

## **SOCIAL GROUPS PREFERENCES RELATION TO MOTIVATIONS AND ABILITY LEVELS OF WHITEWATER KAYAKERS**

Seth Turner

Lyndon State College, Undergraduate, Lyndon State College, Lyndonville, VT 05851

Rod Zwick

Recreation Resource Management Professor, Lyndon State College, Lyndonville, VT 05851

---

**Abstract:** Social groups play an important role in many adventure recreation activities. The purpose of this study was to examine the social group preference relation to motives and ability levels of whitewater kayakers. When participants go out on a kayaking trip they are seeking varying degrees of experiences, a major contributor to that experience comes from the members of their group. Looking at level of ability and motivations as two primary indicators, such indicators should provide deeper insight into social group preferences. Data was collected from 283 participants, through the use of a hand distributed survey instrument on the Deerfield River near the town of Charlemont, Massachusetts. The data was analyzed through the use of a factor-cluster analytical technique using motivational variables and ability levels to identify sub-segments of participants; these were then related to ability level.

Motivations were seen to play an integral part of the social group decision for kayakers' who were there for the challenge compared to the those who were skill/experience oriented. If participants share the same type of motivations for kayaking, then it is likely that they will be drawn to people with similar motivations.

The research found there were significant differences in social group preferences among the three different levels of self reported ability: Beginner, Intermediate and Advanced; and it was made apparent that each ability level had a specific type of social group or groups to which they were drawn.

---

### **Introduction**

The purpose of this study was to examine the relationship between preferences for social group and motivations for participating in whitewater kayaking. The study also examined the relationship between ability levels and preferred social group. There has been little research done which has examined the importance of the social group in adventure recreation activities (Schuett, 1995), and little research which has attempted to relate motivations to group preference.

When participants go out on a kayaking trip they are looking for varying degrees of experiences and a major contributor to that experience comes from the members of

their group. The social group participants can be any number or type of people ranging from family members, peers, neighbors, friends, club associates, or workmates. Relationships with other members tend to be one of the main reasons why people choose the recreational activity in which they participate, and they influence what, when, and how recreation participation occurs (Bergier, 1981). Social interactions can lead to learning more about an individual recreation participant's identity (Kelly, 1990).

### **Methods / Instrument**

Data were collected using a self administered survey instrument that was hand distributed to a population of whitewater kayakers on the different sections of the Deerfield River in Charlemont, Massachusetts during the summer of 2000. The survey looked at the social group preferences, motives and ability level of whitewater kayakers using this river.

The researcher surveyed a purposive sample of kayakers at the put-in and take-outs of each section of river and administered the questionnaire to participants signing up for instructional classes at Zoar Outdoor Adventure Resort. The survey was three-and-a-half pages in length and took approximately three to five minutes to complete.

The questions on the survey were focused on people's ability level/ skill, length of time they had been kayaking, favorite rivers/ rapids, how frequently they kayak with varied groups of people and their motivations.

The different sections of the Deerfield River were chosen for approaching potential respondents because of the wide variety and ability levels of kayakers available. Zoar Outdoor, a local kayaking school, also agreed to allow the researcher to survey their instructional programs, which are primarily directed to beginners. The Deerfield River offers three different sections of river that were used by private boaters of all ability levels, The Dryway (Advanced), Zoar Gap (Intermediate/Beginner) and the Lower Deerfield (Beginner/Instructional). There were 100 surveys collected from each of the three sections of the river during the course of the summer.

### **Results**

Data were collected for this research and analyzed with regard to the relationship of paddlers' motives, ability/ skill levels and type of groups with which they paddle. Principle Components Factor Analysis and K-means Cluster Analysis were employed to develop motivational types. A one way ANOVA test was then used to test if there were any differences between the motivation types and respondent's preferences for participating in kayaking with six selected social groups and preference for paddling alone.

In the initial analysis, three groups of kayakers were identified based upon the section of the Deerfield River that they paddled and self reported ability level. These three groupings were (1) paddlers on the Dryway rapids,

considered as Advanced (X=100); (2) paddlers on Zoar Gap, classified as Intermediate paddlers (X=92); (3) those participating in instructional classes with Zoar Outdoor classified as Beginners (X=91).

A total of 300 surveys was hand distributed to a purposive sample of kayakers, 283 surveys were returned with usable data. Of the missing surveys 15 of them were not returned, and there were two refusals by participants. The number of surveys collected resulted in a 94.3% return rate. The age brackets for respondents ranged from 18 years of age to over 56 years in age. This suggests that a younger age group responded to the questionnaire. The gender of respondents was 189 males and 93 females.

### Descriptive Results and Findings

Data were analyzed in two steps. First, descriptive statistics were obtained to illustrate the characteristics of the sample and mean scores for the sample of kayakers that were identified. Second, a factor-analysis with varimax rotated components, allowed for the 18 original motivational variables to be broken down into linear

combinations; these were then examined and factor loadings were used to label the factors. (See Table 1.) The labels of each factor represent the meaning of the variables on which the factors loaded (>.05).

The principle component factor scores were then used in a non-hierarchical (K-means) cluster analysis to develop a motivational typology of respondents. A five-cluster solution was developed based on cluster centers, stability of clusters, and interpretability (see Table 2). The first cluster was labeled Close to Nature (2.19066). The second cluster was identified as Internal Control as it loaded positively on this factor (.89820). The third cluster was identified by high mean standard deviation on Challenge (.89391). The fourth cluster was identified with the Escapism factor (1.64740), and the fifth cluster could not be labeled directly from the original 5 linear variables. This latter grouping showed that there was an inverse relationship to the factor variables challenge, internal control, and escapism. A cross-tabs test was run using the 5 new cluster types against "ability level"; the fifth cluster was strongly related to advanced ability level, suggesting those respondents of this latter cluster were skill/experience oriented.

Table 1. Rotated Component Matrix (Factor Scores)

<u>Variables</u>	<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>	<u>Group 4</u>	<u>Group 5</u>
	<u>Close To Nature</u>	<u>Challenge</u>	<u>Internal Control</u>	<u>Social Aspect</u>	<u>Escapism</u>
To View the Scenery	0.913				
To Be Close to Nature	0.880				
Enjoy the Wilderness	0.856				
To Be with Friends and Family					
Challenge and Risk		0.794			
Personal Testing		0.791			
Feeling of Accomplishment		0.733			
Excitement		0.717			
To Think			0.805		
Creativity			0.757		
To Develop My Abilities			0.534		
To Gain Control			0.528		
To Be Known As a Kayaker				0.886	
Recognition				0.880	
To Help Others				0.618	
To Get Away					0.790
For Relaxation					0.784
To Slow My Mind					0.745

Extraction Method: Principle Component Analysis

**Table 2. K-Means Final Cluster Centers to Show the New Cluster Centers**

	Close to Nature	Internal Control	Challenge	Escapism	Skill/ Experience*
REGR factor score 1 for: <b>Close to Nature</b>	<b>2.19066</b>	-.56175	-.16590	-.41595	.20886
REGR factor score 2 for: <b>Challenge</b>	.15136	-.07950	<b>.89391</b>	-.61128	-.58329
REGR factor score 3 for: <b>Internal Control</b>	.84907	<b>.89820</b>	-.32911	.03304	-.73619
REGR factor score 4 for: <b>Social Aspect</b>	-.01020	-.59871	.30596	.16589	.15973
REGR factor score 5 for: <b>Escapism</b>	.46958	-.42970	.18001	<b>1.64740</b>	-.66468

\*Label identified through the use of cross-tabs

Social group preferences were then analyzed with One-way ANOVA, using a Post Hoc Scheffe test to determine differences in motivation in their expressed social group preferences in kayaking the Deerfield River (see Table 3). The ratings of social group preference ranged from "Always" = 1 to "Never" = 5.

The results of the One-way ANOVA and Post Hoc Scheffe tests indicates motivational types were differentiated on their preferences for paddling with "Friends" and "Fellow Paddlers of Similar Experience". The Post-Hoc Scheffe test suggests the motivational types "Challenge" and "Experience Oriented" were differentiated in preferences for paddling with friends and paddlers of similar experience level, this can be seen in the super-script.

A One-way ANOVA test was also performed to see if there was any difference among ability levels and preferences for the Social Group (see Table 4). This table shows that there is significance among all levels of ability in their preferences for social groups while paddling. The Advanced level group differs from both the Beginner and

Intermediate groups in preference for paddling with "Friends", "People in Classes or Instruction Groups", "Teachers and Mentors" and "With a guide". Differences among ability levels are displayed by the superscripts in Table Four. The Advanced group differs from beginners on "preferences for paddling with fellow paddlers of a similar experience," and in their preference for paddling "alone." Advanced kayakers lower means on these two variables indicates a higher preference for paddling alone or with those of the same experience level.

The Beginner and Advanced level groups differ from the Intermediates on the preference for "Groups from Outing Clubs or Organizations" variable. It is speculated that Beginners differ from the Intermediates in that they do not want to feel uncomfortable in front of more experienced people. Beginners want to be with people who are kayaking at the same level. The Advanced level group on the other hand do not want to be involved with organization Groups or Clubs, this group is much happier paddling on their own or with people they are comfortable with at the same skill/experience level.

**Table 3. Social Groups vs. Motivational Types**

Preferences	Close to Nature <sup>a</sup>	Internal Control <sup>b</sup>	Challenge <sup>c</sup>	Escapism <sup>d</sup>	Skill/ Experience <sup>e</sup>	F=	Sig.
<b>Friends</b>	<b>2.05</b>	<b>1.91</b>	<b>2.17<sup>e</sup></b>	<b>2.00</b>	<b>1.50<sup>c</sup></b>	3.475	<b>0.009</b>
<b>People in Classes or Instructional Groups</b>	3.00	3.77	3.46	3.32	3.58	2.023	0.092
<b>Alone</b>	3.94	4.38	4.33	4.42	4.17	1.269	0.283
<b>Fellow Paddlers of Similar Experience Level</b>	<b>2.53</b>	<b>2.25</b>	<b>2.62<sup>e</sup></b>	<b>2.37</b>	<b>2.03<sup>c</sup></b>	3.533	<b>0.008</b>
<b>Teachers/ Mentors</b>	3.10	3.27	3.34	3.03	3.04	0.798	0.528
<b>Groups from Outing Clubs or Organizations</b>	3.95	3.82	3.87	4.10	3.87	0.383	0.820
<b>With a Guide</b>	3.60	4.10	4.19	4.00	3.90	0.305	0.269

- Superscript shows difference between Social Groups on each of the Motivational Types.

Table 4. Level of Ability vs. Social Groups

Preferences	Beginner <sup>a</sup>	Intermediate <sup>b</sup>	Advanced <sup>c</sup>	F=	Sig.
Friends	2.33 <sup>c</sup>	1.72 <sup>c</sup>	1.61 <sup>ab</sup>	12.033	0.000
People in Classes or Instructional Groups	3.06 <sup>c</sup>	3.74 <sup>c</sup>	3.76 <sup>ab</sup>	11.311	0.000
Alone	4.63 <sup>bc</sup>	4.32 <sup>a</sup>	3.83 <sup>a</sup>	19.277	0.000
Fellow Paddlers of Similar Experience Levels	2.65 <sup>c</sup>	2.30	2.09 <sup>a</sup>	7.451	0.001
Teachers/Mentors	2.69 <sup>c</sup>	3.41 <sup>c</sup>	3.50 <sup>ab</sup>	14.336	0.000
Groups from Outing Clubs or Organizations	4.11	3.64 <sup>c</sup>	3.91 <sup>b</sup>	4.644	0.010
With a Guide	3.51 <sup>c</sup>	4.15 <sup>c</sup>	4.33 <sup>ab</sup>	13.024	0.000

- Superscript shows differences between the Ability Levels on each Social Group.

This study lends some insight about understanding social group preferences of one group of adventure recreators, whitewater kayakers. Motivations were seen to play an integral part of the social group decision for kayakers' who were there for the challenge compared to the those who were skill/experience oriented. If participants share the same type of motivations for kayaking, then it is likely that they will be drawn to people with similar motivations.

The research also found there were significant differences in social group preferences among the three different levels of self reported ability: Beginner, Intermediate and Advanced. It was made apparent that each ability level had a specific type of social group or groups to which they were drawn, and it was also apparent that ability was a more discriminating variable than motivational type in differentiating paddlers' preference for social group.

#### Discussion

Whitewater kayaking experience is multifaceted; therefore, the reasons why these individuals pursue this adventure recreation activity are varied. Even though this type of adventure recreation involves more risk and danger than passive outdoor recreation pursuits such as picnics and bird watching, the social aspect is still an important underlying dimension (Schuett, 1995). We were able to see the differences among ability levels in their preferences with whom they preferred to kayak.

The Beginners appeared to prefer "people in classes or instructional groups" and "Teachers/Mentors," this suggests that they were looking for people who were most likely just starting to kayak and are less skilled. This would place the beginner in a non-threatening environment where they are most likely surrounded by people of similar ability.

By examining the means in Table 4, the Intermediate ability level preferred paddling with "Friends," and also showed a preference for "Fellow Paddlers of Similar Experience." This indicates intermediate level kayakers have developed their abilities/skills to a certain level and

are looking for people with whom to share a good time; they are less focused on honing their skills/abilities.

Advanced level kayakers looked for "Friends" and "Fellow Paddlers of Similar Experience," they were differentiated from the intermediate and beginner level with a lower mean score on the preference for paddling with "Friends" and more differentiated from beginners in preference for paddling with "Fellow Paddlers of Similar Experience". This tells us that they are not looking to improve upon their skills and abilities, but participating in kayaking for the social aspect of being with friends and people who share the same abilities.

All of the social group variables involve kayaking with others and few participants' kayak alone (see means on Table 4). The importance of the social groups in kayaking was apparent, kayaking alone is not seen as desirable. All preferences with the exception of "alone" involve social contact. Kayakers consider paddling a social sport, but the motivational types of participants and ability level groupings vary in preference with whom they prefer paddling.

#### References

- Bergier, M. J. (1981). A conceptual model of leisure-time choice behavior. *Journal of Leisure Research*, 13(2), 139-158.
- Bryan, H. (1979). *Conflict in the great outdoors* (Sociological Studies No. 4). University of Alabama, Bureau of Public Administration.
- Buchanan, T., Christensen, T. E., & Burdge, R. J. (1981). Social groups and the meaning of outdoor recreation. *Journal of Leisure Research*, 13, 254-266.
- Ewert, A. W. (1993). Differences in the level of motive importance based on the trip outcome, experience level, and group type. *Journal of Leisure Research*, 25(4), 335-349.

- Ewert, A. W. (1985). Why people climb: The relationship of participant motives and the experience level to mountaineering. Journal Leisure Research, 17(3), 241-250.
- Hammit, W., & McDonald, C. D. (1983). Past on-site experience and its relationship to managing river recreation resources. Forest Sciences, 29, 262-266.
- Hautaluoma, J., & Brown, P. J. (1978). Attributes of the deer hunting experience: A cluster analytical study. Journal of Leisure Research, 10, 271-287.
- Heywood, J. L. (1987). Experience preferences of participants in different types of river recreation groups. Journal of Leisure Research, 19(1), 1-12.
- Katzell, R., & Thompson, D. E. (1990). Work motivation: Theory and practice. American Psychologist, 45(2), 144-153.
- Kelly, J. R. (1990). Leisure (2<sup>nd</sup> ed.). Englewood Cliffs, NJ: Prentice Hall.
- Manfredo, M. J., Driver, B. L., & Brown, P. J. (1983). A test of concepts inherent in experience based setting management for outdoor recreation areas. Journal of Leisure Research, 15, 263-283.
- Priest, S., & Gass, M. A. (1997). Effective leadership in adventure programming.
- Schreyer, R., & Lime, D. (1984). A novice isn't necessarily a novice: The influence of experience use history on subjective perceptions of recreation participation. Leisure Sciences, 6, 131-149.
- Schreyer, R. (1982). Experience level affects expectations for recreation participation. In D.W. Lime (Ed.), Forest and river recreation: Research update (pp. 154-159). St. Paul: Minnesota Agricultural Experiment Station.
- Schuett, M. A. (1995). Predictors of social group participation in whitewater kayaking. Journal of Park and Recreation Administration, 13(2), 42-54.