MOTIVES FOR PARTICIPATION IN COLLEGE BASED OUTDOOR ADVENTURE PROGRAMS

by

Andrew Garth Bentley

Submitted in partial fulfillment of the requirements
for the degree
Master of Science
in the School of Health, Physical Education, and Recreation
Indiana University

December 2003

MOTIVES FOR PARTICIPATION IN COLLEGE BASED OUTDOOR ADVENTURE PROGRAMS

Andrew Bentley
Indiana University

ABSTRACT:

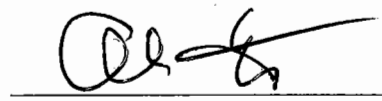
Outdoor recreation is an important component of American society. Currently, its popularity is increasing as social acceptance grows in the form of media support, an increasing number of therapeutic outdoor programs, and a broad array of corporate adventure training programs (Dubin, 2002; Ewert, 2001; Greenfield, 1999; Martin, 2003). Outdoor adventure programs offered by colleges and universities across North America represent another area of recent growth (Attarian, 2001). While a number of works have addressed leisure motivation in an outdoor recreation setting (Anderson, Anderson & Young, 2000; Driver, 1977, 1983; Ewert 1985, 1993; Ewert & Hollenhorst, 1989; Hornibrook et al., 1997; Manfredo, Driver & Tarrant, 1996; Manning, 1986; Mills, 1985; Sugerman, 2001), a gap exists with respect to students in college based outdoor adventure programs.

This study identified important motives for participation in college based outdoor adventure programs. Additionally, significant differences were determined across gender, experience, participation levels, and credit allocation. By understanding motives important for outdoor adventure programs, this research provides empirical evidence for the management decision making process regarding course offerings and marketing strategies.

Motives were measured by a survey containing the Recreation Experience Preference (REP) scales developed by Driver (1983). Although the REP has proven to be a valid and reliable instrument for quantifying motives for outdoor recreation in many areas, it has seen little use in the setting of college based outdoor adventure programs. Therefore, a pilot study ($n = 36$) was administered to ascertain Cronbach's Alpha for reliability of REP scales specific to this population. A revised survey was then distributed to a college based outdoor adventure program at a large mid-western university during September and October of 2003. Surveys were distributed ($n = 130$) to courses/trips that included, rock climbing, sea kayaking, rafting, backpacking, map & compass, surfing, canoeing, whitewater canoeing, and mountain biking.

Descriptive statistics and MANOVA were used to analyze the data and determine any significant differences in participant motives. The data indicated the most important motives were Escaping Social Pressures, Enjoying Nature, and Meeting New People. Least important were For the Credit, Escaping Family, and Teaching/Leading Others. Additionally, the MANOVA suggested statistically significant ($p = .05$) differences across experience, participation level, and credit allocation. There were no statistically significant differences across gender.

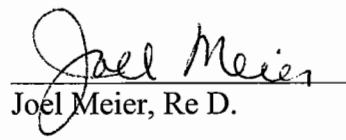
Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree of Master of Science.



Alan Ewert, Ph D.

Thesis
Committee

Doug Knapp, Ph D.



Joel Meier, Re D.

Date of Oral Examination
12/11/2003

TABLE OF CONTENTS

LIST OF TABLES

Chapter 1

INTRODUCTION

Outdoor recreation is an important component of American society. Currently, its popularity is increasing as social acceptance grows in the form of media support, an increasing number of therapeutic outdoor programs, and a broad array of corporate adventure training programs (Dubin, 2002; Ewert, 2001; Greenfield, 1999; Martin, 2003). Another area of recent growth is outdoor recreation programs offered by universities across North America (Attarian, 2001).

Outdoor recreation programs provide a number of "program services [that] are usually one or more of the following: equipment rental, equipment repair,... retail sales of equipment, outdoor programs, events, and activities" (Webb, 1999, p. 4). It is also common for these programs to provide students with instructors and transportation. Since the customer is central to the success of any recreation program, customer-focused organizations include provisions to gather information on client needs, interests, and values (Edginton, Hudson & Lankford, 2001). Understanding this information has managerial implications, as this information allows recreation programmers to address client needs through specific program design.

Statement of the Problem

The problem of the study was to investigate differences in participant motivation for college based outdoor adventure programs with respect to gender, experience, participation level, and credit allocation.

Purpose of the Study

The goal of this study was to understand motives important to participation in college based outdoor adventure programs. These motives were examined among gender, experience, participation level, and credit allocation. This research contributed to the understanding of participant motivation in college based outdoor adventure programs, which created management implications. Motives may be identified by participants or management not previously thought significant. This research provided empirical evidence for management decision making regarding course offerings and marketing strategies. Additionally, different outdoor adventure courses/trips may be developed based on significant differences found in participant motives among gender, experience, participation level, and credit allocation.

Justification for the Study

The rationale for this study was to expand the body of knowledge in the area of participant motives for college based outdoor adventure programs. It was the intention of this study to understand how participant motives vary with gender, experience, participation level, and credit. The following paragraphs illustrate the justification for this study.

The need for this study began as an attempt by the researcher to examine why individuals participate in college based outdoor adventure programs. It has been reported that there is large variation in reasons why participants attend such programs. "Every person who attends an experiential program comes with… different motivations, expectations, and perceptions" (Estes & Ewert, 1988, p. 10). While a number of works have addressed leisure motivation in an outdoor recreation setting (Anderson, Anderson

& Young, 2000; Driver, 1977, 1983; Ewert 1985, 1993; Ewert & Hollenhorst, 1989; Hornibrook et al., 1997; Manfredo, Driver & Tarrant, 1996; Manning, 1986; Mills, 1985; Sugerman, 2001), there appeared a gap with respect to college students in college based outdoor adventure programs. This gap served as the focus of the study.

Pandolfi (1999) discussed the future of outdoor recreation in America. Participation in outdoor recreation is rising rapidly and is a trend currently facing American society. To meet the demand for positive outdoor recreation experiences, the customer must be given consideration. A need exists to understand the consumer and the value they place on outdoor recreation opportunities. By understanding this value, outdoor recreation providers may be able to reproduce highly valued outdoor recreation experiences. In order for this to occur, outdoor recreation staffing will need to be well trained to answer the trend in rising participation rates.

Tarrant, Bright, Smith, & Cordell (1999), concurred with Pandolfi, by saying "...understanding... recreationists' motivations for and attitudes about recreation experiences is essential to improving management of public outdoor recreation" (p. 412). Areas for management improvement include assisting in the participant decision making process and pursuing marketing efforts. Deciding what type of outdoor adventure program to offer could be based on finding an appropriate match of participant motives with program goals. Advertising for adventure programming could be targeted to any number of varying participant motives to attract new, different, or additional clients.

Crandall (1980) suggested several items about the applications of outdoor recreation research. Information gleaned from research allows the leisure provider to predict and provide highly valued leisure choices by understanding participant motives. With a

deeper understanding, program design could be more closely grounded with empirical research, allowing programmers to address specific participant motivations. Programming can be based on clients' motives and optimized to meet them. Also, it may be the case that motives commonly thought important to other outdoor adventure program populations such as being in a natural environment and being physically active (Sugerman, 2001) may be found not as important with this population.

While motivation in the outdoor recreation setting has received considerable attention, it has not been definitive toward motives for college based outdoor adventure programs. This represents a gap in the body of knowledge. Identification of participant motives for college based outdoor programs allows the college based outdoor adventure programmer, instructor, and others to understand participant reasons for attending the program. This study has added to the body of knowledge by identifying important motives for participation in college based outdoor adventure programs.

Delimitations

The study was delimited in the following ways:

1. Subjects for the study were college students participating in college based outdoor adventure programs.

2. Subjects were selected by nonrandom convenience sampling prior to participation in outdoor adventure programs at Indiana University Outdoor Adventures (IUOA).

3. The use of a questionnaire containing the Recreation Experience Preference (REP) scales as a 6-point Likert type response scale to quantify motive importance.

4. The data collection took place September and October, 2003 at outdoor

adventure planning meetings for courses/trips offered by IUOA. The survey instrument was administered and collected by the researcher.

5. For this study, adventure programs included one or two planning meetings and a weekend component. Courses/trips were two to three days in duration.

6. Descriptive statistics and MANOVA were used to analyze the data.

Limitations

The study was limited by the following factors:

1. Subjects participated voluntarily and were only students participating in college based outdoor adventure programs.

2. Data collection occurred only at IUOA. Other types of outdoor adventure programs were not considered. The results of this study are not generalizable outside of this program.

3. The type of outdoor adventure trip investigated by this study were two to three days in length. Data are not reflective of longer outdoor adventure programs, limiting generalizability to those outdoor adventure programs of greater length.

Assumptions

The study was conducted based on the following assumptions:

1. Subjects for the study were college students.

2. The REP scale developed by Driver (1983) is appropriate for use with individuals participating in college based outdoor adventure programs.

3. Subject responses were accurate and honest.

4. Subjects felt their participation in future outdoor adventure programs was neither compromised or enhanced by participation in the study.

Hypotheses

The following null hypotheses, segmented by independent variable, were tested at an alpha level of .05:

1. There are no significant differences in participant motives between males and females.

2. There are no significant differences in participant motives across levels of experience.

3. There are no significant differences in participant motives across levels of participation.

4. There are no significant differences in participant motives when receiving credit for participation compared to not receiving credit.

Definitions of Key Terms

The following terms are defined to clarify their use in the study:

College based outdoor adventure program

A program provided as part of a service by a college or university that equips students to undertake self-propelled activities occurring in small groups, and necessarily requires a natural outdoor setting to take place. Resources provided by such programs often include instructors, equipment, transportation, and/or other necessary items (Webb, 1999). At some institutions, college credit is an option for participation in these programs.

Credit

Academic units awarded for successful completion of a course of study that may be used toward completing a degree.

Ethnicity

Refers to subject's self reported racial background.

Experience level

Subjects self reported perceived level of outdoor experience adapted from a similar classification system for mountain climbers by Ewert (1985). Subjects chose from either novice/beginner or intermediate/advanced categories.

Inexperienced

Refers to subjects indicating a novice/beginner level of outdoor experience.

Experienced

Refers to subjects indicating an intermediate/advanced level of outdoor experience.

Participation level

In the original research proposal, participation levels were operationalized to three categories adapted from Ewert and Hollenhorst (1989). The three categories, introduction, development, and commitment represented previous experience in college based outdoor adventure programs. After the study data was collected and analyzed, only two groups were indicated, those that had participated, and those that had not. This is reflected in the addition of subjects from the commitment level of participation to the development level of participation.

Introduction

This term refers to individuals that have not previously participated in any college based outdoor adventure program.

Development

This term refers to individuals that have previously participated in one or more college based outdoor adventure program.

Motivation

Reasons why individuals perform particular behaviors are dependant on expected outcomes, attitudes, and beliefs an individual holds about a behavior (Fishbien & Ajzen, 1975; Lawler, 1973).

Non-credit

No academic credit awarded.

College students

Individuals enrolled in a college or university pursuing degrees of higher education.

Chapter 2

REVIEW OF THE RELATED LITERATURE

The literature related to participant motivation for college based outdoor adventure programs is reported in this chapter. For organization purposes, it is arranged under the following topics: (a) theoretical underpinnings, (b) effects of previous experience, (c) college programs, (d) measuring motives for participation, and (e) summary.

Theoretical Underpinnings

Several theories and models attempt to explain leisure motivation. The theoretical foundation for examining participant motives in this study, expectancy theory, suggests participant behaviors can be explained by investigating attitudes about perceived benefits and limitations (Driver, Howard, Tinsley & Manfredo, 1991). Shoham, Rose, & Kahle (1998) used expectancy theory to explain outdoor adventure behavior. Additionally, Priest and Gass (1997) contend "expectancy theory has useful application to outdoor programs as it can help to define exactly how you can motivate individuals to experience peak adventures" (p. 51).

Expectancy theory began as a discussion of work motivation by Tolman (1932) and Lewin (1935) that presented motivation as a behavior oriented toward a predicted outcome. It includes an understanding of the concepts of valence and expectancy where valence refers to level of outcome attractiveness and expectancy as the probability of a behavior resulting in certain consequences. Behavior is determined multiplicatively by combining valence and expectancy. In other words, individuals' actions are determined by a desire to obtain specific goals or experiences. For example, an employee desires

higher recognition or status in the job place, so they take on new or additional responsibilities. In this sense, the behavior of taking new responsibilities becomes a means to an end in the expectation that they will receive a certain outcome, that is recognition for having multiple responsibilities.

Situations occur where some outcomes are intermediate or result as a byproduct from reaching those more terminal. For example, an employee seeks additional pay in an effort to increase their personal buying power. They direct their behavior to taking up a second job in order to have increased income from multiple paychecks. This second job is intermediate to the expected outcome of having increased buying power. However, without the intermediate outcome, the final outcome is not attainable.

Lawler (1973) developed an expectancy model for work motivation that illustrates the above points with regard to multiple outcomes. Some outcomes are a means to an end, while others are a means to themselves. With regard to outcomes, the model makes four assumptions:

1. People have preferences among the various outcomes that are potentially available to them.
2. People have expectancies about the likelihood that an action (effort) on their part will lead to the intended behavior or performance.
3. People have expectancies… about the likelihood that certain outcomes will follow their behavior.
4. In any situation, the actions a person chooses to take are determined by the expectancies and the preferences that person has at the time (p. 49).

Lawler's points provide a basis for conceptualizing expectancy theory, however it fails to accommodate for the range of potential variables that influence behavior. Further work in this area by Ajzen and Driver (1991) and Ajzen (1985) attempts to further explain antecedent conditions to leisure participation.

Ajzen and Driver (1991) surveyed beliefs of undergraduate college students on leisure participation. Their data suggested individuals were concerned with the expected outcome and "...were found to engage in a certain recreation activity to the extent that they associated favorable outcomes with the activity, they saw their friends and families as approving of the activity, and they believed themselves to be in the possession of the resources required to perform the activity" (p. 201). Ajzen et al.'s prediction of leisure participation study was done as part of Ajzen's (1985) theory of planned behavior. The theory's evolution was attributed to previous work by Ajzen and Fishbien (1980) and Fishbien and Ajzen (1975) on the theory of reasoned action which relied on expectancy theory for its groundwork.

The basic premise of the theory of planned behavior is that displays of behavior are dependent on information and beliefs individuals maintain about that particular behavior. The first belief refers to attitudes one holds toward a behavior, positive or negative. Subjective norms, the second determinant, "...refers to the perceived social pressure to perform or not to perform the behavior". The third factor determining behavior is perceived behavioral control which "...refers to the perceived ease of difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Ajzen & Driver, p.188).

Expected outcomes as a motivating factor appeared in Dunn-Ross and Iso-Ahola's (1991) work. A sample of 255 individuals participating in sightseeing was surveyed to examine potential motives and satisfactions for this leisure activity. The framework for their study was "...in cognitive social psychology...[where] motives are inextricably linked to expected outcomes of behavior" (p. 227). Lending creditability to expectancy theory, data from this study inherently suggests that subjects participated in sightseeing due to the expectation of gaining knowledge while in the act of participating in the activity.

Several issues become important when looking at leisure motives from an expectancy theory viewpoint. First, participation in leisure can be an end to itself. For example, an individual might participate solely to learn a new outdoor recreation based skill. Secondly, leisure participation can be an intermediate or a byproduct attained while fulfilling some other need. In this sense, participation in leisure is a behavior exhibited because it is expected this behavior will result in some outcome. The outcome may be an external item like physical fitness, or internal like escape/catharsis, or locus of control (Ewert, 1985). Third, multiple motives for participation may be simultaneously present in an individual, resulting in a combination of items. For example, an individual learns skills associated with backpacking in order to feel a sense of independence. With a few backpacking trips, this individual becomes self-secure with their independence and the backpacking behavior either becomes a means to itself and/or new motives for backpacking become important as others fade.

As the understanding of motives deepens, it is important to understand motives as a function of benefits of leisure. The "needs, reasons, and motivation can be looked at as

things that cause leisure to be sought, while satisfaction, need satisfaction, and psychological outcomes can result from leisure" (Crandall, 1980, p. 50). If leisure is sought because of attainment of specific outcomes an individual desires, this implies these outcomes can be thought of as benefits of leisure. Assuming individuals participate in college based outdoor adventure programs as a function of leisure, then motivations for outdoor recreation may be considered benefits obtained from participation in outdoor recreation activities.

Effects of Previous Experience

While little research exists specifically on motivation for college based outdoor adventure, findings do suggest experience plays a role in motivation for other areas of outdoor recreation. In general, as experience increases in a recreation activity, preference changes occur for difficulty level (Virden, 1992). Bryan (1979) noted that individuals acquiring multiple experiences relating to particular activities are likely to experience increases in activity enjoyment levels. As enjoyment increases so does commitment to the activity, which is accompanied by an increase in participation rate. Such increases in participation in outdoor adventure activities were predicted by Ewert (1987) and confirmed by Attarian (2001).

Petrick, Backman, Bixler, Robert, and Williams (2001) studied effects of experience on motivations for golfing (n=1,397). Demographic information was used to segment subjects by levels of experience for data analysis. The findings indicated differing motivations between segment groups based on levels of experience. The most experienced individuals appeared motivated by competition, while the less experienced appeared motivated by status and the opportunity to be at leisure. These findings concur

with Prentice (1993), and Williams, Schreyer, and Knopf (1990) that found varying motives between individuals, where individual's prior experience or lack thereof played a role in determining their motives for participation.

Fluker and Turner (2000) assessed motive differences between those with and those without prior rafting experience. Motives for groups with experience, varied significantly from those without. The novelty of whitewater rafting and exploring new adventure mediums appeared important to subjects without prior rafting experience. Those with experience indicated important items were being in nature and for rest and relaxation.

Whitewater rafting was also the setting of a study by Williams, Schreyer, and Knopf (1990). The Recreation Experience Preference (REP) scales were administered to whitewater river runners (n=3,181) on 13 different rivers and subjects were segmented by experience level. Participant motives for river running varied greatly between the most and least experienced river runners, with veteran river runners exhibiting the highest motive complexity.

Motivations for mountain climbers revealed differences in motives for varying levels of experience (Ewert, 1985; 1993). Generally, inexperienced climbers had preferences for extrinsically rewarding experiences, whereas experienced climbers were found to seek predominantly intrinsic rewards. Climbers with guided groups expressed high motive importance for every item except risk. This data concurs with Ewert and Hollenhorst's (1989) work where differences in experience among recreators contributed to activity engagement level. Engagement level is analogous to participant involvement level and is based on several items including frequency of participation and preferred risk

level. Subjects were segmented by three experience levels from those with the least amount of experience to those with the highest amount. Experienced individuals opted for small groups or solo travel, and those less experienced preferred structured programs. The outdoor adventure program studied in this research primarily provided courses/trips in less natural, developed settings with low levels of risk. In this light, it seems probable to expect inexperienced college students to gravitate to a college based outdoor program, whereas similar students with personal experience or training in adventure pursuits may choose to do activities without the structure of a guided program.

College Programs

According to Gass (1999), adventure programs in higher education primarily include incoming student orientation programs, continuing student orientation programs, and adventure programs for resident assistants. Typically, wilderness orientation programs use group process and fireside discussions with participants on backpacking, day hikes, rock climbing, and canoeing trips that are three to six days in length (Galloway, 2000). Since the first wilderness orientation in 1935 at Dartmouth College, these programs have seen a growth in popularity indicated by a presence in popular literature (Mosser, 2002). Wilderness orientation programs show wide variation in methods used to attain program goals of increasing student retention and providing a positive peer relationship early in a student's college career.

An outline of therapeutic uses of outdoor education by Berman & Davis-Berman (2000) contends therapeutic benefits of outdoor programming are either intentional or incidental. Specifically, benefits to emotional well-being from wilderness orientation programs are classified as incidental to the orientation goals of increased retention and

developing peer groups. Although there is wide variation of program design for wilderness orientations, emotional well-being pervaded a study of 50 such programs by Davis-Berman and Berman (1996).

Longitudinal work by Devlin (1996) studied effects of wilderness orientation on subjects at a small liberal arts college in the northeastern United States. Survey questionnaires were administered immediately before and after, a year after, and the senior year after participation. Data collected a year after participation, indicated the opportunity to make new friends and meet other freshmen were important motives to orientation participation. By senior year, subjects indicated making new friends was still an important motive for participation, however subjects felt the effect of smoothing the transition from high school to college was negligible. Information collected from this study utilizing pre and post data collection measures suggests the effects of wilderness orientation programs are not long term, rather they are closer the to time of participation.

With the separate attention that motivation and wilderness orientation programs has received in the literature, it was surprising that so little work exists on motivations for college based outdoor adventure programs. Work by Festeu (2002) appears to be the only study directly dealing with college student motives for participation in college based outdoor adventure programs. Subjects (n= 108) were Romanian students at the University of Transylvania that were participants to several backpacking trips as part of a college based outdoor adventure program. Data was collected using open-ended questionnaires, unstructured interviews, and participant observation. While the findings suggest motives were identical across gender, variation existed in motive prioritization. Opportunity for enjoyment and fun, and opportunity to meet new friends were ranked as the first and

second most important motives. Females rated opportunity to enjoy nature's beauty third, while males rated it fifth most important. Opportunity for escape from daily routine and family was ranked fourth by females and third by males. Finally, opportunity to explore new territory was fifth for females, forth for males. Festeu suggested future research might address how motives change as participants gain experience in outdoor adventure activities.

Historically, males have had higher participation rates than females in outdoor adventure pursuits, although it appears participation rates among women are heightening (Ewert, 2001). With some outdoor adventure programs experiencing a high number of female participants (IUOA Participant Survey, 2001), future research efforts should continue to include the role of gender as a potential influencing factor to not only outdoor adventure, but specifically college based outdoor adventure programs.

The literature on college adventure programs has been limited primarily to wilderness orientation programs. Gass' (1999) description of adventure in higher education makes no mention of outdoor adventure programs like the type defined by the present study. There is some work describing program activities, number of participants, and financial summaries of college programs (Poff, 2001; Webb 2000, 1999), but little is known about the relationship of experience, participation level, and credit allocation specifically on motives for participation in these programs.

Measuring Motives for Participation

The framework for understanding participant motives and the methodology of this proposal is based largely on conceptual work by Driver (1983) and recent work by Sugerman (2001). Driver quantified motivation through a psychological approach that

relied on expectancy theory to explain recreation behavior (Manning, 1986). Discussed previously, this theory explains human behavior as outcome oriented, and Driver's work bases these outcomes as benefits of the behavior. For example, possible reasons to participate in an outdoor recreation setting could be to gain self-confidence or to become better at the skills involved. The REP scales compose an instrument developed by Driver to help define reasons for participation in outdoor recreation. It is on the basis of the REP that motives for participation were measured in this study. Development and testing of this instrument is discussed further in the following chapter.

This research is similar in design to Sugerman's (2001) REP work with older adults (ages 40 to 84) that suggested differences in motives for participation across gender. The items of nature, physical fitness, learning, and social security were more significant for women than men in the outdoor adventure setting. Additionally, the data indicated subject motivation for Elderhostel outdoor programs may be tied to attraction to the natural environment, physical activity, developing skill competencies in outdoor adventure mediums, and being around others with similar interests.

Summary

Motivation for outdoor recreation is a complex and broad area. It has been established that leisure fills some need for individuals and that leisure activities, according to Driver, often are byproducts of attempts to reach expected outcomes or benefits. Understanding that outdoor recreation provides a means for participants to reach personal outcomes reinforces the importance for recreation programmers to effectively assist clients in meeting those needs.

The literature suggests experience level has played a part in determining participant motives for outdoor adventure. An area that has received no attention is the role of credit allocation on participation in outdoor adventure experiences. This study will use Driver's REP to examine and further the understanding of motives across gender, experience, participation level, and credit allocation.

Chapter 3

METHODOLOGY

The problem of the study was to investigate differences in participant motivation for college based outdoor adventure programs with respect to gender, experience, participation level, and credit. The conduct of the study includes the following organizational steps: (a) arrangements for conducting the study, (b) selection of subjects, (c) administration of the survey instrument, (d) instrumentation, (e) pilot study, (f) organization and analysis of the data, and (g) summary.

Arrangements for Conducting the Study

The study was conducted at Indiana University Outdoor Adventures (IUOA), a college based outdoor adventure program that offers a variety of credited courses and non-credit trips. The researcher contacted the IUOA program director in April of 2003 to explain the purpose, objectives, and detail of the study. At this time the researcher expressed his intent to conduct research and obtained the program director's approval for the study to take place in September and October of 2003. In addition, approval for the study to take place was secured through the Human Subjects Review Board at Indiana University. With approval of the program director, the researcher attended an IUOA coordinator monthly meeting and described the research study to IUOA coordinators. This was done as a courtesy to IUOA coordinators since the researcher would be coming to the IUOA planning meetings for several minutes to administer the survey.

Selection of Subjects

All subjects were volunteers and participants in college based outdoor adventure programs during the course of the investigation. The main criteria for study participation

included (a) all subjects were current college students and (b) all subjects were participants in college based outdoor adventure programs. Convenience sampling was chosen to collect enough data to reveal any significant differences in participant motives. Based on promotional literature available from IUOA, data would be collected predominantly from courses in backpacking, rock climbing, rafting, and flat-water/whitewater canoeing and kayaking.

Administration of the Survey Instrument

Prior to attending IUOA planning meetings, the researcher checked program files at the IUOA office to determine an appropriate number of surveys to bring to the meeting. This usually occurred one day prior to the planning meeting and prevented the researcher from attending courses/trips that were cancelled due to low enrollment. Once at the planning meeting, the researcher presented the study by distributing Study Information Sheets and by oral explanation. Participants volunteering for the study were given the survey instrument, a pencil if needed, and adequate time to complete the survey. While subjects were taking the survey, the researcher remained present to respond and render aid to any potential issues subjects had with the instrument. Upon completion of the survey instrument, participants returned the survey directly to the researcher.

Instrumentation

The first part of the survey instrument contained questions pertaining to subject demographic information (see Appendix B). This included age, class standing, ethnicity, gender, experience, participation levels, and whether the subjects were receiving credit for their participation in the outdoor adventure program. The question pertaining to experience was adapted from work by Ewert (1985) and the breakdown of participation

level was operationalized from work by Ewert and Hollenhorst (1989). Segmenting experience and participation level in this manner will help program directors address specific participant motives when designing future programs.

The second part of the questionnaire was related to the REP scales developed by Driver (1983). This section contained 83 items, using a 6-point Likert-type response scale. The Likert-type response scale provided a clear and concise format for subjects to indicate important motives and required a forced choice type response similar to other works using the REP. The 83 items represented 41 scales as part of a subset of 20 broader domains.

Driver and his associates at the University of Michigan began work on the REP in 1968 (Driver, Tinsley & Manfredo, 1991). The first phase of this work began as an attempt to identify recreation motives and needs for resource managers to better understand their clientele. This included developing a way to quantify motives objectively, which is important for management when looking to raise budget requests and trying to define costs particular to recreation resources. "It was argued that this information could be used in a wide array of planning and management tasks such as clarifying supply and demand, developing management objectives, avoiding conflict, and identifying recreation substitutes" (Manfredo et al., 1996, p.2). Previous to this development, there were few empirical methods investigating leisure motivation or benefits of leisure, especially in regard to the outdoor recreation context. Driver's work provided the field with a psychometric instrument designed to identify reasons individuals participate in outdoor recreation activities. From these identified reasons or

motivations to leisure, resource managers can potentially infer benefits obtained from leisure.

The REP is made of broad recreation preferences or domains that are reduced to a number of scales within each domain (see Appendix C). Each scale item contains two core statements designed to measure participant motives within the scale. Differing number of scale items is common to research with the REP as researchers tailor the instrument to variances in their specific population.

Sugerman (2001) published 21 domains/42 scales in her work with the REP. In the proposed research, the family togetherness domain was dropped from the survey instrument. It was not included based on the assumption that college students are a fairly autonomous group while attending college and they seldom bring their families to such events in this setting. Also, information from college based outdoor adventure program directors never indicated family togetherness as a factor in their client's participation (G. Martz, personal communication, March 6, 2003).

The original REP contained 328 scale items, with several domains containing as many as ten items. Early REP testing revealed administering the instrument overly time intensive due to instrument length; however with repeated testing the instrument was streamlined. Now each REP scale contains only two items referred to as core items. Reducing the number of scale items for each domain produced no significant difference between mean scale scores and standard deviations for the two core scale items verses the mean scale scores and standard deviations for the original full-item scales.

Items for inclusion in the REP were derived a number of ways. According to Driver et al., "most of the needs were derived from the leisure literature, from numerous

focus group sessions conducted with recreationists, or serendipitously from the statistical clustering of early item pools in which previously unanticipated need-implying constructs emerged as clusters" (p. 273). Particular attention was paid to behavior and motivation literature with regard to finding needs and motivations for recreation.

When designing the REP, Driver was interested in the valence affecting participation and asked questions like, what outcomes are most attractive to participants? What outcomes are most sought after by participants? Are the most attractive outcomes synonymous with high levels of positive benefits? To answer these questions, Driver referred to Lawler's expectancy theory to explain motivation in construction of the REP. Also Fishbien and Ajzen's (1980) theory of reasoned action helped guide REP development since the REP deals explicitly with behavior choices within a leisure context.

To test the validity and reliability of the REP, Driver and others performed various tests discussed below to validate the instrument. Tinsley, Kass, and Driver (1981) found acceptable levels of internal consistency when testing the REP in two different ways. The first involved scoring the REP by looking at mean scale scores based on individual responses. Secondly, mean domain scores were calculated by taking the score of the single best item on each scale. Concurrent validity was found in the two scoring methods for the REP. Although domain scoring may be a more time effective way to score the REP, the data suggested a scale scoring strategy allowed higher validity and a broader interpretation of information represented by the REP.

Rosenthal, Waldham, and Driver (1982) used four self-report measures to assess REP validity. The first two utilized Likert type response scales to indicate subject satisfaction and importance of REP scales to participation. "The other two methods were

chosen to be as different as possible from the Likert-type scaling format" (p. 92), allowing inferences toward discriminate validity. Fractionation and paired comparison were the other two measurement techniques. The findings indicated good discriminate validity where this refers to conditions when instrument "...scores do not correlate highly with scores from an instrument that measures something different" (McMillian & Schumacher, 2001, p.242).

Tinsley, Driver, Ray, and Manfredo (1986) found the REP to be reliable over time, location, and instructional sets for groups of fishermen. Two groups completed the REP at varying times before fishing, immediately after, and two more times (2-6 months and 7-10 months) after fishing. MANOVAs indicated no significant differences between groups for the above variables, however individually the data suggested evidence that the variables had an effect on subject responses. Generalizability is limited however, as the number of subjects for this study was small.

Manfredo et al.(1996) made several suggestions about using the REP in a meta-analysis of 36 studies utilizing the REP. Results from a confirmatory factor analysis (goodness of fit index) found the scales of 19 domains to provide a good fit for the data. This information guided the selection of domains and scale items for the present research study. Based on the meta-analysis, the authors posit that "exploratory cluster or additional factor analyses are not necessary in future applications" (p. 7).

Manfredo et al. suggested that determining pre-experience feelings and perceptions of motivation at the conclusion of an experience could be problematic. This was based on findings from Manfredo (1984, 1986) and Tinsley et al., (1986), that time of survey completion may play a role on individual item responses. Feelings measured

post experience may be more a reflection of attained experience preferences rather than an explanation of the pre-experience motives. Manfredo et al. suggest past studies paid too little attention to administering the REP as close as possible to the desired experience and that should be addressed in future research.

The previous literature recommended measuring motives for participation with the REP prior to participation. That said, the data collection in this study took place prior to participation in any college based outdoor adventure experience. Otherwise, motives measured post-experience may have been affected by a number of factors related to feelings attained during the experience (Manfredo et al.). Prior to any data collection however, a pilot study took place.

Pilot Study

This study represented the first time this instrument was used with participants in both credited and non-credited college based outdoor adventure programs. Therefore, a pilot test of the instrument was administered to IUOA coordinators (n = 36). The pilot study was given at an IUOA coordinator monthly meeting, September 2, 2003. The amount of time necessary to complete the survey instrument was measured and qualitative feedback was solicited from the pilot study subjects to examine questionnaire item appropriateness and clarity. A Cronbach Alpha for reliability was then run on the REP scales. Several scales were removed because of poor reliability and this is explained further in Chapter Four. If there were reliability and/or clarity/appropriateness problems with the survey instrument, the issue was evaluated by the researcher to determine the source of the problem and if needed, either modified or removed.

Organization and Analysis of the Data

Following the data colletion (n = 130) it was entered electronically to Microsoft Excel. Descriptive statistics were employed to locate initial differences between independent variables and determine important participant motives. To calculate scores for the REP domains, means and standard deviations were calculated for each REP core statement. To arrive at REP domain means, scale means were averaged together revealing domain scores. Statistical Package for the Social Sciences 11.5 was used to perform a multivariate analysis of variance (MANOVA) with REP domains and independent variables to ascertain any significant differences. Then, univariate analysis was used to locate differences within levels of the independent variables.

Summary

The procedures for conducting the study were presented in this chapter. The IUOA program director was contacted regarding data collection in IUOA courses/trips. A pilot study (n = 36) allowed the researcher to evaluate and revise the survey instruments' 42 scales and 20 domains. Then a convenience sample was taken of IUOA participants (n = 137). Five surveys were removed because they were returning participants and two more were removed due to misplaced survey responses (n = 130). The data are described through descriptive statistics, MANOVA, and univariate analysis in the following chapters.

Chapter 4

ANALYSIS OF THE DATA

The goal of this study was to understand important motives for participation in college based outdoor adventure programs. These motives were examined to identify differences across gender, experience, participation level, and credit allocation. To report the research findings, this chapter is arranged by (a) data collection, (b) results of the pilot study, (c) descriptive statistics, (d) results of the MANOVA, and (e) summary.

Data Collection

The sample in this study (n = 130) represented a variety of college based outdoor adventure courses/trips offered by Indiana University Outdoor Adventures (IUOA). These courses/trips were identified from a list of available offerings that met this study's definition of college based outdoor adventure program. They included Rock Climbing, Backpacking, Sea Kayaking, Canoeing, Whitewater Canoeing, Whitewater Rafting, Surfing, Mountain Biking, and Map & Compass.

The planning meeting schedule for each course/trip was obtained from the IUOA program director and the researcher proceeded to administer the survey instrument at 14 IUOA course/trip planning meetings, September through October, 2003. Of the 137 surveys initially collected, five were by subjects that had previously taken the survey in other planning meetings and two surveys were returned incorrectly completed. The five repeated surveys were not included in the final data analysis to avoid practice effects (Vogt, 1999). The other two were also excluded because their responses were not marked as indicated by oral and written explanation by the researcher and on the survey instrument itself.

Results of the Pilot Study

A pilot study was administered to 37 IUOA coordinators at the September 2003, IUOA coordinator meeting. After completing the survey, coordinators were asked to make written and verbal comments on clarity and appropriateness of the survey questions. There were no indications by pilot study participants that any one question was unclear or inappropriate for the intended population. A suggestion was made by one participant to remove the dots between numbers on the Likert type response scale. Because of this, a slight modification was made to the written survey instructions in order to emphasize correct completion in future data collection efforts (see Appendix D). Also, the researcher would later verbally emphasize how to correctly complete the survey instrument before distributing the survey instrument in further data collection efforts.

One participant to the pilot study misplaced responses to survey questions creating a final sample of n = 36. Pilot study data was used to perform a Cronbach Alpha for reliability on REP scales. Due to poor reliability, five REP domains were deleted from the instrument as noted in Table 1. The final version of the survey instrument used by this study contained 16 domains and 23 scales (see Appendix D). For the purpose of this study, the researcher specifically added one domain, For the Credit.

Table 1

Pilot Study Results of Cronbach Alpha for Reliability of REP Scales

ACHIEVEMENT/STIMULATION		CREATIVITY	
Reinforcing Self-image	0.5817*	Creativity	0.6435*
Social Recognition	0.7192	NOSTALGIA	
Skill Development	0.8789	Nostalgia	0.66*
Competence Testing	0.7581	PHYSICAL FITNESS	
Excitement	0.5474*	Exercise-Physical Fitness	0.8528
AUTONOMY/LEADERSHIP		PHYSICAL REST	
Independence	0.2375*	Physical Rest	0.7153
Autonomy	0.5833*	ESCAPE SOCIAL PRESSURES	
Control-Power	0.8772	Tension Release	0.5903*
RISK TAKING		Slow Down Mentally	0.5255*
Risk Taking	0.7226	Escape Role Overloads	0.6448*
EQUIPMENT		Escape Daily Routine	0.737
Equipment	0.4652*	ESCAPE PHYSICAL PRESSURE	
SIMILAR PEOPLE		Tranquility	0.6873*
Being with Friends	0.7263	Privacy	0.7623
Being with similar people	0.5814*	Escape Crowds	0.7217
NEW PEOPLE		Escape Physical Stressors	0.8647
Meeting New People	0.7766	SOCIAL SECURITY	
Observing Other People	0.5993*	Social Security	0.8021
LEARNING		ESCAPE FAMILY	
General Learning	0.7633	Escaping Family	0.9474
Exploration	0.6077*	TEACHING-LEADING OTHERS	
Geography of Area	0.8247	Teaching-Sharing Skills	0.7411
Learn About Nature	0.7627	Leading Others	0.9138
ENJOY NATURE		RISK REDUCTION	
Scenery	0.8107	Risk Moderation	0.5878*
General Nature Experience	0.7197	Risk Avoidance	0.6117*
INTROSPECTION		TEMPERATURE	
Spiritual	0.8943	Temperature	0.6057*
Introspection	0.6986*		

*Indicates Cronbach Alpha for Reliability lower than 0.7

Descriptive Statistics

Survey responses were initially entered into Microsoft Excel, then transferred to Statistical Package for the Social Sciences 11.5 (SPSS). Once responses were entered electronically, frequency distributions and indicators of central tendency were calculated to reduce the demographic information, then means and standard deviations were calculated for the REP domains across independent variables. This section summarizes the detail of the descriptive findings arranged by (a) age, (b) class standing, (c) ethnicity, (d) trip type, (e) gender, (f) experience, (g) participation level, and (h) credit allocation.

Age

The data indicated an overall mean age of 22.41, years with a major cluster of respondents (70%) falling between the ages of 19 and 22. Males were slightly older than females and the median age for both genders was 21 with a range of 42 (min: 18 max 60). One subject did not indicate an age.

Table 2
Age Means and Standard Deviations

	Mean*	Median	Mode	SD
Male	22.63	21	20	6.21
Female	22.22	21	20	5.69

*one case missing

Class Standing

Within the study sample, 88 subjects were upperclassmen (67.7%), with seniors being the most frequent (42.3%) followed by juniors (25.4%) and sophomores (15.4%). In this sample, graduate students represented the smallest number of respondents (6.9% combined Masters and Ph.D.).

Table 3
Class Standing Frequencies

	f Male	*f* Female	Total *f*	Total %
Freshman	5	6	11	8.5
Sophomore	11	9	20	15.4
Junior	14	19	33	25.4
Senior	24	31	55	42.3
Masters	3	1	4	3.1
Ph.D.	2	3	5	3.8
Other	1	1	2	1.5
Total	60	70	130	100

Ethnicity

Respondents were asked to self-report their ethnic/racial background. Table 3 indicates a majority of respondents were White (84.6%), followed by Asian (6.9%), Hispanic/Latino (3.1%), and Multiracial (2.3%). Additionally there was one Native American respondent (0.8%) and three that listed themselves as "other". These last respondents indicated they were Spanish, Arab/Middle Eastern, and Polish. There were no responses indicated from African Americans.

Table 4
Ethnicity frequencies

	f	%
White	110	84.6
Asian	9	6.9
Hispanic/Latino	4	3.1
Multiracial	3	2.3
Native American	1	0.8
Other	3	2.3
Total	130	100

Trip Type

A number of outdoor adventure pursuits made up the courses/trips in the study sample. They included Rock Climbing, Sea Kayaking, Whitewater Rafting, Backpacking, Map & Compass, Surfing, Canoeing, Whitewater Canoeing, and Mountain Biking. Rock Climbing had the highest percentage of respondents, accounting for 30.8% of the sample. Although rafting had the third highest percentage (13.1%) of participants behind sea kayaking (13.8%), rafting would have had a higher percentage if it were not for removing surveys due to subjects appearing in multiple programs as noted earlier. Mountain Biking had the fewest participants, with only 2 participants or 1.5%.

Table 5
Trip Type Frequencies

	f (participants)	%
Rock Climbing	40	30.8
Sea Kayaking	18	13.8
Rafting	17	13.1
Backpacking	15	11.5
Map & Compass	10	7.7
Surfing	10	7.7
Canoeing	10	7.7
Whitewater Canoeing	8	6.2
Mountain Biking	2	1.5
Total	130	100

Gender

The data indicated the sample contained 70 females, (53.8%) and 60 males (46.2%). Escaping Social Pressures (male mean = 4.73, female mean = 4.64) and Enjoying Nature (male mean = 4.72, female mean = 4.50) were first and second most important motive domains for both genders. Following for males was Physical Fitness (mean = 3.85), and for females, Meeting New People (mean = 4.19).

Table 6
REP Domain Means and Standard Deviation by Gender

Domain	Male Mean	SD	Female Mean	SD
Achievement/Stimulation	3.83	1.03	3.72	0.98
Autonomy/Leadership	2.60	1.30	2.46	1.29
Risk Taking	3.80	1.48	3.27	1.29
Being with Similar People	2.93	1.53	3.20	1.67
Meeting New People	3.83	1.27	4.19	1.35
Learning	3.78	1.22	3.61	1.21
Enjoying Nature	4.72	1.12	4.50	1.21
Introspection	2.98	1.53	3.10	1.56
Physical Fitness	3.85	1.26	3.95	1.29
Physical Rest	3.39	1.38	3.11	1.50
Escape Social Pressures	4.73	1.08	4.64	1.08
Escape Physical Stressors	3.23	1.05	2.88	1.19
Social Security	3.34	1.50	3.60	1.51
Escape Family	2.11	1.31	2.39	1.77
Teach/Lead Others	2.62	1.21	2.06	1.18
For the Credit	1.82	1.05	1.59	1.06

Experience

Level of outdoor experience was self-reported by respondents as either novice/beginner or intermediate/advanced. Since there were no benchmarks in this study to specifically address what constituted an outdoor experience, subjects were allowed to interpret what constituted an outdoor experience. Novice/beginners were classified as inexperienced, and subjects rating themselves intermediate/advanced were classified as experienced. This was adapted from a similar scheme by Ewert (1985) to classify experience levels of mountain climbers.

Experience levels were relatively even, with 48.8% of subjects reporting they were inexperienced and a slightly higher percentage of subjects considered themselves experienced (51.2%). One subject failed to report their experience level. A higher number

of males considered themselves experienced, and a higher number of females considered themselves inexperienced.

Table 7
Experience Frequencies

	Inexperienced		Experienced	
	f	%	*f*	%
Male*	23	36.5	36	54.5
Female	40	63.5	30	45.5
Total	63(48.8%)	100	66 (51.2%)	100

Table 8 indicates important motive domains by subject experience level. Inexperienced subjects responded Escaping Social Pressure (mean = 4.58), Enjoying Nature (mean = 4.29), and Meeting New People (mean = 4.04) were most important. Experienced respondents ranked Enjoying Nature (mean = 4.88), Escaping Social Pressures (mean = 4.77), and Physical Fitness (mean = 4.01) as the important motive domains.

Table 8
REP Domain Means and Standard Deviations by Experience

	Inexperienced		Experienced	
Domain	Mean	SD	Mean	SD
Achievement/Stimulation	3.61	0.97	3.90	1.01
Autonomy/Leadership	2.19	1.10	2.82	1.39
Risk Taking	3.07	1.41	3.92	1.28
Being with Similar People	3.21	1.72	2.92	1.49
Meeting New People	4.04	1.31	3.99	1.33
Learning	3.37	1.13	3.97	1.22
Enjoying Nature	4.29	1.10	4.88	1.16
Introspection	2.86	1.48	3.19	1.58
Physical Fitness	3.80	1.24	4.01	1.31
Physical Rest	3.17	1.34	3.28	1.55
Escape Social Pressures	4.58	1.18	4.77	0.97
Escape Physical Stressors	2.92	0.97	3.14	1.27
Social Security	3.32	1.41	3.60	1.57
Escape Family	2.25	1.54	2.27	1.62
Teach/Lead Others	2.02	1.01	2.57	1.32
For the Credit	1.50	0.84	1.88	1.21

Participation Levels

Participation levels reflected the number of college based outdoor adventure programs in which the respondent has previously taken part in. According to the data in Table 9, 66.2% of the sample had never participated in a college based outdoor program. A number of respondents indicated they had participated in one or more programs, amounting to 33.8% of the sample. One respondent participated in as many as six college based outdoor adventure programs.

Table 9
Overall Participation Frequencies

Number of Programs	*f*	%
0	86	66.2
1	19	14.6
2	12	9.2
3	5	3.8
4	6	4.6
5	1	0.8
6	1	0.8
Total	130	100

Originally, this study proposed using levels of participation by segmenting respondents into three levels: introduction, development, and commitment after Ewert and Hollenhorst (1989). These categories were reflected in the number of college-based programs that respondents had previously participated in, 0, 1-2, and 3 or more, respectively. The findings of this study suggested only two clusters, one composed of subjects with no prior participation in college based outdoor adventure programs, and another composed of subjects that have participated in this type of program. Since there would be few subjects within the commitment level for statistical analysis, they were added to the category of "development" in Table 10.

Table 10
Revised Participation Level Frequencies

	Introduction		Development	
	f	%	*f*	%
Male	35	40.7	25	56.8
Female	51	59.3	19	43.2
Total	86	100	44	100

Participation levels shown in Table 11 were similar for both levels of introduction and development. The important motive domains for subjects within the introduction level of participation were Escaping Social Pressures (mean = 4.72), Enjoying Nature (mean = 4.53), and Meeting New People (mean = 4.07). Subjects that had previously participated in a college based outdoor adventure program found the same domains important but in different order: Enjoying Nature (mean = 4.73), Escaping Social Pressures (mean = 4.61), and Meeting New People (mean = 3.93).

Table 11
REP Domain Means and Standard Deviations by Participation Level

	Introduction		Development	
Domain	Mean	SD	Mean	SD
Achievement/Stimulation	3.71	1.00	3.89	0.99
Autonomy/Leadership	2.48	1.26	2.60	1.35
Risk Taking	3.43	1.38	3.68	1.45
Being with Similar People	3.24	1.63	2.76	1.53
Meeting New People	4.07	1.33	3.93	1.31
Learning	3.60	1.14	3.86	1.33
Enjoying Nature	4.53	1.15	4.73	1.20
Introspection	2.97	1.58	3.20	1.49
Physical Fitness	3.95	1.22	3.81	1.37
Physical Rest	3.33	1.39	3.06	1.56
Escape Social Pressures	4.72	1.02	4.61	1.19
Escape Physical Stressors	3.09	0.98	2.94	1.39
Social Security	3.41	1.39	3.63	1.71
Escape Family	2.39	1.63	2.01	1.44
Teach/Lead Others	2.15	1.05	2.65	1.47
For the Credit	1.65	1.02	1.80	1.13

Credit Allocation

This study collected data on programs that were offered for credit and others that were noncredit. Programs for credit were arranged through a partnership with the Health, Physical Education, and Recreation Department at Indiana University. When credit was offered for participation, it was for one Physical Education credit hour. Table 12 displays

the frequencies for the 130 subjects in this sample; 62.3% were enrolled in credited courses and only 37.7% were in noncredit programs.

Table 12
Credit Allocation Frequencies

	f	%
Credit	81	62.3
Non Credit	49	37.7
Total	130	100

Table 13 summarizes important motive domains for subjects across credit. Both groups indicated that the same domains were important. They were Escaping Social Pressure (no credit mean = 4.72, received credit mean = 4.65), Enjoying Nature (no credit mean = 4.58, received credit mean = 4.61), and Meeting New People (no credit mean = 4.15, received credit mean = 3.95). Subjects receiving credit for participation indicated For the Credit (mean = 1.70) was the least important motive domain.

Table 13
REP Domain Means and Standard Deviations by Credit Allocation

	Noncredit		Received Credit	
Domain	Mean	SD	Mean	SD
Achievement/Stimulation	3.56	0.94	3.90	1.02
Autonomy/Leadership	2.10	1.15	2.78	1.31
Risk Taking	3.56	1.53	3.49	1.33
Being with Similar People	3.28	1.60	2.96	1.61
Meeting New People	4.15	1.41	3.95	1.27
Learning	3.48	1.18	3.81	1.22
Enjoying Nature	4.58	1.20	4.61	1.15
Introspection	3.11	1.64	3.01	1.49
Physical Fitness	3.88	1.27	3.92	1.28
Physical Rest	3.40	1.52	3.14	1.40
Escape Social Pressures	4.72	1.10	4.65	1.07
Escape Physical Stressors	2.99	1.12	3.07	1.15
Social Security	3.82	1.44	3.28	1.51
Escape Family	2.27	1.71	2.26	1.50
Teach/Lead Others	2.15	1.18	2.42	1.24
For the Credit	1.69	1.09	1.70	1.04

Table 14 indicates the overall most important motive domains. The most important domains were (based on a six-point scale): Escaping Social Pressures (mean = 4.68), Enjoying Nature (mean = 4.60), and Meeting New People (mean = 4.03). The least important motive domains were For the Credit (mean =1.70), Escaping Family (mean =2.26), and Teaching/ Leading Others (mean = 2.32).

Table 14
Overall Means and Standard Deviations

Domain	Mean	SD
Escape Social Pressures	4.68	1.07
Enjoying Nature	4.60	1.17
Meeting New People	4.03	1.32
Physical Fitness	3.90	1.27
Achievement/Stimulation	3.77	1.00
Learning	3.69	1.21
Risk Taking	3.52	1.40
Social Security	3.48	1.50
Physical Rest	3.24	1.45
Being with Similar People	3.08	1.61
Introspection	3.05	1.54
Escape Physical Stressors	3.04	1.14
Autonomy/Leadership	2.52	1.29
Teach/Lead Others	2.32	1.22
Escape Family	2.26	1.57
For the Credit	1.70	1.06

Results of the MANOVA

MANOVA was used to identify any significant differences since there were multiple independent and dependent variables in this study. Two significant interactions were identified by the tests of between-subjects effects at the .05 level (Table 15). The first was experience and participation level on Risk Taking ($p = .010$), and Escaping Social Pressures ($p = .044$). Specifically, Risk Taking and Escaping Social Pressures were more important to respondents that were experienced and had previously participated in a college based outdoor adventure program. Experience level and credit allocation was the second interaction, with inexperienced respondents in noncredit courses/trips indicating that social security ($p = .032$) was most important to them. Inexperienced subjects that received credit for participation indicated Teaching/Leading Others ($p = .033$) was the least important motive to their participation.

Table 15
Tests of Between Subject Effects

Effect	Dependent Variable	df	F	Sig.*	Partial Eta Squared	Observed Power
(Experience) x (Participation Level)	Risk Taking	1	6.884	0.01	0.058	0.739
	Escaping Social Pressures	1	4.166	0.04	0.036	0.525
(Experience) x (Credit Allocation)	Social Security	1	4.717	0.03	0.04	0.571
	Teaching/Leading Others	1	4.651	0.04	0.04	0.571

*Significant at p= .05

By testing the dependent variables as one unit in multivariate testing (Table 16), it was revealed that experience, participation level, and credit allocation were significant ($p = .05$). At the multivariate level, Partial Eta Squared was much larger for main effects than it was for the interactions. This indicated that a greater amount of the variance within the dependent variables could be explained for by the effects of the independent variables separately rather than as interactions.

Table 16
Results of the Multivariate Tests

Effect	df	F	Sig*	Partial Eta Squared	Observed Power
Gender	1	1.148	0.324	1.590	0.704
Experience	1	2.175	**0.011**	0.264	0.965
Participation	1	1.933	**0.026**	0.242	0.938
Credits	1	2.010	**0.020**	0.249	0.948
Gender * Experience	1	0.454	0.962	0.070	0.277
Gender * Participation	1	1.083	0.381	0.152	0.672
Experience * Participation	1	1.083	0.382	0.152	0.671
Gender * Experience * Participation	1	0.539	0.920	0.082	0.332
Gender * Credits	1	1.015	0.448	0.143	0.635
Experience * Credits	1	0.808	0.674	0.118	0.510
Gender * Experience * Credits	1	0.642	0.842	0.096	0.401
Participation * Credits	1	0.964	0.501	0.137	0.606
Gender * Participation * Credits	1	0.796	0.687	0.116	0.502
Experience * Participation * Credits	1	0.491	0.946	0.075	0.301
Gender * Experience * Participation * Credits	1	0.957	0.509	0.136	0.602

*Significant at p=.05 indicated by bold print

Univariate testing of the significant main effects indicated relationships with a number of dependent variables as shown in Table 18. Due to the presence of interactions mentioned previously, further interpretation of these relationships would not be meaningful since the effect of these factors depends on their combination with other factors (Aiken & West, 1991; Pedhazur, 1982).

Table 17
Univariate Analysis of Significant Main Effects

Effect	Dependent Variable	df	F	Sig.*	Partial Eta Squared	Observed Power
Experience	Autonomy/Leadership	1	5.961	0.016	0.051	0.677
	Learning	1	5.351	0.023	0.046	0.631
	Enjoying Nature	1	8.8	0.004	0.073	0.837
Programs	Physical Rest	1	3.986	0.048	0.034	0.508
	Escaping Physical Stressors	1	4.111	0.045	0.035	0.52
Credit Allocation	Autonomy/Leadership	1	4.519	0.036	0.039	0.559
	Social Security	1	6.649	0.011	0.056	0.725

Summary

The findings of this study indicated statistically significant differences in participant motivation for college based outdoor adventure programs. In particular, there were significant interactions between experience and participation level as well as experience and credit allocation. Additionally, multivariate tests indicated these variables were significant factors aside from the interactions.

Motives important for participation in college based outdoor adventure programs were identified by this study. Overall, the most important motives were Escaping Social Pressures, Enjoying Nature, and Meeting New People. Least important were For the Credit, Escaping Family, and Teaching/Leading Others.

A wide range of course/trip types was reported. Rock Climbing, Sea Kayaking, Rafting Backpacking, Map & Compass, Surfing, Canoeing, Whitewater Canoeing, and Mountain Biking were among courses/trip types offered by IUOA during September and

October of 2003. Within these offerings, 62.3% of students were enrolled in programs for credit.

The majority of the participants in this study were between the ages of 19 and 22 (70%), slightly more than half were female (53.8%) and the overwhelming majority reported their ethnicity/race as white (84.6%). Upperclassmen accounted for the majority of participants in this study (67.7%), and graduate students represented the smallest group by class standing (6.9%). Many participants in the study sample (66.2%) indicated they had not previously participated in any college based outdoor adventure program, yet only 48.5% of participants indicated themselves as inexperienced in the outdoors.

Chapter 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, IMPLEMENTATIONS, & RECOMMENDATIONS FOR FURTHER STUDY

Summary

This study investigated motives for participation in college based outdoor adventure programs. Previous to this work there has been little research in the area of participant motivation for college based outdoor adventure programs. This information is useful to program planners to make decisions about their programs. Specifically, this study identified important motives and investigated differences across four independent variables. The variables were gender, experience, participation level, and credit allocation. These variables were tested at the .05 level.

Motives were measured by a survey containing the Recreation Experience Preference (REP) scales developed by Driver (1983). A pilot study was administered to coordinators (n = 36) at Indiana University Outdoor Adventures (IUOA) to ascertain Cronbach's Alpha for reliability of REP scales specific to this population. The researcher then administered a revised survey to IUOA participants (n = 130) during September and October of 2003. Surveys were distributed to courses/trips that included, Rock Climbing, Sea Kayaking, Rafting, Backpacking, Map & Compass, Surfing, Canoeing, Whitewater Canoeing, and Mountain Biking.

Findings

Data were entered into SPSS 11.5 where descriptive statistics and MANOVA were used to analyze the data and determine any significant differences in participant motives. The important motives for participation in college based outdoor adventure

programs were (based on a six-point Likert-type scale): Escaping Social Pressures (mean = 4.68), Enjoying Nature (mean = 4.60), and Meeting New People (mean = 4.03). Least important were For the Credit (mean =1.70), Escaping Family (mean =2.26), and Teaching/Leading Others (mean = 2.32).

The MANOVA suggested significant differences at the multivariate level for experience ($p = .011$), participation level ($p = .026$), and credit allocation ($p = .02$). Further testing also indicated an interaction between experience and participation level. The data indicated experienced respondents who previously participated in college based outdoor adventure programs were motivated by Risk Taking ($p = .010$) and Escaping Social Pressures ($p = .044$). Another significant interaction occurred between experience and credit allocation with inexperienced subjects participating for credit indicating that Teaching/Leading ($p = .033$) was not an important motive. Additionally, it appeared Social Security ($p = .032$) an important motive for inexperienced respondents participating in noncredit outdoor adventure trips.

The results of the MANOVA indicated significant differences for participant motivation in college based outdoor programs. The null hypotheses were tested at the .05 level revealing the following:

1. The null hypothesis that there are no significant differences in participant motives between males and females was accepted.

2. The null hypothesis that there are no significant differences in participant motives across experience was rejected.

3. The null hypothesis that there are no significant differences in participant motives across participation levels was rejected.

4. The null hypothesis that there are no significant differences in participant motives when receiving credit for participation compared to not receiving credit was rejected.

Discussion

The findings of this study are consistent with themes found in the related literature on outdoor recreation. The top three important motives for participation suggested by the present study were also suggested by Festeu (2002). Specifically, Festeu suggested meeting new people, enjoying nature, and escaping daily routine among the top five motivating factors for Romanian students in a college based outdoor adventure program. His work suggested the outdoor environment is a socially acceptable place to freely engage and interact with others. Also, connecting with nature was one way to escape the rigors of social and family expectations. When the student returns to their everyday lifestyle they would have pleasant memories and photographs of their encounter with the natural world to relive at a later time.

There is some evidence that motives identified by this study are similar to those for college wilderness orientation programs. The idea of freely interacting with others is mentioned by Berman & Davis-Berman (2000) as an intentional goal of college wilderness orientation trips. Making new friends and meeting new people were important in a longitudinal study on the effects of a wilderness orientation program by Devlin (1996). Not only were making new friends and meeting new people important to subjects a year after participation, it was also important when they were seniors.

Ewert (1989) contends that traditionally, outdoor adventure participants have been largely from the White middle to upper socio-economic class. Internal participant surveys

gathered from 1995 to 2001 at Indiana University Outdoor Adventures confirms this. Of 1,069 participants responding to questions regarding ethnic origin, 950 (89%) were White, 70 students were Asian (7%), 25 were Black (2%), and 20 were Hispanic (2%). The results of the present study indicate similar ethnic/racial diversity levels with White participants representing 84.6% of the study sample. Upon further investigation, these statistics are somewhat similar to those provided by the Indiana University Office of Admissions on enrollment by ethnic groups and also the US Census Bureau, Profile of General Demographic Characteristics for Indiana. The notable exception to this was the absence of African-American participants in this study.

One reason may be that cultural sensitivity is lacking in outdoor adventure programs. Warren (1998) calls for experiential educators to be sensitive to program participant's race, gender and social class. Additionally, common experiential practices should be reexamined for cultural appropriateness such as distinctly Hahnian concepts of service and self-reliance found in many programs today. With slave history still pervading the identity of some communities, sensitivity to impacts of service learning may be needed. "For racial minorities…servitude has a profoundly troublesome history associated with slavery" (Warren, p. 24). The concept of self-reliance is another area of concern. Sense of community is especially important to Latinos where the community provides emotional and economic security. Rather than focusing on self-reliance, perhaps activities for these groups should focus on teamwork, group identity, and cohesiveness.

Differences in setting preferences may have some affect on participation rates. Virden and Walker (1999) surveyed undergraduate college student's (n = 525) preferences for natural settings across gender and ethnicity. The findings suggested

Whites felt safer in a forest type setting than Black or Hispanics. Additionally, Hispanics and Whites preferred less presence by recreation managers and law enforcement in outdoor recreation settings than black respondents. Findings from visual preference studies by Anderson (1978), and Kaplan and Talbot (1988) found similar results. Whites preferred forest and dense vegetation scenes, whereas Blacks preferred more developed scenes containing roads, picnic tables, and paved walks.

Outdoor adventure courses for credit were very popular, representing 62.3% of IUOA's offerings. These courses are in cooperation with the IU School of Health, Physical Education, and Recreation, a relationship worth maintaining considering the number of participants IUOA receives through this arrangement. Even though the goals of credited course verses noncredit trips are implicitly different, it is interesting to note that students of both courses/trips indicated the same important motives: Escaping Social Pressures, Enjoying Nature, and Meeting New People. Higher participation rates in credited courses may be due to several factors. The credited courses are listed in the Indiana University Schedule of Classes Bulletin, which are distributed to every enrolled student. It would be hard to find another type of publication that finds its way into the hands of every student on any campus. This campus wide exposure to courses may contribute to differences in participation rates. Also, according to J. Luce, a past IUOA Desk Manager responsible for reservations for noncredit trips (personal communication, November 9, 2003), students may not be aware that noncredit trips can be billed to their bursar account in the same manner as credited courses, thereby affecting an individuals preference for participating in a non-credit trip.

Upperclassmen accounted for over half the respondents (67.7%) in the sample. Several factors may be responsible for this. With the large amount of credit courses offered by IUOA, upperclassmen often have scheduling priority for course registration. While leading IUOA courses/trips, the researcher often recalled course/trip participants commenting their underclassmen friends weren't able to register for a course as it was closed by the time they received their registration appointment. Additionally, underclassmen may not be aware of the extensive opportunities that exist on campus as 38% of respondents heard about IUOA through word of mouth (Internal surveys gathered from 1995 to 2001 at Indiana University Outdoor Adventures).

Experience also appeared to play a significant role in this study. For experienced subjects that had also previously participated in a college based outdoor adventure course/trip, Risk Taking was a significantly important motive ($p = .01$). Several studies have indicated that risk is a multidimensional item that varies with experience and engagement level (Ewert, 1994; Ewert & Hollenhorst, 1994). Ewert and Hollenhorst's (1989) work with climbers concurs that preferred risk level increased with experience level. Just as beginning backpackers may choose short, well marked trails, an expert backpackers may choose to bushwhack long and arduous routes because they have developed the necessary skills to safely take their backpacking experience to levels not previously attainable at the beginning levels.

Conclusions

Within the limitations of this study as defined in chapter one, the following conclusions are drawn:

1. Experience and participation level were significantly associated with motives

for Risk Taking and Escaping Social Pressures.

2. Experience and credit allocation were significantly associated with motives for Social Security and Teaching/Leading Others.

3. Motive importance varied significantly between inexperienced and experienced subjects.

4. Motive importance varied significantly between subjects that had previously participated in a college based outdoor adventure program and those that had not.

5. Motive importance varied significantly between subjects that received no credit for participation and those that did.

6. The most important motives for participation in IUOA courses/trips were Escaping Social Pressures, Enjoying Nature, and Meeting New People.

7. The least important motives for participation were For the Credit, Escaping Family, and Teaching/Leading Others.

Implementations

Within the limits of generalizability in this study, the findings may be implemented in several ways. An individual is more likely to choose a behavior, in this case a recreation behavior, if they believe the behavior will meet individual goals and preferences (Lawler, 1973). Program managers should use these motives in their promotional materials to attract additional participants on the basis that they will be attracted by courses that appear to fulfill their individual goals and preferences. This study determined Physical Fitness as a motive was more important to males than females, and that Meeting New People was more important to females than males. In this light, motives should be used in the selection of target markets within the college student

population. Selecting target markets helps avoid a one-size-fits-all approach and may help increase program participation rates. Suggestions include segmenting underrepresented area in the categories of class standing, ethnicity, experience, participation level, and/or credit allocation.

Program managers should take participant experience level into consideration. Promotional material from IUOA does not indicate any courses segmented by experience; however courses/trips segmented by skill level are not uncommon at other institutions such as Eastern Washington University, and the University of Utah Natural Resources Learning Program. With a number of participants indicating they were experienced in the outdoors (51.2%), a program may benefit by developing such courses/trips, as this may be an untapped market.

Recommendations for Future Research

The following recommendations are made as a result of this study:

1. Further study should be more specific about quantifying the level of outdoor experience. Specifically, further research should consider creating a benchmark for defining what composes a subject level of outdoor experience.

2. More testing should be done at other college based outdoor adventure programs across the country to validate the findings of this study.

3. Further study should investigate college based outdoor adventure program managers perceptions' of participant motivation.

4. Further research should investigate the variance not explained by the variables in this study.

5. Future study should investigate motivation differences across trip type and

duration.

6. Additional study should identify importance associated with distance/travel time the course/trip occurs from the university/college campus.

7. Additional motivational measurement scales should be considered in future study.

8. If the REP is used in future study, the scale items should be reviewed by an expert panel for clarity and appropriateness to college populations.

9. Further testing should identify motives across segments of the college student population in order to better serve this population.

10. Additional research should further investigate the relationship between experience and participation level.

11. Additional research should investigate motivational constraints and preferences for outdoor adventure programs by participant ethnic/racial background.

12. Gender should continue to be a variable considered in future study.

13. Further research should investigate more deeply the reasons why students participated in more credited courses than non-credit trips.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Thousand Oaks, CA: SAGE Publications.

Ajzen, I. (1985). From intentions to action: A theory of planned behavior. In Kuhl, J., (Eds.), *Action-control: From cognition to behavior* (pp.11-39). Heildelberg: Springer.

Ajzen, I., & Driver, B. L. (1991). Prediction of leisure participation from behavioral, normative, and control beliefs: An application of the theory of planned behavior. *Leisure Sciences 13*, 185-204.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* New York: Prentice Hall, Inc.

Anderson, E. (1978). Visual resource assessment: Local perceptions of familiar natural environments. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.

Anderson, L., Anderson, D., & Young, A. (2000). Testing the Adventure Recreation Model: A replication with subjects involved in a required outdoor experience. *Proceedings of the Coalition for Education in the Outdoors,* 24-30.

Attarian, A. (2001). Trends in outdoor adventure education. *Journal of Experiential Education, 24*(3), 141-149.

Berman, D., & Davis-Berman, J. L. (2000). Therapeutic uses of outdoor education. *ERIC Digest* (ED448011).

Bryan, H. (1979). *Conflict in the great outdoors.* Bureau of Public Administration of the University of Alabama, Birmingham, AL: The Birmingham Publishing Company.

Crandall, R. (1980). Motivations for leisure. *Journal of Leisure Research, 12*(1), 45-53.

Davis-Berman, J. L., & Berman, D. (1996). Using the wilderness to facilitate adjustment to college: An updated description of wilderness orientation programs. *Journal of Experiential Education, 19*(1), 22-28.

Devlin, A. S. (1996). Survival skills training during freshman orientation: its role in college adjustment. *Journal of College Student Development, 37*(3), 324-334.

Driver, B. L. (1977). Itera pool for scales designed to quantify the psychological outcomes desired and expected from recreation participation. Unpublished. USDA Forest Service, Fort Collins, CO: Rocky Mountain Forest and Range Experiment Station.

Driver, B. L. (1983). Master list of items for Recreation Experience Preference scales and domains. Unpublished document. USDA Forest Service, Fort Collins, CO: Rocky Mountain Forest and Range Experiment Station.

Driver, B. L., Tinsley, H. E. A., & Manfredo, M. J. (1991). The paragraphs about leisure and recreation experience preference scales: Results from two inventories designed to access the breadth of the perceived psychological benefits of leisure. In B. L. Driver, G. L. Peterson, & P. J. Brown (Eds.), *Benefits of Leisure* (pp. 263-286). State College, PA: Venture Press.

Dubin, J. (2002). Mountain madness. *Outside, August,* 16-18.

Dunn-Ross, E. L., & Iso-Ahola, S. E. (1991). Sightseeing tourists' motivation and satisfaction. *Annals of Tourism Research, 18* 226-237.

Edginton, C. R., Hudson, S. D., & Lankford, S. V. (2001). *Managing recreation, parks, and leisure services: An introduction.* Champaign, IL: Sagamore Publishing.

Estes, C., & Ewert, A. (1988). Enhancing mixed gender programming: Considerations for experiential educators. *The Bradford Papers Annual, 3,* 10-19.

Ewert, A. (1985). Why people climb: The relationship of participant motives and experience level to mountaineering. *Journal of Leisure Research, 17*(3), 241-250.

Ewert, A. (1987). Outdoor adventure recreation: A trend analysis. *Journal of Park and Recreation Administration, 5*(2), 57-67.

Ewert, A. (1993). Differences in the level of motive importance based on trip outcome, experience level and group type. *Journal of Leisure Research, 25*(4), 335-349.

Ewert, A. (1994). Playing the edge: Motivation and risk taking in a high altitude wilderness like environment. *Environment & Behavior 26*(1), 3-22.

Ewert, A. (2001). Trends in adventure recreation: Programs, experiences, and issues. In K. Luft & S. MacDonald (Eds.), *5th 0utdoor Recreation & Tourism Trends Symposium* (pp.327-335). Lansing: Michigan State University.

Ewert, A., & Hollenhorst, S. (1989). Testing the adventure model: Empirical support for a model of risk recreation. *Journal of Leisure Research, 21*(2), 124-139.

Ewert, A., & Hollenhorst, S (1994). Individual and setting attributes of the adventure recreation experience. *Leisure Sciences, 16*(3), 177-191.

Festeu, D. (2002). Motivational factors that influences students' participation in outdoor activities. *Journal of Adventure Education and Outdoor Learning, 2*(1), 43-54.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior. Reading, MA: Addison-Wesley Publishing.

Fluker, M. R., & Turner, L. W. (2000). Needs, motivations, and expectations of a commercial whitewater rafting experience. *Journal of Travel Research, 38*(4), 380-390.

Galloway, S. P. (2000). Assessment in wilderness orientation programs: Efforts to improve college student retention. *Journal of Experiential Education, 23*(2), 75-84.

Gass, M. A. (1999). Adventure programs in higher education. In J.C. Miles & S. Priest (Eds.), *Adventure Programming* (pp. 373-383). State College, PA: Venture Publishing.

Greenfield, K. T. (1999). Life on the edge. *Time, September 6,* 29-36.

Hornibrook, T., Brinkert, E., Parry, D., Seimens, R., Mitten, D., & Priest, S. (1997). The benefits and motivations of all women outdoor programs. *Journal of Experiential Education 20*(3), 152-158.

Indiana University Outdoor Adventure (2001). *Participant survey, 1995-2001.* Unpublished document.

Kaplan, R., & Talbot, J. F. (1988). Ethnicity and preference for natural settings: A review and recent findings. *Landscape and Urban Planning, 15,* 107-117.

Lawler, E. E. (1973). *Motivation in work organizations*. Belmont, CA: Wadsworth Publishing Company.

Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw Hill.

Manfredo, M. J., Driver, B. L., & Tarrant, M. A. (1996). Measuring leisure motivation: A meta-analysis of the recreation experience preference scales. *Journal of Leisure Research, 28*(3), 188-213.

Manning, R. E. (1986). *Studies in outdoor recreation.* Corvallis, Oregon: Oregon State University Press.

Martin, J. (2003). Reports Indicate Outdoor Activities Raising. *The Outdoor Network.* Retrieved November 14, 2003 from http://www.outdoornetwork.com.

McMillian, J. H., & Schumacher, S. (2001). *Research in education: A conceptual introduction:* New York, NY: Addison Wesley Longman, Inc.

Mills, A. S. (1985). Participation motivations for outdoor recreation: A test of Maslow's theory. *Journal of Leisure Research, 17*(3), 184-199.

Mosser, T. (2002). Getting freshmen oriented to succeed. *Careers & Colleges, 22*(4).

Pedhazur, E. J. (1982). *Multiple regression in behavioral research.* New York, NY: CBS College Publishing.

Pandolfi, F. (1999). Perpetual motion, unicorns, and marketing in outdoor recreation. In S. M. McKinney (Ed.), *Outdoor recreation in American life: A national assessment of demand and supply trends* (pp. IX-XII). Champaign, IL: Sagamore Publishing.

Petrick, J. F., Backman, S. J., Bixler, R. N., & William, C. (2001). Analysis of golfer motivations and constraints by experience use history. *Journal of Leisure Research 33*(1), 56-70.

Poff, R. A. (2001) Expansion, development, growth, and diversification: The current status of college and university outdoor programs. In K. Luft & S. MacDonald (Eds.), *5th 0utdoor Recreation & Tourism Trends Symposium* (pp.336-347). Lansing: Michigan State University.

Prentice, L. (1993). Motivations of the heritage consumer in the leisure market: An application of the Manning-Haas demand hierarchy. *Leisure Sciences 15*(4), 273-290.

Priest, S., & Gass, M.A. (1997). *Effective leadership in adventure programming.* Champaign, IL: Human Kinetics.

Rosenthal, D. H., Waldman, D. A., & Driver, B. L. (1982). Construct validity of instruments measuring recreationists' preferences. *Leisure Sciences 5*(2), 89-108.

Shoham, A., Rose, G. M., & Kahle L. R. (1998). Marketing of risky sports: From intention to action. *Journal of the Academy of Marketing Science 26*(4), 307-321.

Sugerman, D. (2001). Motivations of older adults to participate in outdoor adventure experiences. *Journal of Adventure Education and Outdoor Learning 1*(2), 21-34.

Tarrant, M. A., Bright, A. D., Smith, E. D., & Cordell, H. K. (1999). Motivations, attitudes, preferences, and satisfactions among outdoor recreationists. In S. M. McKinney (Ed.), *Outdoor recreation in American life: A national assessment of demand and supply trends* (pp. 403-431). Champaign, IL: Sagamore Publishing.

Tinsley, H. E. A., Driver, B. L., & Kass, R. A. (1981). Reliability and concurrent validity of the recreation experience preference scales. *Journal of Education and Psychological Measurement 41*(3), 897-907.

Tinsley, H. E. A., Driver, B. L., Ray, S. B., & Manfredo, M. J. (1986). Stability of recreation experience preference (REP) ratings for samples and individuals across three measurement periods. *Journal of Education and Psychological Measurement 46*(4), 1105-1111.

Tolman, E. C. (1932). *Purposive behavior in animals and men.* New York: Century Company.

Virden, R. J. (1992). Integrating past experience into leisure marketing strategies. *Leisure Information Quarterly, 18,* 6-8.

Virden, R. J., & Walker, G. J. (1999). Ethnic/racial and gender variations among meanings given to, and preferences for the natural environment. *Leisure Sciences, 21,* 219-239.

Vogt, W. P. (1999). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences.* Thousand Oaks, CA: SAGE Publications.

Warren, K. (1998). A call for race gender and class sensitive facilitation in outdoor experiential education. *Journal of Experiential Education 21*(1), 21-25.

Webb, D. J. (1999). Recreational outdoor adventure programs. In J.C. Miles & S. Priest (Eds.), *Adventure Programming* (pp. 3-8). State College, PA: Venture Publishing.

Webb, D. J. (2000). *Outdoor recreation program directory & data/resource guide* (3rd ed.). Boulder, CO: The Outdoor Network.

Williams, D. R., Schreyer, R., & Knopf, R. C. (1990). The effect of the experience use history on the multidimensional structure of motivations to participate in leisure activities. *Journal of Leisure Research 22*(1), 36-54.

APPENDIXES

APPENDIX A

Study Information Sheet

INDIANA UNIVERSITY, BLOOMINGTON
STUDY INFORMATION SHEET
MOTIVES FOR PARTICIPATION IN COLLEGE BASED OUTDOOR ADVENTURE PROGRAMS

You are invited to participate in a research study. The purpose of this study is to examine reasons why college students participate in college based outdoor adventure programs.

INFORMATION

You and all of the participants have been selected because of your participation in a college based outdoor adventure program. The problem under investigation is important to both of us. It is on the basis of a common goal about increased knowledge of outdoor adventure that I am requesting your cooperation in filling out the attached questionnaire. The questionnaire has two parts. The first part is on personal information about you. The second part is concerned with the reasons you choose to participate in outdoor adventure programs.

Completing the survey should take no more than 15 minutes. The study is taking place during the months of September and October 2003.

BENEFITS

Your position in outdoor adventure is an important one. It is because of students like you that outdoor adventure programs are successful on college campuses. Without you, these programs would not exist. Therefore, the reasons why you participate in this program is important. The outdoor adventure program director job is important also. Understanding the reasons why you participate in these programs will add to the limited body of knowledge on this subject. Also, it may help program directors decide which outdoor adventure courses to offer in the future.

CONFIDENTIALITY

You need not sign the questionnaire and you are assured your responses are and will remain anonymous.

CONTACT

If you have questions at any time about the study or the procedures, you may contact the researcher, Andrew Bentley, at 3573 Serendipity Dr., Bloomington, IN 47408, 812-323-2880, and andbentl@indiana.edu.

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have not been honored during the course of this project, you may contact the office for the Human Subjects Committee, Bryan Hall 110, Indiana University, Bloomington, IN 47405, 812/855-3067, or by e-mail at iub_hsc@indiana.edu.

PARTICIPATION

Your participation in this study is voluntary; you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled.

Information Sheet date (3/30/03)

IRB Approved
Approval Date: March 31, 2003
Expires: December 31, 2003

APPENDIX B

Research Instrument

INDIANA UNIVERSITY RESEARCH STUDY
MOTIVES FOR PARTICIPATION IN COLLEGE BASED OUTDOOR ADVENTURE PROGRAMS

There are many reasons why individuals participate in outdoor adventure programs. The purpose of this research study is to determine why college students participate in outdoor adventure programs. Please read and carefully follow the instructions below.

PART I INSTRUCTIONS:
In the space provided, please answer the following questions regarding personal information about you.

1. What is your gender? _____Male_____Female

2. How would you describe your personal level of outdoor experience(circle one)?
   novice/beginning intermediate/advanced

3. How many **college based** outdoor adventure programs/courses/trips etc., have you participated in the past?

   _____

4. How many college credits will you receive for participation in this outdoor adventure program?

   _____

5. What is your age?

   _____

6. What is your class standing?
   _____Freshmen
   _____Sophomore
   _____Junior
   _____Senior
   _____Graduate-Masters
   _____Graduate-Ph.D.
   _____Other, please describe_____

7. What is your race or ethnic background?
   _____Asian or Pacific Islander _____African American _____ Native American _____ Hispanic/Latino _____ White/Caucasian _____Multiracial
   _____ Other, please indicate_____

PART II INSTRUCTIONS:
The next section contains statements with reasons for participating in college based outdoor adventure programs. For each statement, please circle the number corresponding with how important each statement is in your reasons for participating in the upcoming outdoor adventure program.

(1) Not Important
(2) Of Little Importance
(3) Mildly Important
(4) Moderately Important
(5) Very Important
(6) Extremely Important

Reasons for Participating in Outdoor Adventure Programs	"1"= Not important, "6"= Most Important
To gain a sense of self confidence	1.....2.....3.....4..... 5..... 6
To become better at the skills involved	1.....2.....3.....4..... 5..... 6
To have a thrilling experience	1.....2.....3.....4..... 5..... 6
To develop personal spiritual values	1.....2.....3.....4..... 5..... 6
To observe other people in the program	1.....2.....3.....4..... 5..... 6
To help release or reduce some built up tensions	1.....2.....3.....4..... 5..... 6
To be alone	1.....2.....3.....4..... 5..... 6
To chance dangerous situations	1.....2.....3.....4..... 5..... 6
To have a change from my daily routine	1.....2.....3.....4..... 5..... 6
To be with friends	1.....2.....3.....4..... 5..... 6
To feel independent	1.....2.....3.....4..... 5..... 6
To get college credit	1.....2.....3.....4..... 5..... 6
To avoid the unexpected	1.....2.....3.....4..... 5..... 6
To be free to make my own choices	1.....2.....3.....4..... 5..... 6
To learn what I am capable of doing	1.....2.....3.....4..... 5..... 6
To do something creative such sketch or paint	1.....2.....3.....4..... 5..... 6
To avoid everyday responsibilities for awhile	1.....2.....3.....4..... 5..... 6
To develop a sense of self pride	1.....2.....3.....4..... 5..... 6
To be in control of things that happen	1.....2.....3.....4..... 5..... 6
To take risks	1.....2.....3.....4..... 5..... 6
To use my equipment	1.....2.....3.....4..... 5..... 6
To learn more about things here	1.....2.....3.....4..... 5..... 6
To give my mind a rest	1.....2.....3.....4..... 5..... 6
To get away from the clatter and racket at home	1.....2.....3.....4..... 5..... 6

Reasons for Participating in Outdoor Adventure Programs	"1"= Not important, "6"= Extremely Important
To talk to others about my equipment	1.....2.....3.....4..... 5..... 6
To show others that I can do it	1.....2.....3.....4..... 5..... 6
To be with people who enjoy the same things I do	1.....2.....3.....4..... 5..... 6
To grow and develop spiritually	1.....2.....3.....4..... 5..... 6
To experience new and different things	1.....2.....3.....4..... 5..... 6
To get to know the lay of the land	1.....2.....3.....4..... 5..... 6
To be with respectful people	1.....2.....3.....4..... 5..... 6
To get away from the noise back home	1.....2.....3.....4..... 5..... 6
To be able to control things	1.....2.....3.....4..... 5..... 6
To study nature	1.....2.....3.....4..... 5..... 6
To be my own boss	1.....2.....3.....4..... 5..... 6
To experience a nicer temperature	1.....2.....3.....4..... 5..... 6
To be sure of what will happen to me	1.....2.....3.....4..... 5..... 6
To think about who I am	1.....2.....3.....4..... 5..... 6
To test my abilities	1.....2.....3.....4..... 5..... 6
To know that others are nearby	1.....2.....3.....4..... 5..... 6
To view the scenery	1.....2.....3.....4..... 5..... 6
To talk to new and varied people	1.....2.....3.....4..... 5..... 6
To get away from the heat	1.....2.....3.....4..... 5..... 6
To experience more elbow room	1.....2.....3.....4..... 5..... 6
To lead other people in the program	1.....2.....3.....4..... 5..... 6
To have others think highly of what I am doing	1.....2.....3.....4..... 5..... 6
To think about my personal values	1.....2.....3.....4..... 5..... 6
To be on my own	1.....2.....3.....4..... 5..... 6
To develop my skills and abilities	1.....2.....3.....4..... 5..... 6
To be creative	1.....2.....3.....4..... 5..... 6
To experience solitude	1.....2.....3.....4..... 5..... 6
To think about the good times I've had in the past	1.....2.....3.....4..... 5..... 6
To be with people who have similar values	1.....2.....3.....4..... 5..... 6
To get exercise	1.....2.....3.....4..... 5..... 6
To be close to nature	1.....2.....3.....4..... 5..... 6
To relax physically	1.....2.....3.....4..... 5..... 6
To get away from the usual demands of life	1.....2.....3.....4..... 5..... 6
To help direct the activities of others in the program	1.....2.....3.....4..... 5..... 6
To be with members of my group of friends	1.....2.....3.....4..... 5..... 6
To have my mind move at a slower pace	1.....2.....3.....4..... 5..... 6

Reasons for Participating in Outdoor Adventure Programs	"1"= Not important, "6"= Extremely Important
To enjoy the smells and sounds of nature	1.....2.....3.....4..... 5..... 6
To learn about the topography of the land	1.....2.....3.....4..... 5..... 6
To rest physically	1.....2.....3.....4..... 5..... 6
To be with and observe other people in the program	1.....2.....3.....4..... 5..... 6
To experience tranquility	1.....2.....3.....4..... 5..... 6
To have a change from everyday life	1.....2.....3.....4..... 5..... 6
To be away from crowds of people	1.....2.....3.....4..... 5..... 6
To be near considerate people	1.....2.....3.....4..... 5..... 6
To develop my knowledge of things here	1.....2.....3.....4..... 5..... 6
To discover something new	1.....2.....3.....4..... 5..... 6
To help get rid of some clutched-up feelings	1.....2.....3.....4..... 5..... 6
To be near others who could help if I need them	1.....2.....3.....4..... 5..... 6
To teach my outdoor skills to others in the program	1.....2.....3.....4..... 5..... 6
To view the scenic beauty	1.....2.....3.....4..... 5..... 6
To keep physically fit	1.....2.....3.....4..... 5..... 6
To bring back pleasant memories	1.....2.....3.....4..... 5..... 6
To feel isolated	1.....2.....3.....4..... 5..... 6
To learn more about nature	1.....2.....3.....4..... 5..... 6
To escape the family temporarily	1.....2.....3.....4..... 5..... 6
To meet other people in the program	1.....2.....3.....4..... 5..... 6
To experience excitement	1.....2.....3.....4..... 5..... 6
To share what I know with others in the program	1.....2.....3.....4..... 5..... 6
To be away from the family for awhile	1.....2.....3.....4..... 5..... 6

In your own words, why are you taking this course/trip?

Thank you for your participation! Please return this questionnaire to the data collector.

APPENDIX C

Recreation Experience Preferences

Note: the following list was obtained from the University of New Hampshire, http://www.unh.edu/outdoor-education/publications/DriverREPScales.doc

It is arranged as follows:

DOMAIN
1. Scale
    a. Core item
    b. Core item

A: ACHIEVEMENT/STIMULATION
1. Reinforcing Self-image
    a. To gain a sense of self-confidence.
    b. To develop a sense of self-pride.
2. Social Recognition
    a. To have others think highly of you for doing it.
    b. To show others you can do it.
3. Skill Development
    a. To become better at it.
    b. To develop your skills and abilities.
4. Competence Testing
    a. To test your abilities.
    b. To learn what you are capable of.
5. Excitement
    a. To have thrills.
    b. To experience excitement.

B: AUTONOMY/LEADERSHIP
1. Independence
    a. To feel my independence.
    b. To be on my own.
2. Autonomy
    a. To be my own boss.
    b. To be free to make your own choices.
3. Control-Power
    a. To control things.
    b. To be in control of things that happen.

C: RISK TAKING
1. Risk Taking
    a. To take risks.
    b. To chance dangerous situations.

D: EQUIPMENT
1. Equipment
    a. To use your equipment.
    b. To talk to others about [your/our] equipment.

E: FAMILY TOGETHERNESS

1. Family Togetherness
    a. To do something with your family.
    b. To bring your family closer together.

F: SIMILAR PEOPLE

1. Being with Friends
    a. To be with members of [your/our] group.
    b. To be with friends.
2. Being with similar people
    a. To be with [others/people] who enjoy the same things you do.
    b. To be with people having similar values.

G: NEW PEOPLE

1. Meeting New People
    a. To talk to new and varied people.
    b. To meet other people in the area.
2. Observing Other People
    a. To be with and observe other people using the area.
    b. To observe other people in the area.

H: LEARNING

1. General Learning
    a. To develop [your/my] knowledge of things [here/there].
    b. To learn more about things [here/there].
2. Exploration
    a. To experience new and different things.
    b. To discover something new.
3. Geography of Area
    a. To get to know the lay of the land.
    b. To learn about the topography of the land.
4. Learn About Nature
    a. To study nature.
    b. To learn more about nature.

I: ENJOY NATURE

1. Scenery
    a. To view the scenery.
    b. To view the scenic beauty.
2. General Nature Experience
    a. To be close to nature.
    b. To enjoy the smells and sounds of nature.

J: INTROSPECTION

1. Spiritual

a. To develop personal, spiritual values.
b. To grow and develop spiritually.

2. Introspection
   a. To think about your personal values.
   b. To think about who you are.

K: CREATIVITY

1. Creativity
   a. To be creative.
   b. To do something creative such as sketch, paint, take photos.

L: NOSTALGIA

1. Nostalgia
   a. To think about good times you've had in the past.
   b. To bring back pleasant memories.

M: PHYSICAL FITNESS

1. Exercise-Physical Fitness
   a. To get exercise.
   b. To keep physically fit.

N: PHYSICAL REST

1. Physical Rest
   a. To relax physically.
   b. To rest physically.

O: ESCAPE PERSONAL-SOCIAL PRESSURES

1. Tension Release
   a. To help get rid of some clutched-up feelings.
   b. To help release or reduce some built up tensions.
2. Slow Down Mentally
   a. To have your mind move at a slower pace.
   b. To give your mind a rest.
3. Escape Role Overloads
   a. To get away from the usual demands of life.
   b. To avoid everyday responsibilities for awhile.
4. Escape Daily Routine
   a. To have a change from your daily routine.
   b. To have a change from everyday life.

P: ESCAPE PHYSICAL PRESSURE

1. Tranquility
   a. To experience tranquility.
   b. To experience solitude.
2. Privacy
   a. To feel isolated.

b. To be alone.

3. Escape Crowds
    a. To be away from crowds of people.
    b. To experience more elbow room.
4. Escape Physical Stressors
    a. To get away from the clatter and racket back home.
    b. To get away from noise back home.

Q: SOCIAL SECURITY

1. Social Security
    a. To be near considerate people.
    b. To be with respectful people.

R: ESCAPE FAMILY

1. Escaping Family
    a. To be away from the family for awhile.
    b. To escape the family temporarily.

S: TEACHING-LEADING OTHERS

1. Teaching-Sharing Skills (Sharing Knowledge/Directing Others)
    a. To teach your outdoor skills to others.
    b. To share what you have learned with others.
2. Leading Others (Sharing Knowledge/Directing Others)
    a. To help direct the activities of others.
    b. To lead other people.

T: RISK REDUCTION

1. Risk Moderation
    a. To be near others who could help if you need them.
    b. To know others are nearby.
2. Risk Avoidance
    a. To be sure of what will happen to you.
    b. To avoid the unexpected.

U: TEMPERATURE

3. Temperature
    a. To get away from the heat.
    b. To experience a nicer temperature.

APPENDIX D

Revised Research Instrument

INDIANA UNIVERSITY RESEARCH STUDY
MOTIVES FOR PARTICIPATION IN COLLEGE BASED OUTDOOR ADVENTURE PROGRAMS

There are many reasons why individuals participate in outdoor adventure programs. The purpose of this research study is to determine why college students participate in outdoor adventure programs. Please read and carefully follow the instructions below.

PART I INSTRUCTIONS:
In the space provided, please answer the following questions regarding personal information about you.

1. What is your gender? _____Male _____Female

2. How would you describe your personal level of outdoor experience (circle one)?
   novice/beginning intermediate/advanced

3. What number of **college based** outdoor adventure programs/courses/trips etc., have you participated in the past?
   _____

4. How many college credits will you receive for participation in this program?
   _____

5. What is your age?
   _____

6. What is your class standing?
   _____Freshmen
   _____Sophomore
   _____Junior
   _____Senior
   _____Graduate-Masters
   _____Graduate-Ph.D.
   _____Other, please describe_____

7. What is your race or ethnic background?
   _____Asian or Pacific Islander _____African American _____ Native American
   _____ Hispanic/Latino _____ White/Caucasian _____Multiracial
   _____ Other, please indicate_____

PART II INSTRUCTIONS:

The next section contains statements with reasons for participating in college based outdoor adventure programs. For each statement, **circle the number** corresponding with how important each statement is in your reasons for participating in the upcoming outdoor adventure program.

(1) Not Important
(2) Of Little Importance
(3) Mildly Important
(4) Moderately Important
(5) Very Important
(6) Extremely Important

Reasons for Participating in Outdoor Adventure Programs	"1"= Not important, "6"= Most Important
To become better at the skills involved	1.....2.....3.....4..... 5..... 6
To develop personal spiritual values	1.....2.....3.....4..... 5..... 6
To be alone	1.....2.....3.....4..... 5..... 6
To chance dangerous situations	1.....2.....3.....4..... 5..... 6
To have a change from my daily routine	1.....2.....3.....4..... 5..... 6
To be with friends	1.....2.....3.....4..... 5..... 6
To get college credit	1.....2.....3.....4..... 5..... 6
To avoid the unexpected	1.....2.....3.....4..... 5..... 6
To learn what I am capable of doing	1.....2.....3.....4..... 5..... 6
To do something creative such as sketch or take photos	1.....2.....3.....4..... 5..... 6
To be in control of things that happen	1.....2.....3.....4..... 5..... 6
To take risks	1.....2.....3.....4..... 5..... 6
To learn more about things here	1.....2.....3.....4..... 5..... 6
To get away from the clatter and racket at home	1.....2.....3.....4..... 5..... 6
To show others that I can do it	1.....2.....3.....4..... 5..... 6
To grow and develop spiritually	1.....2.....3.....4..... 5..... 6
To get to know the lay of the land	1.....2.....3.....4..... 5..... 6
To be with respectful people	1.....2.....3.....4..... 5..... 6
To get away from the noise back home	1.....2.....3.....4..... 5..... 6
To be able to control things	1.....2.....3.....4..... 5..... 6
To study nature	1.....2.....3.....4..... 5..... 6
To be sure of what will happen to me	1.....2.....3.....4..... 5..... 6
To test my abilities	1.....2.....3.....4..... 5..... 6
To view the scenery	1.....2.....3.....4..... 5..... 6

Reasons for Participating in Outdoor Adventure Programs	"1"= Not important, "6"= Extremely Important
To talk to new and varied people	1.....2.....3.....4..... 5..... 6
To experience more elbow room	1.....2.....3.....4..... 5..... 6
To lead other people in the program	1.....2.....3.....4..... 5..... 6
To have others think highly of what I am doing	1.....2.....3.....4..... 5..... 6
To develop my skills and abilities	1.....2.....3.....4..... 5..... 6
To be creative	1.....2.....3.....4..... 5..... 6
To think about good times you've had in the past	1.....2.....3.....4..... 5..... 6
To get exercise	1.....2.....3.....4..... 5..... 6
To be close to nature	1.....2.....3.....4..... 5..... 6
To relax physically	1.....2.....3.....4..... 5..... 6
To help direct the activities of others in the program	1.....2.....3.....4..... 5..... 6
To be with members of my group of friends	1.....2.....3.....4..... 5..... 6
To enjoy the smells and sounds of nature	1.....2.....3.....4..... 5..... 6
To learn about the topography of the land	1.....2.....3.....4..... 5..... 6
To rest physically	1.....2.....3.....4..... 5..... 6
To have a change from everyday life	1.....2.....3.....4..... 5..... 6
To be away from crowds of people	1.....2.....3.....4..... 5..... 6
To be near considerate people	1.....2.....3.....4..... 5..... 6
To develop my knowledge of things here	1.....2.....3.....4..... 5..... 6
To teach my outdoor skills to others in the program	1.....2.....3.....4..... 5..... 6
To view the scenic beauty	1.....2.....3.....4..... 5..... 6
To keep physically fit	1.....2.....3.....4..... 5..... 6
To bring back pleasant memories	1.....2.....3.....4..... 5..... 6
To feel isolated	1.....2.....3.....4..... 5..... 6
To learn more about nature	1.....2.....3.....4..... 5..... 6
To escape the family temporarily	1.....2.....3.....4..... 5..... 6
To meet other people in the program	1.....2.....3.....4..... 5..... 6
To share what I know with others in the program	1.....2.....3.....4..... 5..... 6
To be away from the family for awhile	1.....2.....3.....4..... 5..... 6

In your own words, why are you taking this course/trip?

Thank you for your participation! Please return this questionnaire to the data collector.