CHAPTER THREE

# WINTER SPORTS

Winter sports are popular with the younger population—those 12 to 17 years of age. While these activities are primarily concentrated in the Northeast and North Central States, as measured by days participation per person, some parts of the West and South have sites of heavy participation, although the overall per capita participation is quite low. Ice skating, sledding, and tobogganing are engaged in considerably more frequently than snow skiing. The latter is more strenuous and requires more ideal conditions; hence there are fewer occasions. The survey data for analyzing demographic characteristics of snow skiiers are not sufficient for analysis.

Since each activity rests upon the existence of either ice or snow, increases in participation may be expected only in areas with these conditions. The only obvious basis for increasing participation among young people is through providing facilities near their homes.

Snow skiing, in contrast, is an activity that young adults will travel distances to engage in over a weekend. Consequently, increases in participation may well be related to the cost of facilities and the existence of appropriate facilities within convenient distances from population centers.

In addition to these activities being heavily participated in by youth, and being concentrated in the Northeast and North Central States, participation appears to be associated with income and availability. Rates of participation increase with rurality, and with income.

Being winter activities, these sports were not included in the factor analysis reported in appendix A. Because of the background characteristics of those who engage, however, they are here presented next to the youth activities.

Depending upon the skill of the participant, various facilities are required for snow skiing and tobogganing, but it probably is fair to say that most of the activity takes place on natural slopes if the participant is young. This means that proximity of residence to a natural resource becomes a primary requisite for participation.

## ICE SKATING

Ice skating was engaged in by 7 percent of the population during the winter 1960-61 (December 1960-February 1961). There were 0.52 occasions per person during this period for the population 12 years of age and over. However, the participation was almost altogether in the Northeast and North Central States, the rates in these regions being approximately one occasion per person during the winter (tables 2.01 and 3.01).

Males and females participated at about the same rate (0.56 and 0.47 respectively). Participants are almost altogether 12 to 17 years old although males participate fairly heavily in the 18-24 age class. Participation declines with age. Within the 12-17 year age group, however, participation is quite heavy (about 2.5 occasions per person). These observations apply to the Northeast and North Central States, participation being negligible in the South and West (table 3.02.19).

The relationship between age and sex set forth above is the same by size of place of residence as by region (table 3.03.19).

In the Northeast and North Central States, the highest rate of participation is among the population in cities of less than 1 million. It is lowest in the largest cities (over 1 million). Participation rates seem to be low in rural farm territory, but our sample size is insufficient to explore the rural farm outside of SMA rates for activities with few adherents. The slight variation by size of place of residence may reflect unavailability at locations convenient to use in the larger cities. The combined rates for the Northeast and North Central regions for December 1960-February 1961, arranged in order of decreasing urbanization, are presented below:

| | |
|---|---|
| SMA urban, over 1 million | 1.51 |
| SMA urban, under 1 million | 2.93 |
| Other urban | 3.00 |
| Within SMA, rural | 2.12 |
| Non-SMA, Rural nonfarm | 2.23 |
| Non-SMA, rural farm | 1/.15 |

1/Northeast omitted because of insufficient sample.

Within the male 12-17 year age group, participation increases from 2.21 for urban places in SMA over 1 million, to 3.33 for the small urban place not in SMA, and, then, declines to 1.95 for rural population. Thus, with age constant, we have a variation by size of place of residence which may be associated with availability. The pattern for females aged 12 to 17 is somewhat similar, her highest participation (5.39 days per person) being in SMA cities under 1 million. Variations by size of place of residence for other age groups are similar but the rates are low and consequently vary (table 3.03.19).

The combined Northeast and North Central rates indicate that participation steps up fairly consistently from the low to the high income classes. The rate per person for income of less than $1,500 annually is 0.8 for the Northeast and North Central States combined. The association between age and income (see appendix C table 1 for the summer survey) is responsible for part of the income-participation correlation, tending to depress rates in the two lower income groups and to increase rates slightly in the highest income class. Irrespective of these age differences, however, participation increases with income (table 3.02.19).

The combined rates for the winter for the Northeast and the North Central States, by annual family income, are presented below.

| | |
|---|---|
| Under $1,500 | 0.80 |
| $ 1,500 to $ 2,999 | .73 |
| $ 3,000 to $ 4,499 | .90 |
| $ 4,500 to $ 5,999 | 2.23 |
| $ 6,000 to $ 7,999 | 2.22 |
| $ 8,000 to $ 9,999 | 3.22 |
| $10,000 to $14,999 | 2.28 |
| $15,000 and over | 3.90 |

The relationship with income is not as clear cut when the entire national sample is considered according to size of place of residence (table 3.03.19) For the population over 1 million, the rate increases to the $6,000 income group, remains fairly constant to the highest income group when it about doubles. For the rural population, there is somewhat greater variation, but nevertheless an increase from the lowest income group to approximately 1 per person for the $8,000 to $9,999 income group; for the rural population thereafter, the rate is quite low. Within the SMA's under 1 million, the highest income group evidences the highest participation rate, but there is considerable variation among the other income groups. The same is true for small urban cities, except that the highest participation group is the $6,000 to $7,999 income class. Such variations are partly accounted for by variations in larger income, and age variations by size of place of residence. Coupled with the preceeding discussion, they suggest that lower income groups may participate somewhat more frequently in the smaller cities than in the larger ones (table 3.03.19).

Nonwhites participate about one-third as frequently as whites in the Northeast, and about seven-tenths as frequently as whites in the North Central States (table 3.02.19). The nonwhite female goes ice skating about as frequently as the nonwhite male. This is also true for the white male and female (table 3.03.19).

Within SMA, the white male and female rates are approximately equal, but the female participates about half as frequently in small cities and in rural areas as the male (table 3.03.19).

Years of schooling among those 25 years of age and over appears to have little effect upon ice skating (table 3.02.19).

Among the employed population 14 years of age and over, 5 percent went ice skating one or more times during the winter. The rate is somewhat higher in the Northeast among clerical and sales workers and in the North Central States among professional-technical and operatives and kindred workers. The rates are generally low among other population categories (table 3.02.19).

White-collar workers who ice skate are more likely to reside in urban places of 50,000 or more, whereas laborers who ice skate are more likely to reside in small cities (not in SMA). Otherwise there appears to be little association of occupation by size of place of residence with skating days per person. Since ice skating is primarily a young person's activity, rates are low among the labor force (table 3.03.19).

### *Ice skating and health*

Both male and female, aged 12 to 17 years, who report their health "excellent" participate more frequently than those who report their health "good". For older ages, there is a tendency for participation to decline as health is rated poorer, but these participation levels also are low (table 3.04.19).

Similarly, for younger ages, participation is somewhat greater among those who report no impairments, compared with those with impairments. The 18-44 group, with lower levels of participation, have the same rates for the three impairments classes (table 3.04.19).

The percentage of the population 12 years of age and over expressing some preference for ice skating (combining first, second, and third choices) is 18 percent, exceeded only by driving for pleasure (19 percent) for the winter. Thus, ice skating is highly favored in areas and at times when it can be engaged in. As a winter preference, ice skating is negatively associated with participation in fishing and boating, but positively associated with participation in hiking and driving for pleasure. The association is strongest between a preference for ice skating and participation in hiking, where 50 percent of those who participate in hiking 3 or more times during the season prefer ice skating as an outdoor activity (table 3.12).

About 7 percent of the population would like to engage in ice skating but do not for some reason. The 2 principal reasons are lack of ability (34 percent) and facilities being too crowded, inadequate, or distant (35 percent). The next most frequently mentioned reason for not ice skating is lack of time. Although lack of equipment was mentioned by 8 percent, lack of money was mentioned by only 1 percent. The one-third mentioning lack of skill or ability is the largest proportion for any winter activity, and the largest number indicating inability as a reason for not participating. For example, 34 percent gave lack of ability as a reason for not participating in tennis among the 3 percent who prefer tennis during the spring. The 34 percent indicating lack of ability keeping them from ice skating among the 7 percent who would like to engage, represent, of course, about 2 times more individuals. (See tables 3.16 and 4.16.)

Ice skating is engaged in for brief periods of time. By and large this requires that the pond be not too distant from the residence. Traveling long distances to ice skate under winter conditions does not appear to be a possibility for a very large number of skating enthusiasts. Being a vigorous activity, engaged in by young people during restricted periods of time during the winter, ice skating probably will not increase greatly. In areas subject to sufficiently intense cold during the winter months a program of instruction would undoubtedly be well received by the young people. Such programs might be tied into the school or citywide recreation programs. However, adults are not likely to respond in large numbers to such a program. Indoor ice skating may have a more universal appeal throughout the Nation, however.

## SLEDDING AND TOBOGGANING

These activities are almost exclusively winter activities (December 1960 - February 1961). Nine percent of the pupulation reported that they engaged one or more times during this period. This percentage, however, is 15 percent for the Northeast and 11 percent for the North Central States. The South and West engaged much less frequently (table 3.01). Our analysis considers only the winter rates.

During the winter season, 0.44 occasions per person are engaged in by the United States as a whole. The rate per person is 1.05 for the Northeast and 0.37 for the North Central States. The rate in the West is only 0.09 days per person (table 3.02.20).

Sledding or tobogganing is almost exclusively a young people's activity, the rate being 2.82 occasions per person among the male population 12 to 17 years of age and 1.38 among the female population of the same ages. The participation among older ages is negligible, being less than 0.16 occasions per person for the United States as a whole during winter. Although rates are higher in the Northeastern region, this general male-female-age pattern is followed in each region (table 3.02.20). The same is true for size of place of residence classes, the youngest age group participating heavier by far (table 3.03.20).

In general, it appears that the lower two income groups participate much less, nationwide, than the higher income classes. Part of this effect is due to the smaller proportion of younger aged persons in these income classes. Within each region there appears to be considerable variation by income, both in days per person participation and in percent participating (table 3.02.20).

The relationship is somewhat similar for income classes by size of place of residence. Above the $3,000 income class, the rural resident participates more frequently than others to the $10,000 level. For the two higher income groups, the urban SMA population has the highest participation rates. Generally, however, the variation by income according to size of place of residence is not great (table 3.03.20).

In the North Central region, white and nonwhite rates are about the same (0.37 and 0.42 occasions per person). However, in the Northeast, the nonwhite participation rate (0.13) is quite low compared with the white (1.12). Nonwhite participation in other regions is near zero (table 3.02.20).

By size of place of residence, the nonwhite participation is highest (0.57) in the small urban place and lowest in the cities, 50,000 to 1 million (0.01). For the Nation as a whole, the nonwhite participation rate is about one-fifth the white rate. Nonwhite females participate about one-fifth as frequently as nonwhite males. On the other hand, white females participate about half as frequently as white males. The white female rate is lower than white males in the large city and rural territory, but about equals the white male rate in other size of place of residence classes. Nonwhite female rates are near zero or insufficient for adequate comparison (table 3.03.20).

Sledding and tobogganing, for the Northeast and North Central regions combined, increase as one moves from large cities out toward rural territory, the peak participation rate being among the rural population near large cities (that is, within standard metropolitan areas). The rural nonfarm rate is slightly lower and the rural farm rate cannot be expressed because of insufficient participation. It is clear, however, that within the regions having an appropriate climate, participation rates are definitely associated with size of place of residence, increasing as the environment becomes more rural (table 3.02.20). The winter participation days per person for sledding and tobogganing, Northeast and North Central combined, are shown below:

| | |
|---|---|
| Total | 1.15 |
| Over 1 million | .92 |
| Under 1 million | 1.06 |
| Other urban | 1.29 |
| SMA rural | 2.62 |
| Rural nonfarm | 2.09 |
| Rural farm | (1/) |

1/Omitted because of insufficient sample.

By years of schooling among the population 25 years of age and over, the rate of participation for the Nation as a whole (0.13) is too small to provide data for analysis. There appears to be a tendency for the rate to increase with years of schooling, but the rates are low and the variation by education is small (table 3.02.20).

Six percent of the employed population engaged in sledding or tobogganing during the winter. This figure increases to 11 percent for the Northeast, highest of any region. There is little variation among occupations. The rate is highest among laborers (0.42), and within this group, the Northeastern States show the highest participation level (1.18 for laborers). Laborers living in rural territory have the highest rate (0.85). (See table 3.03.20.) Since the participants are chiefly in the younger ages, occupation is not a significant variable to consider.

Participation level in sledding or tobogganing is approximately the same whether the person assesses his health as excellent or good. This is true for both male and female. Within the 12 to 17 year age group, participation is higher for those rating their health good than those who rate their health excellent, but this may be due to sampling variation. For older age groups the participation level is quite low (table 3.04.20).

Among younger ages, participation is somewhat greater among those who have impairments than those who do not have impairments. But the difference is not great. For the whole population, the participation level declines with an increase in impairments. It appears that persons with impairments find ways to engage fairly heavily in sledding or tobogganing, particularly those aged 12 through 17. Unfortunately, we have no information on the nature of the impairment (table 3.04.20).

### *Preferences*

Twelve percent of the population in the winter survey expressed a preference for sledding or tobogganing. This places sledding or toboggaining sixth in

the winter preference order (combined first, second, or third choices). Preference for sledding or tobogganing is somewhat positively associated with participation in swimming, camping, hiking, picnicking, driving for pleasure and sightseeing, although the association is not great in some instances. On the other hand, the preference for sledding or tobogganing is negatively associated with winter fishing, boating, and hunting. The strongest association appears to be with hiking, where 11 percent of those who hike zero times during the period prefer sledding compared with 41 percent preferring it who hiked 3 or more times during the period (table 3.12).

Two percent of the population would like to engage in sledding or tobogganing but do not for some reason. Among the reasons they gave for not engaging, 42 percent mention facilities are too crowded, inadequate or distant. This is the highest percentage mentioning this factor for the winter, although snow skiing (39 percent mentioning facilities) is almost as high. Other than facilities, ability to sled is mentioned by 21 percent of the population, while 12 percent mention lack of time and 12 percent mention equipment. Money as a limitation on activity is mentioned by only 2 percent of the population. From this one may infer that the provision of facilities at locations convenient to young people's homes will increase participation (table 3.16).

## SNOW SKIING

Snow skiing in winter is an activity of only 2 percent of the population 12 years of age and over. Four percent of the population engage in the Northeastern States, compared with 2 percent in the North Central and West. The percentage participating in the South is near zero (table 3.01).

For the Nation as a whole, the population engages 0.06 times per person during the winter, which also is the same as the participation rate for the North Central States. In the Northeast, however, the participation rate is more than twice this (0.16). These seasonal rates are shown (table 3.01).

Some preference (first, second and third choice) is expressed for snow skiing by 6 percent of the population, for the winter months. This places snow skiing ninth in the preference order, quite a low position. A preference for snow skiing in the winter is partially associated with winter participation in swimming, camping, and to some extent hiking and picnicking. The preference for snow skiing is negatively associated with boating participation (table 3.12).

For the winter period 12 percent of the population would like to engage in snow skiing, although they do not engage in snow skiing at present. This is the largest proportion desiring any activity for the winter period who do not already engage in it. The most frequently mentioned reason for not engaging is that facilities are too crowded, inadequate, or distant (39 percent so mentioning). Among the other reasons mentioned, the lack of ability (22 percent) is the most important reason, although, lack of time (14 percent) also was mentioned. The lack of money was mentioned by 9 percent of those who would like to engage in snow skiing but do not at present. Consequently, it would appear that the provision of facilities near population centers would do more to increase participation in snow skiing than anything else. This applies only to those areas having the appropriate climate for this activity (table 3.16). Artificially creating ski runs holds promise of satisfying part of this need. The participation rate in snow skiing is not large enough to identify the demographic characteristics of skiiers. 1/

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1/ Other sources provide some information on this subject: Theodore A. Farwell, Jr., William C. Estes, Terrence K. Hays, Jack A. McCullough, "Consumer Preference in Ski Areas," March 1961, mimeographed, a privately circulated marketing research report. Program development aspects are reported with a bibliography, in "Winter Facilities Development Committee," report to the 1961 New Hampshire Legislature, Senate Joint Resolution 1, Apr. 19, 1961. Concord, New Hampshire: State Planning and Development Commission, 1961.