Free Time and Leisure Participation

INTERNATIONAL PERSPECTIVES

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pace of life increases and the effects of globalization invade more and more everyday life, free time becomes an increasingly precious resource. For those experiencing a shortage of free time – a 'time-squeeze' – and for the growing s looking forward to abundant free time in retirement, leisure has never been tal for ensuring individual and social health and wellbeing, as well as the ement of social capital and the quality of life. This book is an expanded and edition of a previous work entitled *World Leisure Participation: Free Time in bal Village*, by the same editors (CABI, 1996). It brings together the results of leisure participation surveys from around the world. In addition to updating s to include the latest surveys, the book includes increased coverage of time- surveys and new themes such as public policy dimensions. The following es, three of which were not covered in the earlier volume, are included, a, Canada, Finland, France, Germany, Great Britain, Hong Kong, Israel, Japan, therlands, New Zealand, Poland, Russia, Spain and the USA. It will be of nt interest to those working in the areas of leisure studies, sociology, time-use and social policy.

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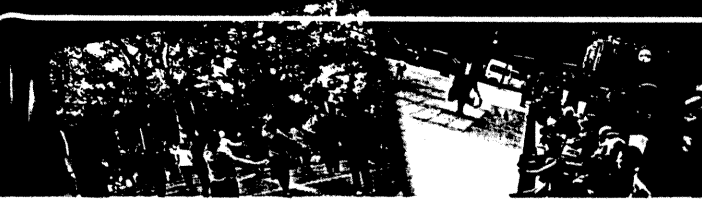

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16 United States of America: Outdoor Recreation

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Introduction

The first nationwide survey of outdoor recreation in the USA was conducted in 1960 for the Outdoor Recreation Resources Review Commission (ORRRC, 1962; Cordell *et al.*, 1996). Since that time, seven additional national surveys have been conducted, in 1965, 1970, 1972, 1977, 1983, 1995 and 2000/01 – summary details are presented in Table 16.1.

Table 16.1. National Recreation Surveys, USA, 1960–2001.

Survey	Date	Managing agency	Sample size	Age range	Ref. period	Ref.
National Recreation Survey (NRS)	1960	ORRRC	6000	12+	Year	ORRRC (1962)
NRS	1965	BOR	7190	12+	Summer	Bureau of the Census (1965)
NRS	1970	BOR	16,770	12+	Year	Bureau of the Census (1970)
NRS	1972	HCRS	3770	12+	Summer	Audits and Surveys (1972)
NRS	1977	HCRS	4030	12+	Year	US Dept of the Interior/ HCRS (1979)
NRS	1982/83	NPS	5760	12+	Year	US Dept of the Interior, National Park Service (1986)
National Survey on Recreation and the Environment (NSRE)	1994/95	USFS + NOAA	17,000	16+	Year	Cordell *et al.* (1996, 1999)
NSRE	2000/01	USFS + NOAA	47,000	16+	Year	This chapter

ORRRC, US Outdoor Recreation Resources Review Commission; USFS, US Forest Service; NOAA, National Oceanic and Atmospheric Administration; BOR, Bureau of Outdoor Recreation; HCRS, Heritage Conservation and Recreation Service; NPS, National Park Service.

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The surveys conducted in the 1970s were found to be problematic for a number of reasons and are not often referenced. In working with the other surveys of 1965, 1982/83, 1994/95 and 2000/01, the focus has been on comparability.

Comparability between surveys is a challenge each time this US national survey is conducted. But comparability and consistency in question phrasing are essential if long-term and short-term trends are to be tracked. The approach is to include, each time as nearly as possible, an identical set of core questions, cast in comparable contexts, and also to repeat the survey as close to a 5-year cycle as possible, so that recent as well as long-term trends can be identified. Renamed the National Survey on Recreation and the Environment (NSRE) for its 1994/95 application, the survey has expanded beyond the former National Recreation Survey's singular focus on recreation participation to include questions on topics such as the environment, public land policy and lifestyles. The latest survey, NSRE 2000/01, was the eighth national survey in the series, and it has run virtually continuously from late 1999 to the writing of this chapter in May 2004. Over 80,000 interviews were collected during this time, making the NSRE the largest federal recreation survey ever conducted in the USA. In this chapter we focus on the 42,868 completed interviews collected between November 1999 and July 2001. The next NSRE is planned for 2005.

Since the late 1980s, the NSRE has been under the management of the US Forest Service and the National Oceanic and Atmospheric Administration (NOAA). Day-to-day operations are housed within the Outdoor Recreation, Wilderness and Demographic Trends Assessment Group, a research unit of the Forest Service Research and Development Branch located in Athens, Georgia. To raise funds for the survey and to attract a wide range of expertize, the Forest Service and NOAA seek additional sponsors, including other federal and state government agencies and private organizations. The NSRE sponsoring agencies from the federal government have included the USDA Forest Service (FS), the National Oceanic and Atmospheric Administration (NOAA), the Bureau of Land Management (BLM), the National Park Service (NPS), the US Environmental Protection Agency (EPA) and the Economic Research Service (ERS).

The name change from National Recreation Survey to the National Survey on Recreation and the Environment reflects not only continuing interest in outdoor recreation, but also a growing interest in the natural environment and the management of public lands. So, in addition to questions about recreation participation, constraints and demographics, the survey now includes many more questions dealing with topics such as knowledge of natural land issues, environmental attitudes, preferences for public land objectives and values of wilderness. In addition, each sponsor has specific information needs beyond recreation. This characteristic of NSRE sponsorship adds considerable complexity to the survey's design. However, this broader array of subject matter adds possibilities for exploring a wider range of relationships between recreation behaviour, demographics, environmental attitudes, lifestyles, public land management preferences, and other aspects of people's lives. In this chapter we describe the NSRE, its operational design and how that design is implemented.

Design

Principal objectives and intended uses

A core purpose of the NSRE is to describe current patterns and recent trends in participation in a wide range of outdoor recreation activities by the people of the USA as a whole. Central to this core purpose is estimation of proportions and numbers of the population participating in the outdoor activities listed for them. A second major purpose is to estimate the distribution of participation by region, state, metropolitan area and other geographic locations in the USA. Of particular interest to NOAA is estimating participation within coastal states around the country. Thirdly, the NSRE seeks to describe, among other things, responding individuals' uses and values in relation to public lands, and attitudes regarding natural resource policy issues, lifestyles and demographic characteristics. It is also designed to provide periodically updated information on public opinions and values with regard to the natural environment, public land management, and changing uses of protected systems of public lands, such as the National Wilderness Preservation System.

The US Forest Service uses data from the NSRE in a number of ways, but the principal one is to examine trends in support of the *National Assessment of Outdoor Recreation and Wilderness*, which is completed every 10 years, with updates in the intervening 5 years. This assessment is required by the federal Forest and Rangeland Renewable Resources Planning Act, 1974. Data from the NSRE are also used to assist National Forest recreation planners and managers, as well as operations in other federal and state agencies, in evaluating recreation-related land and water management issues. Other uses of the data include the assessment of the emerging recreation demands on local, state, federal, and private providers of outdoor recreation, and evaluation of alternative methods for financing the provision of outdoor recreation services and facilities.

The NSRE also provides broad-scale information about market trends and futures for outdoor recreation, regionally and nationally. University researchers and graduate students use the data to develop and test theoretically grounded hypotheses. Specialized sets of questions and analyses address specific needs as they are identified, including those of secondary sponsors seeking results only from their own questions. Results of the 1995 NSRE were published in 1999 in *Outdoor in American Life* (Cordell *et al.*, 1999). Comprehensive results from NSRE 2000/01 are published in *Outdoor Recreation for 21st Century America* (Cordell *et al.*, 2004).

Organization of the survey

The NSRE is an in-the-home telephone survey. For the surveying done in 2000–2004, over 80,000 people, aged 16 or over, across all ethnic groups throughout the USA were interviewed. The NSRE actually consists of a number of different survey versions made up of different mixes of question sets or modules, each version being administered to approximately 5000 people. Throughout the administration of different versions of the NSRE, questions on activity participation and demographics are included as the core of the survey. Where appropriate, questions are asked about special issues, such as disabled persons' recreation participation and access to recreation opportunities.

Modules include sets of questions covering: environmental attitudes; objectives for public land management; attitudes toward and values gained from protected wilderness; appropriateness of charging access fees; knowledge of public lands; lifestyle indicators; leisure; rural land ownership; interest in farm-based recreation; and other more specific questions. Of specific interest to the EPA, for example, were questions dealing with child and adult bicycle helmets for safety. Of specific interest to the cooperative Scenic Byways Research Program, were questions on use and values associated with state-designated scenic highways. Of specific interest to the Forest Service (among a number of other question sets) were questions dealing with fees charged for admission to recreate in National Forests.

Participation questions

In its most recent application, the NSRE included 74 outdoor recreation activities, as listed in Table 16.2. Not all of these activities were asked in every version of the survey, although the majority of them were. For each activity included in a particular version, respondents were asked whether or not they participated at least once during the past 12 months. In some versions, questioning about activities in which a respondent had participated went further, including the number of different days on which they had participated and the number of holidays or trips they took where the activity was the primary reason for taking a trip. The trip questioning included both single- and multiple-day trips. For a randomly selected activity, identified as involving primary purpose trips, more detailed data were collected. The focus was on the last trip of 15 or more minutes taken from home, where the activity was the primary purpose for that trip. The information asked for included a description of the destination, other activities engaged in, travelling companions, mode of travel and other trip characteristics. This detail has been used primarily in modelling activity demand.

Table 16.2. Activities[a] examined in the US National Survey on Recreation and the Environment (NSRE), 2000/01.

Running/jogging	Caving
Golf	Bird watching
Tennis outdoors	Wildlife viewing
Baseball	Fish viewing
Volleyball	Viewing natural vegetation, flowers
Basketball	Nature study/photography
Softball	Small game hunting
American football	Big game hunting
Soccer	Migratory bird hunting
Handball/racquetball/squash outdoors	Gathering mushrooms, berries, firewood or other natural products
Yard games/horseshoes, croquet	Downhill skiing
Bicycling	Snowboarding
Mountain biking	Cross-country skiing
Horse riding	Ice skating
Equestrian activities	Snowmobiling
Picnicking	Sledding
Family gathering	Snowshoeing
Inline skating or rollerblading	Off-road vehicle use
Visiting a historic site, building, monuments	Sightseeing
Nature museums, nature trails, visitor centres, zoos	Visit beach/waterside
Outdoor concerts/plays	Nature tours in an ocean bay or inlet
Outdoor sports events	Driving for pleasure on country roads
Prehistoric/archaeological site	Riding motorcycles for pleasure on highways
Visiting a farm or agricultural setting	Fishing: anadromous
Walking	Cold and warm water fishing
Visit a wilderness or other roadless area	Fishing: freshwater
Home gardening or landscaping	Fishing: saltwater
Day hiking	Ice fishing
Orienteering	Sailing
Backpacking	Rowing
Camping/primitive and developed	Rafting/tubing/other floating
Mountain climbing	Motor boating
Rock climbing	Water-skiing
Swimming/non-pool	Canoeing/kayaking
Swimming in an outdoor pool	Surfing
Personal water craft such as jet skis	Sailboarding/windsurfing
Scuba diving	Snorkelling

[a] Activities are shown in the order asked during the phone interview. Activity ordering is kept consistent from survey to survey.

Issue-specific questions

Short descriptions of some of the questions covered in the NSRE are provided below.

Persons with disabilities

A very significant issue in the USA, as elsewhere, is whether persons with challenging conditions are inappropriately restricted or constrained from participating in outdoor recreation. In addition to concerns about participation, the NSRE includes a section asking about the nature of disabilities and opinions on adequacy of access. Access questions address both legislatively mandated and policy-driven programmes, which seek to improve access for all US citizens. Because disabled respondents were asked the same full-breadth of NSRE questions as everyone else, the data developed provide an in-depth national profile of persons with disabilities that goes well beyond data that are typically available.

Wilderness

Despite numerous studies of wilderness users, the general American public has been little studied with regard to its values, opinions and awareness of protected wilderness. In the NSRE, perhaps the most comprehensive coverage ever assembled about wilderness in the eyes of the public has been completed. Coupled with data from other sections of the NSRE, specifically tailored questions about wilderness can be examined in the full social context in which opinions about wilderness are formed and held.

Trip profiles and valuation objectives

Resource economics literature dating back a number of decades describes a method generally referred to as travel-cost modelling (Clawson and Knetsch, 1966). This methodology focuses on recreational trips taken to different types and qualities of destination sites. Greatly refined over the years by other economists, the basic premise put forward by Clawson and Knetsch was that persons taking recreation trips incur, and are willing to pay, costs for travel and access and, in so doing, provide the researcher an opportunity to observe a relationship between costs incurred and number of trips taken. From this relationship, a formal trip demand function can be estimated, as can the amount the trip-taker is willing to pay for that recreational trip over and above what they actually do pay. This 'over-and-above' willingness to pay is the economist's way of deriving an estimate of the economic value of the trip and of the place visited during that trip. This travel-cost method is firmly grounded in theory and provides a reliable measure of recreation benefits (Walsh, 1986; Bergstrom, 1990). The NSRE provides the necessary trip profile data to support travel cost demand modelling.

Favourite activities

Because individuals vary in what they enjoy and commit themselves to in outdoor recreation, a section of the survey asks about favourite activities. Included is a measure of commitment and the preferred 'setting' or environment for the identified favourite activity(ies). Asking respondents about favourite activities serves a number of purposes. One is to enable tracking trends in most favoured activities from generation to generation and from decade to decade. Often participation data alone are not sufficient to identify activities favoured most, even though participation levels may point to popularity. A second purpose is to set up the respondent for the constraints module (explained below). In preceding national surveys, it has been found that asking about constraints to participation has more meaning to respondents if asked in the context of favourite outdoor pursuits. A third purpose in asking about favourite activities is to identify differences in preferences between different groups in American society, by age, gender, race and other characteristics.

Barriers and constraints

Reasons for non-participation in outdoor recreation are of particular interest to outdoor recreation managers. The NSRE replicates and adds to the list of barriers and constraints considered in previous national surveys and allows open-ended responses to capture new or previously unidentified barriers and constraints. Questions in this section were asked in one of two situations: (i) for respondents who reported that they did not participate in any outdoor recreation; and (ii) for respondents who reported that they did not participate in their favourite activity as often as they would have liked.

Environmental issues

Within political and public arenas, information on how the public uses and values the environment and natural lands is useful in forming or reforming environmental policy, particularly where public lands are the focus. Often, organized interests, natural resource professionals, political interests, commodity interests and local communities are at the decision-making 'table' and their voices are heard. But, the 'voice of the public' is often not at the table and is not heard. The emphasis that people place on different environmental resources and services is growing in importance in the USA and elsewhere in the world. A number of tailored scales

have been developed for the NSRE to help describe how people across American society view and value natural lands and other environmental resources.

Lifestyles

New in the 2000/01 NSRE was a scale of 36 'lifestyle indicators'. The intention was to identify 'lifestyle' activities which respondents participated in regularly. The dimensions in this lifestyle scale included: hobbies, chores, family activities, sports spectatorship, community and church activities, vacations and travel, self-learning, health and exercise, environmental involvement, fads, socializing and going out. Together with recreation participation, environmental attitudes and demographics, information regarding lifestyles adds enormously to the breadth of profiling that can be undertaken for any particular group or interest in American society. Adding lifestyles data provides a new level of opportunity for cluster analysis and other approaches for grouping people by interests, behaviours and/or attitudes. These segmentation results will be used to help make more effective programmes for outreach, education and involvement aimed at the American people.

Bicycle safety

With the signing of Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, in April 1997, the protection of children's health and safety has become a priority for federal agencies and programmes. To assess many of the regulations that affect children's health and safety, policymakers need estimates of the monetary value of reducing risks to children. While some research and literature have provided first-round estimates of the value of reducing health and safety risks, especially for adult populations, it has provided none for school-age children. The 'bicycle helmet' module of NSRE is a highly specialized interest of the EPA aimed at providing data for evaluating reduction of risks in bicycle riding to both child- and adult-age riders through increased emphasis on wearing helmets.

Survey Implementation and Bias Control

The computer-assisted telephone interview system

As with NSRE 1995, telephone interviews for the 2000/01 survey were facilitated using a computer-assisted telephone interview (CATI) system. The CATI system has three primary functions: (i) it facilitates dialling and interviewing; (ii) it manages the administrative functions associated with interviewing; and (iii) it organizes and stores the data for later processing. As quickly as one interview is completed, the CATI system randomly selects another telephone number for the interviewer. Delays are minimal. If the next number proves successful in reaching an eligible person, and they are willing to continue with an interview (an increasingly difficult thing to accomplish), the interviewer reads the survey questions as they appear on the computer screen and records responses directly into the computer as prompted.

The CATI system assures that 'skip' and 'branching' patterns in the interview are executed flawlessly, that responses are within range, that there are no unintended missing data, and that data entry occurs in real time as the survey is administered. If the CATI system and the interviewer are not able to establish contact with a potential interviewee, then a code is entered (e.g. busy, no answer). If the timing of the call is inconvenient, a call back is scheduled for another date and time. Overall, the CATI system is of great assistance to interviewers executing telephone surveys such as the NSRE. In this era of exponentially expanding phone numbers, and voice mail, caller ID, call screening, and many other innovations in telephone communications, CATI might even be viewed as essential to large-scale telephone survey research.

Sampling

Because the NSRE serves many different needs, its sampling framework must be designed to accommodate a variety of needs. For example, the planned modelling and valuation work conducted by EPA and ERS using NSRE 2000/01 activity participation data for agricultural land and farms, requires participation data reflecting rural recreation trip destinations. Sampling allocations, therefore, require oversampling in rural areas to assure adequate numbers of responses in rural recreation destinations throughout the country, especially in sparsely populated areas.

Another example of a special need is the interest of the NOAA in coastal activity participation. To obtain a sample in the 2000/01 NSRE sufficient to cover activities with low participation rates (less than 5%), a large overall sample was needed to assure sufficient coverage of participation in each coastal state. For this use, a large sample spatially distributed as the population is distributed would have been adequate, but because rural intensification was needed by the ERS and EPA, a compromise sampling design was agreed to by the sponsoring agencies. This first set a quota of a minimum of 400 completed interviews per state, spatially distributed as the population within each state was then distributed. This accounted for 20,000 (50 states × 400) of the targeted 50,000 interviews. The remaining 30,000 of the targeted interviews were distributed by a formula to assure adequate sampling in rural counties. The allocation employed for these 30,000 was 65% urban, 25% near urban and 10% rural. The strategy of setting a minimum state quota along with proportionate population sampling provided data adequate for separate reports on participation for each state and region in the USA, as well as reliable estimates of days of participation in states along the coast.

Table 16.3 provides a breakdown of sample sizes attained for the entire USA by the nine Census Divisions. All data are post-weighted before analysis to compensate for the deliberate, as well as chance, disproportionate sampling with respect to social strata and geographic regions.

Potential for estimation bias

There are many potential sources of bias in any large survey of human subjects, such as the NSRE. The principal categories are response bias and non-response bias. Response biases include recall bias and 'digit preference'. Sources of non-response bias include: avidity, incomplete telephone listings, language barriers and refusals (Vaske *et al.*, 1996; Steeh *et al.*, 2001). These sources of bias are discussed in turn below.

Recall bias is simply the inability of a respondent to recall accurately, or to recall at all, whether they participated in particular recreational activities and, if they participated, how often and where that participation occurred. Social scientists often disagree over the optimum recall period (1 week, 1 month, 6 months, etc.) and the best way to account for any recall bias that does occur. In any survey, it must be assumed that some recall bias will occur. For example, one form of recall bias is referred to as 'telescoping' – uncertainty on the part of the respondent as to when participation occurred,

Table 16.3. Regional distribution of sample, NSRE, 2000/01.

Census division	% of population	% of sample	Sample size[a]
East North Central	16.1	13.9	5962
East South Central	6.0	7.6	3254
Middle Atlantic	14.1	10.6	4511
Mountain	6.5	9.6	4118
New England	4.9	7.5	3214
Pacific	16.0	12.6	5365
South Atlantic	18.4	17.7	7568
West North Central	6.8	10.9	4634
West South Central	11.2	9.6	4114
Total	100.0	100.0	

[a] Regional sample sizes sum to 42,740; 128 respondents did not provide their place of residence.

but certainty that they did participate some time in the past. The problem arises when that participation actually occurred outside the time period specified in the interview.

Digit preference is a form of recall bias which involves the common tendency for respondents to round off reported numbers of times they have participated in an activity. Typically, the rounding is upward. For example, for activities of frequent participation, such as walking or running/jogging, respondents often round upward to the nearest 5 or 10, such as 25, 30 or 40, rather than the actual number of occasions, such as 28 times during the past 12 months.

Avidity bias is the tendency of persons who do not participate in outdoor recreation activities, or who participate only infrequently, to refuse to take part in the survey because they feel it is does not apply to them. Avidity bias can result in over-representation of persons who participate and are interested in outdoor recreation. Left unaccounted for, avidity bias can result in seriously inflated estimates of participation rates and biased estimates of participation differences by social group.

Incomplete telephone listings, like any other incomplete sampling frame, can occur for many reasons. More frequently encountered reasons include institutionalization, simply not having a telephone, and access only to pay phones or other non-individualistic arrangements.

Bias comes from language barriers and the resulting, inadvertent exclusion of non-English speaking residents. According to the 2000 Census, 12.5% of the US population is Hispanic. For the non-English-speaking segment of the Hispanic population, the NSRE was conducted in Spanish. The most difficult part of this process was making the translation 'generic' enough for overall comprehension by all the various Hispanic dialects.

Of all sources of bias it is perhaps the non-response bias potentially caused by some households and individuals simply refusing to participate in an interview that is of greatest concern. Increasingly, in today's fast-moving, high-technology world, it is difficult to make contact to set up and complete telephone interviews. First, the expansion of telephone numbers that has been occurring over the past two decades makes it much more difficult to identify a potential individual interviewee in a private household. Cellular telephones, pagers, fax machines, and the growing number of businesses and households are creating more and more demands for new telephone numbers.

But more numbers is only a part of the growing challenge. Once a legitimate phone number is obtained and a candidate household is identified, the process then must focus on making voice contact and on gaining the responding person's confidence and cooperation. Technology is placing a greater burden on attempts to reach and talk with persons in a typical household. Just a few years ago, interviewers only had to deal with answering machines. Before that, 'no answer' or a 'busy' signal were the only issues. Current technology now includes caller ID, call blocking, and other privacy managers. Households using any or all of these devices can easily choose whether to accept a call without the caller knowing such screening is occurring. With these kinds of screeners in place, and with people's often busy schedules, it can take up to 15 to 20 attempts to get a person in the household to answer the telephone.

Much of today's society is fast-paced and time-conscious. In this environment, keeping a respondent on the phone to complete an interview is more and more difficult. Competition with telemarketers, charitable organizations, political pollsters, and other solicitors affect the likelihood that a respondent will stay on the phone and complete an interview. Usually, unless the survey is viewed promptly as interesting or important to respondents, they will not be willing to give the 15–20 minutes needed to complete an interview. In the USA, willingness to cooperate tends to vary by state. It also varies by urban or rural part of the country. For the NSRE, in general, households in urban areas of the country were more easily contacted, but they were less likely to complete the interview process. On the other hand, people in rural areas were more likely to cooperate, but they were more difficult to contact.

For the NSRE, a concerted effort to estimate avidity, listing, and refusal biases was made by asking two key questions of persons who refused to participate in the survey. These were: age and whether or not the respondent participated in outdoor recreation in the past 12 months. The gender of the respondent was also recorded when recognizable. The estimated proportions of non-respondents, relative to respondents, was combined with weights derived from the 2000 Census of the US population to weight each response to correct for over-representation or under-representation by that respondent's social group in the sample. As with any survey, regardless of scope or complexity, bias is a reality that must be dealt with early on, to the extent that it is recognizable and correction measures are affordable. Often this is addressed through sample design, questionnaire order and content, and weighting the data.

Patterns of Participation Based on the 2000/01 NSRE

Overall participation

The estimates of participation presented here are based on the 42,868 completed NSRE interviews that were conducted between November 1999 and July 2001. This period is defined as the base period for statistical reporting from the NSRE, even though interviewing has continued well beyond that time. The final column of Table 16.4 shows the overall, weighted proportion of total respondents, aged 16 or older, who participated in a selection of the more popular outdoor recreation activities in the past 12 months. First listed is overall 'Outdoor recreation participation', indicating the percentage of the population that participated in at least one activity during the base period. An individual is defined as an 'outdoor recreation participant' if he or she participated in at least one activity.

Almost all (97%) Americans aged 16 or older had taken part in at least one activity in the previous 12 months. Activities with the highest levels of participation include: walking for pleasure (83%); attending family gatherings outdoors (73%); viewing natural scenery (60%); visiting nature centres (57%); picnicking (55%); sightseeing (52%); and driving for pleasure (51%).

Table 16.4. Outdoor recreation participation in the past 12 months by gender, USA, 2000/01.

Activity	% of persons aged 16+ participating in year		
	Males	Females	Total
Outdoor recreation participation (at least one activity)	97.5	96.6	97.0
Walking	79.8	85.9	83.0
Family gatherings	72.7	74.1	73.4
View natural scenery	59.5	61.1	60.3
Nature museums/nature centres	57.9	56.6	57.2
Picnicking	51.9	57.1	54.6
Driving for pleasure	51.4	51.4	51.4
Sightseeing	50.1	53.7	52.0
Historic areas/sites/buildings/memorials	47.9	44.3	46.0
Wildlife viewing	45.6	43.8	44.7
Swimming/other than pool	44.6	39.7	42.0
Bicycle	44.2	35.6	39.7
Visit beach	41.2	39.4	40.3
Boating	41.5	31.8	36.4
Fishing	44.2	25.1	34.2
Visit a wilderness area	39.7	26.4	32.7
Bird watching	30.1	34.6	32.5
Hiking	37.0	29.6	33.1
Visit waterside	27.7	24.7	26.1
Snow and ice activities	29.6	23.4	26.3
Developed camping	27.9	24.5	26.2
Motor boating	29.1	20.5	24.5
Outdoor team sports	30.7	15.8	22.9
Mountain biking	25.9	17.3	21.4

Continued

Table 16.4. *Continued*

Activity	% of persons aged 16+ participating in year		
	Males	Females	Total
Prehistoric structure/archaeological sites	21.9	19.9	20.9
Off-road driving	22.1	13.3	17.5
Primitive camping	21.0	11.2	15.9
Hunting	19.9	3.6	11.4
Backpacking	14.0	7.6	10.7
Horse riding	8.2	7.6	7.9
Canoeing	11.7	7.9	9.7
Snorkelling	8.2	5.3	6.7
N	18,694	24,096	42,790[a]

[a] The total NSRE 2000/01 sample size was 42,868, but gender was missing for 78 respondents.

Participation profiles by social characteristic

Gender

Participation rates for many activities vary considerably by gender, as shown in Table 16.4. Activities exhibiting the greatest participation difference by gender include team sports, mountain biking, visiting wilderness areas, hunting, off-road driving, fishing and boating. These tend to be male-dominated activities, in that males reported participation more frequently than females. Higher percentages of females than males participated in walking, picnicking, bird watching, viewing natural scenery and sightseeing. However, across the years that the USA has been conducting national recreation surveys, participation rates have risen faster for females than for males in many activities.

Age

Participation rates for almost all of the more active outdoor pursuits (such as bicycling, hiking, primitive camping, snow and ice activities, swimming, snorkelling and canoeing) vary considerably by age, as shown in Table 16.5. The pattern is as seen in previous surveys, that is, the participation rate declines with increasing age. Activities with the least differences by age include walking, picnicking, family gatherings, visiting historic sites, wildlife viewing, viewing natural scenery and sightseeing. Activities with the greatest difference by age comprise mainly the more physically active pursuits: team sports, mountain biking, hiking, off-road driving, snow and ice activities and canoeing.

Ethnic group

Table 16.6 shows participation rate by ethnic group. Generally, larger percentages of Caucasians and Hispanics participate in outdoor activities than do African Americans. Activities most attracting African Americans include walking, family gatherings, sightseeing, picnicking and visiting nature centres. Overall, Caucasians tend to participate in higher percentages than Hispanics. Exceptions where the Hispanic participation rate is higher are limited to outdoor team sports and hiking. Caucasian participation rates are higher than the other ethnic groups across most activities and are especially higher for visiting historic sites, camping, bird watching, wildlife viewing, viewing natural scenery, hunting, snow and ice activities and several more. These differences in participation rate by ethnicity hold for most of the other activities included in the NSRE, but not shown in Table 16.6.

Region

Not shown in a table is a comparison of participation rates by region. Historically, participation percentages have been lowest in the South (south-eastern quarter of the USA). The NSRE shows this difference continuing into the beginning of the 21st century. For most activities,

Table 16.5. Outdoor recreation participation in the last 12 months by age, USA, 2000/01.

Activity	% of age group participating in year					
	16–24	25–34	35–44	45–54	55–64	65+
Outdoor recreation participation (at least one activity)	98.9	98.2	97.6	97.7	95.6	93.1
Walking	83.8	84.1	84.9	84.4	81.6	78.0
Family gatherings	77.9	78.4	77.5	73.2	67.9	62.5
View natural scenery	57.0	61.8	67.1	66.0	61.5	47.8
Nature museum/nature centres	58.3	67.4	65.9	59.5	52.1	36.9
Picnicking	47.7	59.3	63.4	59.7	52.8	44.5
Driving for pleasure	49.9	54.2	54.9	55.8	51.8	41.8
Sightseeing	46.9	54.2	55.9	57.3	52.9	45.4
Historic areas/sites/buildings/memorials	46.9	47.9	51.0	50.6	46.1	32.5
Wildlife viewing	43.6	45.7	50.5	48.8	44.8	33.8
Swimming/other than pool	57.5	50.5	50.4	41.1	28.5	15.5
Bicycle	56.0	45.9	48.2	35.2	26.4	17.2
Visit beach	50.3	46.9	46.5	40.2	30.8	21.1
Boating	49.5	41.6	41.3	35.5	27.2	17.3
Fishing	42.3	36.6	39.1	33.6	29.6	20.6
Visit a wilderness area	41.9	36.7	37.7	31.5	25.7	17.9
Bird watching	22.2	27.7	36.3	37.5	39.0	34.9
Hiking	36.3	39.7	40.8	34.1	26.1	17.7
Visit waterside	34.3	30.5	31.0	24.9	18.7	12.4
Snow and ice activities	47.8	33.4	31.6	19.8	11.0	4.3
Developed camping	32.1	31.2	32.2	25.4	19.8	12.4
Motor boating	30.5	28.1	28.4	23.8	20.2	13.3
Outdoor team sports	48.3	28.9	24.1	14.2	6.9	3.9
Mountain biking	33.7	29.3	26.5	17.6	10.7	4.0
Prehistoric structures/archaeological sites	22.5	21.6	24.2	22.8	20.0	12.9
Off-road driving	29.3	22.9	18.2	14.3	10.5	5.3
Primitive camping	25.1	19.2	17.7	14.9	10.7	4.5
Hunting	15.2	12.1	12.7	11.2	9.9	6.1
Backpacking	17.6	14.6	12.2	9.5	4.9	1.9
Horse riding	16.2	11.7	11.2	9.4	5.5	2.3
Canoeing	15.7	10.7	11.3	9.2	5.4	3.1
Snorkelling	9.6	8.4	8.1	7.0	3.7	1.6
N	5981	7672	8868	8289	5341	5974

Table 16.6. Outdoor recreation participation by ethnicity, USA, 2000/01.

	% of persons aged 16+ participating		
	Caucasian	African American	Hispanic
Outdoor recreation participation (at least one activity)	97.9	96.1	93.5
Walking	85.6	83.0	71.3
Family gatherings	74.4	73.8	68.4
Viewing natural scenery	66.7	39.3	46.2
Nature museum/nature centre	61.2	42.3	52.7
Picnicking	57.2	47.4	49.1
Driving for pleasure	58.0	40.6	33.6
Sightseeing	57.8	44.9	32.9
Historic areas/sites/buildings/memorials	50.9	37.4	30.9
Wildlife viewing	51.7	26.9	28.3

Continued

Table 16.6. *Continued*

	% of persons aged 16+ participating		
	Caucasian	African American	Hispanic
Swimming/other than pool	49.3	19.9	28.6
Bicycle	41.2	35.4	36.2
Visit beach	43.6	33.6	29.3
Boating	43.9	15.9	21.1
Fishing	38.5	25.9	23.6
Visit a wilderness area	37.7	16.9	23.7
Bird watching	36.8	20.1	22.6
Hiking	34.3	10.8	47.1
Visit waterside	30.3	16.9	15.4
Snow and ice activities	31.3	13.3	15.1
Developed camping	29.9	13.1	20.7
Motor boating	30.8	8.6	12.4
Outdoor team sports	21.3	26.4	26.5
Mountain biking	23.3	14.4	19.3
Prehistoric structure/archaeological sites	21.8	17.6	19.3
Off-road driving	20.1	11.1	12.1
Primitive camping	19.3	5.2	10.0
Hunting	14.2	4.9	5.7
Backpacking	12.1	3.5	9.9
Horse riding	11.3	5.1	8.5
Canoeing	12.3	2.9	3.7
Snorkelling	7.7	2.9	3.8
N	34,577	3115	2791

participation levels of Southerners are less than those for the other three regions (Northeast, Midwest and West), with the exception of hunting, off-road driving, fishing and motor boating. The Northeast participation rate tends to be high relative to other regions in snow and ice activities, visiting historic sites, visiting the beach and swimming in natural water. The West tends to have higher percentages associated with nature-based activities ('The great outdoors'), while the Midwest tends to have relatively high participation for bicycling, visiting nature centres, bird watching, sightseeing and boating.

Income

Table 16.7 indicates that income appears to have a very strong effect on participation across almost all activities. Those with the strongest positive correlation include golf, tennis, visiting prehistoric and archaeological sites, hiking, rock climbing, studying nature near water and snorkelling. Those activities for which participation rates remain relatively steady across most income groups include primitive camping, hunting, off-road motor vehicle driving and fishing. Overall, however, participation in any kind of outdoor recreation was strongly and positively correlated with income, rising from 93% among those earning less than US$10,000 to more than 99% among those earning over US$100,000.

Trends

Long-term trends

National recreation surveys have been conducted in the USA since 1960. Figures 16.1 and 16.2 and Table 16.8 show long-term trends in the eight activities that can be tracked back to the first survey in 1960. In the USA, population and incomes have both risen significantly in the more than 40 years since the first national survey. As shown in Table 16.8, the population aged 12 years and older grew from 131 million in 1960

Table 16.7. Outdoor recreation participation by income, USA, 2000/01.

	Annual total family income, US$'000s					
	<US$15	US$15–24	US$25–49	US$50–74	US$75–99	US$100+
	% of persons aged 16+ participating in year					
Outdoor recreation participation (at least one activity)	93.4	96.9	98.5	99.2	99.0	99.3
Walking	76.4	81.6	85.4	89.2	90.8	89.0
Family gatherings	65.0	74.6	77.8	78.6	80.1	77.5
View natural scenery	45.4	57.7	66.4	73.9	76.1	75.8
Nature museum/nature centre	42.6	51.7	62.5	69.5	75.1	72.1
Picnicking	46.8	54.8	61.1	66.1	64.3	62.5
Driving for pleasure	38.5	48.8	58.8	63.2	63.6	61.9
Sightseeing	38.7	48.6	57.9	64.5	66.3	64.2
Historic areas/sites/buildings/ memorials	30.8	37.8	49.9	59.1	64.4	67.3
Wildlife viewing	33.9	43.3	49.9	56.8	56.9	57.5
Swimming/other than pool	26.9	33.5	46.6	54.1	57.6	62.0
Bicycle	29.7	31.2	40.2	45.5	52.1	52.9
Visit beach	26.5	32.2	43.9	51.1	56.2	59.6
Boating	21.4	26.5	38.3	45.9	52.3	58.8
Fishing	26.5	30.9	37.8	40.2	41.5	40.7
Visit a wilderness area	25.1	28.6	36.6	41.1	41.9	44.1
Bird watching	27.5	30.8	34.7	40.3	40.2	42.6
Hiking	28.5	31.2	33.9	37.4	39.2	43.1
Visit waterside	16.5	20.6	29.5	35.7	35.5	37.8
Snow and ice activities	13.1	17.8	25.7	32.1	38.9	43.9
Developed camping	18.5	22.1	30.9	33.5	34.0	29.5
Motor boating	13.8	17.2	26.4	32.7	35.4	41.9
Outdoor team sports	14.0	19.3	21.1	24.2	26.4	29.4
Mountain biking	14.9	15.5	22.6	25.7	29.4	30.8
Prehistoric structure/ archaeological sites	16.3	17.5	22.4	25.9	29.0	30.1
Off-road driving	9.9	14.4	18.9	21.5	22.9	24.4
Primitive camping	13.1	14.9	18.3	19.9	19.9	19.0
Hunting	6.8	9.4	14.3	14.6	13.3	13.3
Backpacking	8.8	7.9	11.3	12.9	14.5	16.9
Horse riding	7.4	6.6	9.8	11.9	12.8	15.4
Canoeing	4.8	6.5	10.1	12.9	14.4	16.4
Snorkelling	2.7	2.6	5.6	8.6	12.9	19.2
N[a]	5981	7672	8868	8289	5341	5974

[a] Because of refusals and respondents who said 'Don't know', the sample size for the income variable was 26,685.

to 229 million in 2001 – an increase of 75%. During this period real household incomes rose 53% for the lowest-earning 20% of households and by 112% for the highest-earning 5%.

Trends in participation rates for land-based activities show mixed results, with bicycling and camping rising at relatively steady rates, as shown in Fig. 16.1. The level of participation in horse riding has, however, been flat, while the participation rate in hunting has dropped. Because of the growth of population, the number of participants has increased for all activities since 1960. Change in the number of participants has been highest for bicycling, next highest for camping, moderate for horse riding, and lowest for hunting.

A similar mixed story can be seen for water-based activities (Fig. 16.2). The participation

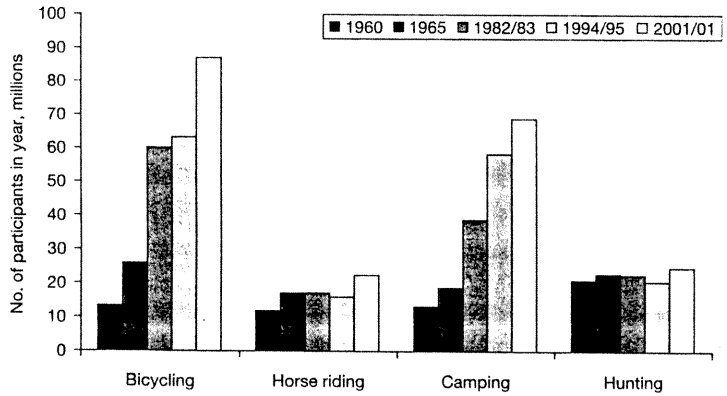

Fig. 16.1. Long-term trends in participation in land-based outdoor activities, USA, 1960–2001. The 1960, 1965 and 1982/83 data refer to populations aged 12+, and the 1994/95 and 2000/01 data to populations aged 16+. Sources: see Table 16.1.

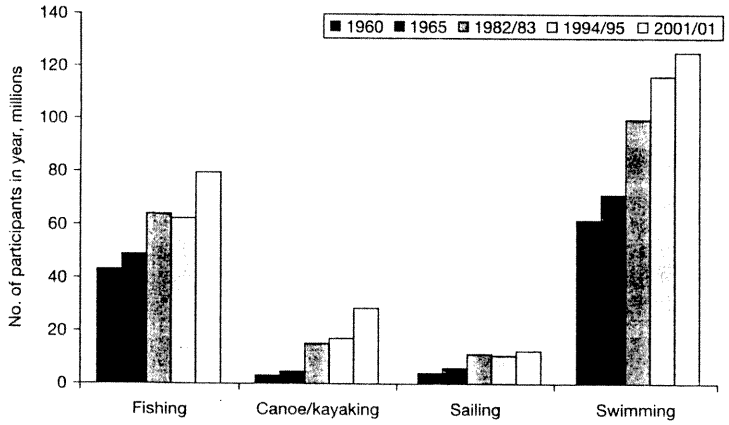

Fig. 16.2. Long-term trends in participation in water-based outdoor activities, USA, 1960–2001. The 1960, 1965 and 1982/83 data refer to populations aged 12+, and the 1994/95 and 2000/01 data to populations aged 16+. Sources: see Table 16.1.

rates for fishing and sailing were near constant over the 41-year period, but due mostly to population growth, the numbers of participants grew substantially for the first half of the period. Trends for canoeing/kayaking and swimming have shown substantial growth in both percentage and numbers participating.

Recent trends

Participation trends can be plotted for a wider range of activities over the period 1982/83 to 2000/01, as shown in Table 16.9. Activities are listed in order of level of growth in the number of participants. The

Table 16.8. Long-term trends in participation in selected outdoor activities, USA, 1960 to 2000/01.

	% participating in year				
	1960[a]	1965[a]	1982/83[a]	1994/95[b]	2000/01[b]
Bicycling	13	18	32	32	41
Horse riding	9	12	9	8	10
Camping	10	13	21	29	37
Hunting	16	16	12	10	12
Fishing	33	34	34	30	35
Canoe/kayaking	2	3	8	8	12
Sailing	3	4	6	5	5
Swimming	47	50	53	55	55
US population, millions	131	144	188	216	229

[a] Population aged 12+; [b] population aged 16+.
Sources: see Table 16.1.

Table 16.9. Trends in participation in selected outdoor activities, USA, 1982/83 to 2000/01.

	Persons aged 16+	
	Percent growth, 1982/83 to 2000/01	Millions of participants in 2000/01
Bird watching	231	73
Hiking	194	76
Backpacking	182	25
Snow-mobiling	125	14
Primitive camping	111	38
Off-road driving	110	42
Walking	91	191
Developed camping	86	62
Downhill skiing	73	21
Swimming/river, lake or ocean	66	98
Motor boating	62	57
Bicycling	53	93
Cross-country skiing	50	9
Sightseeing	37	118
Picnicking	37	124
Horse riding	37	23
Driving for pleasure	30	117
Outdoor team sports	25	56
Fishing	24	80
Hunting	21	27
Water skiing	19	20
Sailing	10	12

fastest growing activity, among those listed in the NSRE, is bird watching, with 231% growth in the number of participants since 1982/83. Other rapidly growing activities include: hiking, backpacking, snow-mobiling, primitive camping, off-road driving and walking. Slowly growing activities include: outdoor team sports, fishing, hunting, water skiing and sailing. The lists of most popular activities in 1960, 1982/83 and 2000/01 differ, partly as a result of changing tastes and incomes and changing patterns of availability of outdoor recreation

facilities, and partly because of advances in the design of outdoor equipment, clothing and transport. For example, water skiing, which was a growth activity for many years in the USA, is today growing slowly and may eventually decline due to the popularity of personal water craft as a substitute.

A Much Expanded NSRE

Analysis of data describing leisure, holiday-taking, and a number of other dimensions of the most recent NSRE has yet to be completed. Summarized below, however, are the results from three of several dimensions employed within the NSRE between 2000 and 2001 that were not in previous US surveys, namely lifestyle indicators, segmentation and exploring diversity.

Lifestyle indicators

Table 16.10 presents information on 20 lifestyle indicators for five regions of the USA. Across the five regions listed, there are many similarities and only a few differences, notably running one's own business, eating out in restaurants, attending church and recycling. Much greater variation is shown across other variables, such as gender and income strata. Added to recreation activity participation and demographics, lifestyle indicators such as these give a much deeper set of variables for describing particular groups of interest.

Table 16.10. Percentage participation in activities defining lifestyles by region, USA, 2000/01.

Activity	% of persons aged 16+				
	North	South	Great Plains	Rocky Mountains	Pacific Coast
Belong to environmental group	7.3	9.0	8.6	8.9	8.0
Run own business	14.5	17.5	15.4	23.6	21.0
Have a vacation home	15.1	15.1	11.3	15.3	15.5
Commute >45 min	16.1	16.6	12.6	11.8	14.9
Raise kids	44.6	47.0	46.2	42.2	44.3
Youth volunteer	19.9	20.4	20.2	19.8	17.3
Playing stock market	24.2	23.0	20.1	20.4	21.8
Read nature magazines	25.1	27.1	27.6	23.6	26.1
Collect things	26.1	29.8	26.7	24.3	25.6
Creative arts	27.2	23.9	23.9	25.6	29.0
Crafts	27.2	27.3	27.8	32.3	30.4
Grow a garden	32.8	30.6	34.5	30.4	33.6
Eat out	37.9	50.6	43.0	44.7	44.6
Exercise	40.6	41.2	39.4	45.4	46.7
Follow sports	44.3	48.9	43.5	43.5	45.3
Attend church	46.5	57.3	49.7	44.1	36.0
Use computer at home	56.0	51.8	50.5	55.6	58.7
Care for pets	56.7	59.5	60.3	62.0	60.3
Recycle	75.9	52.4	64.7	54.3	77.1
Cook at home	79.9	76.9	80.4	84.0	84.5
N	18,335	12,774	2148	4118	5365

Segmentation

The adult American public has been segmented by means of cluster analysis of a range of variables representing recreation activity participation. The eight 'outdoor recreation personalities' identified, the names assigned to them and the percentage of the population each represents is shown in Table 16.11. Each of these segments clustered tightly around their respective participation characteristics, while the demographic characteristics for each were quite different. For example; the 'Nature lovers' are older, most are white females and they are predominantly from rural areas. The 'Outdoor avids' are mostly younger to middle-aged white males with

Table 16.11. Outdoor recreation personalities, USA, 2000/01.

Group description	% of population aged 16+ in group
Inactives	23.9
Passives	15.0
Non-consumptive moderates	11.7
Nature lovers	12.5
Water bugs	13.3
Backcountry actives	8.6
Outdoor avids	7.5
Motorized consumptives	7.5

reasonably high incomes. The 'Motorized consumptives' are younger white males primarily in middle income categories. There are many more characteristics attached to these eight segments, and these are described in greater detail in *Outdoor Recreation for 21st Century America* (Cordell *et al.*, 2004).

The results of this segmentation analysis will be used in a number of public land management programmes. Wilderness education is one such programme. The USA established the National Wilderness Preservation System in 1964, but in recent years there has been growing concern that the public has little access to information about this protected system of lands and thus has limited awareness of its existence and the issues surrounding it. An educational programme to provide the American people with information about wilderness is under way, in part using NSRE data to identify segments and communication pathways that will improve the efficiency of educational delivery and better permit monitoring of learning results.

Segmentation of the public will also assist in meeting objectives such as improving delivery of conservation education, improving responsiveness to differing recreation demands, enhancing the effectiveness of public involvement and ensuring that outreach in public land management is better operated.

Differences in opinions

A major purpose for many of the question modules in the NSRE is to examine the issue of differences related to outdoor recreation participation and land management opinions. Whether these differences are viewed through the lens of environmental justice, social justice or simply equity in service delivery, they are important to track and describe. The NSRE includes demographic questions that match the format used by the United States Census Bureau. This enables us to compare responses to questions dealing with such topics as participation, constraints, opinions, values and access, even though the groups compared may not have been proportionately represented in the final sampling.

One example of exploring differences through the NSRE is a study of how different groups within American society perceive federal lands. A series of questions was designed to solicit opinions on the most important objectives for management of these lands. Figure 16.3 presents differences found between five ethnic groups regarding the level of importance attached to various land management options, including: conserving and protecting sources of water; designating more wilderness areas, restricting trail systems to non-motorized recreation; and expanding access for motorized vehicles. Some clear differences between groups are revealed. Compared with other groups, a smaller proportion of Native Americans see conservation of water as important. Asian Americans see designation of wilderness areas as important, but do not see expanded access for motorized vehicles as important. These results help to identify and explore environmental justice issues related to management of public lands.

Overview

The 2000/01 NSRE has explored outdoor recreation participation by the people of the USA in ways consistent with the seven preceding national recreation surveys conducted between 1960 and 1995. But, it also explored many other aspects of Americans' views on and use of the outdoor environment. Much more emphasis has been placed on environmental topics, to seek an understanding of the public's opinions and values with regard to the natural environment, public lands generally,

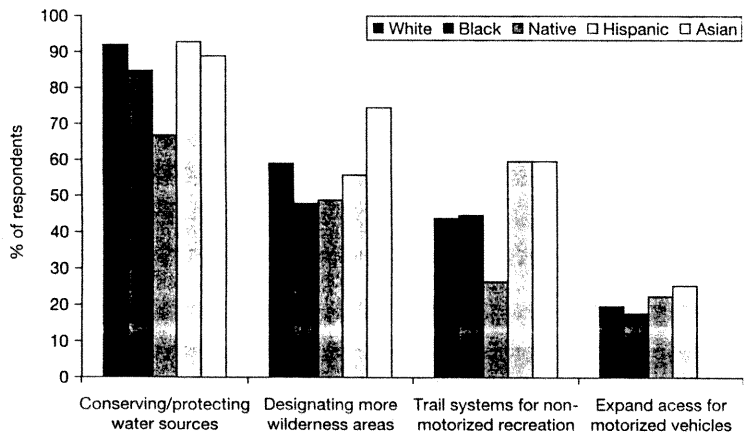

Fig. 16.3. Percentage indicating land-management options important, by race, USA, 2000/01.

and protected public lands. In addition, greater emphasis has been placed on more fully describing respondents' characteristics. Questions have been included on the uses and values of wilderness and other public lands, attitudes regarding natural resource policy issues, lifestyle indicators and demographic characteristics.

Across American society, outdoor recreation continues to be enormously popular, with 97% of Americans aged 16 or older reporting participation to some extent in outdoor recreation during any given year. Traditional activities popular in the 1960s are still popular, but many new forms of activity have been added as technology improves access, comfort and, indeed, what is known and possible. People want to experience nature by viewing it, learning about it, travelling through it and living in it.

Most in demand by Americans are recreation settings and services for passive activities, such as walking, family gatherings, sightseeing, picnicking, and places to visit and learn, such as beaches, historic sites and other sites of interest. These more passive activities cut across a broad band of people, including residents of inner cities, suburbs and rural areas and low-income to high-income groups. As change continues, the importance of a host of other activities becomes apparent, including activities such as personal water craft use, climbing and mountain biking, which emerged as growth activities in the 1990s.

An important consideration in the operation of the NSRE is effective communication of findings to outdoor recreation managers in a format that will assist in the increasingly complex task of managing resources for outdoor recreation. We are seeking to improve the effectiveness of data delivery through a number of methods, in addition to the traditional reports and academic articles. These include personal presentations, up-to-date website postings, topic-specific short reports, articles in professional journals, the book described earlier in this chapter, and 'just-in-time' learning media using interactive, computer-based methods.

A general summary report on the 2000/01 NSRE has been produced for publication in book form in 2004 (Cordell *et al.*, 2004). Other reports have been published in different formats and on specific aspects of the survey results, including: shorter general reports (Overdevest and Cordell, 2001; Cordell *et al.*, 2002a); sustaining outdoor recreation (Cordell and Green, 2001); the continued popularity of bird watching (Cordell and Herbert, 2002); sociodemographics, values and attitudes (Tarrant *et al.*, 2002); forest-based outdoor recreation (Cordell and Tarrant, 2002); demographic trends (Cordell and Macie, 2002); and recreation and environment as cultural dimensions (Cordell *et al.*, 2002b). The website for the NSRE is at: http://www.srs.fs.fed.us/trends

Ideally, the National Survey on Recreation and the Environment will continue as this country's on-going survey on outdoor recreation participation. Outdoor recreation growth continues unabated, but how it grows is not always so obvious. NSRE and similar surveys in other countries are essential if we are to keep pace with this growth, the new directions it will take and the issues it will leave in its wake.

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17 United States of America: Time-use and Cultural Activities

John P. Robinson and Geoffrey C. Godbey

Introduction

This chapter reviews national survey data concerning the free-time activities of Americans in the latter third of the 20th century. It focuses both on the amounts of free time Americans have (and its relations to time spent on non-free-time activities) and on the specific activities done in that free time. It brings together data from different sources that sometimes show conflicting trends and conclusions.

Some of the changes in time-use since 1965 are attributable to an increased presence of newer technologies which consumers now had in their homes. Not only did more households contain dishwashers and microwave ovens, but these appliances now featured more options and conveniences. There was a parallel growth in home entertainment systems – CD players, VCRs, larger screen television sets and the like. Cellular phones allowed people to be 'on call' and reachable, any time, any place. Another significant change was the increased diffusion and use of home computers – at first used to streamline household accounting and to play more sophisticated computer games, but more recently allowing people to communicate inexpensively via e-mail and to surf the World Wide Web (Robinson and Kestnbaum, 1999).

As in earlier diary surveys using different modes of data collection, there have been impressive convergences in the various sets of diary data, which are usually well within sampling error of each other. In other words, the data generally point in the same direction, usually indicating an America with somewhat less work and more free time than in the 1960s.

Time-diary Methodology

The main source of the data on free time in this chapter is a comprehensive set of data reported in national probability surveys of respondents aged 18–64 in the form of 24-hour recall time-diaries. In these diary accounts, collected in 1965, 1975, 1985 and 1995, respondents provided complete accounts of what they did for the full 24 hours of a particular day, including the exact time they went to bed, when they got up and started a new day, and all the things they did until midnight of that day. Because they represent complete accounts of daily activity, diary data collected from cross-section samples allow one to estimate how much societal time is spent on the complete range of human behaviour – from work to free time, from travel to time spent at home. Details of these and other surveys referred to in the chapter are provided in Table 17.1.

A time-diary report is fundamentally different from the task of making long-term time estimates, the source of data on more specific detailed free-time activities, as reported later in this chapter. The diary keeper's task is to recall

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