure travel patterns by household income was 18.92, with a significance of 0.004.

U.S. citizenship also had a significant impact on visitation to natural areas, although this may simply reflect the overall lower income and education levels

Table 6—*Demographic and leisure characteristics of Asian respondents.*

	No trip taken	No visit to natural area	Visited natural area
	percent		
Age (n=145)			
18-34 years	39.7	26.9	33.3
35-44	36.4	21.2	42.4
45-55	35.3	29.4	35.3
55 or older	37.5	43.8	18.8
Education level (n=144)			
High/trade school graduate or less	52.8	22.2	25.0
College graduate or some college	39.3	27.4	33.3
Graduate/professional school	16.7	37.5	45.8
Household income (n=126)			
Under $25,000	50.0	28.6	21.4
$25,000-$49,999	51.2	18.6	30.2
$50,000 or more	19.5	26.8	53.7
U.S. citizenship (n=145)			
Yes	33.3	17.8	48.9
No	41.0	32.0	27.0
Gender (n=145)			
Male	48.4	16.1	35.5
Female	31.3	36.1	32.5

of recent immigrants. Almost half (48.9 percent) of Asian respondents who were U.S. citizens visited natural areas, compared to 27.0 percent of respondents lacking citizenship (*table 6*). More than 41 percent of non-citizens did not take any leisure trip in the summer 1994. The chi-square value for leisure travel patterns by U.S. citizenship was 7.14, with a significance of 0.028.

There was a significant difference in leisure travel patterns by gender (chi-square=7.92, sig.=0.019). Males were more likely not to take any leisure trip (48.4 percent) compared to females (31.3 percent). Female Asian respondents took more leisure trips that did not visit natural areas (36.1 percent) than males (16.1 percent). It is interesting to note there was very little difference in visitation to natural areas, with males slightly more likely (35.5 percent) than females (32.5 percent).

In summary, the data suggest that Asian respondents more likely to visit natural areas were respondents who were U.S. citizens with high education and income levels. However, females were much likely to take a leisure trip than were Asian respondent males.

White Respondents

Visitation to natural areas by white respondents was lowest among the senior age cohort, with younger respondents more likely to visit natural areas (*table 7*). For example, 30.8 percent of the 55 or older age group visited a natural area, while 55.1 percent of the 18-34 group visited. The 35-44 cohort had the lowest likelihood of not taking any trip (29.4 percent), while the 45-55 and 55 or older groups were more likely (38 percent). The chi-square value for leisure travel patterns by age was 13.56 with a significance of 0.039.

Education level of white respondents does not appear to be a significant influence on leisure travel patterns (chi-square=4.53, sig.=0.337). Respondents with the highest education level were most likely to visit a natural area (52.1 percent) compared to those with the least education (41.3 percent).

White respondents with a household income level of $50,000 were the most likely (53.3 percent) to visit natural areas, compared to respondents from households with $25,000 or less (29.3 percent). The pattern was reversed but consistent for respondents who did not take any leisure trips, with those of the lowest income more likely (48.8 percent) not to take any trip, compared to those with the highest income category (25.8 percent). The chi-square value for leisure travel patterns by household income was 13.08, with a significance of 0.041.

U.S. citizenship also had a significant impact on leisure travel patterns (chi-square=1.23, sig.=0.028), although this may simply reflect the overall lower income and education levels of recent immigrants. More than 44 percent of white respondents who were U.S. citizens visited natural areas, compared to 39.3 percent of respondents lacking citizenship. More than 42 percent of non-citizens did not take any leisure trip in the summer 1994 (*table 7*).

Leisure travel patterns by gender were not statistically different (chi-square=1.90, sig.=0.385). Male respondents were slightly more likely to visit natural areas (47.7 percent) than were females (39.9 percent). The percentage of females (35.0 percent) and males (32.3 percent) who did not take any leisure trip were quite similar.

In summary, it appears that white respondents much more likely to visit natural areas were those who were young (18-34 years), who come from households with high income (more than $50,000 per year).

Demographic Characteristics of Vacationers

Age differences for those who traveled to natural areas or other areas were non-significant (chi-square=2.43, sig.=0.657, n=417). Overall, visitors to natural areas were relatively evenly distributed among age groups (*fig. 14*). More

Table 7—Demographic and leisure characteristics of white respondents.

	No trip taken	No visit to natural area	Visited natural area
		percent	
Age (n=273)			
18-34 years	31.6	13.3	55.1
35-44	29.4	26.5	44.1
45-55	38.1	26.2	35.7
55 or older	38.5	30.8	30.8
Education level (n=273)			
High/trade school graduate or less	34.9	23.8	41.3
College graduate or some college	37.0	21.0	42.0
Graduate/professional school	20.8	27.1	52.1
Household income (n=254)			
Under $25,000	48.8	22.0	29.3
$25,000-$49,999	38.7	22.6	38.7
$50,000 or more	25.8	20.8	53.3
U.S. citizenship (n=273)			
Yes	32.7	23.3	44.1
No	42.9	17.9	39.3
Gender (n=273)			
Male	32.3	20.0	47.7
Female	35.0	25.2	39.9

than one-half of the 18-34, 35-44 and 45-55 age groups, visited a natural area, while slightly less than 50 percent of the 55 or older age group visited a natural area.

Differences between education level groups were significant (chi-square=12.56, sig=0.019). More than 46 percent of respondents who were in or graduated from graduate/professional schools visited a natural area, compared to 11.4 percent who graduated from high school (*fig. 15*). The data suggest that respondents with the highest educational achievement were the most likely to visit a natural area.

Traveler household incomes differed significantly (chi-square=13.53, sig.=0.018, n=412). Those respondents in the $25,000 or less group for household income were significantly less likely (58.2 percent or higher) to visit a natural area, compared to the $50,000+ group (59.3 percent) (*fig. 16*).

There were no significant differences between U.S. citizens and non-citizens in their visitation patterns to undeveloped natural areas. About 55 percent of citizens and 53 percent of non-citizens visited a natural area during their summer vacation.

Statistically significant differences were found for vacationers by gender (chi-square=14.31, sig.=0.002). Males were much more likely to take a natural area vacation (63.4 percent) than were females (48.7 percent) (*fig. 17*). This finding contrasts with gender differences found for short excursions to natural areas, which showed no significant differences.

Differences by ethnic group for vacation places were large but not significant (chi-square=9.87, sig.=0.078, n=482). African-American respondents were least

likely to visit a natural area (41.6 percent) during a vacation compared to white respondents (62.2 percent) (*fig. 18*). More than 52 percent of Latino and Asian respondent groups visited a natural area.

Figure 14 — Respondent vacations by age group.

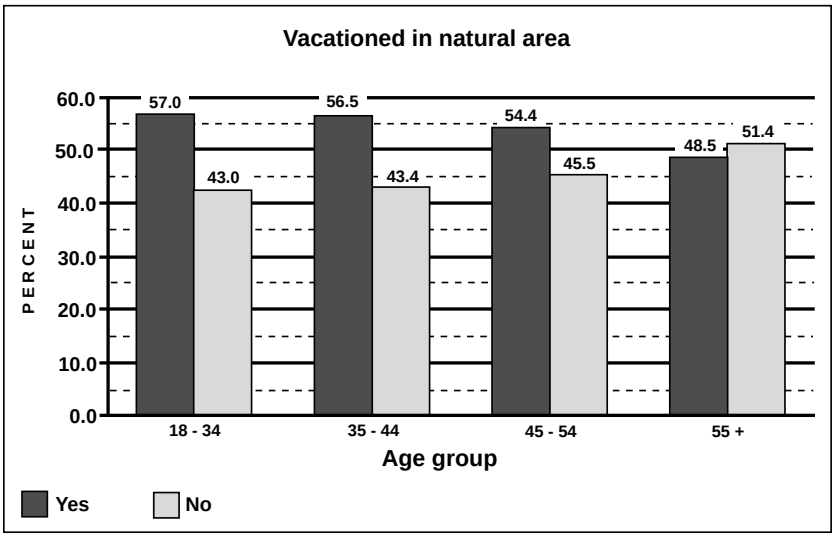


Figure 15 — Respondent vacations by education level.

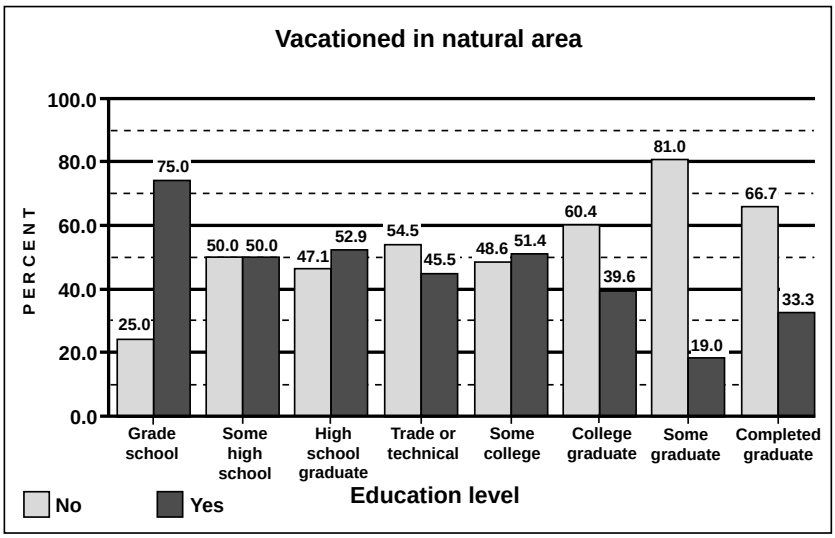
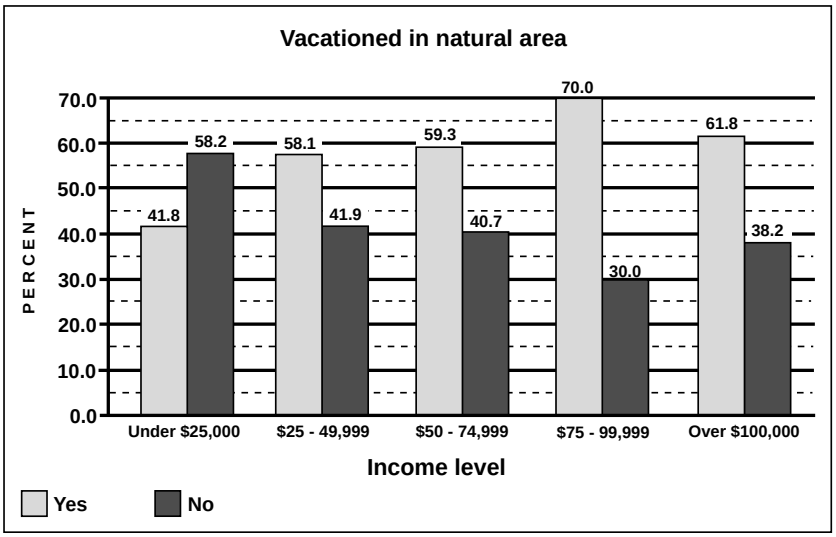


Figure 16 — Respondent vacations by income level.



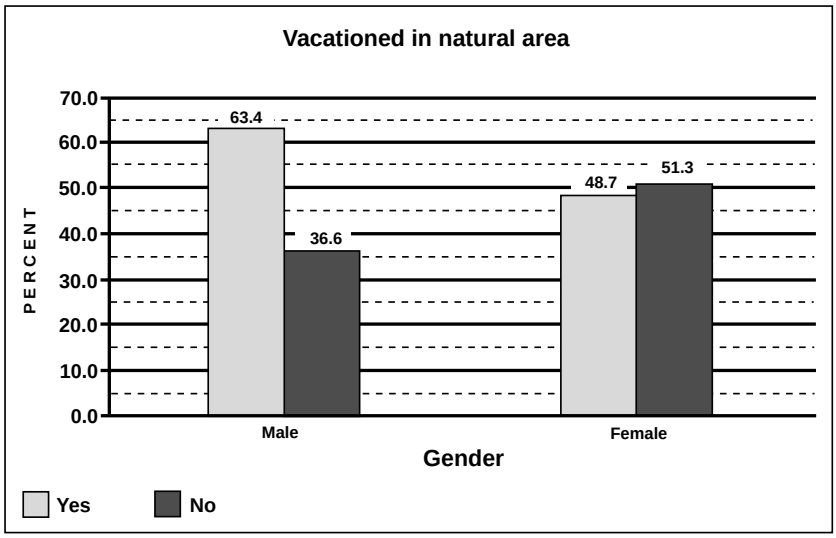


Figure 17 — Respondent vacations by gender.

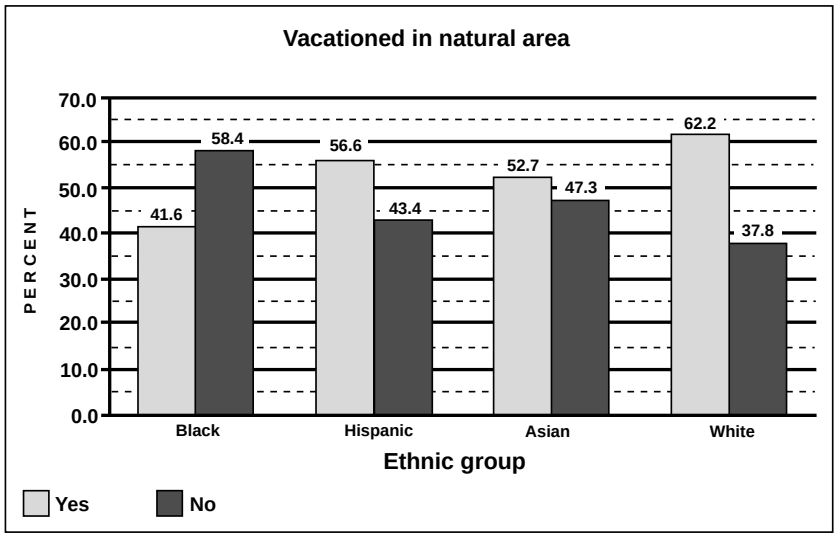


Figure 18 — Respondent vacations by ethnic group.

Differences Within Ethnic Groups Who Traveled in Summer 1994

African-American Respondents

Differences were not significant for African-American traveling groups of respondents by age (chi-square=2.55, sig.=0.465, n=77). Visiting natural areas by African-American respondents varied only slightly according to respondent age, with the 18-34-year-old group somewhat more likely to vacation there (50.0 percent) versus those 55 and older (35.3 percent) (*table 8*). This is consistent with earlier findings on visitation to natural areas.

In contrast to age, education level of African-American respondents had a significant influence on the likelihood of vacation choice (chi-square=14.13, sig.=0.028, n=77). Only about 1 in 4 respondents with a high or trade school education visited a natural area on vacation. In contrast, about 2 out of 3 African-American respondents who vacationed and had at least some graduate or professional education visited a natural area.

Differences in vacation site choices by household income were non-significant (chi-square value=8.56, sig.=0.199, n=73). Vacations in natural areas was highest among those with household income levels of $50,000 or more (48.1 percent), and least likely with respondents from households with $25,000 or less

Table 8—Demographic characteristics of African-American respondents who vacationed in summer 1994.[1]

	Vacation in natural area	No vacation in natural area
	percent	
Age (n=77)		
18-34 years	50.0	50.0
35-44	42.9	57.1
45-55	22.2	77.8
55 or older	35.3	64.7
Education level (n=77)		
High/trade school graduate or less	26.1	73.9
College graduate or some college	42.5	57.5
Graduate/professional school	64.2	35.8
Household income (n=73)		
Under $25,000	18.8	81.3
$25,000-$49,999	43.3	56.7
$50,000 or more	48.1	51.9
Gender (n=77)		
Male	51.4	48.6
Female	33.3	66.7

[1]Small number of cases in cells. No information is provided on citizenship due to small cell counts.

(18.8 percent). These trends are consistent with earlier reported household income characteristics for the entire sample.

African-American male respondents were slightly more likely to vacation in natural areas (51.4 percent) than were females (33.8 percent). Only 4 percent of African-American respondents were not U.S. citizens, so the sample size was too small to analyze this factor.

In summary, African-American respondents significantly more likely to take a vacation in a natural area were those with higher levels of education.

Latino Respondents

Age differences for vacation site choices were non-significant (chi-square=3.78, sig.=0.435, n=98). Vacationing in natural areas was lowest among the younger age cohorts and greatest among the oldest groups (*table 9*). More than 49 percent of the 18-34 year old group visited a natural area, versus 72.7 percent of those respondents 55 and older.

Education level of Latino respondents had an influence on the likelihood of site choice, although non-significant (chi-square=12.14, sig.=0.144, n=96). Those with the least education were the least likely to visit natural areas. More than 3 out of 4 Latino respondents with some graduate education visited a natural area, compared to 1 in 2 with high or trade school education.

There were non-significant differences on site choice by household income (chi-square=3.80, sig.=0.283, n=96). Latino respondents with a household income level of $50,000 were more likely (72.7 percent) to vacation in natural areas, than were respondents from households with $25,000 or less (47.6 percent).

Table 9—Demographic characteristics of Latino respondents who vacationed in summer 1994.[1]

	Vacation in natural area	No vacation in natural area
	percent	
Age (n=98)		
18-34 years	49.1	50.9
35-44	63.6	36.4
45-55	62.5	37.5
55 or older	72.7	27.3
Education level (n=96)		
High/trade school graduate or less	45.5	54.5
College graduate or some college	68.4	31.6
Graduate/professional school	80.0	20.0
Household income (n=96)		
Under $25,000	47.6	52.4
$25,000-$49,999	58.1	41.9
$50,000 or more	72.7	27.3
U.S. citizenship (n=96)		
Yes	56.3	43.8
No	55.9	44.1
Gender (n=99)		
Male	56.8	43.2
Female	56.4	43.6

[1] Small number of cases in cells.

Latino males (56.8 percent) and females (56.4 percent) were nearly equally likely to vacation in a natural area. There was no difference between rates for vacationing in a natural area and U.S. citizenship. About 56 percent of each of these groups visited a natural area.

In summary, there were not significant differences in natural area vacation activity among Latino respondents.

Asian Respondents

Different age groups of Asian respondents had varying natural area vacation participation rates (*table 10*), though findings were statistically non-significant (chi-square=3.32, sig.=0.343, n=74). Vacationing in natural areas was lowest among the senior and youngest age cohorts and greatest among the middle age groups. About 28 percent of the 55 or older group visited a natural area, versus 66.7 percent of those respondents 45-55 years old.

In contrast to age, education level of Asian respondents had a much greater influence on the likelihood of natural area visitation (chi-square=13.75, sig.=0.088, n=73). Those with the least education were the least likely to visit natural areas. About 3 out of 4 Asian respondent vacationers with some graduate education visited a natural area, while about half of those with high or trade school visited.

Asian respondents with a household income level of $50,000 were more likely (67.7 percent) to vacation in natural areas, than were respondents from

Table 10—Demographic characteristics of Asian respondents who vacationed in summer 1994.[1]

	Vacation in natural area	No vacation in natural area
	percent	
Age (n=74)		
18-34 years	48.6	51.4
35-44	61.1	38.9
45-55	66.7	33.3
55 or older	28.6	71.4
Education level (n=73)		
High/trade school graduate or less	50.0	50.0
College graduate or some college	47.7	52.2
Graduate/professional school	69.2	30.8
Household income (n=64)		
Under $25,000	42.9	57.1
$25,000-$49,999	47.4	52.6
$50,000 or more	67.7	32.3
U.S. citizenship (n=74)		
Yes	69.0	31.0
No	42.2	57.8
Gender (n=74)		
Male	67.9	32.1
Female	43.5	56.5

[1] Small number of cases in cells.

households with $25,000 or less (42.9 percent). Although the trends are consistent with earlier findings on income, in that the greater a household income level the increasing likelihood of vacationing in a natural area, the chi-square test indicated that differences were not significant (chi-square=5.64, sig.=0.130, n=64).

There was a significant difference between rates for vacationing in a natural area and U.S. citizenship among Asian respondents. About 42 percent of non-citizens vacationed in a natural area, while 69 percent of U.S. citizens vacationed at a natural area (chi-square=5.05, sig.=0.024, n=74).

More Asian respondent males (67.9 percent) than females (43.5 percent) vacationed in natural areas (chi-square=4.14, sig.=0.042, n=74).

In summary, Asian respondent vacationers significantly more likely to visit a natural area were males with higher education, who were U.S. citizens.

White Respondents

Differences by age for site choices were non-significant (chi-square=4.87, sig.=0.181, n=156). Almost 3 out of 4 respondents between 18 and 34 years visited a natural area (*table 11*). The over 35 age groups all had visitation rates of between 52 and 59 percent.

Education level of white respondents did not seem to influence vacation site choice (chi-square=3.38, sig.=0.759, n=156). In contrast to other ethnic groups, white respondent vacationers with the least amount of education (high school or trade school) or the most education (graduate or professional school) more

Table 11—Demographic characteristics of white respondents who vacationed in summer 1994.[1]

	Vacation in natural area	No vacation in natural area
	percent	
***Age** (n=156)*		
18-34 years	73.2	26.8
35-44	59.5	40.5
45-55	55.6	44.4
55 or older	52.8	47.2
Education level (n=156)		
High/trade school graduate or less	77.8	22.2
College graduate or some college	58.6	41.3
Graduate/professional school	71.4	28.6
Household income (n=144)		
Under $25,000	47.1	52.9
$25,000-$49,999	72.5	27.5
$50,000 or more	61.8	38.2
U.S. citizenship (n=156)		
Yes	60.1	39.9
No	84.6	15.4
Gender (n=156)		
Male	70.6	29.4
Female	55.7	44.3

[1] Small number of cases in cells.

frequently visited natural areas than did those with some formal education (some college or college graduate). This anomaly may be the result of high usage by seniors, who generally have less formal education but more free time.

Differences by household income for site choices were non-significant (chi-square=6.13, sig.=0.105, n=144). White respondent vacationers with a household income level of $25-50,000 were the most likely (72.5 percent) to visit natural areas, compared to respondents from households with $25,000 or less (47.1 percent).

Citizenship had a substantial influence (chi-square=3.03, sig.=0.081, n=156) on vacation choice for white respondents. Respondents who were not U.S. citizens were more likely to visit a natural area (84.6 percent) than were U.S. citizens (60.1 percent). The European tradition of non-citizens to hike and visit natural areas may be the cause of higher participation by non-citizens.

Respondent gender also significantly influenced vacation choices (chi-square=3.62, sig.=0.057, n=156). Males were much more likely to visit a natural area (70.6 percent) compared to females (55.7 percent).

In summary, white respondent vacationers significantly more likely to visit a natural area were young males who were not U.S. citizens.

Barriers to Leisure Travel and Visiting Natural Areas

The survey asked respondents to agree/disagree with 17 statements describing barriers that may have affected their travel during the spring and summer 1994.

A scale of 1, strongly agree, to 5, strongly disagree, is the basis for the responses. Only unweighted data are presented. The importance of each barrier is broken down into three types of travelers identified earlier in this study: respondents who did not take a leisure trip away from home, persons who traveled but did not visit a natural area, and respondents who visited a natural area. The constraint was asked to each of the three groups in a somewhat unique context. For example, the constraint "not safe" was asked as "travel and vacation areas are not safe" to persons who did not take any trip. To respondents who took a trip but not to a natural area, the question was phrased as "undeveloped natural areas are not safe." Finally, persons who visited a natural area were asked "undeveloped natural areas are not safe and this limited my stay or activities in them."

The top three barriers mentioned by those who had not taken a leisure trip in the summer 1994 were *time commitments* (59.1 percent), *financial situation* (54.4 percent), and *nearby destinations are too crowded* (49.2 percent) (*table 12*). Those who took a trip but not to a natural area agreed that *nearby destinations are too crowded* (45.6 percent), and also said that *few friends travel or recreate in natural areas* (47.4 percent), and *they don't know where to go or what to do* (46.7 percent).

Table 12—*Respondent perceptions of barriers to taking a trip, visiting natural areas, and limiting stay within natural areas, by percents.*[1]

Barrier	Barrier to taking a trip[2] (n=412)	Barrier to visiting natural areas[3] (n=193)	Barrier limiting natural area stay[4] (n=289)
	percent		
Time commitments	59.1	41.6	45.1
Financial situation	54.4	27.3	29.7
Nearby destinations are too crowded	49.2	45.6	46.4
Few of my friends travel or recreate in natural areas	44.0	47.4	37.4
Would travel/rec in natural area if more workers of my ethnicity were employed there	42.1	26.8	39.0
Want more luxury accommodations	40.3	31.6	43.4
Don't know where to go/what to do	36.2	46.7	N/A
Normally travel/rec, but did something different this summer	34.8	14.8	23.6
Lacked transportation	33.7	22.5	48.4
Not safe	27.2	16.7	27.5
People of my ethnicity are discriminated against traveling/or rec. in natural area	25.6	16.3	23.6
No nearby natural areas	22.8	14.4	10.4
No companions to go with	22.0	21.5	30.8
Don't feel welcome traveling or in natural area	21.4	10.0	19.8
Travel/rec in natural area is too much trouble	19.0	12.4	23.1
Outdoors are uncomfortable	18.7	12.9	15.4
No interest vacations	15.3	14.3	N/A
Not healthy enough	12.7	4.8	11.5

[1] Scale: 1=strongly agree, 5=strongly disagree; number represents respondents who agreed or strongly agreed.

[2] Respondents who did not take a leisure trip.

[3] Respondents who took a trip but did not visit a natural area.

[4] Respondents who visited an undeveloped natural area.

Those traveling to natural areas said that barriers limiting their stay included *the lack of transportation* (48.4 percent), *nearby destinations are too crowded* (46.7 percent), and *time constraints* (45.1 percent). Other noteworthy barriers for all three groups included *the lack of luxury accommodations*, *the lack of workers of their ethnicity employed there*, and *the lack of companions to go with*.

A comparison of average scores (*table 13*) shows that other barriers exist. Importantly, those who traveled to a natural area that summer were least likely to agree that *having more workers of their ethnicity employed there* was a barrier (3.63). They were also least likely to agree that *safety* was a barrier (3.66) or that *lack of nearby areas* (3.66) was a barrier. Not surprisingly, those who traveled to a natural area were those least likely to agree that they would *feel unwelcome in a natural area* (3.9), that *a natural area is too much trouble* (3.84), *outdoors are uncomfortable* (3.89), that *they have no interest in vacations* (4.18), or that *they are not healthy enough* (4.29).

Table 13—*Respondent perceptions of barriers to taking a trip, visiting natural areas, and limiting stay within natural areas, by the means.*[1]

Barrier	Barrier to taking a trip[2] (n=412)	Barrier to visiting natural areas[3] (n=193)	Barrier limiting natural area stay[4] (n=289)	
	---------- *mean* ----------			*Sig.*[5]
Time commitments	2.69	2.86	2.91	0.036
Financial situation	2.69	3.17	3.37	0.000
Nearby destinations are too crowded	2.89	3.03	2.98	0.015
Few of my friends travel or recreate in natural areas	2.90	3.04	2.97	0.190
Would travel/rec in natural area if more workers of my ethnicity were employed there	2.94	3.25	3.63	0.000
Want more luxury accommodations	2.99	3.16	3.56	0.000
Don't know where to go/what to do	3.04	3.18	3.32	0.018
Normally travel/rec, but did something different this summer	3.18	3.00	3.02	0.574
Lacked transportation	3.20	3.60	3.75	0.000
Not safe	3.24	3.41	3.66	0.000
People of my ethnicity are discriminated against traveling/or rec. in natural area	3.41	3.83	3.90	0.000
No nearby natural areas	3.42	3.48	3.66	0.062
No companions to go with	3.43	3.57	3.78	0.001
Don't feel welcome traveling or in natural area	3.55	3.89	3.90	0.000
Travel/rec in natural area is too much trouble	3.55	3.57	3.84	0.000
Outdoors are uncomfortable	3.58	3.61	3.89	0.002
No interest vacations	3.81	3.84	4.18	0.000
Not healthy enough	3.92	4.04	4.29	0.000

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] Respondents who did not take a leisure trip.

[3] Respondents who took a trip but did not visit a natural area.

[4] Respondents who visited an undeveloped natural area.

[5] The significance that differences between groups were due to chance. Statistics were derived from a two-way chi-square test.

Differences Between Ethnic Group Perceptions of Barriers

The mean importance score for barriers to taking a leisure trip among the four ethnic groups were divided into three segments: 1) barriers to taking a leisure trip reported by respondents who did not take a leisure trip in the summer 1994; 2) barriers to visiting a natural area reported by respondents who took a leisure trip but did not visit a natural area; and 3) barriers limiting the length of stay in natural areas reported by respondents who visited a natural area during the summer 1994. This between-group comparison can be highly influenced by any significant differences in the demographic characteristics of each group. A multivariate statistical analysis was subsequently used to control for demographic differences.

Perceived Barriers to Taking a Leisure Trip by Those Not Taking a Trip in Summer 1994

The percent and mean scores were derived only from respondents who stated they did not take a leisure trip in the summer 1994. The most important barrier for each ethnic group was that they normally travel or recreate but they did something different the summer 1994 (*table 14*). More than half of each ethnic group (except white respondents) also said that *financial situation* was an

Table 14—*Ethnic group perceptions of barriers to taking a leisure trip for those who did not take a trip in summer 1994, by percents.*[1]

Barrier	African-American (n=106)	Latino respondent (n=188)	Asian respondent (n=74)	White respondent (n=125)
	percent			
Time commitments	56.7	50.7	68.9	68.0
Financial situation	56.6	64.4	56.7	37.6
Nearby destinations are too crowded	36.8	53.7	37.9	40.8
Few of my friends travel or recreate in natural areas	59.3	53.1	62.2	22.4
Would travel/rec in natural area if more workers of my ethnicity were employed there	47.2	61.1	37.8	15.7
Want more luxury accommodations	41.5	39.9	28.4	18.4
Don't know where to go/what to do	46.2	51.6	33.8	24.0
Normally travel/rec, but did something different this summer	62.0	77.1	77.8	69.3
Lacked transportation	36.8	46.3	28.4	19.3
Not safe	22.8	36.2	12.2	20.9
People of my ethnicity are discriminated against traveling/or rec. in natural area	33.9	32.4	10.8	8.0
No nearby natural areas	26.4	22.8	28.4	15.2
No companions to go with	26.5	33.0	21.6	24.8
Don't feel welcome traveling or in natural area	23.6	28.7	5.5	8.0
Travel/rec in natural area is too much trouble	20.7	23.9	31.1	13.6
Outdoors are uncomfortable	28.3	18.1	20.8	13.6
No interest in vacations	13.2	21.8	10.9	10.4
Not healthy enough	15.1	12.2	8.9	15.2

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree; number represents respondents who agreed or strongly agreed.

important barrier. Other barriers for at least half of the African-American respondents who did not travel included that *few friends travel or recreate in natural areas* (59.3 percent) and *time commitments* (56.7 percent). Other barriers for at least half of the Latino respondents who did not travel that summer included that *few workers of their ethnicity were employed in natural areas* (61.1 percent), *nearby destinations are crowded* (53.7 percent), *few friends travel to natural areas* (53.1 percent), *don't know where to go or what to do* (51.6 percent), and *time commitments* (50.7 percent). Additional constraints to doing something different and financial situation for over half the Asian respondents was a shorter list than for Latino respondents, and included *time commitments* (68.9 percent) and *few friends travel or recreate in natural areas* (62.2 percent). The white respondents who didn't travel that summer said that *they did something different* (69.3 percent) or had *time commitments* (68.0 percent).

Table 15 shows that Latino respondents were the most likely to agree that *financial situation* (2.47) and *the lack of Latino workers* (2.46) were barriers to their

Table 15—*Ethnic group perceptions of barriers to taking a leisure trip for those who did not take a trip in summer 1994, by the means.*[1]

Barrier	African-American (n=106)	Latino respondent (n=188)	Asian respondent (n=74)	White respondent (n=125)	
	---------- mean ----------				*Sig.*[2]
Time commitments	2.63	2.77	2.41	2.26	0.000
Financial situation	2.65	2.47	2.72	3.16	0.001
Nearby destinations are too crowded	3.06	2.68	3.07	3.17	0.004
Few of my friends travel or recreate in natural areas	2.83	2.81	2.63	3.36	0.000
Would travel/rec in natural area if more workers of my ethnicity were employed there	2.94	2.46	3.14	3.96	0.000
Want more luxury accommodations	3.00	3.12	3.45	3.70	0.001
Don't know where to go/what to do	2.99	2.81	3.27	3.65	0.000
Normally travel/rec, but did something different this summer	3.11	3.07	3.14	3.52	0.036
Lacked transportation	3.22	3.00	3.44	3.79	0.000
Not safe	3.44	3.02	3.68	3.64	0.000
People of my ethnicity are discriminated against traveling/or rec. in natural area	3.22	3.21	3.72	4.23	0.000
No nearby natural areas	3.39	3.52	3.44	3.92	0.000
No companions to go with	3.55	3.37	3.54	3.62	0.014
Don't feel welcome traveling or in natural area	3.47	3.37	3.94	4.21	0.000
Travel/rec in natural area is too much trouble	3.56	3.47	3.39	4.00	0.000
Outdoors are uncomfortable	3.40	3.72	3.62	3.93	0.031
No interest in vacations	3.92	3.68	3.91	4.21	0.001
Not healthy enough	3.89	3.96	4.17	4.02	0.000

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a chi-square test.

travel. The Asian respondents (2.41) and white (2.26) respondents were the most likely to agree that *time commitments* were barriers to travel. None of the groups agreed that they lacked an interest in vacations or that their health was a barrier to taking trips.

Perceived Barriers to Visiting an Undeveloped Natural Area For Those Who Traveled but Not to a Natural Area

For this section the percent and mean scores were derived only for respondents who took a trip but not to a natural area (*tables 16, 17*). There are several interesting and important barriers for groups who traveled but did not go to a natural area. First, there are several issues that more than 20 percent of each minority group agreed with, but were agreed with by 20 percent or fewer white respondents, including that minorities would travel or recreate in a natural area if *workers of ethnic minority background were employed there*, minorities *don't know where to go or what to do*, minorities *lack transportation*, and minorities *perceive the area as not safe*.

Table 16—*Ethnic group perceptions of barriers to visiting an undeveloped natural area for those who traveled but not to a natural area, by percents.*[1]

Barrier	African-American (n=44)	Latino respondent (n=40)	Asian respondent (n=35)	White respondent (n=58)
	percent			
Time commitments	43.2	45.0	51.4	41.3
Financial situation	31.8	37.5	37.1	20.7
Nearby destinations are too crowded	20.5	37.5	31.4	50.0
Few of my friends travel or recreate in natural areas	45.5	37.5	37.1	56.9
Would travel/rec in natural area if more workers of my ethnicity were employed there	50.0	52.5	42.9	17.3
Want more luxury accommodations	54.6	50.0	54.3	39.7
Don't know where to go/what to do	50.0	52.5	42.9	17.2
Normally travel/rec, but did something different this summer	32.8	60.0	48.5	69.0
Lacked transportation	38.6	22.5	25.7	12.0
Not safe	25.0	32.5	25.7	15.5
People of my ethnicity are discriminated against traveling/or rec. in natural area	9.1	15.0	20.0	3.4
No nearby natural areas	31.8	42.5	34.3	22.4
No companions to go with	36.3	22.5	31.4	20.7
Don't feel welcome traveling or in natural area	18.2	20.0	21.2	8.6
Travel/rec in natural area is too much trouble	20.5	20.0	22.8	17.2
Outdoors are uncomfortable	15.9	20.0	40.1	28.6
No interest vacations	13.6	17.5	5.7	19.0
Not healthy enough	13.7	10.0	17.2	8.6

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree; number represents respondents who agreed or strongly agreed.

More than half of each ethnic minority group mentioned another barrier to natural area travel is the *lack of luxury accommodations*. Half of the African-American respondents also cited *few minority workers in natural areas* (50.0 percent) and *not knowing where to go or what to do* (50.0 percent) as barriers. In addition to the lack of luxury accommodations, more than half the Latino respondents who traveled but not to a natural area said that *lack of minority employees* (52.5 percent) and a *lack of knowledge about where to go or what to do* (52.5 percent) were barriers. Additionally, they said that they *normally travel or recreate but did something different that summer* (60 percent). In addition to luxury accommodations, more than half the Asian respondents said they traveled but not to a natural area due to *time commitments* (51.4 percent). Barriers to natural area travel for white respondents who went on a trip included *doing something different that summer* (69.0 percent), *few friends travel or recreate in natural areas* (56.9 percent), and *nearby destinations were too crowded* (50.0 percent).

Table 17—*Ethnic group perceptions of barriers to visiting an undeveloped natural area for those who traveled but not to a natural area, by the means.*[1]

Barrier	African-American (n=44)	Latino respondent (n=40)	Asian respondent (n=35)	White respondent (n=58)	
	---------- *mean* ----------				*Sig.*[2]
Time commitments	2.95	2.97	2.85	3.20	0.348
Financial situation	3.36	3.12	3.14	3.63	0.587
Nearby destinations are too crowded	3.29	3.15	3.17	2.84	0.007
Few of my friends travel or recreate in natural areas	3.02	3.12	3.28	2.79	0.069
Would travel/rec in natural area if more workers of my ethnicity were employed there	2.90	2.90	3.00	3.91	0.002
Want more luxury accommodations	2.63	2.95	2.82	3.20	0.077
Don't know where to go/what to do	2.95	2.97	2.97	3.29	0.695
Normally travel/rec, but did something different this summer	2.97	2.70	2.91	3.20	0.136
Lacked transportation	3.20	3.55	3.48	3.98	0.027
Not safe	3.47	3.77	3.38	3.74	0.226
People of my ethnicity are discriminated against traveling/or rec. in natural area	3.65	3.70	3.54	4.29	0.002
No nearby natural areas	3.13	3.02	3.25	3.60	0.077
No companions to go with	3.20	3.37	3.40	3.77	0.369
Don't feel welcome traveling or in natural area	3.72	3.50	3.60	4.10	0.093
Travel/rec in natural area is too much trouble	3.47	3.45	3.45	3.68	0.465
Outdoors are uncomfortable	3.70	3.62	3.17	3.63	0.093
No interest vacations	3.70	3.70	4.00	3.94	0.126
Not healthy enough	4.00	3.97	3.80	4.27	0.551

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a chi-square test.

The white respondents were the least likely to agree that they were discriminated against while traveling or recreating in a natural area (4.29).

Ethnic Group Perceptions of Barriers Limiting Stay in Undeveloped Natural Area

The percent and mean scores were derived only from respondents who stated they took a leisure trip in the summer 1994 and visited a natural area (*tables 18, 19*). All the groups said that having *few friends who travel or recreate in natural areas* is a barrier limiting their stay. In fact this was the barrier getting the most agreement from African-American respondents (51.7 percent) and Latino respondents (58.4 percent). These two groups both agreed that another barrier was that *nearby destinations were too crowded*. *Table 18* shows that for African-American respondents a third barrier was that *they didn't know where to go or what to do* (44.8 percent), while a third barrier for Latino respondents was *time commitments* (35.4 percent). For the Asian respondents who traveled to a natural area, the top three barriers were *time commitments* (47.2 percent), *few friends travel*

Table 18—*Ethnic group perceptions of barriers limiting stay in undeveloped natural areas, by percents.*[1]

Barrier	African-American (n=29)	Latino respondent (n=48)	Asian respondent (n=36)	White respondent (n=91)
	percent			
Time commitments	41.0	35.4	47.2	46.2
Financial situation	17.2	33.4	36.2	23.1
Nearby destinations are too crowded	44.8	45.8	36.1	53.9
Few of my friends travel or recreate in natural areas	51.7	58.4	41.7	38.5
Would travel/rec in natural area if more workers of my ethnicity were employed there	41.3	27.1	19.4	5.5
Want more luxury accommodations	27.5	31.3	22.3	37.6
Don't know where to go/what to do	44.8	25.0	33.3	30.8
Normally travel/rec, but did something different this summer	N/A[2]	N/A	N/A	N/A
Lacked transportation	23.1	16.7	13.9	12.1
Not safe	24.1	12.5	19.4	15.4
People of my ethnicity are discriminated against traveling/or rec. in natural area	41.4	18.9	11.1	4.4
No nearby natural areas	20.6	25.1	22.2	18.7
No companions to go with	10.3	18.9	16.7	17.6
Don't feel welcome traveling or in natural area	14.2	18.8	8.3	2.2
Travel/rec in natural area is too much trouble	13.7	8.4	11.1	9.9
Outdoors are uncomfortable	17.2	12.5	16.7	8.9
No interest vacations	N/A	N/A	N/A	N/A
Not healthy enough	3.4	14.6	5.6	0.0

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree; number represents respondents who agreed or strongly agreed.

[2] Data not available or appropriate for this variable.

to natural areas (41.7 percent), and their *financial situation* (36.2 percent). For white respondents two other barriers were that *nearby destinations were too crowded* (53.9 percent), followed by *time commitments* (46.2 percent).

More minorities than white respondents said that the *lack of minority workers* was a barrier. Importantly, 41.4 percent of African-American respondents mentioned that *people of their ethnicity are discriminated against while traveling to or recreating in natural areas*.

The white respondents were the least likely to agree that the following were barriers limiting their stay in undeveloped natural areas: *health issues* (4.41), *feeling unwelcome traveling to or recreating in natural areas* (4.23), *discriminatory actions while traveling to or recreating in natural areas* (4.21), and *would travel to a natural area if more workers of their ethnicity were employed there* (4.05).

Table 19—*Ethnic group perceptions of barriers limiting stay in undeveloped natural areas, by the means.*[1]

Barrier	African-American (n=29)	Latino respondent (n=48)	Asian respondent (n=36)	White respondent (n=91)	
	mean				*Sig.*[2]
Time commitments	3.17	3.16	2.83	3.00	0.372
Financial situation	3.62	3.37	3.19	3.57	0.452
Nearby destinations are too crowded	2.82	3.04	3.22	2.76	0.263
Few of my friends travel or recreate in natural areas	2.93	2.91	3.36	3.15	0.197
Would travel/rec in natural area if more workers of my ethnicity were employed there	3.06	3.58	3.72	4.05	0.008
Want more luxury accommodations	3.41	3.39	3.36	3.84	0.058
Don't know where to go/what to do	3.06	3.54	3.38	3.38	0.299
Normally travel/rec, but did something different this summer	N/A[3]	N/A	N/A	N/A	N/A
Lacked transportation	3.55	3.75	3.77	3.88	0.290
Not safe	3.44	3.68	3.58	3.64	0.698
People of my ethnicity are discriminated against traveling/or rec. in natural area	2.93	3.81	3.91	4.21	0.000
No nearby natural areas	3.48	3.37	3.66	3.71	0.558
No companions to go with	3.96	3.62	3.91	3.87	0.682
Don't feel welcome traveling or in natural area	3.13	3.66	3.94	4.23	0.000
Travel/rec in natural area is too much trouble	3.86	3.87	3.83	3.92	0.937
Outdoors are uncomfortable	3.65	3.93	3.83	3.94	0.375
No interest vacations	N/A	N/A	N/A	N/A	N/A
Not healthy enough	4.37	4.08	4.33	4.41	0.015

[1] Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a chi-square test.

[3] Data not available or appropriate for this variable.

Differences Within Ethnic Group Perceptions of Barriers to Travel and Visiting Natural Areas

Respondents from each ethnic group were divided into those who did not take any trip, those who did not visit a natural area, and those who visited a natural area. Eight barrier questions shown in earlier analysis to be important or influenced by ethnic background were selected for analysis in this section.

African-American Respondents

Two barriers were significantly different within this group (*table 20*). African-American respondents who traveled but not to a natural area were the least likely to agree that *they would feel unwelcome* (3.86) in a natural area or that *people of their ethnicity were discriminated against while traveling to or recreating in a natural area* (3.61).

Latino Respondents

Several barriers to leisure travel among Latino respondents were statistically significant (*table 21*). Latino respondents who had not taken a trip in summer 1994 were the most likely to agree that they *would travel to natural areas if more workers of their ethnicity were employed there* (2.41) or if their *financial situation* (2.47) were not an issue. Latino respondents who traveled to an undeveloped natural area were least likely to agree that they *felt unwelcome* in a natural area (3.68) or that *people of their ethnicity were discriminated against while traveling to or recreating in a natural area* (3.62).

Asian Respondents

None of the differences for the constraints examined were statistically significant for Asian respondent groups (*table 22*). Though statistically non-significant, the groups who did not travel in summer 1994 were most likely to agree that *time commitments* were an issue (2.41), while all the groups disagreed that *people of their ethnicity were discriminated against while traveling to or recreating in a natural area* and disagreed that they *feel unwelcome traveling to or while in a natural area*.

Table 20—*African-American respondent perceptions of selected barriers for any travel, travel to natural areas, and travel within natural area.*[1]

Barrier	No trip	Didn't visit	Visited natural area	
	---------- mean ----------			*Sig.*[2]
Time commitments	2.65	2.98	2.97	0.496
Financial situation	2.80	3.38	2.97	0.238
Nearby destinations are too crowded	3.01	3.31	3.00	0.421
Few of my friends travel or recreate in natural areas	2.83	3.06	2.67	0.113
Would travel/rec in natural area if more workers of my ethnicity were employed there	2.84	2.97	3.05	0.477
Don't know where to go/what to do	2.95	3.04	3.02	0.916
People of my ethnicity are discriminated against traveling or rec. in natural area	3.01	3.61	3.29	0.020
Don't feel welcome traveling or in natural area	3.35	3.86	3.24	0.057
Want more luxury accommodations	2.90	2.77	3.41	0.111

[1] n=179. Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a two-way chi-square test.

Table 21—*Latino respondent perceptions of selected barriers for any travel, travel to natural areas, and travel within natural area.*[1]

Barrier	No trip	Didn't visit	Visited natural area	
	---------- *mean* ----------			*Sig.*[2]
Time commitments	2.86	2.83	2.89	0.954
Financial situation	2.47	2.93	3.13	0.000
Nearby destinations are too crowded	2.62	3.06	2.98	0.016
Few of my friends travel or recreate in natural areas	2.81	2.95	2.89	0.588
Would travel/rec in natural area if more workers of my ethnicity were employed there	2.41	2.95	3.17	0.002
Don't know where to go/what to do	2.75	3.02	3.29	0.030
People of my ethnicity are discriminated against traveling or rec. in natural area	3.22	3.48	3.62	0.038
Don't feel welcome traveling or in natural area	3.25	3.55	3.68	0.043
Want more luxury accommodations	3.09	2.76	3.40	0.068

[1] n=276. Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a two-way chi-square test.

Table 22—*Asian respondent perceptions of selected barriers for any travel, travel to natural areas, and travel within natural area.*[1]

Barrier	No trip	Didn't visit	Visited natural area	
	---------- *mean* ----------			*Sig.*[2]
Time commitments	2.41	2.87	2.67	0.452
Financial situation	2.71	2.90	3.24	0.146
Nearby destinations are too crowded	3.16	3.02	3.18	0.676
Few of my friends travel or recreate in natural areas	2.78	2.92	3.10	0.179
Would travel/rec in natural area if more workers of my ethnicity were employed there	3.32	2.87	3.48	0.104
Don't know where to go/what to do	3.25	3.22	3.20	0.918
People of my ethnicity are discriminated against traveling or rec. in natural area	3.58	3.90	3.75	0.166
Don't feel welcome traveling or in natural area	3.78	3.85	3.86	0.532
Want more luxury accommodations	3.20	3.00	3.41	0.284

[1] n=144. Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a two-way chi-square test.

White Respondents

Those white respondents who did not travel in summer 1994 were most likely to agree that *time commitments* were an issue (*table 23*). Those white respondents who traveled to an undeveloped natural area in summer 1994 were the least likely to agree with the following barriers: *people of their ethnicity are discriminated against while traveling to or recreating in a natural area* (4.33), *they would travel to a natural area if more workers of their ethnicity were employed there* (4.15), want *more luxury accommodations* (3.79), and *financial situation* (3.69).

Table 23—*White respondent perceptions of selected barriers for any travel, travel to natural areas, and travel within natural area.*[1]

Barrier	No trip	Didn't visit	Visited natural area	
	---------- mean ----------			*Sig.*[2]
Time commitments	2.27	2.95	2.87	0.005
Financial situation	2.98	3.34	3.69	0.001
Nearby destinations are too crowded	2.90	2.77	2.92	0.838
Few of my friends travel or recreate in natural areas	3.21	3.09	3.08	0.400
Would travel/rec in natural area if more workers of my ethnicity were employed there	3.65	3.88	4.15	0.034
Don't know where to go/what to do	3.44	3.41	3.50	0.700
People of my ethnicity are discriminated against traveling or rec. in natural area	4.03	4.13	4.33	0.032
Don't feel welcome traveling or in natural area	4.09	4.16	4.25	0.413
Want more luxury accommodations	3.58	3.26	3.79	0.037

[1] n=271. Scale: 1=strongly agree, 3=neither agree or disagree, 5=strongly disagree.

[2] The significance that differences between the groups were due to chance. Statistics were derived from a two-way chi-square test.

Respondent Motives for Vacationing

Respondents who took a vacation during the study period were read a list of 16 statements describing potential reasons why they decided to take a vacation. Survey respondents who visited a natural area at some time during their vacation were asked how important this motive was in their decision to go to the natural area. Persons who did not visit a natural area were asked how important this motive was in their decision to take their most recent vacation. Responses were on a scale ranging from 1=extremely important to 5=not at all important.

The five most important motives were *escape from daily routine*, *viewing scenery*, *being with family*, *seeing something different* and *going to a safe area*. The least important motives were *meeting new people*, *challenging yourself*, *maintaining ties with my cultural roots*, *teaching others*, and *developing new skills* (*table 24*).

Several motives were significantly more important for respondents who vacationed in natural areas, which were distinguished from those who did not visit a natural area. *Viewing scenery* was much more important to natural area visitors (82.3 percent; mean=1.74) versus non-visitors (59.9 percent; mean=2.33). Another distinguishing motive was *experiencing quiet*, with a mean score of 2.10 for visitors to a natural area, compared to 2.48 for non-visitors. There were large differences between the two groups in the importance of *getting exercise*. A final factor was the motive of *developing spiritual values*, with a mean score for natural area visitors of 2.91 versus a value of 2.88 for non-visitors.

Two motives were significantly more important to persons who did not visit a natural area compared to those who did visit: maintaining my culture and meeting new people.

Table 24—*Respondent motives for vacationing in natural areas.*[1]

	Did not vacation in natural area (n=209)		Vacation in natural area (n=182)		
Motive	**Percent**	**Mean**	**Percent**	**Mean**	**F prob.**[2]
Escape from daily routine	74.2	1.95	80.9	1.74	0.072
Viewing scenery	59.9	2.33	82.3	1.74	0.000
Being with my family	70.9	2.02	72.3	2.03	0.936
Seeing something different	64.3	2.24	71.3	2.04	0.093
Going to a safe area	66.5	2.20	66.0	2.24	0.719
Being with friends	67.6	2.15	59.8	2.35	0.126
Physically resting	59.3	2.30	67.0	2.25	0.724
Experiencing quiet	53.3	2.48	66.0	2.10	0.001
Getting exercise	48.3	2.75	62.2	2.26	0.000
Learning about new culture or area	45.6	2.73	49.7	2.65	0.540
Develop spiritual values	46.2	2.88	52.6	2.58	0.039
Develop new skills	43.3	3.04	41.2	2.90	0.316
Teach others	36.2	3.12	40.6	3.00	0.418
Maintain ties with cultural roots	44.5	2.91	29.7	3.42	0.000
Challenging yourself	31.8	3.39	36.9	3.18	0.159
Meeting new people	37.3	3.12	25.5	3.45	0.021

[1] Scale: 1=extremely important, 5=not at all important; percent represents extremely and very important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

Differences Between Ethnic Group Motives for Vacationing

The mean score for each motive is the average for all respondents within that ethnic group, regardless if they visited a natural area or not (*table 25*). Several of the motives for vacations differed significantly between the ethnic groups. The following motives were of more importance to African-American respondents: *going to safe area* (1.89), *physically resting* (1.93), and *challenging yourself* (2.98). The following motives were of more importance to Latino respondents than other groups: *being with my family* (1.68), *learn about new culture or area* (2.38), *develop new skills* (2.45), *teach others* (2.52), *maintain ties with cultural roots* (2.53), and *meeting new people* (2.82). African-American and Latino respondents also thought it was more important *to escape from the daily routine*, *be with friends*, and *experience quiet* as compared to the Asian and white respondents.

Differences Within Ethnic Group Motives for Vacationing

Differences in the importance of selected motives within each of the four ethnic groups were disaggregated into those who did not vacation in a natural area and those who visited a natural area on vacation.

African-American Respondents

The most important motivation from this list for these African-American vacationers was *escape from daily routine*. Other top motivations for vacationers were *seeing something different* and *experiencing quiet* (*table 26*). There was one statistically significant within-group difference. Vacationers who visited a natural area were much more likely to cite *getting exercise* (2.20) as a motive versus persons who did not visit a natural area (2.97).

***Table 25**—Ethnic group motives for visiting natural areas.*[1]

Barrier	African-American (n=73)	Latino respondent (n=88)	Asian respondent (n=71)	White respondent (n=149)	
			mean		*F prob.*[2]
Escape from daily routine	1.67	1.68	2.21	1.86	0.013
Viewing scenery	2.15	1.88	2.12	1.96	0.324
Being with my family	1.80	1.68	2.49	2.14	0.000
Seeing something different	2.06	2.10	2.25	2.14	0.778
Going to a safe area	1.89	1.94	2.50	2.42	0.000
Being with friends	2.08	2.06	2.67	2.33	0.011
Physically resting	1.93	2.13	2.50	2.46	0.004
Experiencing quiet	2.10	2.11	2.56	2.37	0.046
Getting exercise	2.67	2.20	2.65	2.49	0.064
Learning about new culture or area	2.58	2.35	2.87	2.85	0.015
Develop spiritual values	2.52	2.59	2.72	2.87	0.285
Develop new skills	2.84	2.45	3.05	3.35	0.000
Teach others	3.00	2.52	3.28	3.34	0.000
Maintain ties with cultural roots	2.69	2.53	3.28	3.76	0.000
Challenging yourself	2.98	3.12	3.32	3.55	0.023
Meeting new people	2.90	2.82	3.43	3.74	0.000

[1] Scale: 1=extremely important, 5= not at all important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

Latino Respondents

The most important motivation from this list for the vacationers was *escape from daily routine* (*table 27*). Another important motivation was viewing scenery. There was one statistically significant within-group difference among Latino respondents. Vacationers who visited a natural area were much more likely to cite *experiencing quiet* (1.81) as a motive versus persons who did not visit a natural area (2.47) (*table 27*).

Asian Respondents

The most important motivations from this list (*table 28*) for Asian respondent vacationers were *viewing scenery*, *escape from daily routine*, and *seeing something different*. There are three significant within-group differences that distinguish natural area visitors from non-visitors. Asian respondent vacationers who visited a natural area were much more likely to cite *seeing something different* (1.94) and *viewing scenery* (1.83) as motives, versus persons who did not visit a natural area. And vacationers to other areas were more likely to rate *maintain ties with cultural roots* (2.94) as more important than those who vacation at natural areas (3.61).

White Respondents

The most important motivations from this list (*table 29*) for white respondent vacationers were *escape from daily routine*, *seeing something different*, and *viewing scenery*. There are four significant within-group differences that distinguish white respondent natural area visitors from non-visitors. White respondent vacationers who visited a natural area were much more likely to cite *viewing scenery* (1.61), *experiencing quiet* (2.13), *getting exercise* (2.16) and *developing spiritual values* (2.63)

Table 26—Selected motives among African-American respondents for vacationing in natural areas.[1]

Motive	Did not vacation in natural area (n=44)	Vacation in natural area (n=29)	
	Mean		F prob.[2]
Escape from daily routine	1.63	1.72	0.716
Viewing scenery	2.25	2.00	0.340
Seeing something different	2.00	2.17	0.519
Experiencing quiet	2.06	2.17	0.701
Getting exercise	2.97	2.20	0.026
Develop spiritual values	2.38	2.72	0.347
Maintain ties with cultural roots	2.47	3.03	0.101
Meeting new people	2.84	3.00	0.639

[1] Scale: 1=extremely important, 5= not at all important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

Table 27—Selected motives among Latino respondents for vacationing in natural areas.[1]

Motive	Did not vacation in natural area (n=48)	Vacation in natural area (n=40)	
	Mean		F prob.[2]
Escape from daily routine	1.85	1.54	0.178
Viewing scenery	2.07	1.72	0.122
Seeing something different	2.35	1.89	0.070
Experiencing quiet	2.47	1.81	0.010
Getting exercise	2.27	2.14	0.619
Develop spiritual values	2.82	2.39	0.177
Maintain ties with cultural roots	2.40	2.64	0.430
Meeting new people	2.67	2.98	0.344

[1] Scale: 1=extremely important, 5= not at all important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

as motives, compared to persons who did not visit a natural area (2.51, 2.75, 3.01, and 3.24, respectively).

Natural Area Ethnic Recreation Participation Model

The final objective of the research was to develop and test a model of outdoor recreation participation in undeveloped natural areas, incorporating the variables of socio-economic status, ethnicity, assimilation, and perceived discrimination. This process began with the development of an *a priori* model based on a review of the literature (see "Methods"). Next, variables in the model were tested by using the logistic regression procedure in the SPSS® for Windows version 6.0.[1] Logistic regression was selected because it is a multivariate procedure that controls for differences in independent variables, and because the dependent variable of visiting natural areas is categorical (either yes, visited; or no, did not visit). A multivariate analysis is extremely important because earlier descriptive

[1] Mention of trade names or products is for information only and does not imply endorsement by the U.S. Department of Agriculture.

Table 28—Selected motives among Asian respondents for vacationing in natural areas.[1]

Motive	Did not vacation in natural area (n=35)	Vacation in natural area (n=36)	
	Mean		F prob.[2]
Escape from daily routine	2.45	1.97	0.100
Viewing scenery	2.42	1.83	0.014
Seeing something different	2.57	1.94	0.006
Experiencing quiet	2.65	2.47	0.457
Getting exercise	2.61	2.69	0.793
Develop spiritual values	2.91	2.55	0.269
Maintain ties with cultural roots	2.94	3.61	0.032
Meeting new people	3.28	3.58	0.344

[1] Scale: 1=extremely important, 5= not at all important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

Table 29—Selected motives among white respondents for vacationing in natural areas.[1]

Motive	Did not vacation in natural area (n=58)	Vacation in natural area (n=91)	
	Mean		F prob.[2]
Escape from daily routine	1.96	1.80	0.420
Viewing scenery	2.51	1.61	0.000
Seeing something different	2.20	2.10	0.631
Experiencing quiet	2.75	2.13	0.003
Getting exercise	3.01	2.16	0.000
Develop spiritual values	3.24	2.63	0.010
Maintain ties with cultural roots	3.62	3.85	0.296
Meeting new people	3.65	3.80	0.509

[1] Scale: 1=extremely important, 5= not at all important.

[2] The F probability that differences between the groups were due to chance. Statistics were derived from one-way ANOVA.

statistics showed that there are significant differences in demographic characteristics of the four ethnic groups, and these differences alone could affect the differences in average natural area visitation found between groups.

The logistic regression procedure assumes a non-linear, "S-shaped" relationship between the dependent and independent variables and employs a goodness of fit analysis. The results of running this procedure include: 1) a goodness of fit chi-square value and significance level for the entire model; 2) a percent correct value showing the percentage of cases that were predicted and observed accurately for the entire model; and 3) for each independent variable the estimated slope coefficient, significance, the probability (odds) of an event occurring compared to the reference category, referred to as the odds-ratio. The odds-ratio is particularly illustrative because it gives a numeric estimate of how likely a respondent at a certain level of the independent variable, educational

attainment for example, is to visit a natural area, compared to the reference group. The reference group is either the lowest or highest level of a particular independent variable, and is defined as 1. An example of interpretation of an odds-ratio of 1.567 for the highest level of educational attainment (independent variable) compared to a reference group of the lowest level of education would be: respondents with the highest level are 1.567 times more likely to take an action than the reference group (odds ratio= 1).

The logistic regression equation was built by using proposed independent variables. A forced entry method was employed with all variables entered in a single step. Casewise listing of residuals included outliers outside of two standard deviations. Probability for stepwise entry was 0.05 and removal 0.10.

Model Development

After a review of the literature, a natural area recreation participation model was developed to identify the primary factors that influence visitation to undeveloped natural areas on a trip of any length, and to meet study objectives (*fig. 19*). The dependent variable, visitation to undeveloped natural areas, is categorical: all respondents visited a natural area on an excursion or vacation, did not take any leisure trip, or did take a leisure trip but did not visit an undeveloped natural area.

The independent variables were assimilation, ethnicity, socio-economic status, and perceived discrimination. The construct of assimilation (Yinger 1981) is considered the process of interaction between two or more groups towards a greater cultural similarity. It is operationalized in this model by the variable citizenship, with citizenship defined as respondents who were born in the U.S. or whose spouse or parents were born in this country. We hypothesize that the more respondents are assimilated into the U.S. culture, the more similar they will be to white respondents in terms of visitation to undeveloped natural areas.

Ethnicity refers to the four ethnic groups analyzed in this study: African-American respondents, Latino respondents, Asian respondents, and white respondents. The literature suggests that white respondents visit more frequently than other ethnic groups, but these studies often do not control for demographic differences in groups. We hypothesize that there will be significant differences in visitation to natural areas.

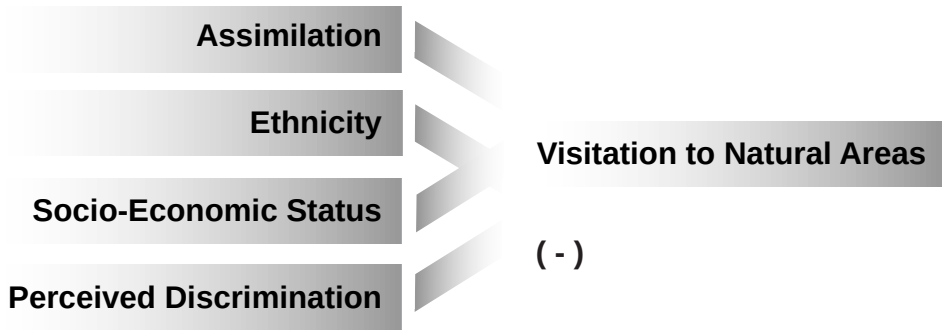


Figure 19 — Proposed natural area recreation participation model.

Socio-economic status refers to respondent economic and social standing in society. The literature suggests that previously documented low participation in outdoor recreation by some ethnic groups is a result of socio-economic barriers: if these are removed then minorities would participate as much as their white counterparts (West 1989). We operationalized socio-economic status by two variables: household income and respondent educational attainment level. The model hypothesizes that respondents with high socio-economic status will be significantly more likely to visit natural areas than those with low status.

Perceived discrimination generally refers to feelings of being unwelcome, taken advantage of, or uneasy. Not being able to speak English and encountering only English speaking staff and materials/signs at recreation sites is another part of the discrimination construct. This study contained a unique opportunity to determine if language is a primary component of discrimination because we interviewed Asian and Latino respondents who might speak their native language, as well as African and white respondents who most commonly speak English. The literature (Philipp 1993, West 1989) suggests that minority groups, especially African-Americans, feel more discriminated against in outdoor recreation settings than do white or European-Americans. Perceived discrimination is operationalized by the scale variable of discrimination. Respondents were asked to agree or disagree with two statements: "Persons of your ethnic background are discriminated against when they travel or visit undeveloped natural areas," and "You often do not feel welcome when traveling in undeveloped natural areas." Responses to these statements were combined to create the discrimination scale. We hypothesize that respondents with high perceived discrimination levels will be significantly less likely to visit natural areas, compared to those with low levels.

Test of the Model

The respondent base for testing the model is all respondents (N=894) in this study. The overall model had a goodness of fit chi-square value of 101.47 and a significance of 0.0000 (*table 30*). Model validity was indicated by a total of 70.19 percent of model-predicted values by the SPSS procedure shown in the data.

Results for household income showed that the low income group was significantly less likely to visit a natural area than the two other income categories. Initially, there were five levels of income entered into the regression equation, but preliminary results showed no significant differences between respondents from households with $50,000-$74,999, $75,000-$99,000, or incomes over $100,000. Therefore, the third income category in the final model was aggregated to incomes over $50,000. The odds-ratio showed that respondents from households earning $25,000-$49,999 were 1.8 times more likely to visit, and those from households with incomes of $50,000 or more were 2.8 times more likely to visit a natural area, compared to respondents from households earning less than $25,000.

Table 30—*Overall model results of logistic regression* (n=894).

Final log likelihood	911.69
Model goodness of fit chi-square	101.47
Degrees freedom	10
Significance	0.0000
Percent correct predictions	
No visit to natural area	88.81
Visited natural area	31.15
Overall	70.19

The construct of perceived discrimination was also found to significantly (0.0366) influence visitation to natural areas. Initially, there were three more levels of discrimination entered into the regression equation, but preliminary results showed no significant differences between respondents with high, moderate, or even slight levels of perceived discrimination. Therefore, in the final model these three levels were combined into one category, High and Moderate (*table 31*). The final analysis showed that respondents with even moderate levels of perceived discrimination were about two-thirds (0.6) as likely to visit a natural area, compared to respondents with no perceived discrimination.

Ethnicity was also found to have a significant influence on visitation to natural areas. However, only one ethnic group, African-American respondents, were significantly less likely (0.0009) to visit. Asian respondents (0.9531) and Latino respondents (0.5626) visitation probability was not significantly different than the white respondent reference group. African-American respondents were less than half as likely (0.4) to visit a natural area as were white respondents. Visitation probability for Asian respondents (0.9) was very similar to white respondents, while Latino respondents were slightly more likely to visit (1.1) a natural area than white respondents, if all other independent variables were held constant.

Table 31—*Independent variable results of logistic regression (n=894).*

Independent variable	Slope coefficient	S.E.	Signif.	Odds-ratio
Socio-economic status				
Household income				
Under $24,999 (ref. group)	N/A[1]	N/A	N/A	1.000
$25,000-$49,999	0.6241	0.2213	0.0048	1.866
$50,000 or more	1.052	0.2373	0.0000	2.864
Education				
Some high sch. (ref. group)	N/A	N/A	N/A	1.000
High/trade school graduate	0.7475	0.3572	0.0362	2.113
Some or college graduate	1.045	0.3529	0.0030	2.845
Professional/graduate sch.	1.344	0.4079	0.0010	3.837
Perceived discrimination				
High and moderate	-0.414	0.1982	0.0366	0.6608
Low (ref. group)	N/A	N/A	N/A	1.000
Assimilation				
U.S. Citizenship				
Yes (ref. group)	N/A	N/A	N/A	1.000
No	-0.3533	0.2200	0.1083	0.7024
Ethnicity				
African-American respondent	-0.8261	0.2494	0.0009	0.4378
Asian respondent	-0.0157	0.2663	0.9531	0.9844
Latino respondent	0.1311	0.2268	0.5626	1.140
White respondent (ref. group)	N/A	N/A	N/A	1.000
Constant[2] (derived)	-1.538	0.4863	0.0016	N/A

[1] Reference groups were not directly entered into the regression model, therefore no data were available for coefficient, S.E., or significance.

[2] Not determined.

Conclusions and Recommendations

About 1 in 3 survey respondents did *not* take any leisure trip during the late spring and summer 1994, suggesting a substantial number of residents had significant barriers to or limited interest in leisure travel. About 4 out of 10 residents of Los Angeles County took a trip in which they visited an undeveloped natural area. The remainder (30.5 percent) took a leisure trip but did not visit a natural area. This suggests that less than half of Los Angeles County residents visited a National Forest, State park, or open space preserve during the height of the travel season for even a 1-hour excursion.

About 57 percent of the respondents who made a short leisure trip of to 3 days in length (excursion) visited a natural area. About 60 percent of respondents who took a vacation (4 days or longer) actually visited a natural area on the trip.

Visitors to natural areas were relatively evenly distributed among age groups. However, there were significant differences in visitation to natural areas according to education levels, with respondents who had acquired a college or graduate diploma nearly twice as likely to visit as were those with or without a high school diploma. There were also significant differences in natural area visitation according to income level, with 55 percent of respondents from households earning $75,000 or more visiting a natural area, compared to 17.1 percent of those from households earning less than $25,000. There was little difference in natural area visitation between males and females. U.S. citizens were more likely to visit a natural area (35.9 percent) compared to non-citizens (24.6 percent).

There were significant within-group differences in visitation to a natural area. African-American respondents much more likely to visit a natural area were young males with high education and high income. Latino and Asian respondents who most frequently visited a natural area were U.S. citizens, with high education and income levels. However, Asian respondent females were more likely to take a leisure trip, compared to males. White respondents much more likely to visit a natural area were young persons with moderate to high income levels.

Respondents who took a vacation that visited a natural area were significantly more likely to be males with higher education and income levels. More than 63 percent of males took a natural area vacation, compared to 49 percent of females.

Significant within-group differences in taking a vacation that visited a natural area were found for all ethnic groups except Latino respondents. African-American respondents much more likely to visit a natural area were those with graduate or professional education. Asian respondents most likely to visit a natural area on vacation were males who were U.S. citizens and had high education levels. White respondent males were most likely to visit a natural area on vacation, compared to females.

The survey asked respondents to agree/disagree with 17 statements describing barriers that may have affected their travel during the spring and summer 1994. The importance of each barrier was broken down into three types of travelers identified earlier in this study: respondents who did not take a leisure trip away from home, persons who traveled but did not visit a natural area, and respondents who visited a natural area. The constraint was asked to each of the three groups in a somewhat unique context. The most constraining barriers for all three groups were *lack of free time*, *few friends travel or recreate in (natural) area*, *nearby destinations were too crowded*, *their financial situation*, and *don't know where to go/what to do*.

There were significant differences in barriers between those who did not take a leisure trip, those who visited a natural area, and those who took a trip but

did not visit a natural area. *Time commitments*, *financial constraints*, *want more luxury accommodations*, and *more workers of my ethnicity* were significantly more important to respondents who did not take a leisure trip, compared to those who took a leisure trip. There were also significant differences between respondents who visited and did not visit a natural area in terms of *perceived discrimination* and *feeling welcome traveling en route or within a natural area*.

Respondents who took a vacation during the study period choose one of 16 statements describing potential reasons why they decided to take a vacation. The top five motives for all respondents who took a vacation were *escape from daily routine, viewing scenery, being with family or friends, seeing something different,* and *going to a safe area*. Significant differences in motive for vacationing in a natural area and taking a vacation that did not visit a natural area were *viewing scenery*, *experiencing quiet*, *getting exercise*, *developing spiritual values,* and *(not) maintaining cultural roots*. There were significant differences in the importance of motives between the four ethnic groups.

The final objective of the research was to develop and test a model of outdoor recreation participation in undeveloped natural areas incorporating the variables of socio-economic status, ethnicity, assimilation, and perceived discrimination. Logistic regression results suggested it was an adequate predictive model. All four proposed model constructs showed statistical or substantive significance.

Logistic regression results showed that respondents significantly less likely to visit an undeveloped natural area were those with low levels of socio-economic status, low levels of assimilation, who had moderate to high perceived discrimination, and who were of African-American ethnicity. There were no significant differences between Asian, Latino, and white respondents in their probability of visiting a natural area, if intervening variables were held constant.

Another finding was the importance of perceived discrimination in natural area visitation. All "minority" ethnic groups were more likely to express the belief that discrimination was an issue, compared to their white respondent counterparts. In addition, model results showed that perceived discrimination was a significant predictor of visitation even after controlling for respondent income and education, a finding supported by previous research (Dwyer and Gobster 1992, Philipp 1993, West 1989). Analysis of barriers to participation and 6) lack transportation options. Many possible alternative strategies for reducing these five barriers could be developed, and local professionals are already working on some of these. However, other strategies could be useful, such as organizing clubs, special programs or school outings for urban youths, or developing family camping programs that encourage friends and family members to recreate together. Some persons do not come from families that have historically visited natural areas; thus, there is a need to provide encouragement to get started and pass on the benefits of wildland recreation.

Agencies could provide information about less crowded alternative sites or how to cope with neighbors. They could also change the management of popular sites to reduce the adverse effects of crowds, including reservation systems, parking capacity increases, site hardening or screening. Crowding identified by respondents may have been perceived, rather than what they have experienced in the past. Compared to Disneyland on a summer weekend, for example, many recreation sites are not crowded. It may be helpful to communicate that not all sites are over booked and it can still be an enjoyable experience. We are not suggesting that wildland areas become amusement parks, rather that it may be possible to increase the actual and/or the perceived carrying capacity of certain sites, while at the same time staying within the guidelines and limits of acceptable change contained in existing management plans.

Hiring more ethnic "minority" workers in natural areas could help mitigate barriers, particularly to African and Latino residents. This might also reduce

language concerns and feelings of being discriminated against. In addition, this strategy might also improve the "psychological safety" and reduce the feeling of being unwelcome or in "white's territory" (West 1989) while at a recreation site. Agencies could review, with the assistance of ethnic staff, their visitor management, concessions contracts and law enforcement policies with a keen eye towards reducing perceived discrimination.

About one-third of respondents who took a leisure trip but did not visit a natural area had inadequate information about where to go or what to do. One in four felt there were no nearby natural areas. These data suggest that a large scale information campaign would be effective. A cooperative campaign with State and Federal park and resource agencies could show the types, locations, and benefits of wildland recreation areas. Past Forest Service campaigns to prevent fire and reduce pollution, for example, have reached many urban residents, and this type of approach could be used to convey information on the locations and benefits of nearby wildland recreation. Unique psychological outcomes or benefits of visiting undeveloped natural areas that were cited by study respondents that could be used as themes in a media campaign include: *escape from the daily routine*, *viewing scenery*, *experiencing quiet*, *getting exercise*, *being with friends and family*, and *developing spiritual values*. Such a media campaign could target groups that were identified with low use of wildlands. It could use specific media (such as Spanish speaking TV stations or Korean newspapers) and programming whose audience are the target subgroups. In addition, it is well known from marketing literature that attractions that do not constantly remind potential visitors that they are open and unique, are surpassed by others and attendance substantially drops. If many intercity urban residents do not have friends or family that recreate in wildland areas, and they never hear or see messages about what nearby wildland areas offer, it is not surprising they never visit them.

Agencies could also undertake more local grass-roots outreach efforts, such as developing partnerships with ethnic clubs, churches, and other organizations. Our experiences with urban fishing in Los Angeles and San Francisco and other intercity recreation programs suggest that there would be many intercity and urban organizations very willing to become partners with land management agencies in an effort to encourage wildland recreation use and provide a unique opportunity for their members or clients.

Lack of transportation was identified as a barrier, especially by those who did not take any leisure trip during the spring or summer. This situation coupled with time constraints and low income made it difficult for a substantial number of residents to recreate in undeveloped natural areas. Providing transportation only to natural areas does not appear to solve the problem of low visitation; rather a complete program or package is needed that includes transportation. Agencies could work with urban organizations to provide complete low cost wildland camping or recreation programs with transportation to and from their community. Examples of similar programs include ski busses, fishing programs, and church camps. It is possible that somewhat similar programs could be developed for camping or recreational excursions. A particularly strong motive for all ethnic groups, but especially Latino and African-American respondents who visited natural areas, was *being with their family*. This suggests that complete programs for families to travel, camp, and recreate together in undeveloped natural areas would be very beneficial.

Survey results extrapolated to the county population suggest that only slightly more than one-third of Los Angeles County residents visited an undeveloped natural area during the summer 1994. Despite the close proximity and low entrance fees, compared to commercial recreation facilities, the vast majority of residents did not spend even a half day at a National Forest or Park,

wildlife refuge, open space preserve, or other undeveloped natural areas located outside a city. These data suggest that public agencies that manage wildland resources must be proactive by creating new programs and expanding existing intervention projects that encourage visitation and communicate to residents about the opportunities and benefits of outdoor recreation in undeveloped natural areas. Otherwise, data will show that publicly funded natural resources are not used by most residents.

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Appendix A - Survey Instrument

Ethnic Outdoor Recreation Study 12/5/94

Hello, I'm (INTERVIEWER NAME) with the Public Research Institute at San Francisco State University. We are conducting a survey of people 18 years and older on recreation activities and we would like your opinions included. It will take just a few minutes and all responses are completely confidential.

1a. Are you 18 years or older? If NO: Can you bring to the telephone a member of your household who is 18 years or older?

1b. Since we want to learn about recreational activities, would you briefly tell me the ONE leisure time activity you enjoy the most.

(LIST ONLY THE GENERAL TYPE OF ACTIVITY...HIKING, READING. ETC.)

1c. We are interested in learning about the different types of people who visit outdoor recreation areas, the activities enjoyed by various groups, and where people usually go for these recreation activities. All responses are confidential. To help us understand ethnic differences better, please tell me which of the following do you feel BEST describes your ethnic background?

A. Black or African American.
B. Mexican American, Hispanic, Chicano, Latino, or Spanish decent.
C. Asian or Pacific Islander.
D. White or European American.
E. Indian or Native American. If YES. THANK THEM AND STOP.
F. Other ethnic group. If YES. Please tell us which specific ethnic group you consider yourself a member _____. CHECK TO SEE
IF GROUP FALLS WITHIN PRIOR CATEGORY. IF NECESSARY RECODE.
IF STILL OTHER CATEGORY, STOP INTERVIEW.

- IF REFUSE TO GIVE ETHNIC GROUP, THANK THEM AND STOP INTERVIEW.
- IF THEY LIST A RELIGION, ASK WHAT IS THEIR PRIMARY RACIAL ORIGIN.

- IF MIXTURE, ASK THEM TO CHOOSE FROM SIX PRIOR ETHNIC CATEGORIES WHICH GROUPS THEY ARE A MEMBER.

G. Mixture. DO NOT RECITE! If mixture, SELECT ANY OF THE FOLLOWING.

<1> African Am
<2> Hispanic
<3> Asian
<4> White
<5> Native Am
<6> Other

IF MIXTURE IS AT LEAST PARTIALLY FROM A TARGET GROUP (African, Asian, Hispanic or White) THEN CONTINUE. IF NEITHER GROUP IS FROM TARGET, THEN STOP INTERVIEW AND THANK THEM.

1d. For each of the following statements I read please tell me if you STRONGLY AGREE, AGREE, NEITHER AGREE OR DISAGREE, DISAGREE, OR STRONGLY DISAGREE with it. Do you feel a great sense of ATTACHMENT to your ethnic group.

<1>Strongly Agree
<2>Agree

<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<9> Refused/Don't know

1da. Do you take great PRIDE in your ethnic group
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<9> Refused/Don't know

2. For the purposes of this survey, we are only interested in recreation trips where you traveled AWAY FROM YOUR HOME and which took place during this SUMMER, MAY through AUGUST OF 1994. Did you take any trips primarily for recreation or leisure where you traveled away from your home during the summer of 1994?
YES ____
NO ____ IF NO, Q-12a

3. Now think about the places where you traveled for recreation this summer. We are NOT interested in trips to a city where there were highly developed recreation sites, like city parks and beaches, zoos, festivals or theme parks. We are interested in trips to areas located OUTSIDE CITIES where you visited undeveloped NATURAL areas, such as national or state parks and forests, open space areas, protected areas or nature preserves? These areas could have campgrounds, lakes, access roads, visitors centers or trails. Did you take any trips where you visited undeveloped natural areas for recreation during the summer of 1994?
YES ____
NO ____ IF NO, GO TO Q-9

4. Were any of these recreation trips to undeveloped natural areas, 3 or less days in length?
YES ____
NO ____ IF NO, GO TO Q-9

5a. Now think about your MOST RECENT short trip of 3 or less days to an undeveloped area. How many DAYS did you spend away from home? (1-4 HOURS= 1/2 DAY; 4-24 HRS=1 DAY; 1 AND 1/2 DAYS=2 DAYS; ETC.)
<1> 1/2 day; 1 - 4 hours = 1/2 day
<2> 1 day; 4 - 24 hours = 1 day
<3> 2 days 1 and 1/2 days = 2 days, etc.
<4> 3 days

5b. How many days of this trip were spent entirely in undeveloped natural areas?
<1> 1/2 day; 1 - 4 hours = 1/2 day
<2> 1 day; 4 - 24 hours = 1 day
<3> 2 days 1 and 1/2 days = 2 days, etc.
<4> 3 days

6a. On this trip, what were the two main recreation activities you did while in the undeveloped natural areas?

6b. MAKE SURE YOU TYPE "2" ACTIVITIES. YOU CAN PROMPT WITH: "Can you tell me another main recreation activity..."

7. What was the name of the natural area, forest or park you visited the most?

_____

IF CAN NOT RECALL COMPLETELY, WRITE ALL THEY CAN REMEMBER

8a. What state or country is it located in?

<1>CA
<2>Other U.S. (specify) _____
<3>International Country (specify) _____

8b. What is the name of the closest city? _____ GO TO Q 12a

9. Did you take a recreation trip of 3 days or less in length to a DEVELOPED area last summer?

YES ____
NO ____ IF NO, Q-12a

10. For your most recent short recreation trip to a DEVELOPED area, how many DAYS were you away from home?

<1>1/2 day; 1 - 4 hours = 1/2 day
<2>1 day; 4 - 24 hours = 1 day
<3>2 days 1 and 1/2 days = 2 days, etc.
<4>3 days

11a. On this trip, what were the two main recreation activities you did

_____

11b. MAKE SURE YOU TYPE "2" ACTIVITIES. YOU CAN PROMPT WITH: "Can you tell me another main recreation activity…"

_____

11c. What State or Country was this area located in?

<1>CA
<2>Other U.S. (specify) _____
<3>International Country (specify) _____

12. We are also interested in vacations you've taken. By vacations we mean work-free periods of FOUR(4) or more consecutive days where most time is spent on leisure activities, and you traveled away from home for at least some of the time.

12a. How important are vacations that involve travel away from your home to your lifestyle? Would you say vacations are EXTREMELY IMPORTANT, VERY IMPORTANT, IMPORTANT, SOMEWHAT IMPORTANT OR NOT AT ALL IMPORTANT?

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

12b. How many vacations, of four or more consecutive days, have you taken in the last two years?

<0>If respondent didn't go on a vacation [GO TO 21a]

<1 - 20> Enter the number of vacations

<21> 21 or more vacations in 2 years

12c. Did you take a vacation of at least 4 days during the summer of 1994? "BY VACATIONS WE MEAN WORK-FREE PERIODS OF 4 OR MORE CONSECUTIVE DAYS"

YES ____

NO ____ IF NO, Q-21a

13. During any vacation in the summer of 1994, did you visit an undeveloped natural area OUTSIDE OF A CITY?

YES ____

NO ____ IF NO, Q19a

14a. During your only or most recent vacation where you visited a natural area, how many days were you away from home? IF NUMBER OF DAYS IS LESS THAN 4, SAY-" BY VACATIONS WE MEAN WORK-FREE PERIODS OF 4 OR MORE CONSECUTIVE DAYS"

<1 - 3> DAYS [go to 12b]

If answer remains less than 4 days enter 1-3 and the computer will take you back to question 12b, change answer for questions that follow.

<4 - 365> Enter the NUMBER of Vacation Days

<999> ONE YEAR or MORE

14b. How many days did you spend in undeveloped natural areas?

<1 - 365> Days

<999> ONE YEAR or MORE

15a. What were the two main recreation activities you did while in undeveloped natural areas?

_____

15b. MAKE SURE YOU TYPE "2" ACTIVITIES. YOU CAN PROMPT WITH: "Can you tell me another main recreation activity..."

_____

16. What was the name of the undeveloped area, forest or park you visited the most?

_____

IF CAN NOT RECALL COMPLETELY, WRITE ALL THEY CAN REMEMBER.

17a. What state or country was that area located in?

<1>CA

<2>Other U.S. State (specify) _____

<3>International Country (specify) _____

17b. What is the name of the closest city? _____

17c. Which ONE (1) of the following statements BEST describes the TYPE OF VACATION you were on? Select only one. Was it.....

<1> A vacation primarily to a large THEME PARK.

<2> A vacation taken primarily to visit a SPECIAL EVENT, FESTIVAL or exhibition.

<3> A vacation on a CRUISE SHIP.

<4> A vacation whose primary purpose was to VISIT WITH FRIENDS and/or RELATIVES

<5> A vacation to a CITY where you can shop, enjoy entertainment, dine, attend concerts, or just stroll around and enjoy the city.

<6> A vacation to primarily ONE RESORT, LODGE OR RESORT AREA, where a wide variety of activities, such as golf, tennis, beach activities and horseback riding, are available close by or on the premises.

<7> A vacation by car, train or bus through MANY AREAS of SCENIC BEAUTY, cultural or historic interest.

<8> A vacation to a NATURAL AREA where you can engage in outdoor activities, such as hiking, boating, mountain biking or fishing.

FORCED CHOICE QUESTION. IF RESPONDENT HAS DIFFICULTY WITH ?, REPEAT CATEGORIES UNTIL THEY SELECT THE ONE THAT BEST FITS THEIR TRIP.

<9> Refused/don't know (DO NOT READ)

18. People often have different REASONS for vacationing in an undeveloped natural area. Please indicate how important each of the following factors were in your decision to visit the undeveloped natural area. Indicate importance by using a scale of 1 to 5, with 1 being EXTREMELY IMPORTANT, and 5 being NOT AT ALL IMPORTANT?

How important was meeting new people?

<1> Extremely Important

<2> Very Important

<3> Important

<4> Somewhat Important

<5> Not At All Important

<9> Refused/Don't Know

18a. How important was viewing beautiful scenery?

<1> Extremely Important

<2> Very Important

<3> Important

<4> Somewhat Important

<5> Not At All Important

<9> Refused/Don't Know

18b. Getting exercise

<1> Extremely Important

<2> Very Important

<3> Important

<4> Somewhat Important

<5> Not At All Important

<9> Refused/Don't Know

18c. How important was physically resting?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18d. Developing your spiritual values

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18e. Being with friends

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18f. How important was challenging yourself by taking risks?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18g. Learning about a new culture or area

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18h. How important was going to a safe area?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18l. Being with your family

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18j. Developing new skills

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18k. How important was seeing something different?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18l. How important was experiencing quiet?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18m. Maintaining ties with your cultural roots

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18n. Escaping from your daily routine

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

18o. How important was teaching others?

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

18p. Is there any other important reason for taking your most recent vacation?

<1>YES, IF YES, DESCRIBE _____
<2>NO [go to 21c]

18q. How important was this reason?

<1>EXTREMELY IMPORTANT
<2>SOMEWHAT IMPORTANT

GO TO Q21c

[DID NOT VACATION IN NATURAL AREA]

19a. For your most recent vacation this summer, how many days did you spend away from home?

IF NUMBER OF DAYS IS LESS THAN 4, SAY-" BY VACATIONS WE MEAN WORK-FREE PERIODS OF 4 OR MORE CONSECUTIVE DAYS"

<1 - 3> DAYS [go to 12b]

If answer remains less than 4 days enter 1-3 and the computer will take you back to question 12b, change answer for questions that follow.

<4 - 365> Enter the NUMBER of Vacation Days
<999> ONE YEAR or MORE

19ba. What were the two main recreation activities you did while in the developed area?

_____

19bb. MAKE SURE YOU TYPE "2" ACTIVITIES YOU CAN PROMPT WITH: "Can you tell me another main recreation activity..."

_____

19c. What state or country was that area located in?

<1>CA
<2>Other U.S. State (specify) _____
<3>International Country (specify) _____

20. Which ONE (1) of the following statements BEST describes the TYPE OF VACATION you were on? Select only one. Was it.....

<1>A vacation primarily to a large THEME PARK.
<2>A vacation taken primarily to visit a SPECIAL EVENT, FESTIVAL or exhibition.
<3>A vacation on a CRUISE SHIP.
<4>A vacation whose primary purpose was to VISIT WITH FRIENDS and/or RELATIVES
<5>A vacation to a CITY where you can shop, enjoy entertainment, dine, attend concerts, or just stroll around and enjoy the city.

<6> A vacation to primarily ONE RESORT, LODGE OR RESORT AREA, where a wide variety of activities, such as golf, tennis, beach activities and horseback riding, are available close by or on the premises.

<7> A vacation by car, train or bus through MANY AREAS of SCENIC BEAUTY, cultural or historic interest.

<8> A vacation to a NATURAL AREA where you can engage in outdoor activities, such as hiking, boating, mountain biking or fishing.

FORCED CHOICE QUESTION. IF RESPONDENT HAS DIFFICULTY WITH ?, REPEAT CATEGORIES UNTIL THEY SELECT THE ONE THAT BEST FITS THEIR TRIP.

<9> Refused/don't know (DO NOT READ)

20b. People often have different REASONS for taking a vacation. Please indicate how important each of the following factors were in your decision to take your most recent vacation this summer. Indicate importance by using a scale of 1 to 5, with 1 being EXTREMELY IMPORTANT, and 5 being NOT AT ALL IMPORTANT.

How important was meeting new people?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20ba. How important was viewing beautiful scenery?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bb. Getting exercise

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bc. How important was physically resting?

<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bd. Developing your spiritual values

<1> Extremely Important
<2> Very Important
<3> Important

<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20be. Being with friends
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bf. How important was challenging yourself by taking risks?
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bg. Learning about a new culture or area
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bh. How important was going to a safe area?
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bI. Being with your family
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important
<9> Refused/Don't Know

20bj. Developing new skills
<1> Extremely Important
<2> Very Important
<3> Important
<4> Somewhat Important
<5> Not At All Important

<9>Refused/Don't Know

20bk. How important was seeing something different?

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

20bl. How important was experiencing quiet?

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

20bm. Maintaining ties with your cultural roots

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

20bn. Escaping from your daily routine

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

20bo. How important was teaching others?

<1>Extremely Important
<2>Very Important
<3>Important
<4>Somewhat Important
<5>Not At All Important
<9>Refused/Don't Know

20bp. Is there any other important reason for taking your most recent vacation?

<1>YES, IF YES, DESCRIBE _____
<2>NO [go to 21b]

20bq. How important was this reason?

<1>EXTREMELY IMPORTANT
<2>SOMEWHAT IMPORTANT

GO TO Q21b
[PERSONS WHO DID NOT TAKE A TRIP AWAY FROM HOME OR NO VACATION]

21a. When people think about taking a recreation trip away from home or a vacation, a number of things may prevent them from doing so. Think about your situation in the summer of 1994, and for each of the following items I read please tell me if you strongly disagree, disagree, neither agree or disagree, agree or strongly agree with the statement.

You had NO companions to vacation with you last summer

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know.

21aa. There were no suitable travel destinations nearby

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know.

21ab. Time commitments to work, family or friends interfered with a leisure trip or vacation this summer

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know.

21ac. Leisure travel and vacations are too much trouble

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know.

21ad. You want more luxurious accommodations and meals than those usually available when traveling

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know.

21ae. You are not healthy enough to travel

<1> Strongly Agree
<2> Agree

<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21af. People of your ethnic background are discriminated against when they vacation
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ag. You've no interest in vacations
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ah. You often do not feel welcome when traveling away from your home on vacation
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ai. Nearby travel destinations are too crowded
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21aj. Your financial situation prevented you from traveling for pleasure this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ak. You lack information about where to go and what to do for leisure travel
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree

<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21al. Few of your friends or family members normally travel for pleasure or take a vacation
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21am. Outdoors are uncomfortable for leisure travel
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21an. You lacked transportation options to travel or go to areas for a vacation this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ao. You'd be much more likely to travel if more persons of your ethnic background worked in or visited travel destinations
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ap. Travel and vacation areas are not safe
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21aq. Normally you travel for pleasure and vacation but this year you wanted variety and just decided to do something else this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree

<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ar. Is there any other important reason why you did not travel or vacation this summer?
<1> YES Please specify _____
<2> NO [go to 22a]

21as. Was this reason EXTREMELY IMPORTANT, OR SOMEWHAT IMPORTANT?
<1> Extremely Important
<2> Somewhat Important

[go to 22a]

[PERSONS WHO DID NOT TAKE A TRIP TO AN NATURAL AREA]

21b. When people think about taking a recreation trip away from home or a vacation to an undeveloped natural area, a number of things may prevent them from doing so. Think about your situation in the summer of 1994, and for each of the following items I read please tell me if you strongly disagree, disagree, neither agree or disagree, agree or strongly agree with the statement.

You had NO companions to vacation with you last summer in undeveloped natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ba. There were no suitable natural areas nearby
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bb. Time commitments to work, family or friends interfered with a trip to a natural area this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bc. Trips to natural areas are too much trouble
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree

<6> Refused/Don't Know

21bd. You want more luxurious accommodations and meals than those usually available in natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21be. You are not healthy enough to travel to natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bf. People of your ethnic background are discriminated against when they recreate outdoors in natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bg. You have no interest in natural area recreation

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bh. You often do not feel welcome when traveling away from your home enroute to or from natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bi. Nearby natural areas are too crowded

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bj. Your financial situation prevented you from recreating in undeveloped natural areas this summer

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bk. You lack information about where to go and what to do for recreation in natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bl. Few of your friends or family members normally recreate in undeveloped natural areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bm. Outdoors are uncomfortable

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bn. You lacked transportation options to natural areas this summer

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bo. You'd be much more likely to travel to natural areas if more persons of your ethnic background worked in or visited these areas

<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21bp. Undeveloped natural areas are not safe

<1>Strongly Agree
<2>Agree
<3>Neither Agree or Disagree
<4>Disagree
<5>Strongly Disagree
<6>Refused/Don't Know

21bq. Normally you travel natural areas, but this year you wanted variety and just decided to do something different

<1>Strongly Agree
<2>Agree
<3>Neither Agree or Disagree
<4>Disagree
<5>Strongly Disagree
<6>Refused/Don't Know

21br. Is there any other important reason why you did not travel or vacation this summer?

<1> YES Please specify _____
<2>NO [go to 22a]

21bs. Was this reason EXTREMELY IMPORTANT, OR SOMEWHAT IMPORTANT?

<1>Extremely Important
<2>Somewhat Important

[go to 22a]

[PERSONS WHO DID TAKE A VACATION TO NATURAL AREA]

21c. Even though you took a trip to an undeveloped natural area this summer, a number of things may have limited your stay or activities. Think about your situation in the summer of 1994, and for each of the following items I read please tell me if you strongly disagree, disagree, neither agree or disagree, agree or strongly agree with the statement.

You had NO companions for trips to undeveloped natural areas this last summer

<1>Strongly Agree
<2>Agree
<3>Neither Agree or Disagree
<4>Disagree
<5>Strongly Disagree
<6>Refused/Don't Know

21ca. There are no suitable natural areas nearby

<1>Strongly Agree
<2>Agree
<3>Neither Agree or Disagree
<4>Disagree
<5>Strongly Disagree
<6>Refused/Don't Know

21cb. Time commitments to work, family or friends interfered with a trip to a natural area this summer

<1>Strongly Agree

<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cc. Trips to natural areas are too much trouble
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cd. You want more luxurious accommodations and meals than those usually available in natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ce. You are not healthy enough to travel to natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cf. People of your ethnic background are discriminated against when they recreate outdoors in natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cg. You often do not feel welcome when traveling away from your home enroute to or from natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ch. Nearby natural areas are too crowded
<1> Strongly Agree
<2> Agree

<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ci. Your financial situation limited your recreation in undeveloped natural areas this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cj. You lack information about where to go and what to do for recreation in natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21ck. Few of your friends or family members normally recreate in undeveloped natural areas
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cl. Outdoors are uncomfortable
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cm. You lacked transportation options to natural areas this summer
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cn. You'd be much more likely to travel to natural areas if more persons of your ethnic background worked in or visited these areas
<1> Strongly Agree
<2> Agree

<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21co. Undeveloped natural areas are not safe
<1> Strongly Agree
<2> Agree
<3> Neither Agree or Disagree
<4> Disagree
<5> Strongly Disagree
<6> Refused/Don't Know

21cp. Is there any other important reason why you did not travel or vacation this summer?
<1> YES Please specify _____
<2> NO [go to 22a]

21cq. Was this reason EXTREMELY IMPORTANT, OR SOMEWHAT IMPORTANT?
<1> Extremely Important
<2> Somewhat Important

[go to 22a]

[ALL RESPONDENTS ANSWER]

22a. We are almost finished, I just have several short questions about your background

What is your current marital status?
<1> Single
<2> Married
<3> Divorced
<4> Separated
<5> Widowed
<9> Refused

23a. How many persons reside in your household?
<1> One Person [go to 24]
<2 - 20> Total number of residents
<21> 21 or more residents

23b. How many of these residents are children under age 18?
<0 - 20> Number of children under 18
<21> 21 or more children

24. What is the highest grade of formal education you have completed?
<1> Grade school or less
<2> Some high school
<3> High school graduate
<4> Trade or technical school
<5> Some college
<6> College graduate

<7> Some graduate/professional school
<8> Completed graduate school
<9> Refused

25. Which of the following ranges does your age fall into?
<1> 18-34 years
<2> 35-44
<3> 45-54
<4> 55 or more
<9> Refused

26. Which of the following categories does your 1993 household income fall into?
<1> Under $25,000
<2> $25,000 - $49,999
<3> $50,000- $74,999
<4> $75,000 - $99,999
<5> $100,000 and over
<9> Refused

27a. People may have different recreational preferences depending on their country of origin. To help us learn about recreation use please tell me what country was your father born in?
<1> the United States [go to 27b]
<2> Another Country [go to 27a1]
<9> Refused

27a1. Which specific country was your father born in?

Specify _____

27b. And your mother, was she born in the United States or another country?
<1> the United States [go to 27c]
<2> Another Country [go to 27b1]
<9> Refused

27b1. Which specific country was she born in?

Specify _____

27c. Were any of your grandparents born outside the US?
<1> YES
<2> NO
<9> Refused

IF NOT MARRIED, GO TO Q27E

27d. And your spouse, what country was he/she born in the United States or another country?
<1> the United States [go to 27e]
<2> Another Country [go to 27d1]
<9> Refused

27d1. Which specific country was he/she born in?

Specify _____

27e. What country were you born in, the United States or another country?

<1>the United States [go to ifAH]
<2>Another Country [go to 27e1]
<9>Refused

27e1. Which country specifically were you born in?

Specify _____

27f. What year did you permanently move to the U.S.?

<1900 - 1994> TYPE EXACT YEAR, FOUR DIGITS
<9999> Refused

ifAH. IF ASIAN ON Q1ca, then go to 28.
[go to 29]

28. You mentioned that you were of Asian; please tell me which specific Asian ethnic group you consider yourself a member

<specify. _____

29. THANK YOU FOR COMPLETING THIS SURVEY!

30. Total time of interview _____

INTERVIEWER RECORD RESPONDENT GENDER:

<1> Male
<2> Female

Appendix B - Survey Respondent and 1990 Census Characteristics

A concern with any survey research is if the sample is representative of the population. To address this issue, information is presented in this appendix (*table 32*) showing two key socio-economic characteristics for the survey respondents, and this is compared with the results of the 1990 Census of Los Angeles County (U.S. Bureau of the Census 1993). All census data is for adults over 18 years, which is the same criteria used for eligibility in the survey. Data is presented for adults in each of the four ethnic groups used in this study, as defined in the census. Education and household income categories were defined the same way in both the survey and in the census. Census data was derived through computer analysis of existing Census Bureau databases.

The data listed suggest that the sample achieved is reasonably representative of Los Angeles County residents. The sample also reflects the response rate of a telephone survey versus a house-by-house survey. The telephone survey normally gets a smaller percentage of households of lower socio-economic status. The large scale immigration into the Los Angeles area between 1990 and 1994 may also help explain some of the differences in census data and the survey respondents. However, we believe that the sample is representative of and can be extrapolated to the larger County population.

In addition, the information below suggests that non-respondents were mainly from a group that is less likely to visit undeveloped natural areas (e.g., lower education and income). This reduces the likelihood that the study underestimated visitation to natural areas.

Table 32—*Educational and household income characteristics of survey respondents and 1990 Los Angeles County U.S. Census data.*

	Black		Hispanic		Asian		White	
	Resp.[1]	LA[2]	Resp.	LA	Resp.	LA	Resp.	LA
	percent							
Education level								
Some high school or less	8.3	11	27.5	60	6.2	26	3.7	23
High school graduate	29.0	29	31.2	17	18.7	22	19.4	22
Some college	31.8	31	17.0	11	20.7	21	32.2	22
College graduate	20.1	23	12.3	9	37.2	17	27.1	23
Graduate or prof. Degree	7.3	6	2.5	2	11.7	14	10.6	10
Age								
18-34 years	44.7	43	62.3	51	53.8	42	35.9	38
35-44	26.3	21	20.7	23	22.8	24	24.9	20
45-55	10.1	15	8.7	12	11.7	24	15.4	14
55 and older	18.4	22	8.0	14	11.0	20	23.8	28
Income level								
Under $25,000	31.3	48	53.3	44	29.0	32	15.0	32
$25,000 - $49,999	39.1	30	26.8	23	29.7	31	34.1	32
$50,000 - $74,999	16.8	14	8.3	16	17.2	20	22.3	19
$75,000 - $99,999	3.9	5	3.6	5	4.8	9	12.1	9
Over $100,000	5.0	3	1.4	3	6.2	8	9.5	10

[1] Survey respondents.

[2] Adult (18+) residents of Los Angeles County (1990 Census).

United States
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Forest Service

**Pacific Southwest
Research Station**

Research Paper
PSW-RP-236

Cultural Diversity of Los Angeles County Residents Using Undeveloped Natural Areas

The Forest Service, U.S. Department of Agriculture, is responsible for Federal Leadership in forestry.

It carries out this role through four main activities:

- Protection and management of resources on 191 million acres of National Forest System lands
- Cooperation with State and local governments, forest industries, and private landowners to help protect and manage non-Federal forest and associated range and watershed lands
- Participation with other agencies in human resource and community assistance programs to improve living conditions in rural areas
- Research on all aspects of forestry, rangeland management, and forest resources utilization.

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