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Barriers to white water rafting in the eastern United States

Tyrone L. Burnette

To the Graduate Council:

I am submitting herewith a thesis written by Tyrone L. Burnette entitled "Barriers to white water rafting in the eastern United States." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Recreation and Leisure Studies.

Mary Dale Blanton, Major Professor

We have read this thesis and recommend its acceptance:

Ken Krick, Pat Beitel,

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

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Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:

Associate Vice Chancellor
and Dean of The Graduate
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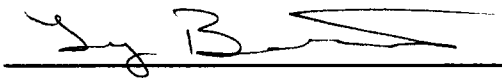
Signature 

Date 4-24-91

BARRIERS TO WHITE WATER RAFTING IN THE EASTERN UNITED STATES

A Thesis Presented

for the

Master of Science

Degree

The University of Tennessee, Knoxville

Tyrone L. Burnette

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DEDICATION

This thesis is dedicated to my grandfather

Sherman Burnette

for being a positive influence in my life

and to my parents

Mr. Charles S. Burnette

and

Mrs. Linda E. Burnette

for their love and support.

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ABSTRACT

The purpose of this study was to identify factors which prevent individuals from participating in white water rafting in the Eastern United States.

The Total Design Method (TDM) of telephone surveying was used to solicit information from a random sample of the general population of the Eastern United States. A questionnaire was developed and validated with a jury of professionals and pretested with 50 persons randomly selected. Eight interviewers were trained on how to conduct telephone surveys.

Advance post cards informing the prospective respondent that they had been randomly selected to participate in a research study were designed and mailed.

The SAS computer program was used to analyze descriptive statistics. The Lotus computer program was utilized to produce the graphical representations of the data and the Epistat program was used to do limited

inferential statistics.

It was discovered that less than one fifth of the general population had been white water rafting. About one fifth of the general population knew so little about the subject that they could not give a definition of the term white water rafting. About half of the population had no desire to go white water rafting.

The following major barriers, affecting more than a fourth of the population, were identified: (a) lack of time, (b) work commitments, (c) lack of desire to participate, (d) perceived risk of the activity, (e) procrastination, (f) family commitments, (g) lack of knowledge on the subject, and (h) location of white water rivers. The following minor barriers, affecting between one fourth and one tenth of the population, were identified: (a) travel expenses, (b) physical demands of the activity, (c) price of the endeavor, (d) lack of companionship, (e) lack of ability to swim, and (f) dislike of water activities.

There was a definite set of barriers to white water rafting of which about half could be addressed to increase

participation. The most predominant of these was lack of time.

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CHAPTER I

INTRODUCTION

"Theirs is a hidden land; wolf-haunted.
Stormy highlands with perilous paths,
where mountain torrents plunge though
the mist and flow unseen."
-Beowulf

There is inherent value in high adventure recreation and white water rafting is an avenue by which this value is accessible to people. Kurt Hans, the founder of adventure programing, stated that these activities promoted qualities, the awareness and knowledge of which were the foremost task of education. These included: "an enterprising curiosity, an undefeatable spirit, tenacity in pursuit, readiness for sensible self-denial, and, above all else, compassion (Zook, 1987)." These qualities are compelling and few activities promote them quite as well as high adventure recreation.

High adventure has been said to build character. Lester Zooks in High-Adventure Outdoor Pursuits suggests that "high adventure builds character by giving the

individual chances to develop capabilities, increasing self-understanding, demonstrating man's interdependence, providing for a broader understanding of man's relationship with nature and supplying opportunities to distinguish between wants and needs (Zook, 1987)."

In addition to the values that are inherent in high adventure recreation, there is a set of attributes that it shares with all outdoor activities. In The President's Commission on the Outdoors, it is stated: "outdoor recreation helps people accomplish personal goals such as fitness and longer life, family togetherness, friendship, personal reflection, and an appreciation of nature and beauty." These five personal goals become a stimulant for the achievement of the nation's goals which include: "health, education, employment, family cohesion, economic vitality, and environmental quality (President's Commission on the Outdoors, 1987)." In light of the general benefits of outdoor recreation coupled with those of high adventure recreation, it is evident that there is considerable value to be derived from participation in these types of activities.

White water rafting is a high adventure activity that

has the unique quality of allowing a large number of people an avenue to high adventure recreation. Most high adventure activities require a fairly long skills development period which thwarts a large number of people. The skills development period in rafting can be greatly reduced for the participant by the skill of the guide. Rafts have a simplicity and inherent stability which makes them appealing in relation to other white water crafts such as kayaks and canoes (Ford & Blanchard, 1985, p. 399). The equipment required, although quite expensive, can be rented to patrons due to its durability. These factors make white water rafting through professional services a viable avenue to high adventure recreation for almost all people.

It is useful to look briefly at the development of white water rafting as a recreational endeavor and commercial service so that their stage of growth is understood. Although it is certain there were other white water adventurers, John Wesley Powell was one of the first persons to attempt a white water river. His river run of 1869 was sponsored by the Smithsonian Institute, covered about 1000 miles of the Colorado and Green Rivers, discovered the last unknown river and mountain ranges in

the lower 48 states, and sparked an interest that would not truly manifest itself until almost a hundred years later (Powell, 1980). White water adventuring remained fairly veiled in obscurity until the late 1960's. White water boating had been practiced sparsely in the Western United States until this period and had scarcely been practiced in the Eastern United States. The emergence of white water rafting in the late 1960's was followed by a raise in popularity in the 70's that continued through the 80's (Armstead, 1982).

With the popularity of white water rafting on the rise, a new era of recreation on the brink of dawn, and a surge in economic prosperity in the United States, a few individuals started rafting companies that provided whitewater adventure trips for a fee. These first attempts often did quite well and were followed by even more agencies providing much the same service. By the 1980's there was a thriving white water rafting industry in the Eastern United States. This industry provides a valuable avenue for individuals to participate in a high adventure outdoor pursuit.

Even with a thriving white water rafting industry

ready and willing to serve people, there has been a large portion of the population which have not participated. Although there is a high degree of perceived risk, that is the value of white water rafting as high adventure recreation. In all actuality, there is only a small degree of real danger. A review of The American Canoe Association's River Safety Report finds the safety record of Eastern rafting companies to be quite impressive with only four deaths in the last seven years (Walbridge, 1989, p. 47). It is reasonable to assume that there is some barrier to participation in white water rafting which limits higher participation.

It has been suggested that outdoor adventure pursuits such as white water rafting prepares humans to face the risks that are inherent in being alive (Ewert, 1989, p.47). If white water rafting is a worthwhile endeavor that serves the purpose of other high adventure sports and leisure is a valuable component of becoming satisfied with life, then the promotion of high adventure activities should be developed to its fullest extent as long as there are no unreasonable risks or loss of value due to overuse. There is a need to understand why some persons do not participate in certain activities and reap the benefits from

those activities. It is certain that many persons are fulfilling the values associated with high adventure pursuits by avenues other than white water rafting (Ford & Blanchard, 1985, p. 3) . It is reasonable to think that there are factors that prevent some people from participating that could be overcome so as to provide the benefits associated with the activity.

Statement of the Problem

The problem was to identify those factors which prevent individuals from participating in white water rafting in the Eastern United States.

The study was divided into the following subproblems:

1. To identify barriers preventing individuals from participating in white water rafting.

2. To identify demographic characteristics that are common among white water rafting participants and non-participants.

3. To discover measures that could be taken to promote participation in white water rafting.

4. To use data collected form persons that have been rafting to identify barriers to white water rafting.

Hypotheses

The following research hypotheses were identified.

Hypothesis 1: There is a set of factors that limit certain individuals from participating in white water rafting.

Hypothesis 2: There is a set of identifiable characteristics common to nonparticipants in white water rafting.

Hypothesis 3: There are measures that can be taken to promote increased participation in white water rafting.

Delimitations of the Study

The study was delimited to the following parameters:

1. A random sample from the Eastern United States.

2. The random sample included only those persons who had listed telephone numbers.

3. The random sample will only include persons between the ages of 20 and 65 years of age.

4. The random sample was targeted at persons in families with a yearly income above $25,000.

5. The survey included only the following selected demographic data: income range, age range, sex, and type of employment.

6. Other selected variables included the following: television shows most likely to watch in a given week, names of magazines regularly read, types of recreation participation and main source of

recreational activity information.

Limitations of the Study

It was expected that the study would have the following limitations:

1. The number of persons having telephones and available to be surveyed during the time frame.

2. The willingness of persons to be surveyed.

3. The differences between telephone interviewers' style.

4. The list supplied by the commercial sampling firm.

Basic Assumptions of the Study

The study was designed and conducted considering the following basic assumptions:

1. Subjects would answer as truthful as possible.

2. The telephone survey would provide a reliable and valid method of acquiring the needed information.

3. The instrument, constructed through collaboration with professionals in the field and after performing a pilot, would produce the needed information to identify barriers to white water rafting.

4. The randomly selected respondents in the study would be representative of the total population of the desired area.

5. The selected areas would be representative of the desired demographic region.

6. The total sample would be representative of the Eastern United States.

Definition of Terms

In order to better understand the study, the following terms were defined:

Barriers. A barrier is any factor that prevent one from participating in an activity.

High Adventure Recreation. Recreation conducted in the outdoors that contains some degree of real or apparent danger.

Total Design Method (TDM). The Total Design Method is a step-by-step procedure and method for conducting telephone surveys. The TDM consists of two parts. The first is to identify each aspect of the survey process that may affect either the quality or quantity of response, and to shape each of them in such a way that the best possible responses are obtained. The second is to organize the survey efforts so that the design intentions are carried out in detail (Dillman, 1978, p. 12).

Whitewater rafting. White water rafting is a high adventure pursuit conducted on whitewater rivers using

inflatable rafts and that are commercially offered.

Significance of the Study

The need for this study was based on three separate factors. The first was the need to increase participation in white water rafting. Second was the need to develop a better understanding of the motivators for participation in high adventure pursuits, specifically white water rafting. The third was that by identifying barriers to high adventure pursuits, methods could be developed to overcome these barriers so that more people could enjoy the benefits of the experience and a greater margin of profit could be generated for those offering the service.

It was determined that it was important to increase our knowledge of the recreator, especially in relation to high adventure outdoor pursuits. While there had been much attention devoted to recreation participation, there had been little documented research on the barriers to high adventure recreation participation (Searle & Jackson, 1985). Secondly, even less had been done on participation barriers in outdoor recreation. Additionally, knowledge was needed to provide a foundation from which to build a viable disciple in high adventure recreation.

The research would provide a valuable tool for the sponsoring agents, namely a collection of Eastern rafting companies, by which they could conduct more effective marketing. This would not only create greater revenues for the companies involved, it also provided an avenue for people to have a high adventure outdoor experience, of which the personal benefits have already been well described. As with any increase in participation in a particular geographic area, it would help the economic stability of the surrounding community as well.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

This study examined the barriers to participation in whitewater rafting in the Eastern United States. This chapter is a review of the literature organized in the following manner:

1. The most relevant literature which supports participation in rafting, high adventure activities, and outdoor recreation.

2. The relevant literature supporting the need for further study in the adventure recreation field.

3. The studies which have specifically addressed barriers to participation in recreation, relevant studies on barriers to recreation and studies on whitewater recreation participation.

4. The studies which are relevant to the methodology.

Support for Participation

Rafting

Rafting is unique in that it is a high adventure activity done in the outdoors that can be enjoyed by most of the population. It contains many of the same elements, such as promoting personal growth, instilling a sense of achievement, and expanded perceptions, associated with other high adventure activities such as rock climbing, caving and kayaking, and is conducted in the outdoors, which seems to be an important to the value of the experience. Whitewater rafting, when done in conjunction with a professional outfitter, does not require a long skills and equipment collection period. Ron Waters, author of the book The Whitewater River Book, states:

> Of all the activities in the outdoors, a river trip is one that many different types of people can enjoy - young, old, rich, poor, physically fit, physically not-so-fit (1982, p.14).

This characteristic that rafting can be participated in by most people is not within itself enough to justify its promotion. There are other characteristics that make

rafting a desireable activity worthy of promotion. Many of these characteristics are associated with the fact that rafting is a high adventure activity and is done outdoors, which will be addressed later in this section. Unique to rafting is the avenue, to the outdoors, the river, coupled with the teamwork of the rafters and the element of adventure. William McGinnis, who operates a large California rafting company and wrote the book Whitewater Rafting, states the following about these qualities.

> When you launch off on a whitewater voyage you give yourself to the river. You die to the arena of cities and jobs, and are born into a world that is clear, continuous, and flamboyantly colorful - a world of risk and surge, with a flow that wafts you along with colossal motion, easy. ... The people on a river voyage draw into a tight society. Engulfed in a world of sensation, mood, and skin, they reach out to one another with intensity, talk deeply, and often find rich and supportive rapport. (1975, p. xvii).

Rafting shares with many other outdoor activities the fact that it is a relatively non-consumptive recreational pursuit. This type of leisure time activity will become increasingly critical during the next few decades. It is the role of the leisure service industry to provide leadership in promoting such non-consumptive behavior and therefore improve the overall environmental quality. (Godbey, 1989, p. 100) This may seem a small thing to add

to the already impressive list of benefits to be derived from outdoor adventure recreation and, by association, white water rafting; but it is already evident that this subject will be of severe importance in the upcoming years.

High adventure activities

Rafting can easily be categorized as a high adventure activity. There are several desireable characteristics associated with this type of endeavor. The characteristics often associated with these types of activities include psychological benefits in the form of self control and personal growth (Scherl, 1989), value clarification (Huie, 1982), reconciling of tension (DeMocker, 1987), and exploration and exercise (Kauffman, 1984). One of the most compelling descriptions comes from John C. Miles in "The Value of High Adventure Activities":

> After the risk has passed and the challenge met, a great physical and spiritual satisfaction is the reward. It is an intense emotion... (Miles, 1987)

Lester Zook (1987) provides a more concrete explanation of the benefits derived in "Outdoor Adventure Programs Build Character Five Ways." His list is as follows:

* Opportunity to increase self-understanding and to develop individual capabilities.

* Living demonstrations of man's interdependence.

* Real life adventures.

* Broader understanding of people's relationship with nature.

* Opportunities to clarify the distinction between needs and wants. (p. 8)

Kurt Hans is accredited with beginning outdoor adventure programing in 1941 in Wales. He set up an education approach where the wilderness became the classroom. By way of describing what he thought one should get out of education he gave a brilliant set of values to be obtained from outdoor adventure:

> I regard it as the foremost task of education to ensure the survival of these qualities: an enterprising curiosity, an undefeatable spirit, tenacity in pursuit, readiness for sensible self-denial, and, above all, compassion.
> (Zook, 1987)

Outdoor recreation

Assuredly, one could continue limitlessly on the virtues persons have placed on adventure in the outdoors. There are, as described by the persons above, valuable

qualities to be obtained from adventure activities that are inherent almost solely to that type of activity. In addition to this, there are a much valued set of attributes associated with outdoor recreation. One of the most comprehensive works on outdoor recreation in the United States is The President's Commission on the Outdoors. Within this work the benefits of outdoor recreation are deeply explored. The following excerpts provide excellent reasons for promoting participation in outdoor recreation.

> Outdoor recreation helps us accomplish personal goals -- fitness and longer life, family togetherness, friendship, personal reflection, and appreciation of nature and beauty. As the outdoors leads to the attainment of personal goals, it becomes a stimulant or catalyst for the achievement of the nation's social goals: health, education, employment, family cohesion, economic vitality, environmental quality.
>
> Health is the primary reason American adults say they engage in outdoor recreation. Healthy people constitute a productive work force, effective armed forces, and a motivated citizenry .... Americans spent $355 billion, or about 1,500 per capita,on health care in 1983. If increased recreation participation could reduce that figure by just five percent, the national saving would amount to more than $15 billion.
>
> Recreation creates jobs and vitality in our communities.... In 1984 consumers spent $100 billion on outdoor recreation. Outdoor recreation resources, facilities, and activities generate economic activity.
>
> (Outdoor) recreation has helped stimulate our efforts to maintain and enhance the quality of our environment. ... Species as yet unknown or unresearched may hold the key to the future food medicine, and fibre sources. As Davis Bower says,

"Wilderness holds the answer to questions we have yet to ask."

The outdoors is a learning environment for many professions. Wilderness areas in particular are living museums of natural history. The study of science is enhanced by an appreciation of the natural forces of the earth -- the geology that formed the Grand Canyon and the botanical features shaping the Everglades.

The outdoors stimulates creative expression: poetry, philosophy and religion, among other forms. From Winni the Pooh's "100-Aker Woods" to Huckleberry Finn's life on the great Mississippi, children share the experience of beauty and wonder of the outdoors through stories.
(President's Commission on the Outdoors, 1987)

It is easy to see that the outdoor component in adventure recreation is important and lends an immense amount of value to the experience. The benefits associated with adventure pursuits coupled with those of outdoor recreation make the question of "why increased participation is desired" one that seems to answer itself. Because there is such a wealth of wondrous attributes, including personal, social and economic, to be gained.

Support for study

The perception that there is such a discipline within recreation as high adventure pursuits is only a recent revelation. There came in the late 1800's and early 1900's

an increasing array of events which indicated a new awareness of the environment, the wilderness and the developing need for adventure. Until this time the need for adventure had been fulfilled by either simple survival or as a by product of searching for scientific knowledge (Ewert, 1989, p. 19). In the centuries since the emergence of this need there have been several developments that have made it even more important. The most crucial factor is that leisure has become a part of almost every person's life in America and that leisure component accounts for a large percent of the economy
(Godbey, 1989, p. 7).

With this in mind it is prudent to note that recreation is a relatively young discipline and that adventure recreation is even younger and less studied. As seen above, the benefits to be derived from adventure programs are quite impressive, but they suffer from being a part of young discipline with a small knowledge base. The drawbacks of a small knowledge base and, as a result, recognition as a viable discipline are best explained in the introduction to part one of <u>High-Adventure Pursuits</u>:

> There still exists a somewhat negative overtone on the part of many in respect to sponsorship of programs or

> activities of this (high-adventure recreation programing) nature. Such disclaimer often relates directly to the general misunderstanding of the purposes and values of adventure/risk-type programs.
>
> As a result of negative attitudes and feelings on the part of the wary, leaders and administrators must be prepared to expound on the virtues of their adventure activities. To fully grasp this understanding requires not only the development of firm theory and philosophy as a basis to justify the program, but also an understanding of the current research - including application and implications on such matters as motives for involvement, need for fulfillment, and other values derived from participation. (Meir, Morash,& Welton, 1987, p. 3)

This misunderstanding is in part due to the lack of research having been done on the subject. These high adventure activities have not been accepted as recreation as long as more traditional pursuits and therefore have not been as deeply studied. The academic world has explored the value of these pursuits, as demonstrated above, but it has not explored other components which would make these types of activities acceptable to much of the academic or professional world.

Barriers to Recreation and Participation

Before looking at specific studies one should note

that, although there have been a considerable number of studies done on why people participate in certain recreational pursuits, there has been relatively little done on what factors prevent participation (Jackson, 1983). After a comprehensive study of the literature, this author was unable to find any studies directly addressing the barriers to adventure activities.

Barriers to recreation

A very general overview study dealing with barriers to recreation was done by the National Recreation and Parks Association in Demand for Recreation. Within this report the "lack of time" was cited as the most common barrier to recreation for the American public. Following this barrier in descending rank order were: (a) areas too crowded, (b) lack of money, (c) lack of information about opportunity, (d) recreate mostly at residence, (e) interesting areas not convenient, (f) areas had pollution problems, lack of interest, personal health reasons, (g) lack of transportation, (h) areas poorly maintained and (i) personal safety reasons. Also pointed out in this report was that almost 40% of the American population mentioned that they would like to participate in a particular

outdoor, and often adventure, activity but do not do so currently (National Recreation and Parks Association, 1984 p.12).

The study of barriers to recreational pursuits has only recently been identified in the literature (Searle & Jackson, 1985). One of the more pertinent studies was done by Edgar Jackson on "Activity-Specific Barriers to Recreation Participation". This study proves to be extremely important because it deals with specific activities such as downhill skiing, self propelled activities, exercise based and resource based. The study identifies fifteen specific barriers to participation.

Of the identified barriers work commitments were perceived as "most often a problem" by 32.3 % of those surveyed and was ranked first. This was followed by "no opportunity to participate near my home" by 31.3%, "recreational facilities or areas too crowded" by 29.6%, "price of recreational equipment" by 23.2% and "It is difficult to find others to participate with" by 21.2%. Other relative findings included equipment price as the top ranked barrier for resource based activities and down hill skiing, work commitments ranked continuously first or

second across all activities and (lack of) opportunity ranked within the top three barriers for all activities except golf (Jackson, 1983).

The conclusions that Jackson generated from the study are of considerable worth.

1) Nonparticipation in recreation should not be treated as an undifferentiated phenomenon: differences occur in the perceived importance of barriers, depending on the type of activity desired.

2) While it may appear desireable to group similar kinds of barriers into categories, each may have its own specific effect. In the case of the three economic barriers, for example, the relative strength and importance of equipment costs, admission fees and charges, and the price of gasoline varied both within and among types of recreational activity desired.

3) No single barrier was of overriding importance in inhibiting participation in any given recreational activity. Rather, combinations of barriers best characterized and discriminated between types of activity, a finding that suggests that nonparticipation, like participation, is a function of multidimensional complex of factors. (Jackson, 1983)

Although the results in Jackson's study do not directly pertain to rafting, some interesting deductions can be made. The list of barriers is important in that they have proven responsible for nonparticipation in recreational activities. The study also states that nonparticipation is

a function of complex factors when considering categories of activities. It would be interesting to explore the relationship between a particular activity, rafting, and the grouping in which it could logically be placed. Aside from work commitment and lack of opportunity, economic factors tended to play an important role in nonparticipation.

A later study done by Searle and Jackson (1985) supported much of the earlier findings while expanding the scope. This investigation of the "Socioeconomic Variations in Perceived Barriers to Recreation Participation Among Would-be Participants" looked at similar barriers producing relatively the same ranking. In the later study the variations of respondent characteristics, rather than variations of activities and activity groups, were considered.

Family and work commitments tended to be more important in middle-aged groups. Lack of awareness of appropriate site, of transport, need for partners and opportunity to learn the desired activity proved to be more effective barriers for the younger and older groups. Only work commitments were a more effective barrier for males

than for females: in all other barriers studied, lack of partners, family commitment, place to learn unknown, shyness, physical ability, lack of transport and physically unable, females evaluated barriers more effective obstacles to participation than did males, although the difference did not prove to be significantly different (ps .01).

For level of education the barriers explored did prove to differ significantly, although the trend that differences decreased with higher levels of education was noticed. In consideration of income only five barriers proved to be very significant, those being: family commitments, work commitments, (lack of) awareness, (lack of) opportunity, and overcrowding. In the remaining four barriers, shyness, price of gasoline, physical ability, (lack of) transportation, artistic ability and physically unable, the less affluent respondents showed a significantly greater number of responses.

The consideration of size of household showed no definite trends except that as household size increased so did family commitments and less likelihood that lack of partners was an important barrier. Likewise, length of residence proved only an important factor in consideration

of family commitment as a barrier (Searle & Jackson, 1985).

A more general but similar study to Jackson and Searle's was done by Gerald Romsa and Wayne Hoffman (1980). The major finding of this study was that, "individuals from lower social strata and less active recreation groups suggest that a lack of interest is their main reason for noninvolvement." This study considered eight activities; two of which are of particular interest in relation to rafting. The activities of interest were canoeing, because it is a water/river resource based activity, and snow skiing, since it is usually carried out at a commercial outfitter with similar costs and area specificity to rafting.

The study found that Canoeing: a significant difference and low income association for the barrier "lack of interest", no significant difference for "lack of time", significant difference and high income association for "lack of facility" and a significant difference for "lack of funds". For snow skiing there was no significant difference for "lack of time" and "lack of interest" as barriers and a significant difference and high income

association for the barriers "lack of facility" and "lack of funds". The study also found that 93% of the respondents did not participate in canoeing and 94% did not participate in snow skiing.

The results of the study suggest an expected low number of participants in a select activity, such as rafting. The study also suggests an expected high level of "lack of interest" as a barrier for lower income groups and "lack of facility" as a barrier for higher income groups.

Another noteworthy study in relation to nonparticipation was done by John Boothby, Malcom F. Tungatt and Alan R. Towwnsend (1981) on "Ceasing Participation in Sports Activity: Reported Reasons and Their Implications." It is granted that "ceasing participation" is not the same as barriers, but it is interesting to note that this study found six main categories of reasons in rank order to be most important: Loss of interest, lack of facilities, lack of fitness and physical ability, leaving youth organization, moving away from the area and no time to spare. Several of these responses are identical or similar to those in other studies explored.

The above studies have direct similarities to the one proposed in that they deal with issues of nonparticipation. These studies also show a trend in the types of barriers which are common across several recreational areas and varying groups of people. A fairly recent study, "Reconceptualizing Barriers to Family Leisure" by Duane Crawford and Geoffrey Godbey (1987), looks at nonparticipation in a broader, more theoretical light. One important factor this author states is that, "little empirical research (as of 1987) has been conducted concerning barriers to leisure participation". Crawford and Godbey only cited seven studies having been done on this subject. The article identified several different groups of barriers.

The first of these were "intrapersonal" which included stress, depression, anxiety, religion, kin and non-kin reference group attitudes, prior socialization, perceived skill level, and subjective evaluations. Another group, "structural" barriers, included family life-cycle stage, family financial resources, season, climate, work time, opportunity, and reference group attitudes concerning the appropriateness of certain attitudes. Clearly this study has merit in that it supplies a broader definition of

barriers.

A couple of studies have addressed specific barriers to recreation in the college environment. The most recent of these was conducted at the University of Oregon by Youngkhill Lee and Kathleen Halberg (1989). This study explored the college students' perceptions of freedom in leisure and shyness. The study found, "quite clearly, a negative relationship between shyness and perceptions of freedom in leisure... This finding is not a surprising one, since shyness is defined in terms of discomfort in the presence of others, and many leisure activities require (rafting included) interacting with other people."

The other study was conducted by Sara Hammitt at the University of Tennessee (1984). Its major contribution states: "The results indicated that nearly all of the respondents had positive attitudes toward participation and that increases in the level of participation were associated with an increased positive attitude toward participation, an increased social group influence, and an increased amount of past participation experience."

River recreation participation

Although the studies do not address barriers or nonparticipation, works addressing participation in "river" recreation are worthy of mention. There has been even less attention, as would be expected, to this specific area than to barriers to general recreation. The most relevant study was conducted by Lawrence Beck (1987) on, "The Phenomenology of Optimal Experiences Attained by Whitewater River Recreationists in Canyonlands National Park." The study identified nine categories of optimality which were: (a) positive emotional orientation, (b) novelty and escape, (c) aesthetic response to the environment, (d) arousal, (e) increased awareness and self realization, (f) humility and spirituality, (g) noetic qualities, (h) ineffability, and (i) ethereal elements. In addition to the nine categories identified, it was also found that 45% of the respondents reported their river trip as a highlight of their life. It is clear that this information, although not directly pertaining to nonparticipation, does demonstrate the possible value of a river trip.

Another study on river recreation participation addressed the issue of "Experience Preferences of

Participants in Different Types of River Recreation Groups." The study, conducted by John Heywood (1987), found that preferred river recreation experiences depended on the size and composition of the groups. The study also states that the use of a commercial outfitter was only a meaningful on certain rivers at certain levels of flow. Since the proposed study will only address the use of commercial outfitters, it is useful to know that this factor does not seem extremely important if considering the participants perceptions.

One river/participation study addresses, "Social Groups as a Basis for Assessing Participation in Selected Water Activities" and identified friendship and family as the most significant variables promoting participation. The study identified nine social characteristics promoting participation. Of the nine factors, only three were found to be significant. These included: level of education, age, and marital status (Field & O'Leary, 1973). Although it does not address participation, the study done by Cockrell and Mclaughlin (1981) also considered social factors on river users' expectations. The study is worth mentioning since it found social influences, friends, family and working companions, as the most frequently

mentioned source of personal expectations.

Recreation participation

Many studies have been done on participation in recreation. Of these, four are worthy of mention here. Stephen McClaskie, Ted Napier and James Christensen conducted a study which explored sixteen variables influencing participation that could be classified in three general categories: (a) familiarity, (b) personal community, and (c) barriers. Also within this study, it was stated that:

> Individual characteristics and the environment in which the individual operates influence his/her opportunity to enact recreation behaviors (1986).

Other studies include "An Analysis of the Social Unit of Participation and the Perceived Psychological Outcomes Associated with Most Enjoyable Recreation Activities" in which it was found that outdoor recreation activities were dominated as the "most enjoyable" recreation pursuits. The following two variables influencing participation proved to be most important: escaping personal and social pressures and exercise and physical fitness (Allen & Donnelly, 1985).

There are two more studies to be considered. "A Conceptual Model of Leisure-Time Choice Behavior" in which the factors affecting participation were broken down into: demographic and socioeconomic characteristics, psychographic characteristics, benefits sought and benefits offered, perceptions and preferences, interpersonal influences, and situational factors. The category situational factors was broken down even more into product related factors, personal factors, and environmental factors. Within environmental factors there were several statements that are relevant to rafting:

1. The participant who has made a financial commitment will try to get his money's worth at all costs.
2. The participant ignores weather reports.
3. The participant considers weather as "part of the experience" and does not worry about it.
4. The participant finds it inconvenient or impossible to reschedule based on last minute weather reports. (Bergier, 1981).

The other study, "The Identification of Outdoor Recreation Market Segments on the Basis of Frequency of Participation", identified outdoor recreation market segments. Within this study the following useful hypotheses were drawn from the literature:

1. Topologies of participants based on annual participation rates exist for each of the eighteen selected outdoor recreational activities.

2. Socioeconomic-demographic characteristics of participants can not be used effectively to differentiate between topology groups within an activity.

3. Similarity, socioeconomic-demographic characteristics of participants do not necessarily differ between recreational activity groups. (Romsa & Girling, 1976, p. 248)

The results from the study showed that, "on the basis of annual participation rates, distinct groups of recreation users do exist for some outdoor activities. This finding lends support to the validity of topological approaches for studying recreational behavior. However, standard socioeconomic - demographic variables likely are not reliable criteria with which to discriminate between groups of recreationists (Romsa & Girling, 1976)."

Methodology

Instrument

A review of the literature concerning barriers to recreation revealed no standard measurement methods, e.g.

the same instrument used in more than one study. Studies conducted by Jackson in 1983 and Searle and Jackson in 1985 did use the same set of barriers in comparing different sets of variables, activities in the earlier study and demographic information in the later. Romsa had earlier used a monoethic devise algorithm to place data into eight distinct categories. The categories were differentiated on the basis of socioeconomic/recreation participation data (Romsa & Hoffman, 1980).

Sample selection

Most studies having to do with "river" recreation deal with the perceptions of the users of the resource and therefore the sample populations are selected from that population. (Heywood, 1987; Beck, 1987; Edwards, 1982; Cockrell & McLaughlin, 1981). Since the proposed study will attempt to identify the reasons people do not use the resource, this method of sample selection is not reasonable.

The studies found that were most similar to the one the author proposes were conducted by Jackson in 1983 and Searle and Jackson in 1985. In these studies the data was

generated using a random sampling, generated from residential phone lists of the province of Alberta, Canada, of 4700 households. One other study showed similarities to the one proposed. It made use of information gathered during a 1969 Canadian National and Historic Branch survey (Romsa and Hoffman, 1980). All three studies share one common characteristic in relation to sample selection; they used information gathered from a larger study to look at nonparticipation which enabled the use of a large number of responses.

Data collection

The review of literature also found no set pattern in data collection methods. Romsa and Hoffman (1980) used data collected from personal interviews. Jackson (1983) and Searle and Jackson (1985) used data collected from mail questionnaire surveys. Cockrell and McLaughlin (1981) used a telephone survey to obtain information from users of the Middle Fork of the Salmon River followed by a mail questionnaire. These four works are the most relevant to the one proposed and show no pattern in collection methods.

The telephone survey method is not a new collection

method, although it has only recently become widely accepted. Several factors have lead to the telephone survey's recent acceptance.

1. The widespeard distribution of telephones. The 1986 U.S. Census reported that 97% percent of the households have phones.

2. The development of a wide array of research on all aspects of conducting telephone surveys. One of the most significant examples of the development of the telephone survey research is found in Dillman's (1978) work on mail and telephone survey's. In this publication, Dillman advocates an approach to conducting surveys which he titles "The Total Design Method" (TDM).

3. Lowered acceptance of the traditional household face-to-face interview. This can be attributed to field costs rising, interviewers being reluctant to go out at certain times of day or to certain locations, and it becoming increasingly difficult to obtain interviews from those sampled.

4. Developments in telephone technology and telephone interview technology. Improvements in telephone technology have contributed to the ease with which calls can be made, particularly long distance calls. Wide area telephone service (WATS) and alternative long distance services such as MCI or Sprint permit long distance calls to be made with relative ease at a lower cost (Frey, 1989, p. 26-29).

Frey (1989) in his book Survey Research by Telephone, 2nd Edition lists the major advantages of telephone surveys as: (a) time for implementation, (b) sample coverage, (c) ability to get desired respondent in household, (d) interview control, and (e) obtaining socially desireable responses. He lists the minor advantages as: (a) cost, (b) response rate for general public, (c) noncontact / nonaccessibility, (d) ability to obtain response from elite population, (e) sampling special subpopulation, (f) impact on questionnaire length of response, (g) ability to ask sensitive questions, (h) ability to clarify and (i) ability to probe (p. 76). The most attractive of these advantages is the relative low cost, time for implementation and

sample coverage.

Reporting results

The methods for reporting the results for barriers to participation tend toward calculation of percentages (Jackson, 1983; Searle & Jackson, 1985; Romsa & Hoffman, 1980; Boothby, Tungatt & Townsend, 1981). Romsa and Hoffman (1980) did, however, also use Chi-Square tests of significance when comparing activities not participated in to the reasons given for not participating.

After a detailed review of the results reporting methods, there is a trend towards simplicity. If one was able to restrict the number of barriers, then detailed comparison methods to report the results would be acceptable. At this point the barriers are unknown and must be identified before limited sets can be addressed.

CHAPTER III

METHODOLOGY

The problem was to identify those factors which keep individuals from participating in whitewater rafting in the Eastern United States.

The study was divided into the following subproblems:

1. To identify barriers preventing individuals from participating in white water rafting.

2. To determine if the factors that limit participation in one geographical region are different from those of another geographic region.

3. To identify characteristics that are common among whitewater rafting participants.

4. To discover measures that could be taken to promote participation in whitewater rafting.

Identification of the Population

The population will be defined as the general public of the Eastern United States. The Eastern United States was defined as containing the following states: Alabama, Connecticut, Deleware, District of Columbia, Florida, Georgia, Kentucky, Maine, Maryland, Massachusetts, Mississippii, New Hampshire, New Jersey, New York, North Carolinia, Pennsylvaia, Rode Island, South Carolinia, Tennessee, Vermont, Virginia, West Virginia.

The total population for the Eastern United States, as of 1986, was 106,140,000 persons. Considering a constant population growth, the total population for 1991 was estimated as 291,890,000 persons. There were an estimated 38,782,000 households with an average of 2.6 persons per household. For the Eastern United States there was an average of 228.57 persons per square mile (1986 Census).

Identification of the Sample

A random sample was selected from the Eastern United States. The determination of the number of individual responses needed was determined on the following basis:

1. The best estimate of the population rate of the survey characteristics was to be 50%.

2. The maximum for the difference between the true population rate and the sample rate to be tolerated was 3.35%.

3. 90% certainty that the difference between the true population rate and the sample rate was to not exceed 3.25%.

The criteria listed above demanded that the a sample size of 602 individual random reponses be obtained (Gustafson, 1984).

A commercial sampling firm (Webb) was utilized to obtain the random sample of 602 persons form the Eastern United States. This method of obtaining the sample had the advantage over other methods of having already eliminated nonworking and business telephone numbers (Frey, 1989, p. 81). The sample was limited to persons between the ages of 20 and 65. It was suggested by the jury of professionals that persons younger than 20 often do not make their own choices on recreational pursuits. It was also suggested that persons over 65 years of age often have physical

problems which limit their recreational choices.

Utilizing a commercially generated list shared the same shortcomings as sampling from a telephone directory. These shortcomings were: (a) There may be numbers within the list for which the person was not available; (b) the list would not contain telephone numbers not listed in the telephone directory, unlisted numbers for example. (c) Most listing were aknowledged to be out of date to some degree. The list method was used in preference to the random digit dialing method due to the cost and time considerations associated with the latter (Dillman, 1978, p. 43).

The design method used in the research had commonly achieved response rates of 90% (Dillman, 1978, p.52). The commercially generated list contained 5,000 randomly selected names, corresponding address and telephone number. Since the study required only 602 individual surveys and the list was grouped in states, the following prodedure was used to ensure that each person was randomly selected. It may also be useful to aknowledge that a duplicate list was ordered for mailing out the advance post card which contained the prospective respondent's name and address.

Each label and its duplicate was stamped, in order, with

a number between 1 and 5000. Then a random number between 1 and 5000, generated by the computer program Lotus, (Lotus Development Corporation, 1989) was assigned to each number. After this the list was ordered depending on the random numbers and labels were selected in sequence depending on their new order. In the event that a random numer was duplicated in the list, a new, completely randomly generated number was assigned. This process was repeated until no repeatition of randomly generated numbers occured. In this manner it was assured that each label, represented by its stamped number, had an equal chance of being selected.

After the list of numbers representing labels and their corresponding duplicate had be ordered depending on their associated random number, the first 1000 were selected and sent an advance post card which stated that they would be contacted. (See Appendix A for sample post card). The excess of post cards sent in relation to the sample size needed was needed for replacement for the expected 10% nonreponse rate (Dillman, 1978, p. 47). After consultation with the postal service, it was determined that mailing of the advance post cards one week prior to the beginning of the survey would be adequate.

Development of the Instrument

The telephone method of surveying the population was chosen used due to its attractive qualities of high response rate, relative low cost, and time for implementation. Don A. Dillman's (1978) Total Design Method (TDM) was the basis for the assessment technique. Alterations to the technique were made in light of more recent information found in James H. Frey's (1989) Survey Research by Telephone. "The Total Design Method (TDM) consists of two parts. The first was to identify each aspect of the survey process that may affect either the quality or quantity of the response and to shape each of them in such a way that the best possible responses was obtained. The second part was to organize the survey efforts so that the design intentions were carried out in complete detail. The first step was guided by a theoretical view about why people respond to questionnaires. It provided the rationale for deciding how each aspect, even seemingly minute ones, should be shaped. The second step was guided by an administrative, the purpose of which was to ensure implementation of the survey in accordance with design intentions (Dillman, 1978, p. 12)."

The respondent's behavior or reaction to the survey was determined to be affected by three major factors. The first of these was the expected rewards the respondent would reap if they did the survey. The researcher had few rewards to offer and the ones that were most at the researcher's disposal were usually intangible. With this in mind it was important to pay attention to all details of the survey method. In general the respondent was rewarded by the researcher showing a positive attitude, verbal appreciation, use of consulting approach, supporting the respondent's values and making the survey interesting. The second concern was that of cost to the respondent. These costs were reduced as much as possible by making the task appear brief, reducing as much physical and mental effort as possible to the respondent, eliminating chances for embarrassment, and eliminating any monetary cost to the respondent. The third factor states that trust must be established between the surveyor and respondent. This trust was facilitated by showing a token of appreciation in advance, identification with a respected organization, and a building of the exchange process during the individual survey (Dillman, 1978, p.18).

Questionnaire

The instrument (See Appendix B for a copy of the instrument) was divided into six sections:

1. Demographic. This included sex of respondent, age, reported family income for last year, type of work done, industry in which worked, and highest grade completed in school.

2. Selected Variables. This included three most likely T.V. shows watched in any given week, three magizines most likely read in a month, three main recreational activities most likely to participate in, main source of information about recreational activities, weither they had ever participated in a high adventure outdoor other than rafting, and, if so, what activity.

3. Identification of Barriers - Variables included perceived barriers to rafting participation. This section was developed using input from four professionals in the field of rafting, one professional in development of instruments (See Appendix C for Jury List) and using the

instruments developed by Edgar L. Jackson in "Activity-Specific Barriers to Recreation Participation" (1983) and Mark S. Searle and Edgar L. Jackson in "Socioeconomic Variations in Perceived Barriers to Recreation Participation Among Would-be Participants" (1985). The items the repondent was asked to repond to in this section included: work commitments, no rivers near me, price of rafting, no one to go with, family commitments, travel expenses, difficulty of making reservations, lack of transportation, rafting is to physically demanding, rafting is too risky, no information on outfitters, do not like water sports, do not swim, want to go go but putting it off, know nothing about rafting, general lack of time, and do not like rivers. This section also included several questions concerned with if the respondent had ever considered going rafting, factors affecting decision not to go white water rafting, and if lack of time for getting information together and making plans for a trip had affected their decision not to go white water rafting.

4. Overcoming Barriers - under factors affecting nonparticipation in instrument. This section was designed to identify methods for overcomeing barriers. This included asking the respondent what would most enourage their participation in rafting and where they had obtained most of their present information about rafting.

5. Reasons for Participating - under rafting information in instrument. If the respondent had been whitewater rafting then the reasons why they participated were addressed in this section. The factors addressed in this section corresponded strongly with those for nonparticipation, although the wording of the actual questions were different, the factors considered were similar.

6. Interest in Rafting. In this section the respondent was asked if they were interested in going rafting in the future and if so, would they like information on rafting in their area.

The first thing to be noted about telephone surveys was that good mail surveys do not make good telephone surveys. The main reason for this was that the method of

communication was verbal instead of visual. In correlation to this, the interviewer was heard, but never seen. The interviewer became an intermediary between the questionnaire and the respondent. This meant that some questionnaire construction requirements could be relaxed, such as the content being sufficiently enticing to serve effectively as the questionnaire's own advocate. This also meant that there was the danger that the interviewer would read the question wrong or make other errors (Dillman, 1978, p. 200).

The telephone survey must was designed to serve three audiences: respondents, interviewers, and coders. Each audience had special needs that could not be dismissed in favor of the questionnaire requirements imposed by the others. Therefore the construction process necessitated an understanding of the problems faced by each audience, where their needs conflicted, and where necessary compromises must be made. This situation was much different from that of the mail questionnaire, in which the needs of the respondent are always deemed paramount (Dillman, 1978, p.201).

It was understood that the respondent may often be called to the telephone unexpectedly and asked to do

something they do not fully understand yet. For this reason they may have immediated feelings of reluctance, anxiety, or even excitement. The respondent may also have been caught in the midst of another activity so that their undivided attention was not given to the interviewer. It was also understood that the respondent relies solely on what is heard to formulate a response. Mispronounced words or any other failure of the respondent to understand the question may have make the inquiry completely incomprehensible. In a mail survey the respondent may reread a question if they do not understand, this was not possible in the telephone survey.

The interviewer's needs were of great importance in light of the fact that they serve as the intermediary between the respondent and instrument. The interviewer was prepared to respond quickly yet concisely to respondent questions in the first few moments of the interview, since it was a crucial time for determining if the interview would be successful. As the interview proceeded, the interviewer found it necessary to simultaneously keep the conversation moving,write answers while mentally preparing to read the next question, avoid long blank spots created by the need to write lengthy answers, listen for changes in mood, hold the receiver and turn the pages of the

questionnaire. Added to this was the fact that the interviewer would usually administer the instrument repeatedly, creating a situation that some found quite exhausting. The result was that not only were interviewer mistakes quite possible, but probable. The questionnaire tried to avoid word combinations that were hard to read, design that required the interviewer to memorize what to do if a certain response was given, design that required frequent turning of pages and irregular placement of questions on page (Dillman, 1978, p.203).

One of the most common problems identified with telephone survey questions was that they are too long. Long questions containing several ideas were known to be prone to being misunderstood and possibly requiring a repeat. The most basic solution was to keep the questions short, but sometimes this was not a viable option. The Total Design Method (TDM) solution when this problem arises was to use the key word summary method. This involved building in redundancy by summarizing the question so the respondents hear the essential parts more than once (Dillman, 1978, p. 205).

Another common problem with telephone survey questions was too many response categories. This could cause two

subproblems. The first was that there might be too many responses for the respondent to remember, which might be overcome with repetition. The second was that the order suggests a feeling from extremely negative to extremely positive. The respondent might become confused over the categories and not be able to "visualize" the implied order. There were three solutions to this problem. The first was reduce the number of categories. The second was to use hypothetical scales. Another solution was the break the question into two parts, the first asking for a direction of feeling and then asking for the degree or intensity of feeling (Dillman, 1978, p.206).

Questions that required ranking created yet another problem. The mail survey coould have facilitated this quite easily, since the respondent mould refer back to the list as often as needed. This was not as easy with the telephone survey. Not only must the respondent remember the list, but they must also remember what order in which they assigned a rank to each item. One solution was to ask the respondent to get a pencil and paper to write the list down on. However, sometimes it was seen that it would be impossible to find the needed pencil and paper immediately. Another solution was to change the question so that it was a two-step process (Dillman, 1978, p. 211).

Items in a series could have presented a problem in the questionnaire. In the mail questionnaire the listing of questions in one column with response categories at the side was known to be sufficient to show the respondent what is to be done. In the telephone survey this information was communicated verbally. The interviewer needed to be sure the response categories were understood and that needless repetition was avoided. A solution to this was to present the first question in full, the next one in abbreviated form with a complete list of response categories, and from that point leave it to the interviewer's discretion (Dillman, 1978, p. 213).

Another consideration was the incorporation of response categories into the actual question. This technique reduced the likelihood of the interviewer doing so in an inconsistent manner and therefore unwittingly changing the nature of the question or being inconsistent among interviews. This also promoted consistency in voice inflection and helped maintain a natural flow in the way questions were asked.

The order in which questions were asked was extremely important to the Total Design Method (TDM). The goal of

ordering was to ease the task of the respondent and to reduce any resistance to participation. The questionnaire started with questions that were central to the topic. Questions were placed in reasonable sets and one question lead logically to the next. All topical questions were listed before those dealing with personal characteristics. Topical questions which might have been objectionable were placed just before those dealing with personal characteristics. Any questions concerning personal characteristics which might be objectionable were positioned last (Dillman, 1978, p. 218).

The first question of the survey was of great importance. If a response could be gained for this question then later termination was unlikely. The first question also had the power to draw the respondents attention away from other concerns, so that they were concentrating more on the survey. The way in which the first question was asked and answered set the tone for the whole survey. The first question involved a series of two rather than one. This question was close-ended, with no more than tree possible responses. The first question was relevant, interesting, and easy to answer. Following the close-ended first question was an open-ended second question. This gave the respondent an opportunity to

express themselves fully and set a pleasant tone for the interview since the respondent could have felt more like their opinion was needed (Dillman, 1978, p.219).

The questionnaire page was constructed so that little was left to chance and it maximized the possibility that all interviewers would administer the survey in the same fashion. Detailed guides for the interviewer were given throughout the instrument. All words and phrases to be read to the respondent every time were typed in lower case letters. Those that were read only occasionally, such as probes, were also typed in lower case letters but placed in parentheses. Everything that was not read to the respondent, such as interviewer instructions, was typed in upper case letters. Questions were structured so that turning of the page was not required between questions (Dillman, 1978. P. 220).

The Introduction

The introduction contained a statement about who was calling, the name of the institution, how the respondents number was obtained, what was needed, why the response was needed, reference to the advance letter, and a conservative estimate of the time the interview would take. Special was

taken in formulating the introduction, since it was at this time that most refusals occur. The introduction provided an opportunity to persuade the respondent that the interview was worth their time. The initial introduction used in the piolit study was found to be too long, so that the finial introduction used for the study was reduced as much as possible while still containing all essential elements.

Interviewer Instructions

The interviewer instructions were placed in the questionnaire so that they were available at all times. All instructions to the interviewer were typed in upper case letters so that they were clearly distinguishable from that which was to be read to the respondent which was in lower case letters. A rule book for interviewers was prepared to help interviewers master the interviewing task. (See Appendix D for a copy of the rule book developed and used.) It was designed to acquaint the interviewer with pre- and post-interview procedures and gave the actual interview schedule. The last four pages of the rule book contained a detailed, step-by-step decription of the questionnaire, paying particular attention to suspected problem areas.

It was expected that respondents would often be interested in knowing more about the study than given in the introduction. It was understood that the response the interviewer gave would determines if respondent would complete the survey. A summary of the expected questions were prepared along with answers that should heve been given in a possible questions book. (See Appendix E for a copy of the "Possible Questions" book.) The interviewer was trained to use the questions book in mock interviews. In addition to this, the "Possible Questions" book also contained a section that gave comments expected by the repondent which they might have said to terminate or refuse the survey. Along with these comments were given reponses that the interviewer might use to encourage the repondent to complete the survey.

It was expected that many interviews would not be completed on the first attempt and might require several call backs. For this reason each Total Design Method (TDM) telephone survey instrument contained a call record on the front page with the introduction. The interviewers were trained to complete the call record in accordance with the rule book.

Coding

The coding of answers for computer analysis followed procedures set forth by Don A. Dillman (1978) in Mail and Telephone Surveys: The Total Design Method.

Each response category was assigned a number that was used to represent it on the within the computer data file. Consistent use of certain numbers to indicate certain responses was used to reduce the possibility of coding errors. In addition to this, lower numbers represented negative responses and higher numbers represented positive responses. For example, for questions requiring a yes or no response, 1 always represented no and 2 always represented yes. The result allowed for quick translation from questionnaire to computer data file for analysis.

The Total Design Method (TDM) for telephone surveys suggested that the response categories, identification of the location in the computer data file that correlated to the question, be placed on the right side of the page. This had two purposes. The first was that, as opposed to mail surveys, the interviewer was less likely to circle the wrong number when it was not further removed from the beginning of the item. The second was that it was easier,

since it required less back and forth movement and the hand was not covering the question.

Also in keeping with design set forth by Dillman, a special screen format was be used. All questions applying to all respondents were typed starting on the standard left margin. Questions that pertained only to respondents replying in a certain way started five spaces from the margin for the preceding question. As a further guide, an arrow was provided between certain responses and the correlating question. Whenever there was a page break between a certain response and the correlating question, written directions as to the next question were provided.

Selection of the Jury

Five jury members were utilized to review the telephone survey. The jury consisted of four professionals in the whitewater rafting industry and at one professional familiar with scholastic research. (See Appendix C for a list of jury members.) The professionals in the white water rafting industry were members of Great Rivers, which is an Eastern organization of rafting companies.

Each jury member was contacted by the investigator

requesting their participation in reviewing the survey. The professionals in white water rafting were contacted by telephone to explain the process and for later development of the survey. The professional familar with scolastic research was contacted through personal interview. Each white water professional jury member was contacted by telephone and given the survey in the same manner as would be expected in the actual interview. Each jury member was also supplied a preliminary written instrument. Feedback was requested and revisions made before finalization of the instrument. The process of reviewing, identifing possible problems, and updating the instrument was completed in several steps which involved at least twelve major updates.

Pretesting of the Instrument

In accordance with The University of Tennessee at Knoxville regulations concerning research involving human subjects, the instrument was certified exempt from review before pretesting. This was completed December 12, 1990. (See Appendix F for cover letter and form.)

The Total Design Method (TDM) required a fairly detailed pretesting procedure. A random sample of 50 persons from

the sample population were used to serve as repondents for the pretest. Immediate revisions were made during the pretesting process. The pretesting period took place under the same conditions as those expected for the actual implementation of the survey between February 18 and 21, 1991. The only diffenences between the pretesting and actual implementation were in the intensity, number of interviewers and length of time worked, and the modified instrument.

Administration of the Instrument

A total of eight interviewers were recruited from the UNiversity of Tennessee at Knoxville students intersted in participating in the research study. The initial intention had been to select interviewers only from recreation and graduate students, but, due to low response rates, the recruitment was opened to all University of Tennessee at Knoxville students through the finiacial aid office. The screening of potential interviewers was based on three criteria, as suggested by the Total Design Method (TDM). The first was the ability to adequately read the questionnaire. The second was the sound of the potential interviewer's voice over the phone. The next criteria was the potential interviewer's ability to respond to questions

from the respondent.

After the interviewers had been selected, they went through an in-training process. This process included operating the telephone, answering respondent questions, completing the call record, editing the completed questionnaire, familiarization with the rule book and questions book, and practice sessions. One major training session was conducted on February 14, 1991 for the majority of the interviewers. The interviewers failing to make this training session were trained upon arrivial.

It was important to consider the best time for the respondent when scheduling the interviews. For this reason calls were made between 6:00 P.M. and 10:00 P.M. on Mondays, Tuesdays, Wednesdays, and Thursdays. A countdown list, suggested by Dillman, of activities that must be completed before administration of the instruments was used to prevent oversight and organizational errors. Countdown activity areas included the drawing of the sample, the facilities and equipment, computer related needs, materials, advance letter, personnel, and other resources. (See Appendix G for a copy of the countdown list.)

It was known that many people would react with suspicion

when contacted by telephone and asked to participate in a survey. For this reason an advance letter was prepared and sent to all potential respondents one week before it was expected for them to be contacted. This was done to eliminate the surprise of the telephone call asking them to do a survey. It was also done to reduce suspicion that the survey was sales gimmick or a joke. The use of the advance letter in Total Design (TDM) telephone surveys had regularly obtained response rates above 90% (Dillman, 1978, p.245).

Statistical Treatment

Descriptive statistics, frequences and percentages were employed on all data collected. Spearman's rank coefficient was used to test the relation between some ranked data. Graphs were used extensively in the reporting of the data for several reasons:

1. The data collected lent itself to descriptive analysis.

2. The questionnaire was constructed in such a manner that insignificant data was not asked of

the respondents. For example, branching within the questionnaire separated persons that had participated and that had not participated in white water rafting.

3. Graphic representations made visual assesment of relationships easy.

CHAPTER IV

DISCUSSION AND ANALYSIS OF THE DATA

The purpose of the study was to identify reasons that prevent individuals from participating in white water rafting in the Eastern United States.

The study was divided into the following sub-problems:

1. To identify demographic characteristics that are common among white water rafting participants and non-participants.

2. To identify barriers preventing individuals from participating in white water rafting.

3. To use data collected from persons that have been rafting to identify barriers to white water rafting.

4. To discover measures that could be taken to promote participation in white water rafting.

Profile of Sample Population

The 615 respondents in this study represented the general population of the Eastern United States. Therefore, it may be helpful to the reader to know more about the sample population to better determine the significance of the data analysis and interpretation. It might also be helpful to remind the reader that the sample population was obtained from a commercial sampling firm (Webb Marketing) and was ordered to fit the criteria of the study. The two main delimitations being: ages between 20 and 65 years of and family income above $25,000 per year.

Sex

Table 1 presents the sex distribution of the sample population. Males definitely make up the larger portion of the sample population. This was not surprising since families often are listed only under the male head-of-household. There was a difference in the total number given in Table 1 (571) and the total number of surveys/respondents (615). This is due to several factors.

Table 1

Sex Distribution

Sex	Number	Percent
Male	415	72.7
Female	156	27.3
Total	571	100.0

1. A small number, nine, surveys were removed from the sample since the information within these surveys was believed to be unreliable.

2. Due to the length of the instrument, a few respondents terminated the interview during the demographic data collection portion. Surveys which contained responses having to do with rafting were retained. This was due to cost of obtaining each survey, limited funds, and the fact that rafting information was the main focus of the study.

3. Some interviewers failed to record a particular item.

Age

The study was limited to those persons between the ages of 20 and 65. The age of respondents was important since it may play an important role in white water rafting. The age distribution of the sample population is presented in Table 2.

Table 2

Age Distribution

Age Range In Years	Number	Percent
20 - 25	45	7.9
26 - 30	98	17.1
31 - 40	189	33.0
41 - 50	124	21.6
51 - 60	56	9.8
61 - 65	61	10.3
Total	573	100.0

The sample contained a larger portion of middle-aged persons. It was attributed to three major factors.

1. Difficulty of obtaining information on younger persons due to likelihood they do not have permanent addresses and phone numbers.

2. Difficulty of contacting younger persons due to lifestyle.

3. Higher refusal rate among older persons, as opposed to middle aged respondents.

Income

The respondents were asked to indicate their reported family income for the last year. The information obtained is presented in Figure 1. There were two interesting facts to note in relation to the reported income data. This is illustrated in Figure 1. First there was a high refusal rate regarding this information (31.1%) in comparison to the response rate for any of the other categories (17.8%). Secondly there was a cluster of people associated in the lower income range.

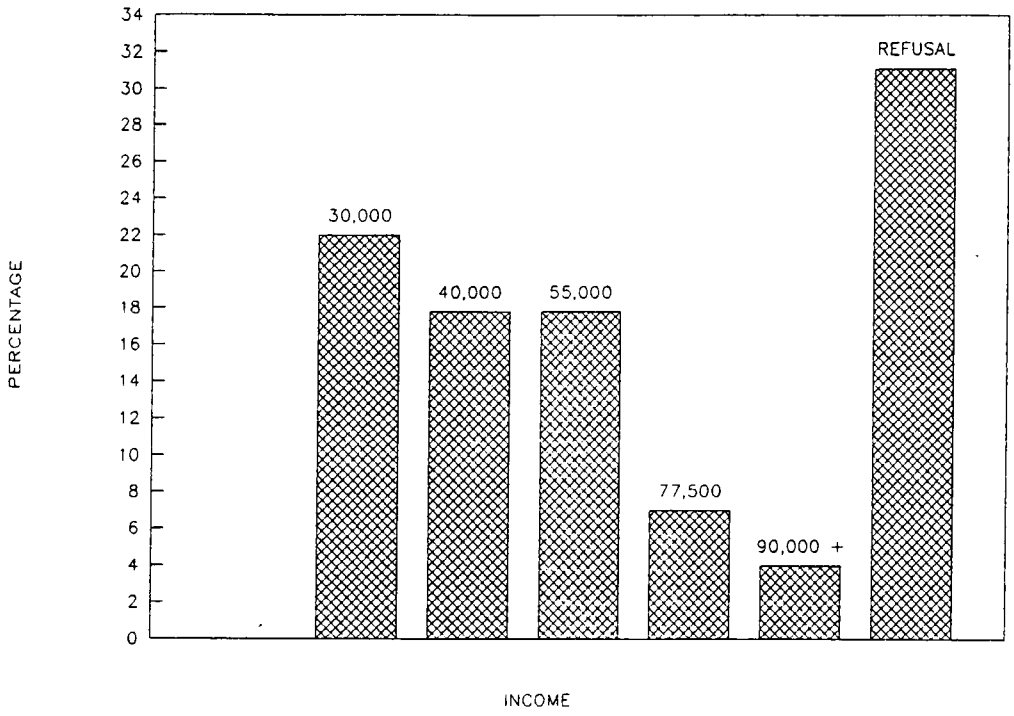

Figure 1. Distribution of income.

Note: Income is given as range averages.
Refusal = Refused to answer question

Education

Respondents were asked for an indication of their level of education. This information is presented in Figure 2. There was a noticeable trend in the sample population towards higher education. The group with the most respondents was that of college graduate (28.4%), followed by post graduate or professional degrees (23.6%), and some college (21.3%).

Type of employment

During the interview respondents were asked to identify one of eleven categories which best described their type of employment. These categories corresponded to those used by the Department of Labor. The information obtained is presented in Table 3. Slightly over a fourth (27.9%) of the population were managers, educators, or professionals, a fifth (20.2%) were technical, sales, or administrative, followed by the categories "operator, fabricator, laborer" (10.5%), and "other" (10.2%).

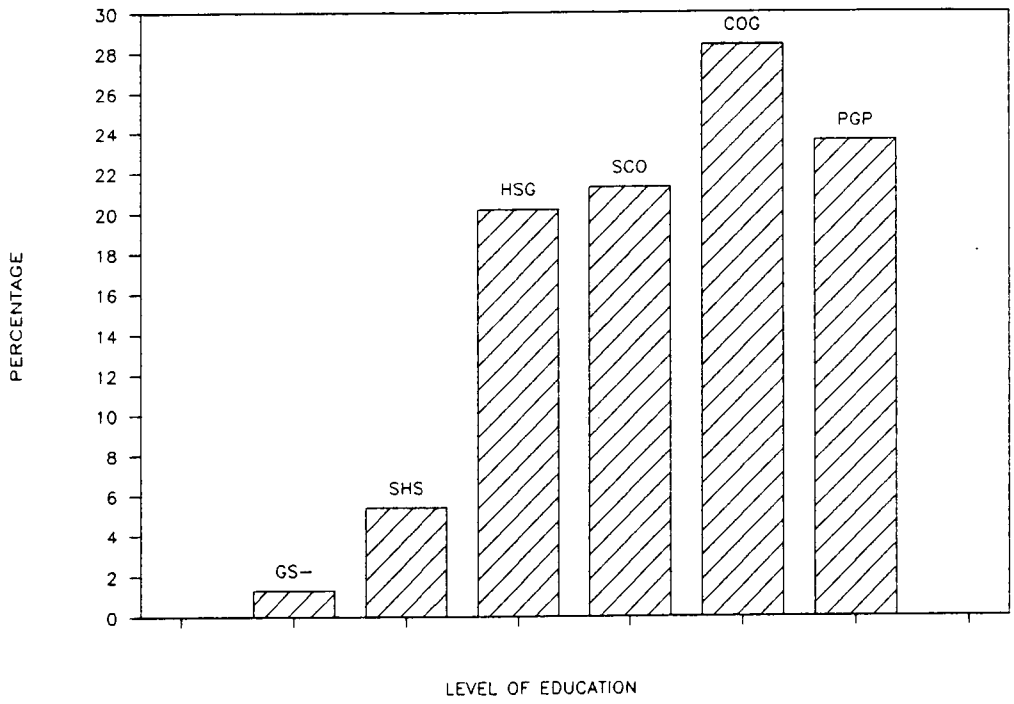

Figure 2. Distribution of level of education.

Note: GS- = Grade school or less
SHS = Some high school
HSG = High school graduate
SCO = Some college
COG = College Graduate
PGP = Post graduate or professional

Table 3

Type of Employment

Type of Employment	Number	Percent
Manager, educator, professional	159	27.9
Technical, sales, administrative	115	20.2
Operator, fabricator, laborer	60	10.5
Other	58	10.2
Retired	49	8.6
Health care	43	7.5
Service	25	4.4
Student	23	4.0
Skilled crafts	18	3.2
Homemaker	11	1.9
Unemployed	7	1.2
Total	568	100.0

Type of industry

In addition to information on employment, respondents were also asked in what type of industry they had last or currently worked. Again, all categories corresponded to those used by the department of Labor. The information obtained is presented in Table 4. The highest response rate fell into the "other" category (32.5%), followed by "financial and service" (14.8%), "government" (13.9%), "wholesale and retail" (13.1%), "transportation and communication" (12.7%), and all other categories had less than a six percent response rate.

Characteristics of Sample Population

During the survey the respondents were asked a series of open ended questions in an effort to better define the sample. These questions were designed to delimitate those respondents that may have potential barriers to rafting. The characteristics explored in this survey included: (a) T.V. shows regularly watched, (b) magazines regularly read, (c) recreational activity participation, (d) source of information on recreational activities, and (e) involvement in high adventure outdoor activities besides rafting.

Table 4

Type of Industry

Type of Industry	Number	Percent
Other	184	32.5
Financial, service	84	14.8
Government	79	13.9
Wholesale, retail	74	13.1
Transportation, communication	72	12.7
Construction	30	5.3
Manufacturing	18	3.2
Agriculture, forestry, fishing	15	2.6
Electric, gas, sanitation	10	1.8
Mining	1	0.2
Total	567	100.0

T.V. shows

The respondents were asked to identify the three T.V. shows they were most likely to watch in any given week. The responses were reviewed and placed in one of nine categories. These included movies, comedy, news and informative, adventure such as detective shows, soaps, sports, old reruns, and no response. A summary of the results are graphically represented in Figure 3. About a fifth (19.5%) of the respondents indicated a news interest in their viewing pattern.

Magazines read

The respondents were asked what three magazines they were most likely to be read in any given month. The categories used were general/popular such as People or Better Homes and Gardens, news related, hunting and fishing, sports, professional, hobbies, outdoor recreation, and no response. A summary of the results is presented in Figure 4.

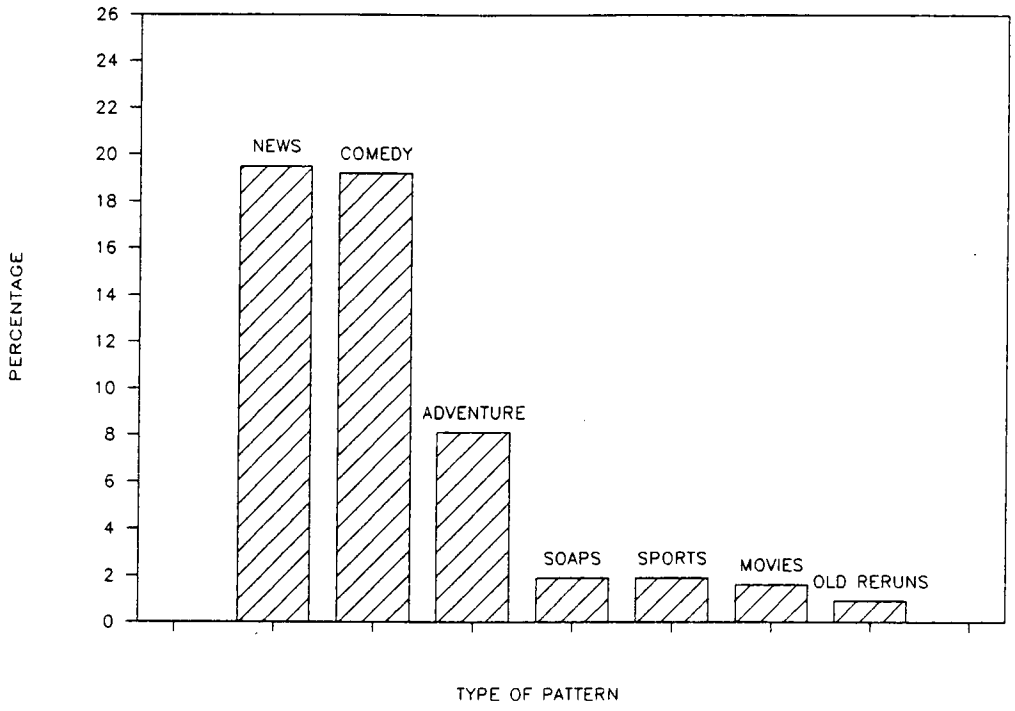

Figure 3. Distribution of Patterns of T.V. Shows Watched.

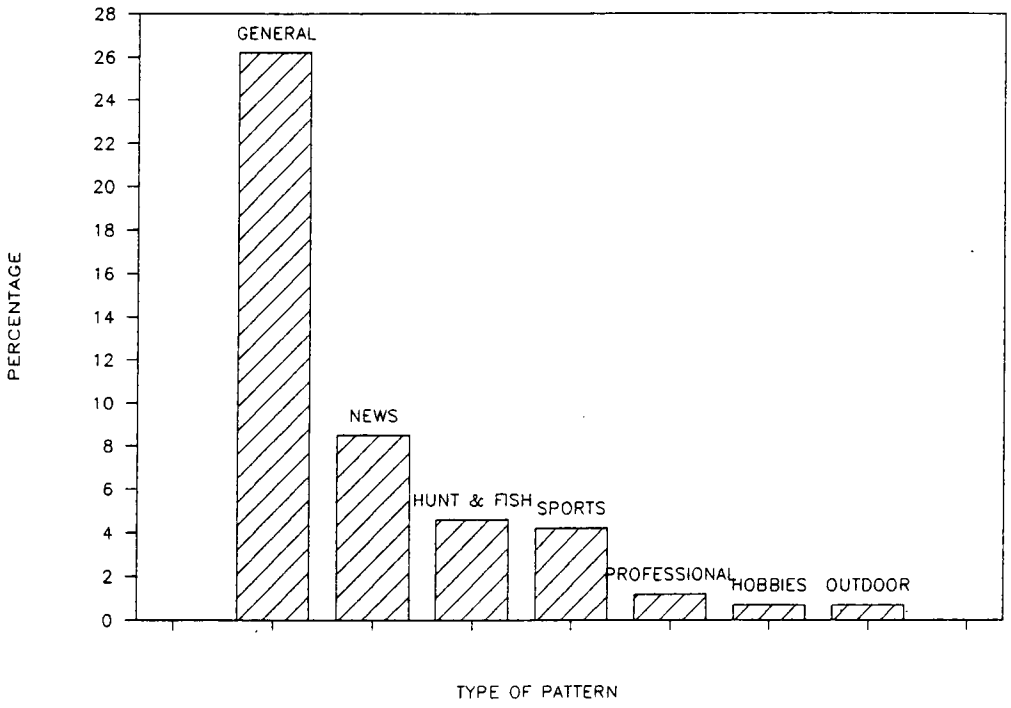

Figure 4. Distribution of Patterns of magazines read.

Recreational activity participation

One of the more important characteristics explored was the types of recreational activities in which the respondent was most likely to participate. The respondent was asked for the three recreational activities in which they were most likely to participate on a regular basis. The categories used included outdoor recreational activity, team sports, individual sports such as bowling, hunting and fishing, health club participation, health and fitness and no response. A summary of the results graphically represented in Figure 5. (See Appendix H for actual frequencies and percentages.)

A fifth (21.7%) of the respondents indicated they participated in some kind of outdoor recreation. Between a seventh and a tenth indicated their recreational activity was centered around health and fitness (12.3%) and team sports (10.0%). Health and fitness was defined as different from health club participation due to the social element and implied intensity of use of health clubs. About a fourth (25.7%) of the respondents did not show a strong pattern of recreational activity participation.

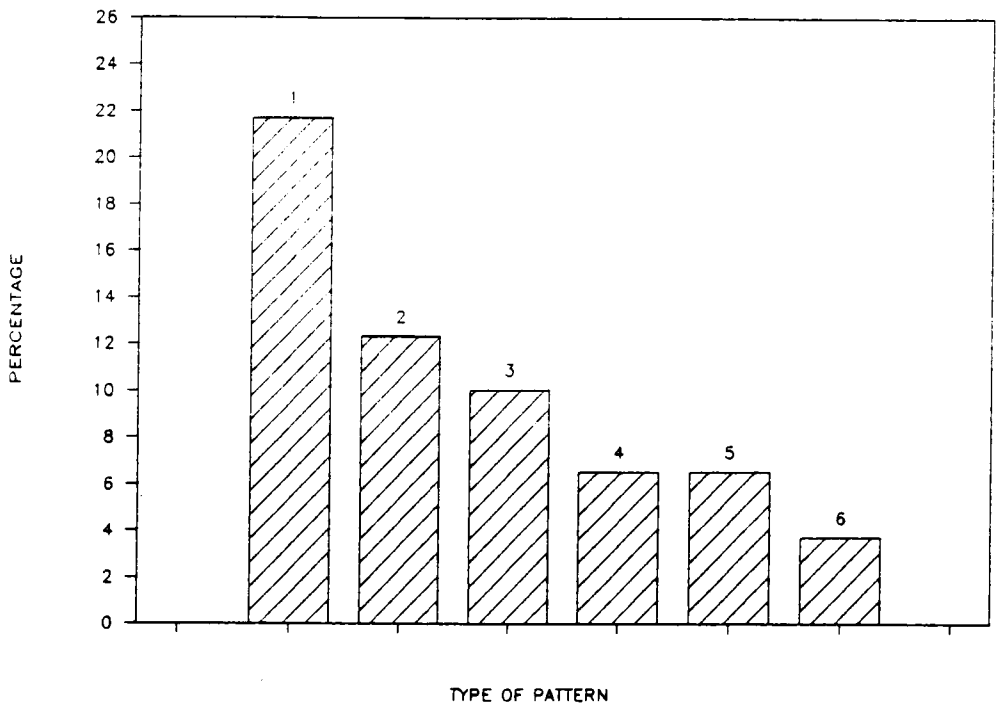

Figure 5. Patterns of recreational participation.

Note:

1 = Outdoor
2 = Health and fitness
3 = Team sports
4 = Health club
5 = Individual sports
6 = Hunt and fish

Main source of information on recreational activities

The respondents were asked to identify their main source of information on recreational activities. These were put into one of eight descriptive categories. The categories included: (a) verbal/friends, (b) magazines, (c) T.V., news paper, (d) organizations such as Y.M.C.A. or outing club, (e) work contacts, (f) reading books, and (g) no response. A summary of the results are presented graphically representation in Figure 6.

A fifth (22.9%) of the respondents indicated that they received most of their information on recreational activities from friends or verbal information. Other sources affecting more than a tenth of the population included: magazines (16.7%), T.V. (14.5%), and newspaper (13.0%). The remaining sources affected less than eight percent of the population.

Participation in high adventure outdoor activities

The respondents were asked if they had ever participated in a high adventure outdoor activity other than rafting. Most reported that they had not (59.4%). The remainder (40.6%) reported that they had participated

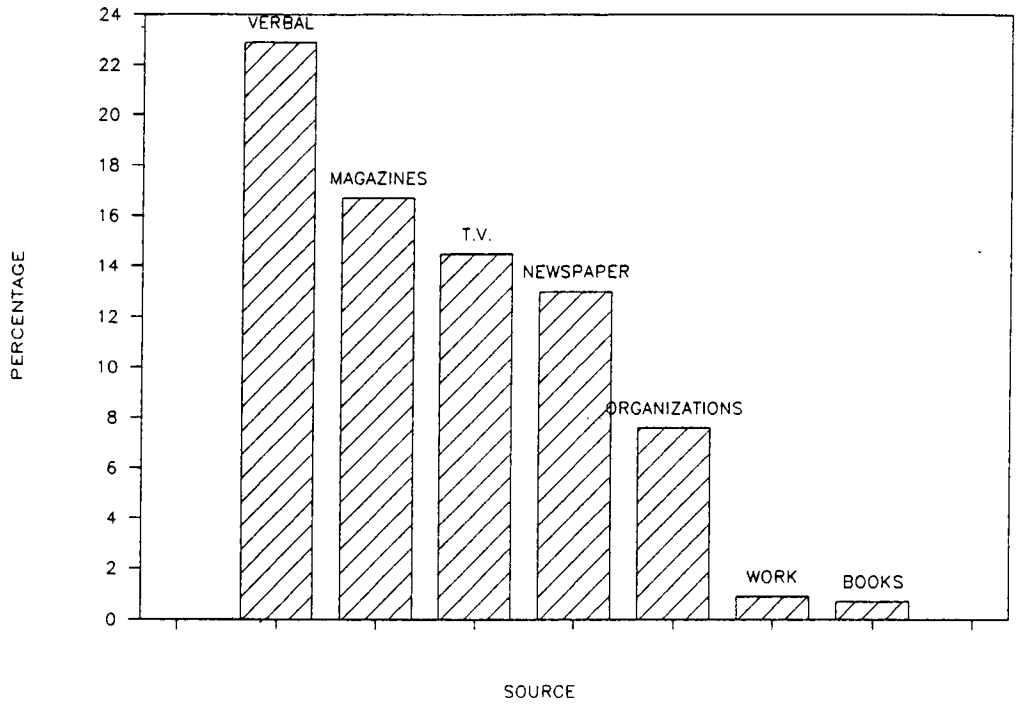

Figure 6. Sources of recreational information.

in some activity fitting the above description. These results are presented in Table 5.

If the respondent had participated in some high adventure outdoor activity, then they were asked to identify the activity. These included: (a) skiing (snow) (17.7%), (b) climbing (16.4%), (c) hiking (15.5%), (d) hunting and fishing (15.0%), (e) camping (14.4%), (f) air sports such as hang gliding or parachuting (10.5%), (g) sea sports such as surfing and sailing (7.3%), (h) caving (4.1%), and (i) no response (2.3%) A summary of the results are graphically represented in Figure 7.

Table 5

Participation in High Adventure Activities

Response	Number	Percentage
No	331	59.4
Yes	226	40.6
Total	556	100.0

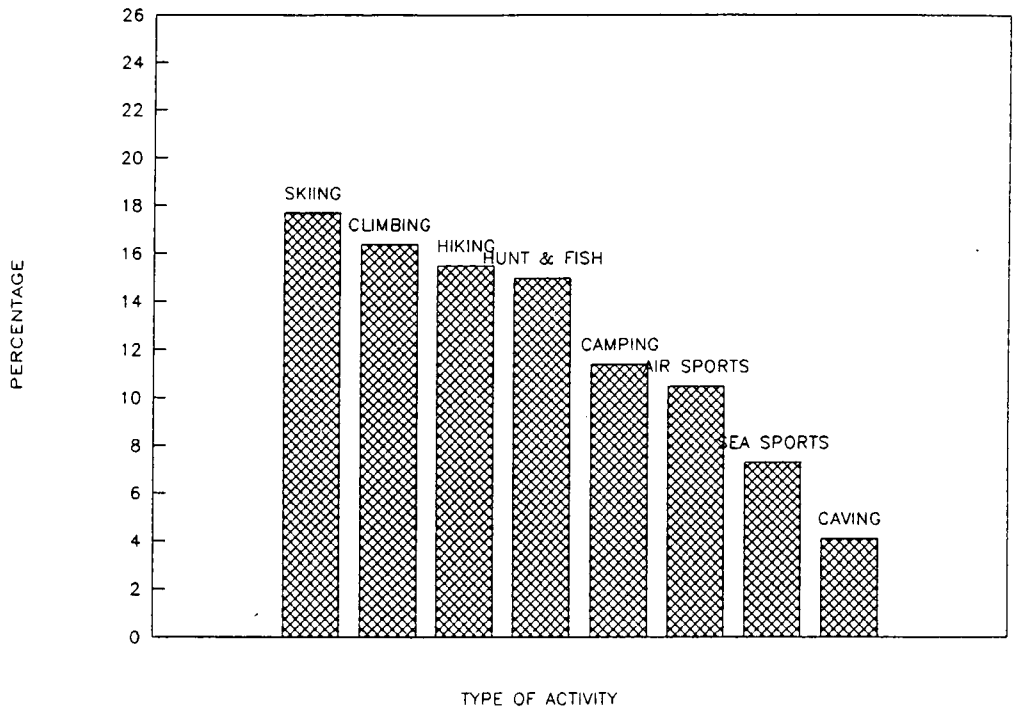

Figure 7. Distribution of types of high adventure outdoor activities participated in by respondents.

Initial Rafting Information

This section was extremely important for several reasons. The first was that it provided the criterion for "dividing" the sample population so that inappropriate questions were not asked of the respondent. The second is that it provides information on the percent of the general population that has been rafting. To date there has been very little information of this type produced. This was recognized during the literature search for this research.

Knowledge of rafting

Each respondent was asked if they could define white water rafting. Over three-fourths (78.5%) of the respondents reported that they could define white water rafting and a surprising 20 percent did not know what white water rafting was. A summary of these results are presented in Table 6. (See Appendix I for a sample.) It could easily be assumed that the major barrier for this population was an extreme lack of knowledge.

Participation in white water rafting

As indicated in the introduction, it was important to

Table 6

Ability to Define White Water Rafting

Ability to define	Number	Percent
Could not	123	20.0
Could	483	78.5
Total	615[a]	98.5[a]

[a] Nine surveys (1.5%) were removed from sample due to interviewer report that information was unreliable.

discover the percentage of the general population that had or had not been white water rafting. A large majority (82.6%) of the persons surveyed indicated that they had not been white water rafting. This includes the persons (20%) responding that they did not know what white water rafting was. The remaining respondents (17.4%) had, at some time in their life, reportedly been white water rafting. A graphic representation of this data is presented in Table 7. On the most basic level, this data shows that 80 percent of the population are still potential white water participants.

Table 7

Participation in White Water Rafting

Participation Status	Number	Percentage
Had been	106	17.4
Had not been	502	82.6
Total	608	100.0

Non-participation

The respondents that had not been white water rafting and were able to define white water rafting were asked to respond to a series of questions designed to identify barriers to white water rafting participation.

Factors affecting non-participation

The respondents were asked to respond to a series of eighteen factors that might have affected their decision not to go white water rafting. Over half (53.5%) of the respondents indicated that a general lack of time had affected their decision not to go white water rafting. This supports the findings of the research done by the National Recreation and Parks Association (1984, p.12). Slightly less than half (38.9%) indicating that they had no

white water rivers near them as a factor. Over a third (36.5%) indicated that work commitments had affected the decision and slightly less than a third indicated that rafting was not appealing (31.0%) and rafting was too risky (39.6%). Work commitments also figured predominantly as a barrier in the work done by Jackson (1983).

Lack of transportation was of least concern as a factor preventing people from going white water rafting with less than three percent (2.9%) of the population indicating it was a concern. Other categories affecting less than a tenth of the population were dislike for rivers (3.2%) and difficulty in making reservations (9.0%). A graphical representation of this information is presented in Figure 8. (See Appendix J for a complete list of associated frequencies and percentages.)

One of the more interesting points that can be drawn from this data is that slightly less than a third of the persons that had not been white water rafting simply did not find the activity appealing to them. It could be assumed that this third of the population would be difficult to encourage to participate in white water rafting. Another interesting point is that difficulty of making reservations did figure predominantly as a barrier.

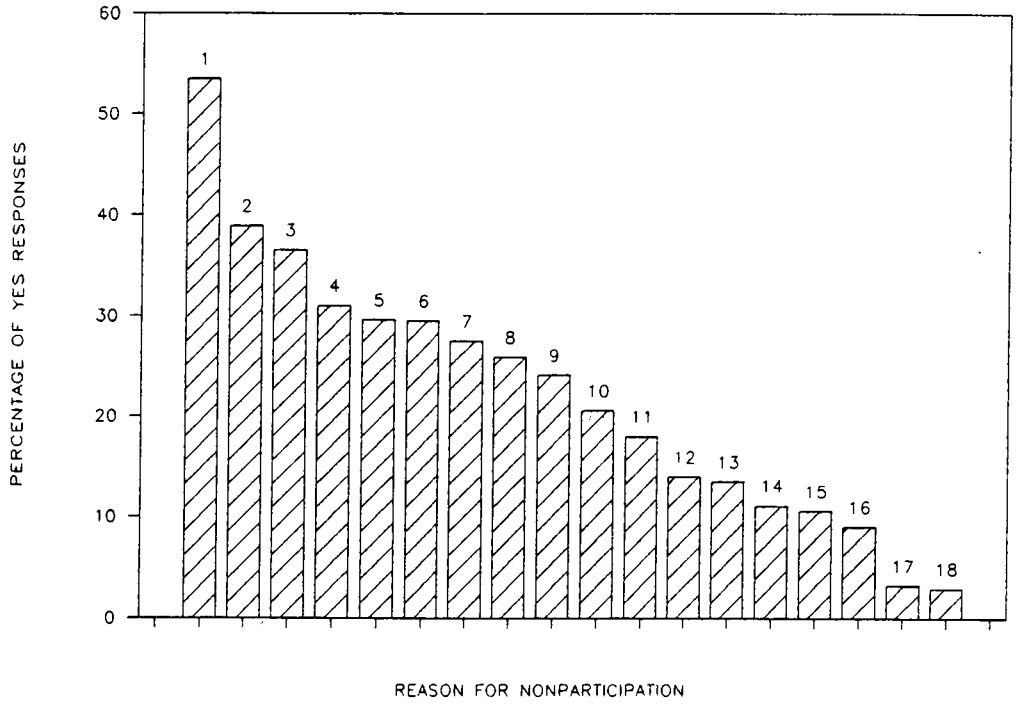

Figure 8. Reasons for non-participation in white water rafting.

Note: Legend given below.

1 = General lack of time	10 = Travel expenses
2 = No rivers near me	11 = Physically demanding
3 = Work commitments	12 = Price
4 = Just not appealing	13 = No one to go with
5 = Rafting is too risky	14 = Do not swim
6 = Putting it off	15 = Not like water sports
7 = Family commitments	16 = Making reservations
8 = Know nothing of rafting	17 = Do not like rivers
9 = No information	18 = Lack of transportation

It could be deducted that efforts in this area are adequate.

Consideration of going rafting

The respondents were asked a series of three questions directed towards their willingness to pursue any interest in rafting. First they were asked if they had ever considered going rafting. Almost half (52%) of the population had considered going white water rafting. If the respondent stated they had considered going white water rafting, they were asked if they had ever obtained any information on the subject. Slightly over a third (36.0%) of the persons that had considered going white water rafting had obtained any information on the subject. Of the respondents that had obtained information on the subject, about an eighth (12.5%) indicated that the information they obtained had affected their decision not to go white water rafting. (See Appendix K for actual frequencies and percentages for each question.)

It was evident that as more effort was required in the process of preparing to go white water rafting, i.e. actually getting information, less people pursued the endeavor. It is also evident that information, or lack of

information, on white water rafting did not affect their decision not to go white water rafting.

Decision not to go rafting

The respondents were asked to indicate how strongly certain factors had affected their decision not to go white water rafting. These factors included: (a) friends to go with, (b) difficulty of planning, (c) the risk of the activity, (d) time considerations, and (e) did not want to go. A summary of the results is presented in Table 8.

The majority (55%) of the respondents indicated that time considerations had affected their decision not to go rafting. A third (32%) of the population indicated they had no desire to go rafting. Slightly less than a third stated that difficulty of planning (29%) and the risk of the activity (28%) had affected their decision not to go rafting. Friends (17%) least affected the respondents' decision not to go rafting. A graphic representation of this information is presented in Figure 9. This data supports the findings of earlier questions.

Table 8

Factors Affecting Decision Not to Go Rafting

Factor	Did Not		Very Little		Somewhat		Strongly	
	#	%	#	%	#	%	#	%
Friends	257	67	57	15	20	05	45	12
Planning	224	59	42	11	59	16	49	13
Risk	209	55	56	15	36	09	73	19
Time	135	36	31	08	88	23	120	32
No Desire	159	56	29	10	29	10	63	22

Note: Percentages are rounded to the nearest whole number.

Source of rafting knowledge

The respondents were asked to identify the source(s) of information they received on white water rafting. In rank order sources of information identified by respondents included friends / verbal (46.8%), T.V. (40.3%), magazines (33.6%), advertisements (21.3%), movies (8.8%), rafting companies (5.5%), and then books (2.7%). This information is graphically presented in Figure 10. From this it is easy to see that verbal information is the most important for spreading knowledge to the general public and that

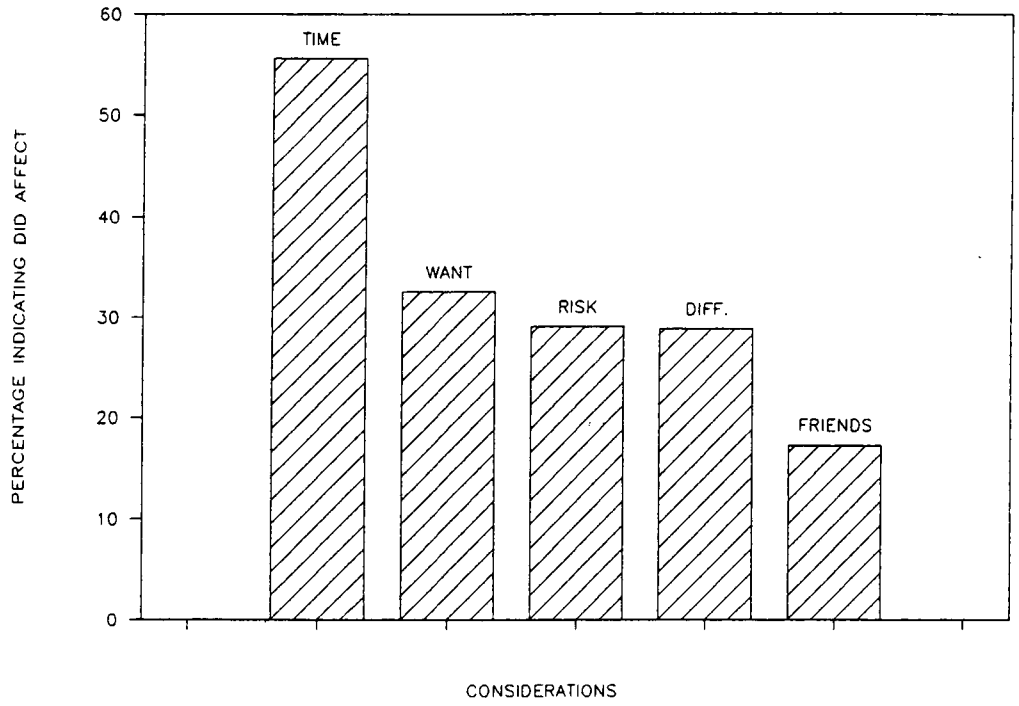

Figure 9. Indications that considerations did affect decision not to go white water rafting.

Note: Includes both "somewhat affected and strongly affected.

Time = Time considerations
Want = Did not want to go
Risk = Risk of the activity
Diff. = Difficulty of planning
Friends = Friends to go with

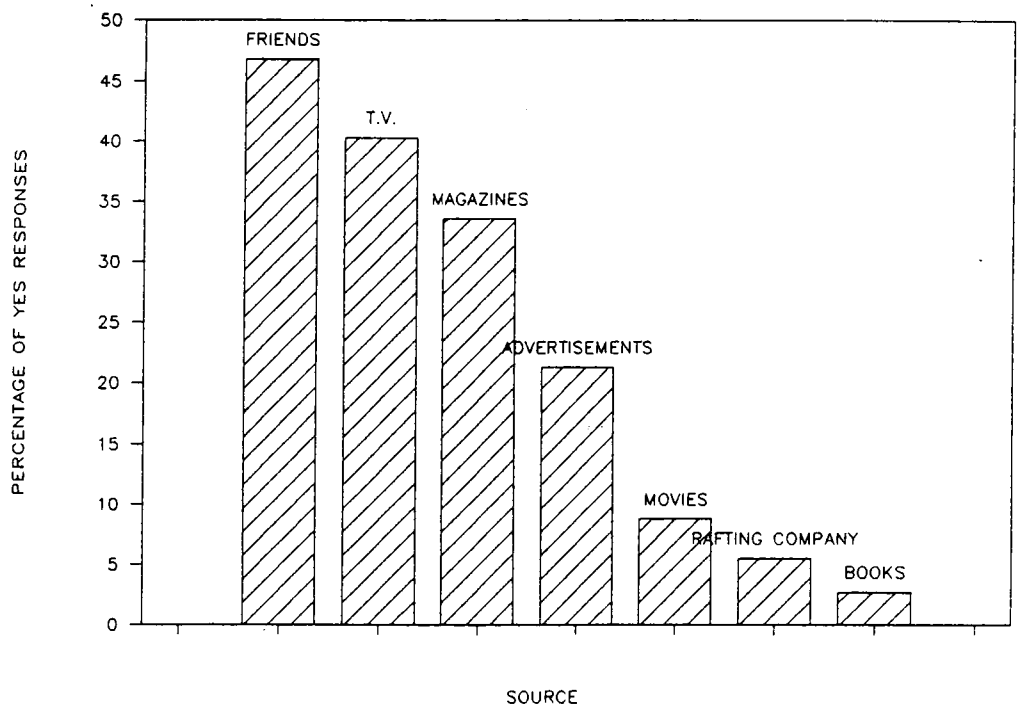

Figure 10. Source(s) of rafting knowledge.

magazines may serve are the most affective media, that is easily usable, for spreading information on an activity.

Factor to encourage participation

The respondents were asked what would be the one thing which would most encourage them to go rafting. The responses were placed in one of nine categories. The first (adventure) category included all responses which included some reference to adventure or excitement. The second category (agency) included some mention of factors that could be affected by the agencies offering the service. Examples of this included easier methods for making reservations and decreasing cost. The third (fun) category included all responses making reference to fun. The fourth (different) included responses indicating a desire for something different to do.

The sixth (nothing) category included responses that indicated that there was nothing that would encourage them to go rafting. The seventh (vicinity) included responses that indicated either the experience would be part of a vacation in an area with rafting available or that they just happened to be in the vicinity where rafting was provided. The eighth (company) included all responses

indicating that being with a group or someone to go with was needed. The ninth (family) category included those were some mention of family was made. The results are graphically represented in Figure 11. (See Appendix L for actual frequencies and percentages.)

The greatest number of respondents indicated that a desire for adventure or excitement (23.4%) would be the one thing that would most encourage them to go rafting. This was followed by someone to go with (company) (17.4%). A portion of the respondents indicated that there was nothing that could encourage them to go rafting (14.4%). A desire for fun (11.4%) and factors under the agency's control (10.1%) would encourage about a tenth of the respondents. All other response categories received response rates below ten percent.

Participation

Those respondents that had been white water rafting were asked to identify what had attracted them to the activity, what they liked or disliked about the experience, and what barriers might have been present in making the decision to go. It is important to remember that all information in

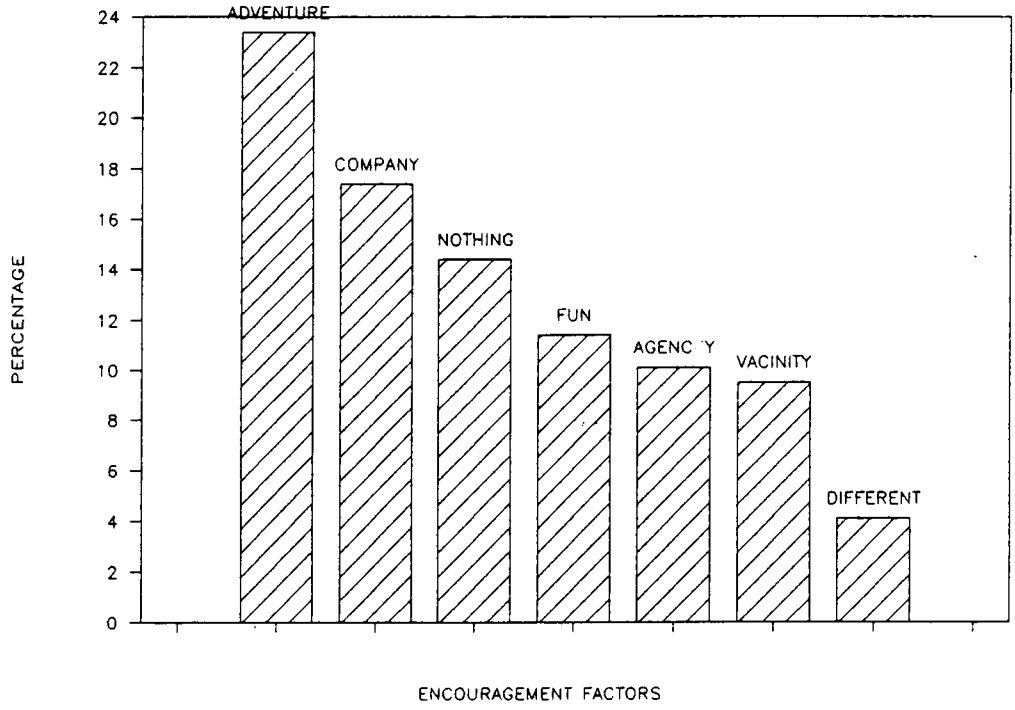

Figure 11. Factors that might encourage respondents to go white water rafting.

this section is based on the persons identified in the survey that had been white water rafting which is less than a fifth (17.4%) of the entire sample.

Initial information

Each of the respondents were asked two initial questions. First, if they had enjoyed going white water rafting and secondly if they would consider organizing a trip. The second question was considered important as a measure of their enjoyment since if they enjoyed the experience then they would be willing to expend extra effort to go again. It was also important in identifying how many of the people that do go rafting might be expected to actually encourage others to go.

The majority (82.7%) of the respondents indicated that they had enjoyed their rafting experience while a small number (4.8%) stated that they did not enjoy the experience. About a eighth (12.5%) somewhat enjoyed the experience. A summary of this data is presented in Table 9. From the large portion of the population reporting that they enjoyed the experience, it can be deducted that enjoyment of the experience does not act as a barrier.

Table 9

Enjoyment of Rafting Experience

Category	Number	Percentage
Did not enjoy	5	4.8
Some what enjoyed	13	12.5
Did enjoy	86	82.7
Total	106	100,0

The respondents that enjoyed their rafting experience were then asked if they would consider organizing a trip. The responses were closely balanced with a slight majority indicating that they would not organize a trip (51.0%). Less than half indicated that they would consider organizing a trip (40.2%). A small percentage (7.8%) indicated that they might or that they did not know. A summary of this information is presented in Table 10. Since over a third of the participants would consider organizing a trip, encourage for them to do so might help overcome at least two barriers.

1. It could possibly increase verbal passage of information and therefore decrease lack of information as a barrier.

2. It could help decrease barriers associated with lack of time if one person took responsibility for making plans for a group.

Initial interest

The respondents were asked to indicate how strongly each of eleven factors had affected their decision to go white water rafting. (See Appendix M for actual frequencies and percentages.)

The four factors that most affected the decision to go white water rafting were: (a) wanted to be outside (64.8%), (b) wanted adventure (62.9%), (c) work related, and (d) friends going" (60.6%). A small portion (17.1%) went white water rafting after reading about it. All other factors affected the respondents' initial interest even less than reading about it. A graphic representation of factors affecting the respondents decision to go white water rafting is presented in Figure 12. In consideration of rank order for factors affecting and not affecting initial interest in rafting there is a significant difference (Spearman's rank correlation coefficient = -.6545, alpha = .01)

Table 10

Consideration of Organizing a Rafting Trip

Category	Number	Percentage
Would not organize	52	51.5
Might organize	8	7.9
Would organize	41	40.6
Total	101	100.0

The four factors that lest affected the respondent's decision to go white water rafting were "work related trip" (82.9%), "school trip" (81.9%), "church trip" (78.1%), and "any other group function" (66.7%). It is interesting to note that all of these involve a pre-existing group. Other responses included "advertisements" (54.1%), "read about it" (52.4%), and "saw it on T.V. and movies" (49.0%).

Main reason for going

The respondents were also asked what was their primary reason for going white water rafting. The responses were placed in one of seven categories. The categories included: (a) adventure, (b) friends, (c) to be outside (outside), (d) to do something different (different), (e) for fun (fun), (f) given the trip (given), and (g) no

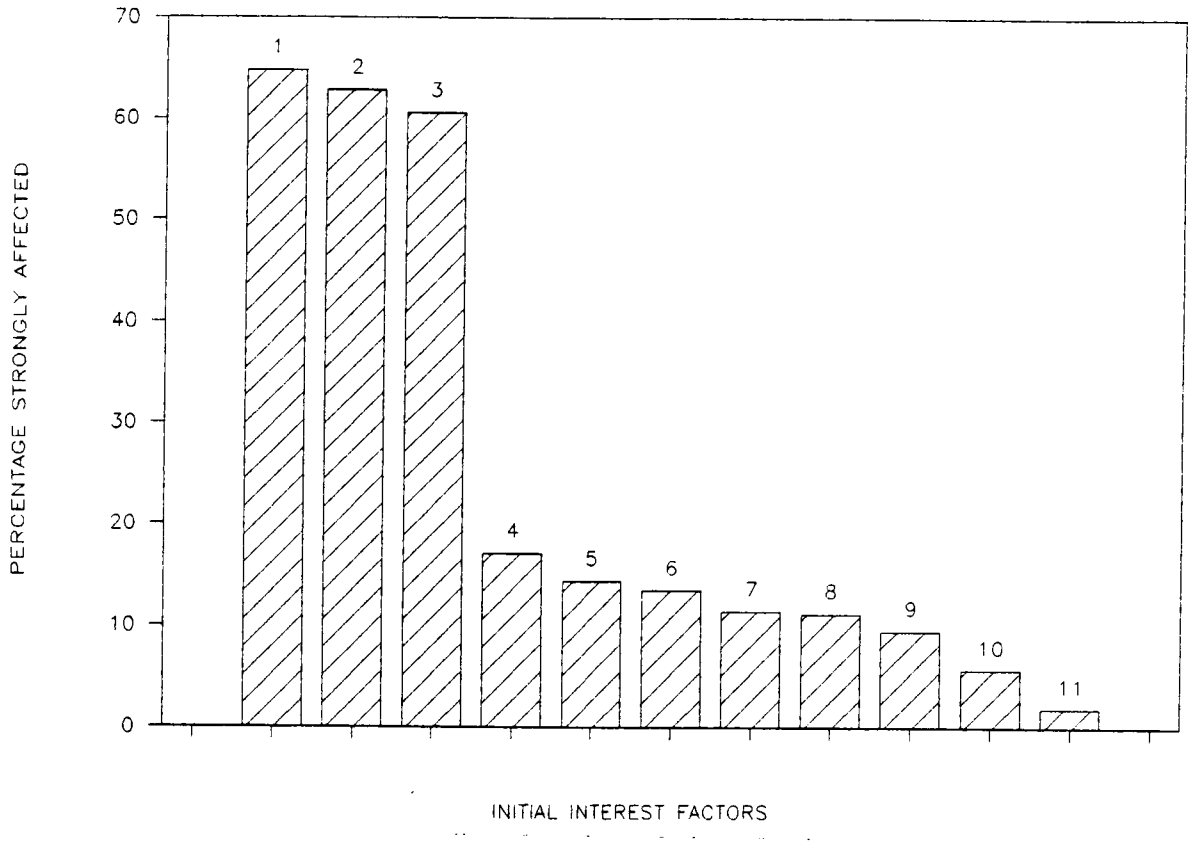

Figure 12. Factors that strongly affected their initial decision to go rafting.

Note:

Legend

1 = To be outside
2 = For adventure
3 = Friends going
4 = Read about it
5 = Any other group going
6 = Saw it on T.V. or movie
7 = Church trip
8 = Advertisements
9 = Work related trip
10 = School trip
11 = Someone else planned
12 = Lack of transportation

response.

Adventure was a predominant reason for going rafting (28.8%). This was followed closely by some influence of friends (26.0%), a desire for fun (17.3%), wanting to be outside (14.4%), and something different to do (10.6%). A summary of the results are resented in Table 11.

Time since first and last rafting trip

It might be useful at this point to remind the reader that about a fifth (17.4%) of the total sample population indicated that they had been white water rafting. Each of these respondents were asked how many years ago they had gone on their first rafting trip. The vast majority (73.3%) had initially gone over four years ago. A small (7.6%) number had been within the last year. A summary of this information is presented in Table 12.

All respondents that had not gone on their first rafting trip within the last year were asked how many years ago they had gone on their last white water trip. The majority (41.4%) had gone four or more years ago and equal numbers had gone on their last white water trip less than a year ago (24.1%) or between one and two years ago

Table 11

Main Reason for Going Rafting

Category	Number	Percentage
Adventure	30	28.8
Friends	27	26.0
Fun	18	17.3
Outside	15	14.4
Different	11	10.6
Given	1	1.0
No response	2	1.9
Total	368	100.0

Table 12

Years Since First Rafting Trip

Years	Number	Percentage
Less than 1	8	7.6
1 to 2	11	10.5
More than 2; less than 4	9	8.6
4 or more	77	73.3
Totals	105	100.0

(24.1%). A small number (10.3%) said that their last trip had been more than two years ago and less than four years ago. This data is presented in Table 13.

After looking at these two sets of data, it was evident that the large majority of the respondents had gone on their first and last rafting trip over four years ago. Further examination reveals that the remainder continued to go rafting on a fairly regular basis.

The respondents that had gone on their first rafting trip more than a year ago were asked how many times they had been white water rafting. A third (34.4%) had gone only once. Almost a third (32.8%) had gone four or more times. A fifth (20.3%) had been rafting twice and a little more than a tenth (12.5%) had been three times. From this information it was summarized that people either were interested in rafting and continued to go or went once just as a novelty. This information is also presented in Table 14.

Reasons for not recently going white water rafting

All respondents that had not been rafting within the last year were asked what factors prevented them from going

Table 13

Number of Years Since Last Rafting Trip

Years	Number	Percent
Less than 1	21	24.1
1 to 2	21	24.1
2 to 4	9	10.3
4 or more	36	41.4
Total	87	100.0

Table 14

Number of Times Gone Rafting

Number of times	Number	Percent
1	22	34.4
2	13	20.3
3	8	12.5
4	21	32.8
Total	64	100.0

white water rafting. Almost half (49.4%) the respondents indicated procrastination had prevented from recently going rafting. Just under half of the respondents had been affected by work commitments (40.2%) and family commitments (39.0%). The closeness of white water rivers had affected under a third (28.0%) of the respondents. (See Appendix N for complete list of frequencies and percentages for all factors.) A graphic representation of the results is presented in Figure 13.

Desire to go Rafting

Each of the respondents were asked if they were interested in going rafting in the future. Over half (53.4%) of all respondents stated that they had no desire to go rafting in the future and the remaining portion (46.6%) were favorable towards future rafting experiences. The respondents were also asked if they would like to receive information on rafting in their area. The majority (63.7%) said that they did not want the information while 36.3% said that they would like to receive the information. A summary of these results are presented in Table 15 and 16, respectively.

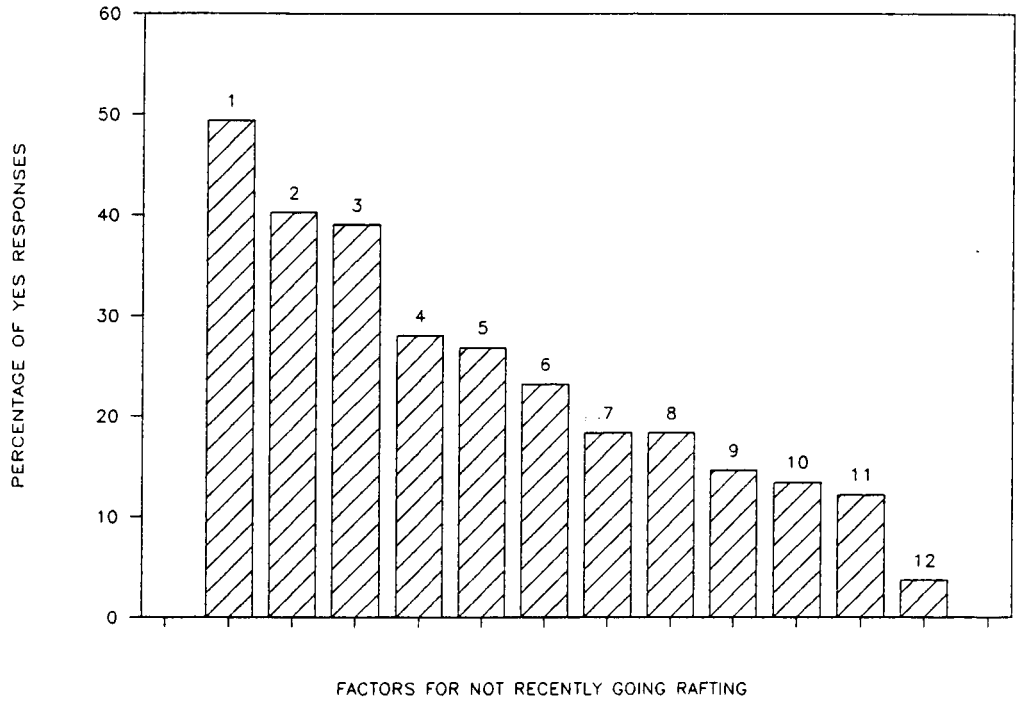

Figure 13. Factors affecting recent rafting participation.

Note:
1 = Putting it off
2 = Work commitments
3 = Family commitments
4 = No rivers near me
5 = No one to go with
6 = Price of rafting
7 = Rafting is physically demanding
8 = Travel expenses
9 = Too risky
10 = Just not appealing
11 = No information
12 = Lack of transportation

Table 15

Desire to Go Rafting in Future

Response	Number	Percentage
No	303	53.4
Yes	226	40.6
Total	567	100.0

Selected Factors and Rafting Participation

Several factors were explored for their influence on rafting participation. Many of the factors asked for in the characteristics section of the instrument did not show raw frequencies sufficient to warrant further examination.

Table 14

Desire to Receive Information on Rafting

Response	Number	Percentage
No	358	63.7
Yes	204	36.3
Total	562	100.0

These included: (a) T.V. shows watched, (b) magazines read, (c) recreational activities, and (c) main source of recreational information. The same held true for some of the demographic data: (a) type of employment, (b) industry worked in, and (c) sex. Several facts may be helpful in understanding why the frequencies of these factors did not seem sufficient.

1. Small sample size.

2. Lack of indication of strong patterns in some characteristics.

3. Data asked for was not conducive to this type of analysis.

The data obtained was particularly useful for two major reasons.

1. Although much information has been obtained on the rafting population and the general population, the literature search did not reveal instances where this had been done in relation to each.

2. The relationships give indications and help identify barriers to white water rafting.

Age

The frequencies and percentages of each age range and whether or not they had been rafting before was calculated. Most of the respondents, over three-fourths, that had been rafting were between the ages of 26 and 40 (75.38%). There was a drastic decrease in the percentage of people that had been rafting in the later ages. A graphic representation of this information is presented in Figure 14. (Appendix L for actual frequencies and percentages.) One could assume that age acts as a barrier in one of two ways:

1. White water rafting was not commonly done during older persons' youth.
2. Older persons had barriers to white water rafting associated with their age.

Income

The frequencies and percentages for each income range and whether or not the respondent had been rafting was calculated. As mentioned before the sample population had

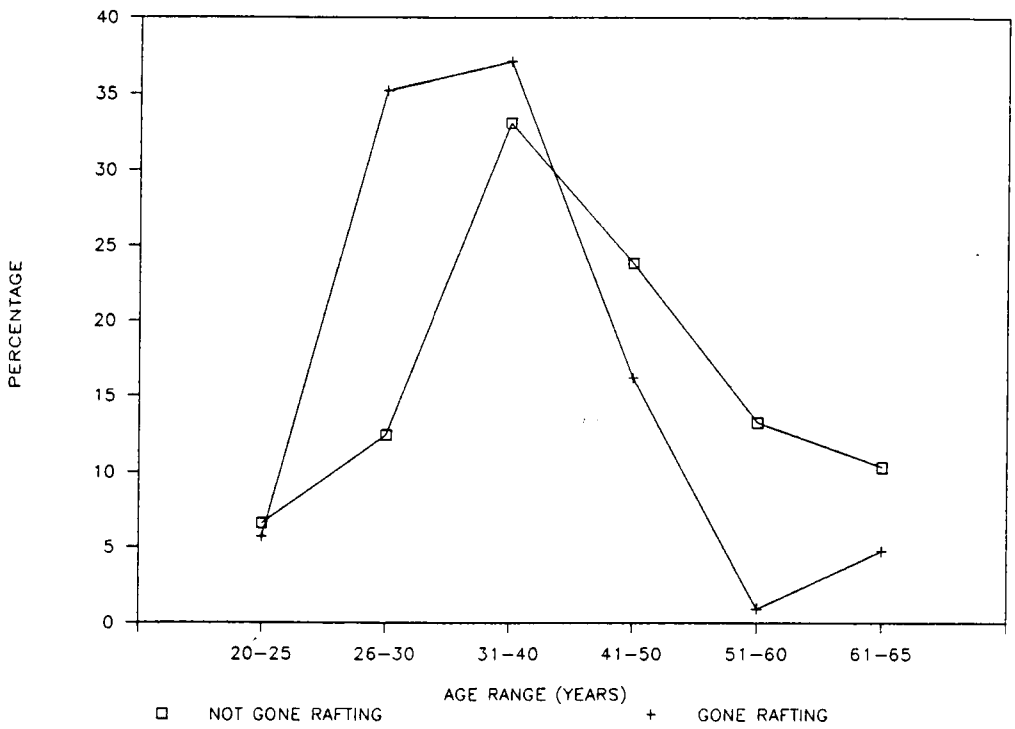

Figure 14. Age and participation in white water rafting.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

tended towards lower incomes. Of the respondents that had been rafting over a fourth (26.7%) had yearly family incomes between $25,000 and $35,000. About a third (34.3%) yearly incomes between $35,000 and $65,000. Less than a third (19.1%) of the persons that had gone rafting had yearly incomes above $65,000. This information is graphically presented in Figure 15. (See Appendix P for actual frequencies and percentages.) It is evident that there was a tendency for persons with lower incomes in our sample to participate in white water rafting. This might well be associated with the younger population also associated with the sport.

Education

Probably some of the most conclusive data was found when a comparison of level of education and participation in white water rafting was made. The sample population tended towards higher levels of education. The vast majority (85.4%) of the persons that had been rafting had education levels above that of high school graduate. A graphic representation of this information is presented in Figure 16. (See Appendix Q for actual frequencies and percentages.)

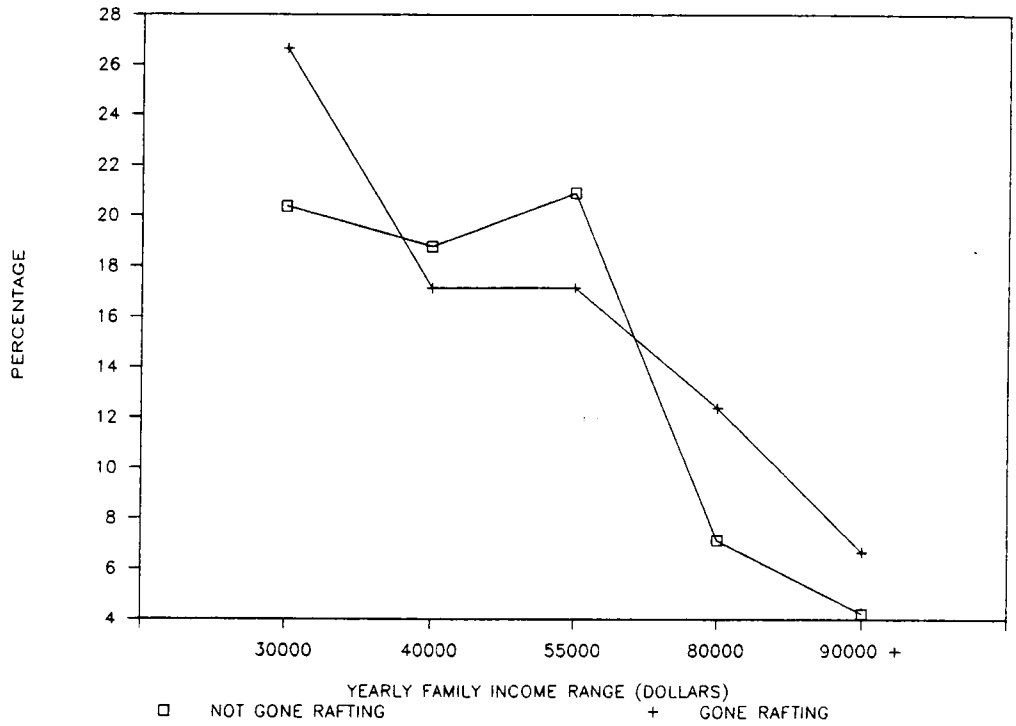

Figure 15. Income and participation in white water rafting.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

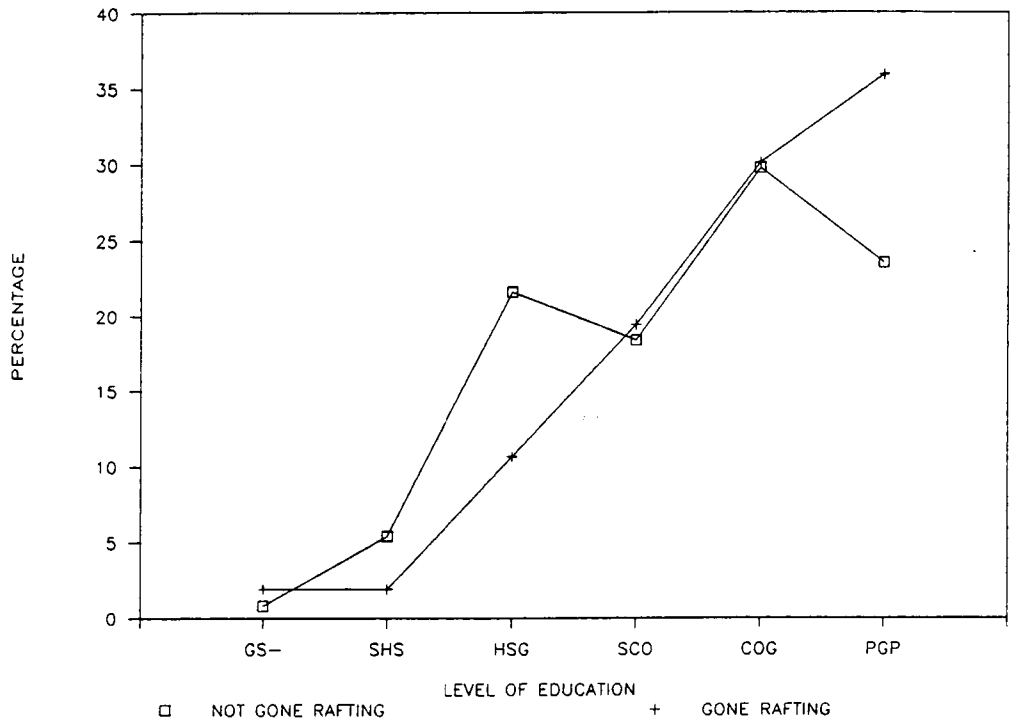

Figure 16. Education and participation in white water rafting.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

The greatest number of people that had been rafting was found among those that had post graduate or professional degrees which is in contrast to that found among persons that had not been white water rafting. There were less people with post graduate or professional degrees than those that were college graduates for those that had not been white water rafting, so that it might be fair there is a greater tendency for persons with higher level of education to go rafting and that persons with lower levels of education encounter barriers that prevent them from going rafting.

Participation in high adventure outdoor activities

Whether or not respondents that had participated in a high adventure outdoor activity (HAA) other than rafting was compared to participation in white water rafting. Of the respondents that had not been white water rafting, slightly over half (55.4 %) had not participated in some other HAA. Of the persons that had been rafting, slightly less than half (43.1%) had not participated in some other HAA.

The line graph in Figure 17 shows this difference. It must be noted that differences are less than 16% and show

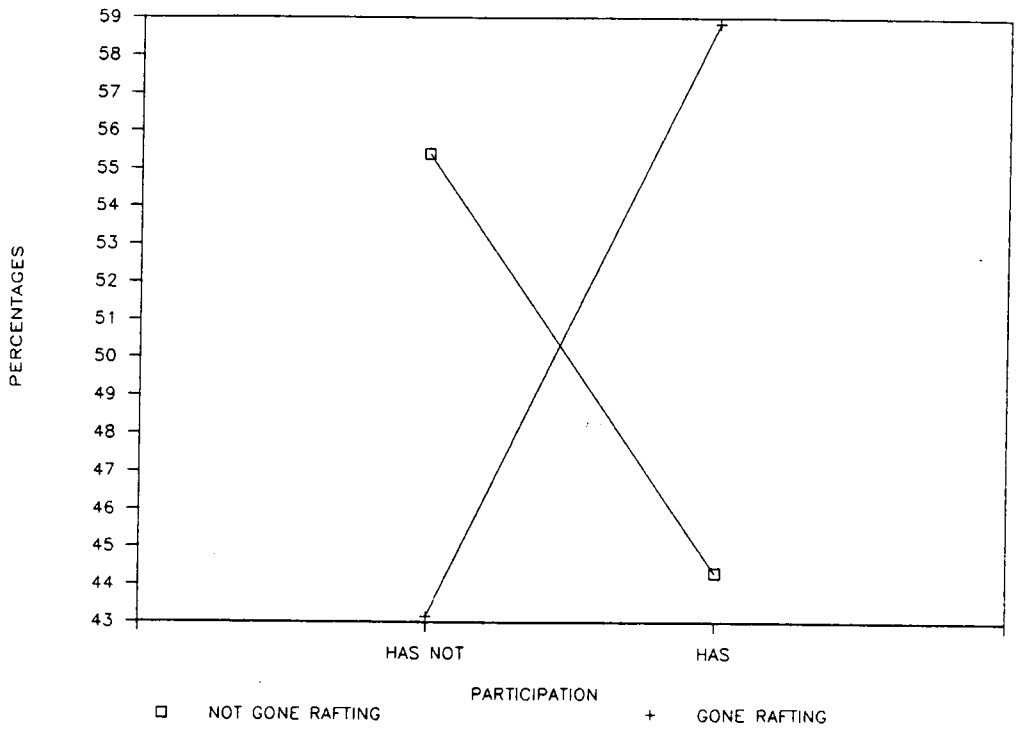

Figure 17. Participation in high adventure outdoor activities and white water rafting.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

Participation on X-axis refers to high adventure outdoor activities.

only a slight tendency for people that had participated in some other high adventure outdoor activity to also participate in white water rafting.

Each respondent that had participated in a HAA was asked what they had done. The type of activity the respondent had participated in was cross-tabulated with whether or not they had been rafting. A summary of the results are graphically represented in Figure 18. (See Appendix R for actual frequencies and percentages.)

About a fifth of the respondents indicated that they had been white water rafting also reported that they had been hunting and/or fishing. Equal numbers of the persons that had been white water rafting had also been either mountain or rock climbing, snow skiing, or some kind of HAA done in or on the ocean, i.e. SCUBA and surfing (17.0% each), comprising half of the population that had been rafting.

Mountain or Rock climbing and Snow skiing showed approximately the same percentages participating from the population that had not been rafting. There was a notable difference between the two groups, had been rafting and had not been rafting, in that there was a tendency for persons

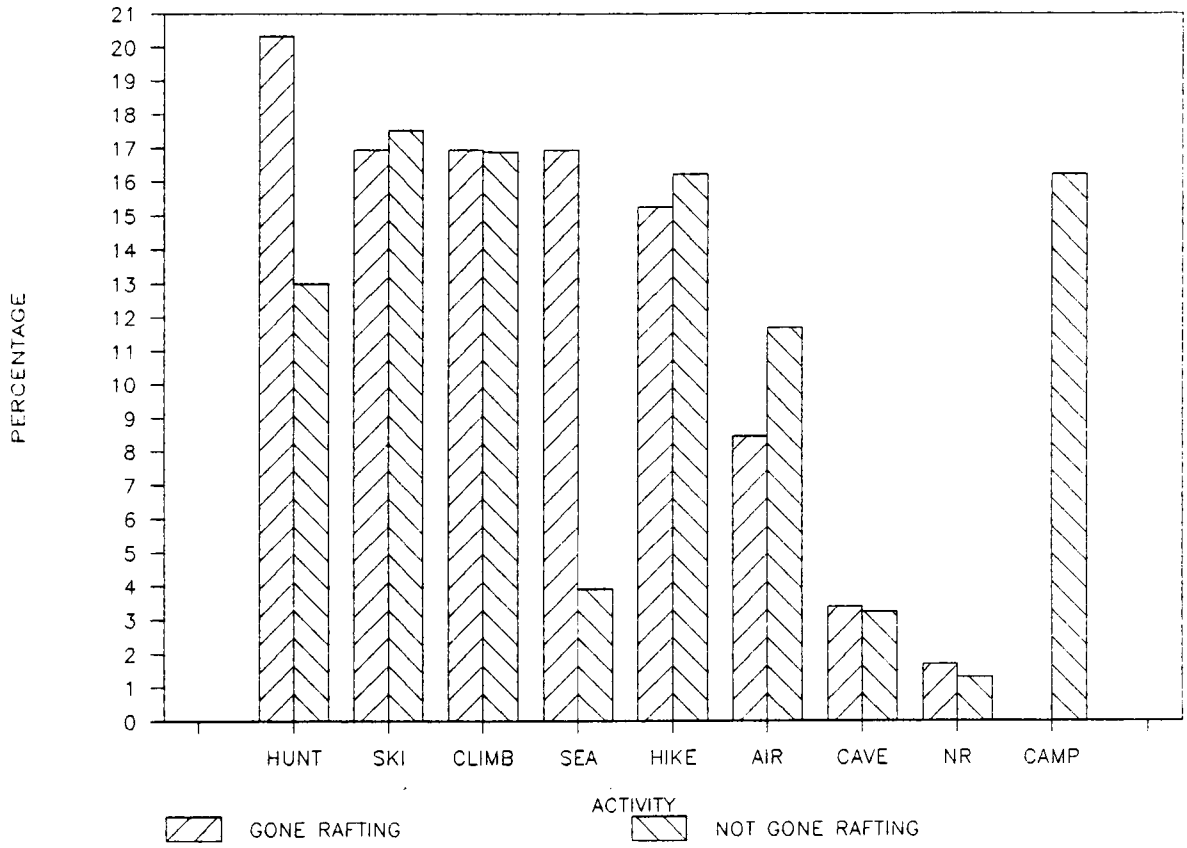

Figure 18. Participation in actual high adventure outdoor activies and white water rafting.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

that had been rafting to have also participated in some other water related sport. There was about equal numbers of persons that had and had not been rafting that participated in land based activities. The exception to this was persons that had not been rafting often reported camping as a HAA. Not one person that had been rafting reported participation in camping as a HAA. Persons that had participated in air sports had tendency to not go rafting. From this one might surmise that people participate in high adventure sports based on some affinity for either water, land, or air.

Interest in rafting

Whether or not the respondent had been rafting was compared to whether or not they were interested in going rafting, and some surprising results were found. Just less than a third (28.6%) of the persons that had been rafting were not interested in going rafting in the future. The remainder (71.4%), of course, were interested in going rafting in the future. Of the people that had not been rafting over half (56.1%) had no interest in going in the future. The remainder (43.9%) did have an interest in going in the future. A summary of this data is graphically presented in Figure 19.

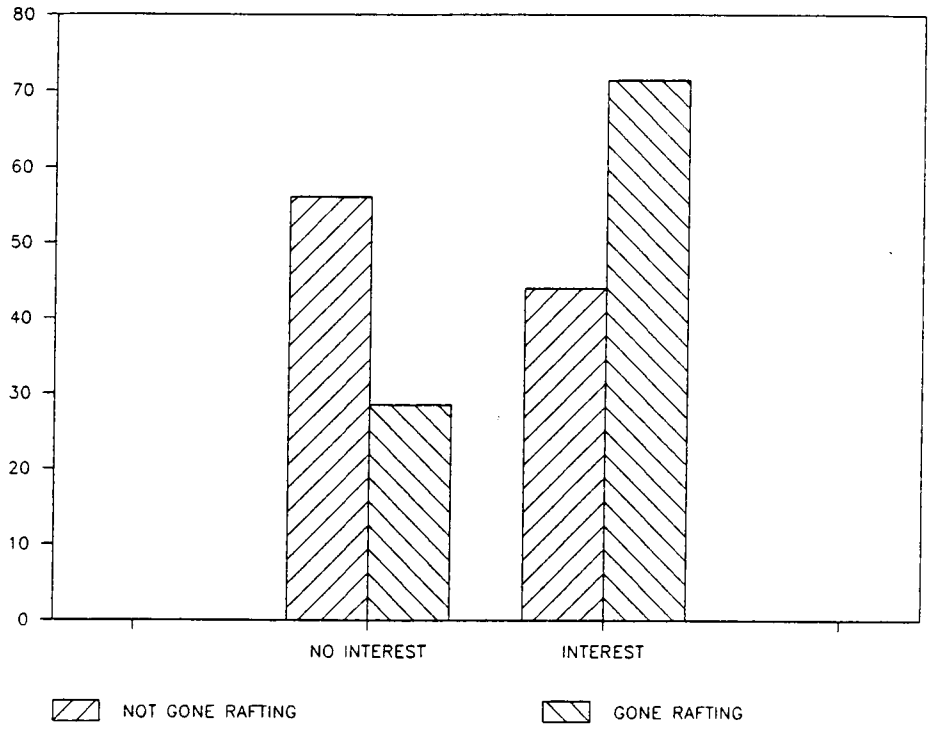

Figure 19. Interest in white water rafting in the future and past participation.

Note: Percentages are measures of percentage of population that had or had not been white water rafting.

Summary

Sample population profile and characteristics

The average person in the sample population was male and between 31 and 40 years of age. The most common family income reported was within the $25,000 - $35,000 per year range. Most were college graduates, had employment as a manager, educator, or professional, and worked in a financial or service industry.

Most of the respondents participated in some kind of outdoor recreation activity and received most of their information about recreational activities from friends. The majority of the population had not participated in a high adventure outdoor activity. The most common type of high adventure activity participated in by those that had was snow skiing.

A small percent (20%) of the population could not give a definition of white water rafting. The majority of the population had not been white water rafting. Most of the population had no desire to go rafting in the future and did not want information on the subject.

Non-participants

Of the persons that had not been white water rafting, a general lack of time was the primary reason for having not gone rafting. Most of the respondents had not considered going white water rafting. Of those interested in white water rafting, most had not obtained any information on the subject. The information that was received did not deter the respondents from going white water rafting.

Again, the main source of knowledge on rafting had been from friends. The main factor that would most encourage a non-participant to go white water rafting was a desire for adventure.

Participants

Of the persons that had been white water rafting, most enjoyed the experience, although they would not take the initiative to organize a trip. The main reasons for the participants' initial interest in rafting were to enjoy the outdoors, adventure, and going with friends. With the exception of enjoying the outdoors, these same factors also were reported as the primary reasons for participating in

the activity.

Most persons that had gone rafting had gone on their first and last trip four or more years ago. Most had only gone rafting once. Of the participants that had not gone rafting within the last year, most reported procrastination as their main reason for not having been recently.

Selected factors and rafting participation

Most of the people that had been white water rafting were between 26 and 40 years of age and there were very few people above 50 years of age that had been rafting. A surprisingly large portion of the population that had been rafting were either in the lower yearly income range of $25,000 to $35,000. There was a notable higher percentage of people that had been white water rafting in comparison to those that had not been white water rafting in the upper yearly income ranges, above $65,000. There was a steady increase in the percentages of people that had been white water rafting as level of education increased.

There was a slight tendency for people that had participated in some high adventure outdoor activity other than rafting to have also participated in white water

rafting. In comparison to those that had not participated in rafting, there was a strong positive correlation between participants of white water rafting and the following high adventure outdoor activities: (a) hunting and fishing and (b) sea activities. In comparison to those that had not participated in rafting, there was a negative correlation between participants of white water rafting and the following high adventure outdoor activities: (a) camping and (b) air activities.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, RECOMMENDATIONS

The purpose of this study was to identify factors which prevent individuals from going white water rafting in the Eastern United States. This was broken down into four sub-problems. Two of these dealt with identification of barriers: (a) to identify barriers preventing individuals from participating in white water rafting, and (b) to use data collected from persons that had been rafting to identify barriers. The other two sub-problems were: (a) to identify demographic characteristics that were common among white water rafting participants and non-participants, and (b) to discover measures which could be taken to promote white water rafting.

The Total Design Method (TDM) of telephone surveying was used to solicit information from a random sample of the general population of the Eastern United States. A questionnaire was developed and validated with a jury of

professionals and pretested with 50 persons randomly selected and utilizing the TDM of sampling. Eight interviewers were trained on how to conduct telephone surveys.

Post cards informing the prospective respondent that they had been randomly selected to participate in a research study were designed and mailed. One thousand post cards were mailed to prospective respondents to obtain the desired sample size of 602 and to accommodate needed replacement. Although the postmaster had assured delivery of the advance post cards within a week and appropriate time was allowed before the start of interviewing, two interview nights were spent calling persons that had not received advance postcards. There was a notable increase in response rates once the advance post cards arrived. It may also be of interest that the response rate experienced in this study (68%) was lower than that suggested by Dillman. There are at least two possible explanations for this:

1. A change in the general population's willingness to participate in research due to increased use of the telephone as a sales tool.

2. A difference among the selected populations. Data from the research instrument were transferred to a computer disk.

The SAS computer program was used to analyze descriptive data. The Lotus computer program was utilized to produce the graphical representations of the data and the Epistat program was used to do limited inferential statistics.

Findings

In review of the analysis of the results presented in Chapter IV, the following findings are identified.

General

1. Approximately one fifth of the general population was found to have such limited knowledge on the subject that they were unable to give a definition of the white water rafting.

2. Less than one fifth of the general population had participated in white water rafting.

3. Slightly less than half of the general population was found to be interested in going white water rafting in the future.

4. Approximately a third of the population that had not been rafting did not find the activity appealing.

5. The primary source of recreational and rafting information for the general population was friends and verbal information.

Identification of barriers from non-participants

1. Lack of time was the predominant barrier to participation in white water rafting.

2. The following seven factors acted as barriers to more than one fourth of the population that had not been rafting: (a) location of rivers, (b) work commitments, (c) lack of desire to participate, (d) perceived risk of the activity, (e) procrastination, (f) family commitments, and (g) lack of knowledge on the subject.

3. The following six factors acted as barriers to between one fourth or less of the population that had not been rafting: (a) travel expenses, (b) physical demands of the activity, (c) price of the endeavor, (d) lack of companionship, (e) lack of ability to swim, and (f) dislike for water activities.

4. The following three factors acted as barriers to less than one tenth of the population that had not been rafting: (a) difficulty of making reservations, (b) dislike for rivers, and (c) lack of transportation.

Identification of barriers from participants

1. Procrastination was the single most predominant barrier to repeat participation in white water rafting.

2. The following four factors acted as barriers to more than one fourth of the population that had been white water rafting: (a) work commitments, (b) family commitments, (c) location of white

water rivers, and (d) lack of companionship.

3. The following six factors acted as barriers to more than one fourth and less than one tenth of the population that had been white water rafting: (a) price of the activity, (b) travel expenses, (c) physical demands of the activity, (d) risk of the activity, (e) lack of desire, and (f) lack of information.

Demographic information and selected characteristics

1. Age acts as a barrier to white water rafting.

2. Income does not act as a barrier to white water rafting. (Consider no one was interviewed that made less than $25,000 yearly.)

3. There was a tendency for people that had participated in some other high adventure activity to also have participated in white water rafting.

4. People that had participated in other water

activities such as SCUBA also tended to have participated in white water rafting.

Discovering measures to promote white water rafting

1. More than 80 percent of the people that had been white water rafting enjoyed the experience.

2. The following three factors were most predominant in positively affecting the initial interest in white water rafting of those that had participated: (a) desire to be outdoors, (b) desire for adventure, and (c) going with friends.

3. The following four factors positively affected the initial interest in white water rafting of more than one fourth and less than one half of those that had participated: (a) read about the activity in a magazine, (b) some social group going, (c) viewing of T.V. or movies, and (d) advertisements.

4. The two most predominant reasons for going white water rafting were: (a) a desire for adventure,

and (b) going with friends.

5. The two factors which would most encourage non-participants to take part in white water rafting were: (a) desire for adventure or excitement, and (b) others to go with.

6. Information obtained on white water rafting generally does not affect people negatively.

7. The primary source of recreational information for the general population was friends.

8. Approximately one sixth of the population had the following as their primary source of recreational activity: (a) magazines, (b) T.V., and (c) newspapers.

9. Forty percent of the people that had been white water rafting stated that they would be willing to organize a trip.

Trends

Several facts were noticed during the research that are worth mentioning, although the scope of this research did not allow further exploration.

1. There was no noticeable difference among different geographical regions.

2. Although organizations as a recreational source did not affect more than eight percent of the population, the Y.M.C.A. was noticed as the source of most information where organization were listed as the primary source.

3. Friends to go with did not seem an important factor in deciding to go rafting; but it was predominant in reasons for initial and repeat participation.

Conclusions

In examining all data generated for the purpose of this study the investigator was able to make the following

conclusions:

1. The following, presented in rank order, were the major barriers to white water rafting: (a) lack of time, (b) location of white water rivers, (c) procrastination, (d) work and family commitments, (e) lack of desire, (f) perceived risk of the activity, and (g) lack of friends to go with or others to plan activity, (h) information on the subject.

2. The following, presented in rank order, were minor barriers to white water rafting: (a) travel expenses, (b) physical demands of the activity, and (c) price of the activity.

3. The following were not barriers to many people: (a) difficulty in making reservations, (b) dislike for rivers, and (c) lack of transportation.

4. Approximately half of the population has barriers to white water rafting that could be overcome.

5. The major elements, in rank order, for encouraging participation in white water rafting were: (a) desire for adventure, (b) friends to go with, and (c) enjoyment of the outdoors.

Recommendations

Additional research

1. A more detailed identification of participant and non-participant characteristics with a larger sample population.

2. An expanded exploration, larger sample, of people that had participated in high adventure outdoor activities other than rafting in relation to participation in white water rafting.

3. A detailed exploration of the social element of white water rafting.

Promotion of white water rafting

1. Release as much information as possible in

magazine articles and T.V. shows.

2. Take measures to decrease the perceived time required for the activity.

3. Capitalize on the fact that the vast majority of the people that go white water rafting enjoyed the experience.

4. Capitalize on the outdoor element of the activity.

5. Decrease the perceived risk of the activity for certain populations.

6. Increase social element of the overall activity so that participants do not feel a need to be accompanied by others.

7. Provide means to decrease the impact of family commitments in relation to the activity.

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APPENDIXES

APPENDIXES

Appendix A:

ADVANCE POST CARD

Dear Sir or Madam,

Between February 11 and March 14 a representative of the Leisure Studies Department at The University of Tennessee at Knorville will be contacting you via telephone as part of a research study. The study is concerned with why or why not people participate in white water rafting. It is anticipated that a better understanding of this subject will allow for better recreational planning in the future.

You are being contacted in advance of the telephone call because we have found that many people appreciate being advised that a research study is in process, and that they have been selected to participate. Your response will be treated confidentially.

The interview should only take a short period of time, if by chance we should call at an inconvenient time, please tell the interviewer and he/she will be happy to call back later.

Your response will be very helpful. Thank you for your time and contribution. If you have any questions, please do not hesitate to ask the interviewer or you may contact me by phone at 615-974-6045.

Sincerely,

Ty Burnette
Graduate Teaching Associate

Appendix B:

QUESTIONNAIRE

COVER PAGE AND CALL RECORD

The University of Tennessee at Knoxville
Department of Health, Leisure and Safety
White Water Barriers Study
February 1991

I.D. # ___ ___ ___ ___ ____ ____
(INT. ST-ZIP IND. NUMBER)

NAME OF RESPONDENT:
PHONE NUMBER:
ADDRESS:

Hello, May I speak with (FIRST & LAST NAME OF PERSON BEING CALLED).

(IF NO, THEN: The number I was calling is (USE LISTED NUMBER ABOVE) and it was for (FIRST & LAST NAME OF PERSON BEING CALLED).

(IF WRONG NUMBER, TERMINATE WITH: I am sorry to have bothered you.)

This is YOUR NAME - THE INTERVIEWER Leisure studies program at The University of Tennessee at Knoxville. We are doing a study on participation and non-participation in whitewater rafting. The information you provide is very important to our study. Your name and telephone number were drawn randomly. A letter was sent to you explaining a little about the study. Did you receive it?

(IF NO: I am sorry yours did not reach you. It was a short letter letting people know that we would be calling.)

The questions I need to ask should take about 5 to 10 minutes. Your response to the questions will be treated confidentially, and will not be associated with your name. (GO TO PAGE 1 PART A.)

DATE	TIME: START	END	NET	INTERVIEWER RESULTS		CODE FOR RECALL & NOTES

PLEASE DO NOT MAKE MORE THAN 5 ATTEMPTS

ABBREVIATIONS:

NA = NO ANSWER	REF = REFUSED (NOTE WHEN, WHY, AT WHAT POINT)	A = RESPONDENT NOT SELECTED
WN = WRONG NUMBER	IC = INTERVIEW COMPLETED	B = HAVE TALKED TO RESPONDENT (GIVE HELPFUL HINTS)
NH = NOT HOME	PIC = PARTIALLY COMPLETED	
WR = WILL RETURN (WHEN)	DIS = DISCONNECTED	

NOTES:

PART A. NONRAFTING INFORMATION:

The following questions have to do with why you have or have not been white water rafting. There are no right or wrong answers. Try to answer as honestly as possible. Generally speaking, it is best to give a response quickly based on your first reaction.

101. Do you know what whitewater rafting is? [101]

No (GO TO # 221 PAGE 10)..... (1)

Yes - What is it?..... (2)

SURVEY REJECTED..... (3)

RESPONSE: _____

_____

_____

102. Have you ever been whitewater rafting? [102]

NO (GOTO 103.)..... (1)

IF RESPONSE IS YES, BUT IT WAS A LONG TIME AGO. (ALSO A YES RESPONSE - GO TO PART C, PAGE 6)..... (2)

YES (IF YES GO TO PART C, PAGE 6)..... (2)

[103.]
Next, we would like to know why you have not been whitewater rafting. I will read you a list of commonly given reasons for not going rafting. Please tell me, ___(NAME OF RESPONDENT)___, either yes, it is problem that has prevented me from going whitewater rafting, or no, this factor has not been a consideration in deciding not to go whitewater rafting. (Would you like for me to read the responses again? (IF SO PLEASE DO SO.))

		NO	YES	REFUSAL	
103.	Work commitments	1	2	5	[103]
104.	No rivers near me	1	2	5	[104]
105.	Price of rafting	1	2	5	[105]
106.	No one to go with	1	2	5	[106]
107.	Family commitments	1	2	5	[107]
108.	Travel expenses	1	2	5	[108]
109.	Difficulty of making reservations	1	2	5	[109]
110.	Lack of transportation	1	2	5	[110]
111.	Rafting is too physically demanding	1	2	5	[111]
112.	Rafting is too risky	1	2	5	[112]
113.	No information on outfitters	1	2	5	[113]
114.	Just not appealing	1	2	5	[114]
115.	Do not like water sports	1	2	5	[115]
116.	Do not swim	1	2	5	[116]
117.	Want to go but putting it off	1	2	5	[117]
118.	Know nothing about rafting	1	2	5	[118]
119.	General lack of time	1	2	5	[119]
120.	Do not like rivers	1	2	5	[120]

[121-BLANK]

W.W. Barriers Instrument

122. Have you ever considered going whitewater rafting? [122]

NO (IF NO GO TO 126.)..... (1)
YES (IF YES GO TO 123.)..... (2)

[123.] 123. Did you get any information on the subject? [123]

NO (IF NO GO TO 126.)..... (1)
YES (IF YES GO TO 124.)..... (2)

[124] 124. Did the information you received help you decide not to go? [124]

NO (IF NO GO TO 126.)..... (1)
Yes (IF YES GO TO 125.)..... (2)

[125.] 125. How did the information prove to be most helpful or informative?

[125]
CODER ONLY
1 2 3 4 5 6 7 8 9

[126-BLANK]

→[126.] For each of the following considerations, please rate if they "strongly affected", "affected somewhat", or "affected very little" your decision to not go whitewater rafting?

		DID NOT AFFECT	AFFECTED VERY LITTLE	AFFECTED SOMEWHAT	STRONGLY AFFECTED	REFUSAL	
127.	Friends to go with	1	2	3	4	5	[127]
128.	Difficulty of planning	1	2	3	4	5	[128]
129.	The risk of the sport	1	2	3	4	5	[129]
130.	Time considerations	1	2	3	4	5	[130]
131.	Did not want to go	1	2	3	4	5	[131]

[132-134 BLANK]

I35. How much do you think your lack of time for getting information together and making plans for a trip has affected your decision not to go whitewater rafting? [135]

None..... (1)
Some..... (2)
A lot..... (3)

W.W. Barriers Instrument

PART B. FACTORS AFFECTING NONPARTICIPATION

[136.]
From what source or sources, (NAME OF RESPONDENT) have you received any knowledge you have of whitewater rafting?
NOTE: DO NOT READ THIS LIST OR GIVE SUGGESTIONS.

		NO	YES	
136.	T.V.	1	2	[136]
137.	MOVIES	1	2	[137]
138.	MAGAZINES	1	2	[138]
139.	BOOKS	1	2	[139]
140.	ADVERTISEMENTS	1	2	[140]
141.	TRAVEL AGENT	1	2	[141]
142.	FRIENDS - VERBAL	1	2	[142]
143.	FROM RAFTING COMPANY	1	2	[143]

[144 - 148 BLANK]

149. If you were to go whitewater rafting, what would be the one thing which would most encourage you to go?

_____ [149]

CODER ONLY
1 2 3 4 5
6 7 8 9

_____

_____

PART C. RAFTING INFORMATION

THE FOLLOWING QUESTIONS ONLY PERTAIN TO THOSE PERSONS HAVING BEEN WHITEWATER RAFTING. IF THE PERSON BEING INTERVIEWED HAS NOT BEEN WHITEWATER RAFTING, PLEASE PROCEED TO PART D.

150. Did you enjoy going whitewater rafting? [150]

NO (GOTO 151).....(1)

SOMEWHAT - ANYTHING NOT YES OR NO...(2)
(GOTO 152)

YES.....(GOTO 152).....(3)

151. Why did you not enjoy going whitewater rafting? [151]

_____

_____

CODER ONLY
1 2 3 4 5
6 7 8 9

152. Would you consider organizing a trip to go whitewater rafting? [152]

NO.....(1)

MAYBE - DO NOT KNOW....(2)

YES.....(3)

[153.]
We would like to know, ___(NAME OF RESPONDENT)___, what interested you in going whitewater rafting. I will read you a list of factors that often affect peoples' decision to go rafting the first time. Please indicate how strongly you feel this factor has affected your decesion. Please respond either strongly affected, somewhat affected, affected very little or did not affect, to each of the following factors.

[153 BLANK]

		DID NOT AFFECT	AFFECTED VERY LITTLE	SOMEWHAT AFFECTED	STRONGLY AFFECTED	REFUSAL
154.	Friends going	1	2	3	4	5
155.	Work related trip	1	2	3	4	5
156.	Church trip going	1	2	3	4	5
157.	School trip going	1	2	3	4	5
158.	Any other group function	1	2	3	4	5
159.	Wanted adventure	1	2	3	4	5
160.	Wanted to be outside	1	2	3	4	5
161.	Someone else planned trip	1	2	3	4	5
162.	Read about it	1	2	3	4	5
163.	Saw it on T.V. or movie	1	2	3	4	5
164.	Advertisements	1	2	3	4	5

201. What would you say was your main reason for going whitewater rafting?

_____ [201] CODER ONLY 1 2 3 4 5 6 7 8 9

_____

202. How many years ago did you first go whitewater rafting? [202]

LESS THAN 1 (GO TO PART D... PAGE 10) (1)
1 TO 2..... (2)
More than 2 and less than 4.. (3)
4 or more..... (4)

203. How many times have you been since? [203]

1..... (1)
2..... (2)
3..... (3)
4 or more.. (4)

204. How many years ago was your last whitewater rafting trip? [204]

LESS THAN 1 (GO TO PART D.... PAGE 10) (1)
1 TO 2..... (2)
More than 2 and less than 4.. (3)
MORE THAN 4..... (4)

[205.] Next, we would like to know why you have not recently been whitewater rafting. I will read you a list of reasons for not going rafting. Please tell me, (NAME OF RESPONDENT) , either yes, it is a problem that has prevented me from going whitewater rafting, or no, this factor has not been a consideration in deciding not to go whitewater rafting. (Would you like for me to read the responses again?) (IF SO PLEASE DO SO.)

		NO	YES	REFUSAL	
205.	Work commitments	1	2	5	[205]
206.	No rivers near me	1	2	5	[206]
207.	Price of rafting	1	2	5	[207]
208.	No one to go with	1	2	5	[208]
209.	Family commitments	1	2	5	[209]
210.	Travel expenses	1	2	5	[210]
211.	Lack of transportation	1	2	5	[211]
212.	Rafting is physically demanding	1	2	5	[212]
213.	Rafting is too risky	1	2	5	[213]
214.	No information	1	2	5	[214]
215.	Just not appealing	1	2	5	[215]
216.	Putting it off	1	2	5	[216]

[217 - 220 BLANK]

PART D. DEMOGRAPHIC DATA

The following demographic data is requested as part of the study. If you are uncomfortable giving a response to any of the following questions, please feel free to decline giving a response. I would like to remind you that all information is confidential, your name is not even associated with the data collected and that the more complete the answers are the better the study will be.

221. INTERVIEWER, PLEASE NOTE THE RESPONDENT IS: [221]

MALE.....(1)

FEMALE.....(2)

222. What was your age on your last birthday? [222]

20 - 25....(1)

26 - 30....(2)

31 - 40....(3)

41 - 50....(4)

51 - 60....(5)

61 - 65....(6)

223. What was your reported family income for the last year, a good estimate will suffice. [223]

25,000 or less...(1)

25,001 - 35,000..(2)

35,001 - 45,000..(3)

45,001 - 65,000..(4)

65,001 - 90,000..(5)

90,001 or more...(6)

REFUSAL.....(7)

224/225. Which of the following best describes the type of work you do?

[224/225]

Health care professional..... (01)

Manager, educator, professional..... (02)

Technical, sales or administrative support..... (03)

Operator, fabricator, laborer..... (04)

Student..... (05)

Retired..... (06)

Homemaker..... (07)

Service..... (08)

Skilled crafts..... (09)

Unemployed..... (10)

Other..... (11)

226/227. In which of the following industries did you last work? [226/227]

Electric, gas, sanitation..... (01)

Transportation, communication..... (02)

Agriculture, forestry, fishing..... (03)

Wholesale or retail trade..... (04)

Financial and service industries... (05)

Mining..... (06)

Goverment..... (07)

Manufacturing..... (08)

Construction..... (09)

Other..... (10)

228. What, of the following, best describes the highest grade you completed in school? [228]

Grade school or less..... (1)

Some high school..... (2)

High school graduate..... (3)

Some college..... (4)

College..... (5)

Post graduate or professional degree..... (6)

PART E. CHARACTERISTICS

We would like to get some information about what you like to do and something about the kind of person you are ___(NAME OF RESPONDENT)___. I am going to ask a few very simple, basic questions that should be fairly easy and fun to answer.

229. What three T.V. show are you most likely to watch in any given week?

_____

_____

_____

[229]
CODER ONLY
1 2 3 4 5 6 7 8 9

230. What three magazines are you most likely to read in a month?

_____

_____

_____

[230]
CODER ONLY
1 2 3 4 5 6 7 8 9

231. What are the three main recreational activities which you are most likely to do?

_____

_____

_____

[231]
CODER ONLY
1 2 3 4 5 6 7 8 9

232. What is your main source of information about recreational activities?

_____

[232]
CODER ONLY
1 2 3 4 5 6 7 8 9

W.W. Barriers Instrument

233. Have you ever participated in a high adventure outdoor activity other than rafting?

[233]

NO (1)

YES (2)

- If so, what?

234. _____ [234] CODER ONLY 1 2 3 4 5 6 7 8 9

_____

PART F - INTEREST IN RAFTING

235. Are you interested in going whitewater rafting in the future? [235]

NO..... (1)

YES..... (2)

235. Would you like to have information on whitewater rafting in your area?

[236]

NO..... (1)

YES..... (2)

IF YES: Would you please give us your name and address so that information may be sent to you. This information will not be associated with your response and will not jeopardize the confidentiality of your response.

PLACE NAMES AND ADDRESS OF PERSON WANTING INFORMATION ON SEPARATE 3 BY 5 CARD.

Thank you very much for taking the time to participate in this research study, and for helping us identify barriers to whitewater rafting participation.

Once again, be assured that your responses to the questions will be treated confidentially, and will not be associated with your name.

Thank you again and have a nice evening.

NOTE TO CODER: IN SPACES 236 - 241 PUT I.D. FROM FRONT PAGE.

W.W. Barriers Instrument

Appendix C:

LIST OF JURY MEMBERS

Jim Greiner
Wildwater Ltd.
550 Fortson Rd.
Athens, GA 30606
404-549-2631

Doug Fogal
Pacano Whitewater
Route 903
Gymthorp, PN 18229
717-325-3600

Chris Dragon
Wilwater Expeditions Unlimited
P.O. Box 55
Thurmond, WV 25936
1-800-982-RAFT

John Connelly
Eastern River Expeditions
P.O. 1173
Greenville, ME 04441

Dr. Jack Pursely
Department of Health, Leisure, and Safety
The University of Tennessee, Knoxville
1914 Andy Holt Ave.
Knoxville, TN 37996
615-974-6045

Appendix D:

RULE BOOK

The University of Tennessee at Knoxville
Leisure Studies Program
Department of Health, Leisure, and Safety
White Water Barriers Study
February 1991

RULE BOOK

A. Before you start:

1. Place this rule book and "Questions" book in front of you.

2. Obtain your questionnaires for that session and review the names on the labels. If you know anyone or have heard of them, return that label and questionnaire to the supervisor.

3. Make sure that you have three sharpened pencils.

4. Make sure you completely reviewed the questionnaire notes at the end of the rule book. This is a step by step look at the questions with comments that you might find helpful.

B. Who to talk to:

Our goal is to talk to the person listed on the label and no one else. You should avoid needlessly talking to any other person. Be nice, but immediately ask to talk to the person on the label. If they are not able to talk to you then, ask when would be best for you to call back.

C. Who the interview is about:

This survey is individual based. The respondent should answer only for themselves, not for other persons. For example: when asked if a they have been rafting a person might respond that they have not been, but their son has. Please tell the respondent that they are the one you are interested in obtaining information from.

D. The interview:

1. Be sure to mark the time the interview starts.

2. Be sure to read the questions **EXACTLY** as written.

As you know, even a single word can drastically change the meaning of a question for the respondents. Attempts to interpret the question in response to a respondent's query frequently does the same thing. Here are some key phrases you might use to respond to the question of "What do you mean?"

> It is important that the question be answered as best you can in terms of the way it is stated, maybe I could read it to you again.
>
> I will write down your concern (or qualification) you just mentioned so that it will be taken into account in the analysis.

3. The respondent misunderstands the question.

It is very easy for respondents to miss a word or two, that is crucial to the meaning of the question. Sometimes they are embarrassed to admit that they did not quite understand. If you suspect a question has been misunderstood, **do not tell the respondent that you suspect they misunderstood**, these responses may help.

> Could I reread the question and the answer to make sure I have every thing you wanted to say.
>
> I think I may not have read the question correctly, so, may I read it again to be sure.

4. Use neutral probes as needed.

When you are in doubt about how to interpret the respondent's answer or what it means, you might want to probe a little to make sure you understand the response intended. You need to be certain to remain neutral when you probe. A statement like, "Then what you really mean is ..." does not convey neutrality.

Before accepting an answer of "I do not know" or anything coded as a refusal, be sure to probe. Respondents frequently use a phrase like, "I'm thinking," when a probe is needed.

Some examples of probes you might use are:

Yes, I see, (or) uh-huh, stated in an expectant manner and followed by a pause.

Could you be more specific.

Could I read back what I have written down to make sure it is exactly what you wanted to say.

5. Write down **everything** the respondent says.

6. If you need help, excuse yourself and get the supervisor.

Sometimes a respondent wants to know more about a question or the study than you can tell them. If in your judgement it is warranted, do not hesitate to ask the supervisor for help.

7. If a respondent becomes incensed, uses abusive language, etc., **BE NICE! DO NOT HANG UP! KEEP COOL!**

This is not likely to happen. If it does, be patient, maybe the person had a bad day. You might try:

Yes, I understand you feel strongly about this matter. But we really need the information.

If all else fails, call for the supervisor or wait for the opportunity to say something to this effect:

I think I can understand your feelings, and your not wanting to complete the interview. But thank you very much anyway. Good bye.

E. When the interview is over:

1. Immediately record time and length of call.

2. Immediately go over all answers and make sure it was done correctly. Rewrite any open ended answers you think might be illegible.

3. Place survey in appropriate place.

a. If the survey was completed, hand survey to supervisor or place in completed survey box.

RULE BOOK

b. If the survey was not conducted, place in call back box.

c. If the interview was terminated for some reason, hand the survey to supervisor.

F. When you are finished for the evening:

1. Fill out the hours you worked and number of surveys completed on work sheet.

2. Check with supervisor to explain any "special" happening during the session.

3. **DO NOT** take any of the research materials with you!

G. After you leave:

Do not discuss any portion of your interviewing experience with anyone. It is extremely important that we keep the respondents' information as confidential as possible. Avoid making your own summary of the results from your experience. Just because most of your interviews seemed to go a certain way, does not mean that others did the same.

RULE BOOK

QUESTIONNAIRE NOTES

The following is a step by step look at the questionnaire you will be administrating. You should have received all this information and more during the training session, but if you need to review it is here.

A. Introduction

1. You will need to write the individual's name of you are calling on something so that you may have it through out the interview.

2. The information written normally, small letters, is to be read to the respondent as it is written. Information in all caps is not to be read to the respondent. Information in "()'s" is to be read to the respondent only in certain instances.

3. Ask to speak to the person listed on the label, you can not substitute other persons.

4. Once you contact the person to be interviewed and read the introduction, fill in appropiate information in call record and proceed to page 2.

B. Call record

1. Everytime you attempt to call someone, you will enter information in the call record.

2. You will always enter the date and time of the call, you will always enter your interviewer number under interviewer.

3. Use the appropiate abbreviations under results and code for recall if needed.

C. Nonrafting information - Part A.

1. The numbering system used starts with 101 for coding purposes and is of no concern to the interviewer except as a reference point.

2. The numbers in the blanks are also of no concern to the interviewer except as a reference to mark the correct response.

RULE BOOK

3. You should mark the appropiate blank, over the number, to indicate the appropiate reponse.

4. **Number** 101, **2nd blank** requires you to ask the respondent to tell you what white water rafting is if they said they knew what it was.

5. If **number** 102, **1st blank** is marked you continue with number 103.

   If **number** 102, **2nd or 3rd blank** is marked you continue on page 5 with part C.

6. For **questions** 103 - 118 simply mark 1, 2, or 5 as appropiate. You will mark refusal, 5, anytime you get a reponse that is not yes or no. Do not waste a lot of time avoiding a "refusal" response here.

7. **Question** 118 you ask the respondent if they have other reasons. If they do, list them in the blanks provided.

8. **Questions** 119 - 121 are spaces to be used if the questionnaire needs to be expanded at a later date. They are not the concern of the interviewer.

9. **Questions** 122 - 125 are dependant on each other. If you get a "no" reponse for any of these you will continue with number 126. For each "yes reponse you continue on to the next question.

10. Only use **question** 131 if the repondent volunteers more information, do not ask for more. If more information is volunteered, record it in the blanks provided.

D. Factors affecting ... - Part B

1. **Question** 136 (-142) you read the question and then mark the reponse(s) given as yes and all others as no. Do not read any of the possible responses.

2. **Question** 143 if the respondent gives a response not in the list, please list it (or them) here.

RULE BOOK

E. Rafting information - Part C

1. **This section is only for persons that have been rafting.** Skip this section if the person being interviewed has not been white water rafting and go to Part D, page 10.

2. **Questions 153 - 164** relate to the scale at the top of the page, you will probably need to repeat the scale a few times, but not for all the items. Try to avoid being overly redundant here, but make sure the respondent is familar with the scale before you do not read it after every item.

3. Once again, refusal or 5 is for any reponse where the respondent will not committ one way or the other.

4. **Question 165**, you will ask the repondent if there are other reasons that interested them in going white water rafting. If so, you will mark #2 and put the response in the blank provided in #3.

   If they have no other reasons, you will mark number 1 and continue with question 201.

5. **Question 202**, if you mark #1 here you will immediately go to part D, page 10.

   Any other response and you continue on normally with the questionnaire.

F. Demographic data - Part D.

1. **Question 221**, if you can tell if the respondent is **male** or **female** without asking, please do so and just **mark** the correct number. If you can not tell you will have to ask.

2. **Questions 222 - 228**, read all of the ranges here and let the respondent tell you which one best fits. If the respondent does not want to give you a response, leave it blank.

G. Characteristics - Part E.

1. **Questions 229 - 232** are all open ended and we would like to keep them as short as possible. Get a response, but do not prompt for excessive elaboration.

RULE BOOK

2. **Question 233 is very important.** If the respondent has participated in another high adventure outdoor activity, mark #2 and list the first two they give you. Even if the respondent gives you three or more, only list the first two given.

H. Interest in rafting - Part F.

1. **Question 234**, if you mark no, #1, here you will mark #1 for question 235 without asking.

2. **Question 235**, if a person would like white water rafting information, then follow the directions given. You may ask them if they would like the information sent to the name and address you have on the label if you wish. The respondent must want to have the information sent to them before you place their name and address on a card. It is very important for the people that are sponsoring this research that we get names and addresses for persons that want information (they are also giving you your pay check), but we do not want to pressure any one in the least.

Appendix E:

QUESTIONS BOOK

The University of Tennessee at Knoxville
Leisure Studies Program
Department of Health, Leisure, and Safety
White Water Barriers Study
February 1991

Possible Questions

The respondent may wish to ask questions and we would like to respond in a reasonable manner. Review these "expected" questions and be familiar with them. If a respondent asks a question you can not correctly answer - get the supervisor to field the question and make sure that you write the question down so that it may be added to the Questions Book.

About the Survey:

Why are you doing this?

This research is being conducted by a graduate student in recreation at the University of Tennessee at Knoxville to better understand why people do or do not go white water rafting. This information is important for understanding how to better provide recreational opportunities.

Who is paying for the survey?

The research is sponsored by an Eastern organization of rafting companies called Great Rivers.

Who is responsible for the survey?

The research is being conducted by Ty Burnette, a graduate teaching associate at The University of Tennessee at Knoxville.

May I talk to the person responsible for the research?

Yes, I am sure Ty will be happy to talk to you. I will ask him to call you when he comes back around.

About the Respondent's Role in the Survey:

How did you get my name (Telephone number)?

Your name was randomly selected from all the persons in the Eastern United States. In this method, every person has an equal chance of being selected and yours was chosen completely by chance.

How can I be certain that this is authentic?

I would be glad to give you my telephone number here at the University and you may call be back collect.

If that is unacceptable - call the supervisor.

Why don't you interview someone else (in the family)?

We can not do that because it is one of the things which enable us to say that this survey is representative of the Eastern United States. We must interview the person which has been randomly selected.

Is this confidential?

Yes, most definitely. After the interview the information is entered into a computer without names. All the information is tabulated together with no method of identifying individual responses.

Also, the matter of confidentiality is of extreme importance to us. We are doing professional research and confidentiality is always of the utmost importance in good research.

Can I get a copy of the results?

The sponsoring agent does not wish for certain information obtained during this research to be widely released. We would be more than happy to send you a copy of the results we can release. It is expected the results will be ready within two to three months.

Are you trying to sell be anything?

No! We are not trying to sell you anything; we just wish to get your opinion. At the end of the survey you will asked if you wish to have information on white water rafting mailed to you, if you wish you may decline.

Questions Book

Often people will try to not do the survey because they are apprehensive. The following is a list of commonly given reasons for not wanting to do the survey and possible responses which might help get the respondent to complete the survey. Do not push too much!

I've never been rafting.

Then you are just the type of person this research is interested in getting information from.

I do not know anything about rafting.

That is O.K., you are exactly the type of person we want to get information from.

I'm not interested.

It is extremely important that we get everyone's opinion in the selected sample, otherwise the results will not be very useful. So, I would very much like to talk to you.

It is no one else's business what I think.

I certainly understand how you feel and that is exactly why the interviews are completely confidential. Protecting the respondents privacy is one of our major concerns. The results will be reported in such a way that they can not be linked to any individual. Your opinion is very needed.

I am too busy.

I understand, but his will only take a few minutes. If it is a really bad time, maybe I could call you back later tonight or within the next few days.

I do not feel well or am in bad health.

I am sorry to hear that. Have you been sick long? Maybe I could call back in the next few days.

If the illness is serious - substitute another person that is there or if this is not possible, excuse yourself and indicate that they will not be contacted again.

Questions Book

I am too old.

In this particular survey, older persons opinions are just as important, if not more so, than any one else's. In order for the survey to be representative of everyone, we need everyone's opinion in the sample of which you are part. We really need your response.

I object to surveys.

We feel that this survey is extremely important and the questions are just a matter of how you feel on subjects that are not generally considered controversial. We rally need your response.

I object to telephone surveys.

We chose telephone surveys because of the low cost and the speed by which they can be done.

Appendix F:

HUMAN SUBJECTS EXEMPTION FORM

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Research Administration
Compliances
Grants & Contracts
Proposal Development Services

CRP #: 3402 A DATE: 12/18/90

Title: Barriers to Whitewater Rafting Participation in the Eastern United States

Burnette, Ty
Health, Leisure & Safety
1719 Clinch Avenue
Knoxville, TN 37916

Blanton, Dr. Mary Dale
Health, Leisure & Safety
1914 Andy Holt Ave.
Campus

The project listed above has been certified exempt from review by the Committee on Research Participation and is approved.

This certification is for a period ending one year from the date of this letter. Please make timely submission of renewal or prompt notification of project termination (see item #2 below).

The responsibilities of the project director include the following:

1. Prior approval from the Coordinator of Compliances must be obtained before any changes in the project are instituted.

2. Submission of a Form D to request renewal, report changes during the approval period, or report termination of the project.

We wish you success in your research endeavors.

Sincerely,

Edith M. Szathmary

Edith M. Szathmary
Coordinator of Compliances

cc: Dr. Charles Hamilton
374 HPER Bldg.

Attachment: Copy of Form A

(PLEASE TYPE ON THIS FORM)
(Instructions on reverse side of this form)

FORM A
Certification of Exemption from Review for Research Involving Human Subjects

CRP# _____
Received in ORC 3402A

A. **PROJECT DIRECTOR(s) and/or CO-DIRECTOR(s):** (For student projects, list both the student and the advisor)
Ty Burnette Co-director: Dr. Mary Dale Blanton

B. **COMPLETE MAILING ADDRESS and PHONE NUMBER OF PI/PD and CO-PI/PD:**
Dir.: 1719 Clinch Ave. Knoxville, TN 37916 Dir.: 523-4344
Co-dir.: U.T.K. 1914 Andy Holt Ave. Co.: 974-6045

C. **TITLE OF PROJECT:**
Barriers to Whitewater Rafting Participation in the Eastern United States

D. **DEPARTMENT:**
Health, Leisure, and Safety

E. **EXTERNAL FUNDING AGENCY AND ID NUMBER** (if applicable):

F. **GRANT SUBMISSION DEADLINE** (if applicable):

G. **STARTING DATE:** "Upon certification by Director of Research Compliances"
Jan. 15, 1991 (NO RESEARCH MAY BE INITIATED UNTIL CERTIFICATION IS GRANTED)

H. **ESTIMATED COMPLETION DATE:**
(Include all aspects of research and final write-up)
May 1, 1991

I. **Objective(s) of Project:** (see Section 8.4 of GUIDE)

To identify factors preventing participation in whitewater rafting in the Eastern United States.

II. **Subjects:** (see Section 8.5 of GUIDE)

A comercial sampling firm will be utilized to obtain a random sample of 909 persons from the Eastern United States. The sample will be limited to persons between the ages of 20 and 65 and having an income above $15,000 per year. The limiting of the sample will be conducted solely by the comercial sampling firm. For definition of Eastern United Staes or reasoning for limitations, see attached supplement.

III. **Methods or Procedures:** (see Section 8.6 of GUIDE)

The questionnaire does not propose to ask questions that are considered incriminating in any way. The respondent will only be identified with a specefic questionnaire until the completion of the interview. Upon completion of the telephone interview the name and number of the respondent will be separated from the questionnaire with no method remaining to reassociate the two. This will be accomplished by clipping labels to the questionnaire rather than writing on the intrument, making removal easy. All materials for the study will be stored in HPER #382 and locked within a file cabinet. The project director will be the only person with access to these materials. Upon completion of the study all materials will be destroved that contain any individual respondent information. Respondents requesting rafting information will have their names and addresses recorded separately from the questionnaire so that no association is possible.

IV. **CATEGORY(s) FOR EXEMPT RESEARCH PER 45 CFR 46:** 3 (see reverse side for categories)

CERTIFICATION: The research described herein is in compliance with 45 CFR 46 101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

	Name	Signature	Date
Investigator	Ty Burnette		12-6-90
Advisor	Dr. Mary Dale Blanton	Mary Dale Blanton	12-6-90
Dept. Head	Dr. Charles Hamilton	for	12-6-90
CERTIFICATION BY DIRECTOR, OFFICE OF RESEARCH COMPLIANCES		Edith M. Gabbard	12-18-90

REVISED 6/86

Appendix G:

COUNT-DOWN LIST*

Draw Sample
-Names, addresses and telephone number

Facilities and Equipment
-Access to telephones arranged
-Telephones checked for working order
-Access to lines arranged
-Chairs and tables supplied
-Labeled boxes for sorting questionnaires into categories
(refusals, call backs and completed)

Computer Related Needs
-Arrange access to computer
-Arrange access to needed computer equipment (card reader and printer)
-Decide on analysis programs and set up format
-Do "dummy" run of computer equipment

Materials
-Questionnaires
-Duplicated
-Assembled
-Randomized distribution to interviewers
-Rule book duplicated
-Questions book duplicated
-Supplies (pencils, notebooks, rubber bands, tape, etc.)

Advance Letter
-Printed, signed, and stuffed into envelopes
-Each mailed one week before expected call

Personnel
-Interviewers
-Hired
-Trained
-Scheduled
-Procedure to check completed questionnaires arranged

Other Resources
-Obtain sample list
-Do human subjects review

* Adapted from Don A. Dillman (1978. p. 274)

Appendix H:

RECREATIONAL ACTIVITY PATTERN

Category	Number	Percent
Outdoor	123	21.7
Health and fitness	70	12.3
Team sports	57	10.0
Health club	37	6.5
Individual sports	37	6.5
Hunting and fishing	21	3.7
No response	77	13.6
No strong pattern	146	25.7
Total	568	100.0

Appendix I:

SAMPLE OF COMMONLY GIVEN DEFINITIONS OF WHITE WATER RAFTING

Riding in a raft over rapids.

Bunch of people in a raft going down a big river with lots of rocks.

Exciting - riding down a river.

Going down a fast paced current in a raft for fun.

Canoe, kayak.

Over choppy water - riding a raft.

Terrifying ride on a raft down rapids.

Boating in fast water.

Going down wild rapids.

Canoeing on a river with white water.

Going down the rapids in a canoe.

Going out on a rapid flowing river in an inflatable boat of some sort.

Transversing a mountain river with a group in a raft.

Appendix J:

FACTORS AFFECTING NON-PARTICIPATION IN WHITE WATER RAFTING

		Yes responses only	
#	Reason	Number	Percent
1	General lack of time	151	53.5
2	No rivers near me	147	38.9
3	Work commitments	138	36.5
4	Just not appealing	117	31.0
5	Rafting is too risky	112	29.6
6	Putting it off	111	29.5
7	Family commitments	103	27.5
8	Know nothing of rafting	73	25.9
9	No information	91	24.1
10	Travel expenses	78	20.6
11	Physically demanding	68	18.0
12	Price	53	14.0
13	No one to go with	51	13.5
14	Do not swim	42	11.1
15	Not like water sports	40	10.6
16	Making reservations	34	9.0
17	Do not like rivers	9	3.2
18	Lack of transportation	11	2.9

Appendix K:

CONSIDERATION OF GOING RAFTING

Question Number[a]	"No" Number	"No" Percent	"Yes" Number	"Yes" Percent
One	194	52.0	178	48.0
Two	114	64.0	64	36.0
Three	56	87.5	8	12.5

[a] Question numbers one through three are described in the text above.

#1 = Have you considered going rafting?

#2 = Did you get information?

#3 = Did the information you got help you decide not to go?

Appendix L:

ENCOURAGEMENT FACTORS

Category	Number	Percent
Adventure	86	23.4
Agency	37	10.1
Fun	42	11.4
Different	15	4.1
No response	30	8.2
Nothing	53	14.4
Vicinity	35	9.5
Company	64	17.4
Family	6	1.6
Total	368	100.0

Appendix M:

INITIAL INTEREST FACTORS

	FREQUENCIES			
Factor	DN	VL	SW	ST
Wanted to be outside	13	2	22	68
Wanted adventure	17	1	21	66
Friends going	17	5	19	63
Read about it	55	18	14	18
Other group functions	70	6	14	15
T.V. or movie	51	14	25	14
Church trip	82	4	7	12
Advertisements	53	11	23	11
Work related trip	87	3	5	10
School trip	86	2	11	6
Someone planned	37	8	24	2

Note:
DN = Did not affect
VL = Affected very little
SW = Somewhat affected
ST = Strongly affected

	PERCENTAGES			
Factor	DN	VL	SW	ST
Wanted to be outside	12.4	1.9	21.0	64.8
Wanted adventure	16.2	1.0	20.0	62.9
Friends going	16.3	4.8	18.3	60.6
Read about it	52.4	17.1	13.3	17.1
Other group functions	66.7	5.7	13.3	14.4
T.V. or movie	49.0	13.5	24.0	13.5
Church trip	78.1	3.8	6.7	9.5
Advertisements	54.1	11.29	23.5	11.2
Work related trip	82.9	2.9	4.8	9.5
School trip	81.9	1.9	10.5	5.7
Someone planned	35.2	7.6	22.9	1.9

Note:
DN = Did not affect
VL = Affected very little
SW = Somewhat affected
ST = Strongly affected

Appendix N:

FACTORS FOR NOT RECENTLY PARTICIPATING

	Yes Responses	
Factor	Number	Percent
Putting it off	40	49.4
Work commitments	33	40.2
Family commitments	32	39.0
No rivers near me	23	28.0
No one to go with	22	26.8
Price of rafting	19	23.2
Travel expenses	15	18.3
Rafting physically demanding	15	18.3
Rafting is too risky	12	14.6
Just not appealing	11	13.4
No information	10	12.2
Lack of transportation	3	3.7

Appendix O:

AGE AND PARTICIPATION IN WHITE WATER RAFTING

	Have Not Been Rafting		Have Been Rafting	
Age	Number	Percent	Number	Percent
20-25	25	6.6	6	5.7
26-30	47	12.4	37	35.2
31-40	125	25.9	39	37.1
41-50	90	23.8	17	16.2
51-60	50	13.2	1	0.9
61-65	39	10.32	5	1.1

Appendix P:

INCOME AND PARTICIPATION IN WHITE WATER RAFTING

	Have Not Been Rafting		Have Been Rafting	
Income	Number	Percent	Number	Percent
30,000	77	20.7	28	26.7
40,000	71	18.8	18	17.1
55,000	79	20.9	18	17.1
77,500	27	7.1	13	12.4
90,001 +	16	4.2	7	6.7

Appendix Q:

EDUCATION AND PARTICIPATION IN WHITE WATER RAFTING

	Have Not Been Rafting		Have Been Rafting	
Education	Number	Percent	Number	Percent
Grade school or less	3	0.8	2	1.9
Some high school	20	5.4	2	1.9
High school graduate	80	21.6	11	10.7
Some college	68	18.3	20	19.4
College graduate	110	29.7	30	30.1
Post graduate	87	23.5	37	35.9

Appendix R:

PARTICIPATION IN HIGH ADVENTURE OUTDOOR ACTIVITIES AND WHITE WATER RAFTING

	Have Not Been Rafting		Have Been Rafting	
Activity	Number	Percent	Number	Percent
Hunt and/or fish	20	13.0	12	20.3
Sea activities	6	3.9	10	16.9
Snow ski	27	17.5	10	16.9
Rock or mountain climb	26	16.9	10	16.9
Hike	25	16.2	9	15.2
Air activities	18	11.7	5	8.5
Cave	5	3.3	2	3.4
Camp	25	16.2	0	0.0

VITA

Tyrone L. Burnette was born in Sequatchie, Tennessee on September 10, 1965. He attended elementary and junior high school in Jasper, Tennessee and graduated from Baylor high school in Chattanooga, Tennessee in May, 1983. Mr. Burnette attended The University of Tennessee, Knoxville (1983-1987) and graduated with a Bachelor of Arts degree in Zoology. For two years he worked in the rafting industry. Mr. Burnette pursued his graduate studies in Recreation and Leisure studies at The University of Tennessee, Knoxville (1989-1991) where he worked as a Graduate Teaching Associate while in pursuit of a Master's degree. In May, 1991 he received a Master of Science degree in Leisure and Recreation Studies with a concentration of Park and Recreation Administration.