

AN EXPLORATORY COMPARISON OF MOTIVATIONS AND CROWDING NORMS BETWEEN ETHNIC GROUPS IN DOWNHILL SKI AREAS OF NEW YORK STATE AND KOREA

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Abstract: This study explores the concept that ethnic groups have different motivations and crowding norms when downhill skiing and that visiting and immigrant ethnic groups would respond more like their original ethnic group than they would be like their host ethnic group. The four ethnic groups or sampling strata that were surveyed in this study were: White Anglo skiers at Hunter Mountain Ski Area; Korean skiers at Hunter Mountain Ski Area; White Anglo skiers at Yong Pyeong Ski Resort; and Korean skiers at Yong Pyeong Ski Resort. The total sample was 1,157 skiers for the four sampling strata. Eight hypotheses were tested to explore what affect the ethnic differences of skiers had on motivations for skiing and crowding norms for White and Korean skiers in New York State and Korea. Discriminant analysis was used to predict group classification in the four sampling strata based on the eight variables used in the hypotheses testing.

Introduction

Managers have expressed concern about not having adequate information to plan for and serve various ethnic groups. Information on recreational differences between ethnic groups is limited. Several studies have reported on different participation rates between different ethnic groups and other studies have reported that ethnic differences in participation rates remain even when socio-economic factors are controlled (Carr and Williams 1993, Floyd et al. 1994, Klobus-Edward 1981, Washburne 1978). Ethnic groups are the subject of this study and are defined as a group that is distinct on the basis of country of origin, language, religion, or cultural tradition (Hutchinson 1987). The term race is not used herein since it is based more on socially constructed definitions of physical appearance and differences in physical appearance between groups (Banton 1987).

This study was designed to investigate the relationships between ethnicity and motivations for a recreational activity and crowding norms. The approach in this study was to select a recreational activity and setting that would be relatively consistent in the United States and Korea, as these were the two ethnic comparisons of interest to the authors. Downhill skiing was determined to be a recreational activity that was similar in individual equipment, commercial services, and skiing experience in the two countries to warrant an exploratory study of them (Kim 1992, Rowan 1993, Sandberg 1989). After investigating many ski areas in the Northeastern United States and Korea, two ski areas were found to be reasonably comparable and each had a strong ethnic population of White Anglo and Korean skiers from which a sample could be collected (Park 1996). These two areas were Hunter Mountain Ski Area in New York and at Yong Pyeong Ski Resort in Korea. The characteristics of these two areas are summarized in Table 1. The largest differences were in the greater vertical drop and more ski slopes at Hunter Mountain.

Table 1. Comparison of the ski area characteristics at Hunter Mountain Ski Area in New York and at Yong Pyeong Ski Resort in Korea during the 1997 ski season.

Description Summary	Hunter Mountain Ski Area, NY	Yong Pyeong Ski Resort, Korea
Peak elevation (feet)	3,200	3,720
Vertical drop (feet)	1,600	750
Number of ski slopes	49	13
Number of ski lifts	15	16
Ski slope distribution		
Beginner	35%	25%
Intermediate	35%	50%
Advanced	30%	25%
Average annual snowfall (inches)	125	35
Season	Nov. 1 to May 7	Nov. 25 to April 7
Night ski slopes	0	2
On-site lodging	Condo, hotel, Inn	Condo, hotel
Adult lift ticket price (weekend)	\$40	\$35
Classification	Large medium size	Medium size

The approach in this study was to explore the concepts that ethnic groups will have different motivations and crowding norms and that visiting and immigrant ethnic groups would

respond more like their original ethnic group than they would be like their host ethnic group. The two objectives of this paper are: (1) to explore what affect the ethnic

differences of skiers had on motivations for skiing and crowding norms for White and Korean skiers in New York State and Korea; and (2) to predict group classification in the four sampling strata based on the eight variables used in the hypotheses tested.

Methods

Skiers were systematically sampled going into the main ski lodge and were asked to complete an on-site self-administered survey (Park 1996). The ethnic background of the skiers was asked to determine if they would be included in the study sample and to categorize them into the White Anglo or Korean groups. The survey was available in both English and Korean languages and the survey staff were bi-lingual to help in the interview and survey process. Survey sampling was conducted in 1996 on 2 3-day weekends in February at Yong Pyeong Ski Resort in Korea and on 3 2-day weekends in February-March at Hunter Mountain Ski Area in New York.

Eight hypotheses were tested in this paper using the Kruskal-Wallis *H* statistic, Duncan's Multiple Range Test, or the Chi-square statistic: (1) the natural environment motivational scale has equal mean scores for all four groups; (2) the escapism motivational scale has equal mean scores for all four groups; (3) the social interaction motivational scale has equal mean scores for all four groups; (4) the physical exercise motivational scale has equal mean scores for all four groups; (5) the level of skiing experience is the same between the four groups; (6) the preferences for downhill skiing crowding are the same for all four groups; (7) the expectations for downhill crowding are the same for the four groups; and (8) the acceptable waiting time (mean) for a ski lift is the same for all four groups. These eight variables were used in a

discriminant analysis to classify survey participant membership in the four ethnic groups.

Results

The field interviews and surveys resulted in the following sample sizes for each of the four ethnic groups (i.e., sampling strata) that were analyzed in this study: (1) 415 White Anglo skiers at Hunter Mountain Ski Area; (2) 124 Korean skiers at Hunter Mountain Ski Area; (3) 116 White Anglo skiers at Yong Pyeong Ski Resort; and (4) 502 Korean skiers at Yong Pyeong Ski Resort. The total sample was 1,157 skiers in the four sampling strata.

Ten motivational questions (survey items) were combined into four scales using factor analysis to reduce the number of variables for the following analysis. The four scales were made of motivational questions as follows: (1) the natural environment scale was based on 'to be close to nature', 'to feel calm and tranquillity', and 'to enjoy the absence of man-made features'; (2) the escapism scale was based on 'to be away from job stress', 'to change from the daily routine', and 'to be away from others'; (3) the social interaction scale was based on 'to develop a friendship with others' and 'to meet new and different people'; and (4) the physical exercise scale was based on 'to improve skiing skills' and 'to get physical exercise'. Korean skiers in Korea reported the highest mean rating for all four motivational scales (Table 2) and two of these mean scale scores were significantly higher than the other three ethnic groups: natural environment scale and social interaction scale. White Anglo skiers in Korea reported a significantly higher mean scale score for escapism than the other three ethnic groups. White Anglo skiers in New York State reported a significantly higher mean scale score for physical exercise than the other three ethnic groups.

Table 2. Mean motivational scales scores for the four ethnic groups.

Motivational Scales ^{abc}	Korean <i>k</i>	Korean <i>nys</i>	White Anglo <i>k</i>	White Anglo <i>nys</i>
Natural environment scale (3 survey items)	3.4	2.9	2.9	2.9
Escapism scale (3 survey items)	3.3	2.9	3.6	3.1
Social interaction scale (2 survey items)	3.0	2.5	2.8	2.9
Physical exercise scale (2 survey items)	3.6	3.8	3.7	4.0

^aItem responses: 1=never true, 2=slightly true, 3=somewhat true, 4=quite true, 5=always true.

^bScale score = (total of all item responses/ # of items in scale).

^cStatistical test: bold type indicates that mean is significantly different using Kruskal-Wallis *H* Statistic with $p < 0.05$.

Comparison of the skiing experience levels between the four ethnic groups required the construction of a new variable to accommodate the magnitude of difference between new beginning skiers and experts. A skiing experience composite variable was created based on four reported variables from the study so that skiing experience level = ((years skiing x times skiing per year) + number visits + ski ability). The results of the composite variable on skiing experience was then categorized into three

experience levels: low, moderate, and high. The Chi-Square statistical test results indicated that there were significant differences between the experience levels of the four ethnic groups (Table 3). Korean skiers in Korea and New York State tended to be in the low to moderate skier experience levels, White Anglo skiers in Korea tended to be moderate to high experience levels, and White Anglo skiers in New York were evenly distributed between all three skier experience levels.

Table 3. Skiing experience level percentages for the four ethnic groups.

Skiing Experience Level ^{ab}	Korean <i>k</i>	Korean <i>nys</i>	White Anglo <i>k</i>	White Anglo <i>nys</i>
Low	51%	41%	15%	31%
Moderate	35%	40%	42%	34%
High	14%	19%	43%	35%

^aSkiing experience level = ((years skiing x times skiing per year) + number visits + ski ability).

^bStatistical test: Chi-Square Statistic with 6 df. and $p < 0.05$.

Comparison of the downhill crowding preferences between the four ethnic groups required the construction of a new composite variable to reduce the number of variables for the following analysis. The downhill crowding preference scale was based on the acceptable average number of times that a skier had to stop, change direction, and reduce speed will skiing. The Korean skiers in Korea had a significantly lower scale score compared to the other three ethnic groups

(Table 4). The lower acceptability of these downhill skiing interruptions or maneuvers is probably related to the higher number of Korean skiers in Korea who are beginners learning to ski. The expectations for downhill crowding were significantly lower for the Korean skiers in Korea than for the other three ethnic groups (Table 4); although the mean scores, from a management perspective, were relatively similar for all four groups.

Table 4. Expectations and preferences for downhill crowding for the four ethnic groups.

Expectations and Preferences for Crowding	Korean _k	Korean _{nys}	White Anglo _k	White Anglo _{nys}
Downhill crowding preference scale (3 items) ^{ab}	3.8	5.9	5.4	5.0
Downhill crowding expectation ^{cd}	2.3	2.6	2.6	2.5

^aScale score = (total of all item responses/ # of items in scale).

^bStatistical test: bold type indicates that mean is significantly different using Kruskal-Wallis *H* Statistic with $p < 0.05$.

^cItem responses: 1=much less than expected, 2=less than expected, 3=about same, 4=more than expected, 5=much more than expected.

^dStatistical test: bold type indicates that mean is significantly different using Duncan's Multiple Range Test with $p < 0.05$.

The mean waiting time for riding a chair lift or other transport uphill was significantly lower for Korean skiers in Korea than the other three ethnic groups (Table 5). The mean waiting time for both Koreans and White Anglo skiers in Korea was less than New York groups probably

because of the shorter ski slopes and higher number of lifts per slope in Korea (i.e., skiers expected more rapid accommodation on a lift because the downhill experience was shorter in time in Korea than in New York).

Table 5. Acceptable mean waiting time for riding the chair lift for the four ethnic groups.

Acceptable waiting time ^a	Korean _k	Korean _{nys}	White Anglo _k	White Anglo _{nys}
Mean (minutes)	6.4	8.8	7.1	8.1

^aStatistical test: bold type indicates that mean is significantly different using Kruskal-Wallis *H* Statistic with $p < 0.05$.

The attempt to predict group classification in the four sampling strata was based on the eight variables used in the hypotheses tests previously described herein. The statistical procedure used was discriminant analysis with a stepwise method of including the eight discriminating variables. All eight variables had high Wilk's lambda values and each were significant ($p < 0.05$) in comparing between the groups and were included in the analysis (Table 6). The results of the Box's *M* test indicated that the

group co-variance matrices were not too dissimilar. Three discriminant functions were used to combine the eight variables. The attempt to correctly classify the skiers in their respective ethnic group using the discriminant functions was significantly ($p < 0.05$) better than what would be predicted by chance. The overall correct classification was 52% with the highest percent correct classification (70%) for Korean skiers in Korea (Table 7).

Table 6. Stepwise analysis with 8 discriminant variables.

Step	Variable Entered	Wilks' Lambda	Significance
1	Downhill crowding preference scale	0.89	0.000
2	Skiing Experience Level	0.81	0.000
3	Natural environment scale	0.74	0.000
4	Physical exercise scale	0.67	0.000
5	Escapism scale	0.63	0.000
6	Downhill crowding expectation	0.62	0.000
7	Social interaction scale	0.61	0.000
8	Acceptable waiting time	0.60	0.000

Table 7. Correct classification using discriminant analysis for the four ethnic groups.

	Korean _k	Korean _{nys}	White Anglo _k	White Anglo _{nys}
Percent correct classification	70.1%	46.4%	55.9%	31.1%

Discussion

The approach in this study was to explore the concepts that ethnic groups will have different motivations and crowding norms and that visiting and immigrant ethnic groups would respond more like their original ethnic group than they

would be like their host ethnic group. Based on the analysis of the eight variables in this paper, White Anglo skiers in Korea were more similar to White Anglo skiers in New York than to the host ethnic group of Korean skiers. Korean skiers in New York were more similar to the host

ethnic group of White Anglo skiers than they were to Korean skiers in Korea. Acculturation may have played a major role as an intervening variable since Korean skiers in New York tended to be residents (e.g., first or second generation immigrants) whereas White Anglo skiers in Korea tended to be businessmen and women or military staff in Korea on assignment or tourists in Korea for an extended vacation. Thus, White Anglo skiers in Korea did not tend to assimilate Korean culture and behavior. Further analysis by Park (1996) concluded that the three ethnic groups of Korean skiers in New York and White Anglo skiers in New York and Korea were more similar to each other than any of them were to Korean skiers in Korea.

Two cautionary notes are necessary when reviewing this paper: (1) larger samples are needed to control for the affect of skiing experience levels on this type of comparative analysis; and (2) the ability to generalize these findings is of some concern since only one ski area was used from each country. Future research needs to take these two research design issues into consideration when testing for differences between ethnic groups and host versus visiting and immigrant groups.

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