THE UNDERSTANDING OF MOTIVATIONS, PREFERENCES AND CONSTRAINTS OF RECREATION IN A RURAL COSTA RICAN COMMUNITY: LA ZONA DE MONTEVERDE

By

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I would like to dedicate this project to my parents, Rich and Debbie Hayes, who have been pillars of constant strength, faith and love throughout the dreams and endeavors of my life.

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TABLE OF CONTENTS

page

ACKNOWLEDGMENTS iv

LIST OF TABLES ix

LIST OF FIGURES xii

ABSTRACT xiii

CHAPTER

1 INTRODUCTION 1

The Case of La Zona de Monteverde 2
Statement of the Problem 4
Purpose of the Study 5
Theoretical Framework 5
Delimitations 9
Limitations 10
Definitions 10

2 LITERATURE REVIEW 12

Motivations for Recreation 12
Preferences for Recreation 17
Preferences for Recreation: Based on Demographics 21
Constraints to Recreation 23
Gender Constraints to Recreation 32

3 METHODOLOGY 37

Introduction 37
Site Description 37
Pilot Study 39
Data Collection 39
Sampling Procedures 40
Selection of Subjects 41
Operationalization of the Constructs 41
Motivations 41
Preferences 41

Constraints 42
Demographics 42
Analysis 43
Description of the Sample 44
Gender 44
Age 44
Family Life Cycle 44
Education Level 45
Residency/Town and How Long 45

4 DATA ANALYSIS AND INTERPRETATION 52

Analysis of Motivations 52
Question 1: What Is the Relationship between Demographics and Motivations for Recreation? 53
Analysis of Motivational Statements 53
Factor 1- Relax 54
Factor 2- Nature 54
Factor 3- Active 54
Factor 4- Alone/Away 55
What Is the Relationship between Age and Motivations? 55
What Is the Relationship between Family Life Cycle and Motivation? 55
What Is the Relationship between Education level and Motivation? 56
What Is the Relationship between Residency (Town) and Motivation? 56
What Is the Relationship between Gender and Motivation? 57
Question 2: What Is the Relationship between Demographics and Preferences for Recreation? 57
Question 3: What Is the Relationship between Demographics and Constraints to Recreation? 61
Analysis of Constraints 62
Intrapersonal (Intra) 62
Interpersonal (Inter) 62
What Is the Relationship between Age and Constraints? 63
What Is the Relationship between Family Life Cycle and Constraints? 64
What Is the Relationship between Education level and Constraints? 65
What Is the Relationship between Residency (Town) and Constraints? 66
What Is the Relationship between Gender and Constraints? 66
Summary 67
Motivation 67
Preferences 67
Environmental Preference 68
Constraints 69

5 DISCUSSION AND CONCLUSION 101

Summary of Procedures and Treatment of the Data 101
Discussion of Findings 101

Research Question 1: What Is the Relationship between Demographics and Motivations for Recreation? 102
Research Question 2: What Is the Relationship between Demographics and Preferences for Recreation? 104
Research Question 3: What Is the Relationship between Demographics and Constraints to Recreation? 108
Implications 110
Recommendations for Future Research 115

APPENDIX

A PHOTOS OF THE SALÓN, BULLRING AND SOCCER FIELD 117

B MOTIVATIONS, PREFERENCES AND CONSTRAINTS QUESTIONNAIRE 120

C INSTITUTIONAL REVIEW BOARD APPROVAL 126

LIST OF REFERENCES 128

BIOGRAPHICAL SKETCH 135

LIST OF TABLES

Table		page
3-1	Data Collection Schedule	48
3-2	Data Collection Totals	48
3-3	Operationalization of Motivation constructs	49
3-4	Operationalization of Constraints Constructs	50
3-5	Demographic Profile for the Monteverde Zone	51
3-6	Age of Respondents	51
4-1	Mean and Standard Deviation of Motivation Items	70
4-2	Frequency of Motivation Items (in Percentages)	71
4-3	Factor Analysis Results of Motivation Statements	72
4-4	ANOVA for Motivations by Age	73
4-5	Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Age Groups	73
4-6	ANOVA for Motivations by Family Life Cycle	73
4-7	Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Family Life Cycle	74
4-8	ANOVA for Motivations by Education	74
4-9	Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Education	74
4-10	ANOVA for Motivations by Residency (Town)	75
4-11	Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Residency (Town)	75

4-12 Means and Standard Deviations for Significant Relationships between Gender and Motivations 76

4-13 Independent T-Test Results for Gender and Motivations 76

4-14 Frequency Counts (in Percentages) for Preference Question 1:"What do you do for fun in your free time when you do not work?" 77

4-15 Frequency Counts (in Percentages) for Preference Question 2: "If a recreational center could be constructed in your community, where do you think it should be located?" 78

4-16 Frequency Counts (in Percentages) for Preference Question 3: "What three activities would you MOST like to have available for recreation in your community?" 79

4-17 ONE-WAY for Environment Preferences by Age Group 80

4-18 Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Age Group 81

4-19 ONE-WAY for Environment Preferences by Family Life Cycle (FLC) Group 82

4-20 Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Family Life Cycle 83

4-21 ONE-WAY for Environment Preferences by Education Level 84

4-22 Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Education Level 85

4-23 ONE-WAY for Environment Preferences by Residency (Town) 86

4-24 Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Residency (Town) 87

4-25 T-test for Environment Preferences by Gender 88

4-26 Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Gender 89

4-27 Mean and Standard Deviation for Constraint Items 90

4-28 Frequency of Constraint Items (in Percentages) 91

4-29 Mean and Cronbach Alpha of Constraints Items 92

4-30 ONE-WAY for Constraints by Age Group 92

4-31 Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Age Groups 92

4-32 ONE-WAY for Structural Constraints by Age Group 93

4-33 ONE-WAY for Constraints by Family Life Cycle 93

4-34 Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Family Life Cycle 94

4-35 ONE-WAY for Structural Constraints by FLC 94

4-36 ONE-WAY for Constraints by Education 95

4-37 Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Education 95

4-38 ONE-WAY for Structural Constraints by Education 96

4-39 ONE-WAY for Constraints by Residency (Town) 96

4-40 Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Residency (Town) 96

4-41 ONE-WAY for Structural Constraints by Residency (Town) 97

4-42 Independent T-Test Results for Gender and Constraints 97

4-43 Means and Standard Deviations for Significant Relationships between Gender and Constraints 98

4-44 ONE-WAY for Structural Constraints by Gender 98

4-45 Overview of Responses to: “What do you do for fun in your free time when you do not work?” 99

4-46 Overview of Responses to: “If a recreational center could be constructed in your community, where do you think it should be located?” 99

4-47 Overview of Responses to: “What three activities would you MOST like to have available for recreation in your community?” 99

4-48 Overview of Responses for Environmental Preference. 100

4-49 Overview of Responses for Intra and Interpersonal Constraints. 100

LIST OF FIGURES

Figure page

1-1 Leisure participation as the product of a balance between constraints and motivations. 11

2-1 The proposed interactions between constraints, motivations, and participation. 36

3-1 Map of Costa Rica. 46

3-2 The Monteverde Zone: Santa Elena, Los Llanos, Cerro Plano and Monteverde 47

A-1 The salón in Cerro Plano 117

A-2 An outside view of the bullring in Cerro Plano. 118

A-3 An inside view of the bullring in Cerro Plano. 118

A-4 The soccer field in Santa Elena. 119

Abstract of Thesis Presented to the Graduate School
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By

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Chair: Lori Pennington-Gray
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This study came about by a voiced concern of the lack of recreation in the Monteverde Zone, by the residents of the community. The lack of safe, healthy and inexpensive recreation, in the opinions of the community members, has been leading the youth of the community to turn to unhealthy alternatives such as experimenting with drugs, alcohol and sex. This study sought to investigate the motivations, activity and environmental preferences as well as the contraints to recreation participation for the residents of the Monteverde Zone, Costa Rica. In addition, the secondary purpose was to examine whether these motivations, preferences and constraints were related to five demographic variables. The data for this study were collected in the Monteverde Zone, Costa Rica. A total of 343 survey questionnaires were collected over a three-week period in April 2003.

This study found that seventeen items loaded on four factors (or domains) with eigenvalues greater than 1.0. The four motivational factors included relax, nature, active,

and alone/away. Participants of this study were highly motivated to participate in recreation for socialization. The majority of participants of this study expressed the most importance for relaxation. Results indicated that the education variable was significantly related to the types of motivations for participation. College educated respondents were more likely to indicate that nature was a motivation for participating in recreation than respondents with "other" types of degrees (i.e., technical degrees).

The greatest preference for recreation activities was for sports across all life cycle groups and in particular for males. The second most popular activity was social activities. Results indicated that women preferred social activities. The majority of the respondents chose the salón and bullring in Cerro Plano or the sports field (la cancha) in Santa Elena as their preferred locations for a recreational center.

Based on previous literature, variables were computed to create the three constraint domains (intrapersonal, interpersonal and structural). After computing Cronbach Alphas, only two domains were used for further investigation (intrapersonal and interpersonal). Results of the ANOVA analysis revealed that younger adults with children reported a high degree of intrapersonal and interpersonal constraints. While females also reported higher levels of both intrapersonal and interpersonal constraints.

In conclusion, the community members would prefer to have a recreation center located in the salón and bullring in Cerro Plano that could be used for sports and social activities. It is recommended that the current structures be used to increase recreation opportunities for the citizens of La Zona de Monteverde. Additionally, it is also recommended that further research be conducted on the youth of the Monteverde Zone.

CHAPTER 1
INTRODUCTION

Recreation and leisure are activities that are pursued for the attainment of personal and social benefits or for just the experience itself. Dimensions of perceived freedom of choice and intrinsic satisfaction are the central determinants of leisure. Leisure and recreation are pursued during discretionary time when there are fewer obligations to work.

Research on recreation has indicated an improvement in the quality of life of individuals who partake in regular recreational activities. Few people would argue the fact that there are benefits to recreation and leisure pursuits. A recreational activity is beneficial to the extent that it helps people to attain one or more of their goals. Lack of recreational opportunities can keep people from participating in recreation activities, however at times, opportunities are available and people still choose not to take part in them. It is thought this may occur when the benefits of leisure and recreation are not realized or when resources are not available.

While North Americans spend over 200 billion dollars a year on recreation, residents of other countries may not have the funds to invest as extensively in leisure and recreational activities. One country in particular, which has lacked funding for recreational activities, is Costa Rica. Costa Rica is part of the land bridge between North and South America, just about 10 degrees above the equator; it is Central America's second smallest nation (Infocostarica, 2003). The entire country is less than 20,000 square miles, roughly the size of West Virginia (Salazar & McEwen, 1996). La Zona de

Monteverde, Costa Rica is located in the highlands of northwestern part of the country, La Zona de Monteverde, can only be reached by a 35 kilometer dirt road straight up the mountain. La Zona is made up of four small towns with approximately 2500 residents, with the greatest concentration of people in the village of Santa Elena.

Recreation services for Costa Ricans and agencies in local communities are relatively undeveloped (Salazar & McEwen, 1996). "Due to the lack of knowledge on the field, recreation and leisure are still seen only as a concern of more developed countries by the Costa Rican administrators," (Molina, 1995). "Since the 1970's, a study conducted by the Institute of Municipal Development of Costa Rica (IFAM), revealed that the inhabitants of 860 rural communities identified lack of recreation alternatives as a major problem in these localities," (Molina, 1995). To confirm this finding, residents in La Zona de Monteverde also identified a lack of recreation for the community as a concern in a pilot study conducted in 2002. This pilot study is presented below.

The Case of La Zona de Monteverde

Hayes, Schmidt, Adkins and Hassan (2002) conducted a study in the Monteverde Zone in 2002 which examined recreation preferences. The pilot study was designed as a follow up to a previous study conducted in 1996. The Sustainable Futures Program at the Monteverde Institute conducted an assessment of youth in the village of Monteverde. Interviews were collected from thirty young people in addition to conducting three focus groups with both youth and adults who provided information on their perceptions of existing recreation activities and sites, and their recreational needs for the future.

Part of the Sustainable Futures report focused on recreational issues. The consensus from gathering information from both adults and youth was that recreation was an important issue and the people of the community perceive there are not enough

activities for youth to do in their free time. In the open-ended question, "What recreational activities exist for youth here?" some of the participants responded, "Nothing," "There are no activities for youth here." Of particular concern was the lack of activities for young women. Some activities reported by the youth were places to dance or roller skate and access to sports such as soccer or basketball. They also said they would like to have areas to simply hang out and talk with friends. However, while many people wished they could have more activities and felt the lack of access was a problem in the community, no concrete efforts were identified to change the situation. The Sustainable Futures entitled, "Youth in the Zone" investigated youth recreation, education, and family life in the town of Monteverde. However, the study solely addressed Monteverde, not the surrounding areas of Santa Elena and Cerro Plano.

In 2002, Hayes, Schmidt, Adkins and Hassan conducted a follow up study to the Sustainable Futures project, entitled "Recreation for the youth of the Monteverde Zone: A Needs Assessment," expanding the research area to be more representative of the entire Zone, rather than just the town of Monteverde (See Map). Qualitative research methods were used in the form of observations, unstructured interviews and conversations. Conversations included questions about present activities available to youth and the physical locations of recreational areas. From the information gained from the unstructured interviews and preliminary investigations, a structured interview was constructed. Two separate interviews were administered, one for youth (ages 10-24) and one for adults (ages 25 and above). From the twenty-five structured interviews, it was confirmed that there is a lack of recreational activities for youth in the Santa Elena and Cerro Plano areas. In fact, in response to the question of what activities are currently

available for youth, nine of the twenty-five interviewees answered that there was nothing for youth to do.

In response to the question, "Are there activities that you wished that were available for youth, but are not?" The following responses were given: Indoor soccer, darts, billiards, track, classes, swimming pool, cancha (field), skating rink, volleyball, dancing, traditional games, movie theatre, gymnasium, aerobics, weight lifting, basketball, theatre group, puppet workshop, park, place to meet friends, youth counseling, recreational center, video games, recreational area, large salón, cancha for women, farmers market, ping pong. The top three most common responses for both youths and adults were a roller skating rink, a sports field (cancha) and a volleyball court. A striking result of this research was the need for anything, something more than what they had.

Both the 1996 and 2002 studies on recreation in the Monteverde Zone scratched the surface of an underlying lack of available opportunities. More research is needed to fully understand not only the needs, but also the motivations, preferences and constraints to those living in the Zone.

Statement of the Problem

Based on the findings from the two previous studies of recreation opportunities for the youth in Costa Rica, it became evident to the researcher that little was known about the recreation needs of the adult community in La Zona de Monteverde. Lack of understanding of recreation motivations, preferences and constraints for adult residents of the Zone make it difficult to plan for recreation.

Research (observations, conversations and a needs assessment) has indicated that there is a lack of free and/or inexpensive recreational activities for residents of

Monteverde, Costa Rica. Lack of recreation opportunities is linked to several social problems (e.g. experimenting with drugs, obesity, casual sex). When there are no recreational outlets for stress, energy and emotions such as anger, negative or unhealthy alternatives may be sought in place of recreational and leisure activities. Boredom can lead to the pursuit of stimulation and when there is no legitimate recreation available, alcohol, drugs, sex and vandalism can all become possibilities. Therefore, the focus of this study is to examine motivations, preferences and constraints to recreation faced by residents of La Zona de Monteverde.

Purpose of the Study

The main purpose of this study was to identify the motivations, preferences and constraints to recreation faced by residents of a rural Costa Rican community. In addition, the secondary purpose is to examine whether these motivations, preferences and constraints were related to five demographic variables.

Theoretical Framework

The theoretical framework guiding this study combines the constructs of motivations, preferences and constraints. This framework is appropriate for understanding the recreation in a rural community in Costa Rica.

In 1993, Jackson, Crawford and Godbey determined that "both the negotiation and the outcome of the negotiation process are dependent on the relative strength of, and interaction between, constraints to participating in an activity and motivations for such participation" (p. 9). During the early stages of leisure constraints literature, assumptions were made that participation is the only aspect of leisure behavior affected by constraints and there is only one type of leisure constraint that does, in fact, prevent participation. As a way of classifying people who have adopted some form of negotiation strategy and

have exhibited a proactive response to constraints, Jackson, Crawford and Godbey came up with the "Balance" and "Negotiation" propositions. These propositions were concerned with the negotiation of leisure constraints, the interactions among categories of constraints, and the interrelationships between constraints and motivations (p. 2). They felt that the outcome of a response to leisure constraints, now measured by the level of participation rather than by participation versus nonparticipation, should be viewed as a function of the interaction, or balance, between constraints and motivations (Figure 1-1). The balance proposition is consistent with a social exchange of the negotiation process as a decision-making confrontation between motivations and constraints (p.9).

Leisure constraints negotiation research is still in its seminal stages, but the understanding and maturity of the concept has been developing in three directions (Jackson & Rucks, 1995). Initial thoughts were dominated by the idea that leisure constraints were un-penetrateable barriers that always resulted in nonparticipation. But, researchers such as Scott (1991) on participation in contract bridge, Henderson, Bedini, Hecht, and Shuler (1993) on the experience of constraints by women with disabilities, and Samdahl and Jekubovich (1993) on constraints negotiation in everyday living, have changed this assumption. All of these authors have illustrated in their research that people are able to find ways to participate (Jackson & Rucks, 1995, p. 86).

The second area of research on constraints negotiation relates to the fact that constraints are not always considered to be negative. Studies conducted by Kay and Jackson (1991) and by Shaw, Bonen and McCabe (1991) suggest the process of negotiation is understood within oneself and people engage in activities despite the

presence of obstacles. Interestingly, the relationship between constraints and participation may even be positive (p. 2).

The third and final area in which constraints negotiation has developed proposes that people encounter and negotiate through the types of constraints defined by Crawford and Godbey (1987) in a hierarchical sequence (Crawford et al., 1991; Jackson et al., 1993). In turn, Jackson, Crawford and Godbey (1993) worked together to challenge their own research of leisure constraints through reviewing the concepts and literature on the subject and suggested a re-interpretation of their hierarchical model (p.2). "Participation is dependent, not on the absence of constraints, but rather on negotiation through them. Such negotiation may modify rather than foreclose participation, " (Jackson et al., 1993). The strategy used to overcome constraints is dependent partly upon the problem encountered. Jackson suggested that strategies could be either cognitive or behavioral, with behavioral strategies involving modifications to the non-leisure aspects of life in order to accommodate leisure needs, such as re-organization of personal time to accommodate leisure activities. Jackson also suggested that modifications to leisure may occur by becoming more aware of opportunities and increasing one's skill (p. 2).

While leisure participation is still possible through the negotiation of constraints, Jackson et al. (1993) proposed that participation as an outcome of constraints negotiation is likely to be different. Preferences for particular activities may change, participation may occur less frequently, and specialization in an activity may increase or decrease. To date, research has supported the validity of the concept of leisure constraints and its relationship to motivations and preferences.

The study examined recreation in a Costa Rican rural community. This community is unique in that it does not have many recreation opportunities. This study attempted to understand the motivations of community members to participate in leisure activities, their preferences for particular types of recreation and recreation environments and the constraints faced with in the pursuit of leisure. Leisure participation as a balance of constraints and motivations is used as the theoretical framework to guide the study of how to best meet the needs of the community.

Research Questions

This study included the following research questions:

1) What is the relationship between demographics and motivations for recreation?

   a) What is the relationship between age and motivations?
   b) What is the relationship between family life cycle and motivations?
   c) What is the relationship between education and motivations?
   d) What is the relationship between place of residency and motivations?
   e) What is the relationship between gender and motivations?

2) What is the relationship between demographics and preferences for recreation?

   A. What do you do for fun in your free time when you are not working?

      a. What is the relationship between age and preferences?
      b. What is the relationship between family life cycle and preferences?
      c. What is the relationship between education and preferences?
      d. What is the relationship between place of residency and preferences?
      e. What is the relationship between gender and preferences?

   B. If a recreational center could be constructed in your community, where do you think it should be located?

      a. What is the relationship between age and environmental preferences?
      b. What is the relationship between family life cycle and environmental preferences?
      c. What is the relationship between education and environmental preferences?
      d. What is the relationship between place of residency and environmental preferences?

e. What is the relationship between gender and environmental preferences?

C. What three activities would you MOST like to have available for recreation in your community?

a. What is the relationship between age and preferences?
b. What is the relationship between family life cycle and preferences?
c. What is the relationship between education and preferences?
d. What is the relationship between place of residency and preferences?
e. What is the relationship between gender and preferences?

D. What environment would you prefer to participate in recreation in?

a. What is the relationship between age and preferences?
b. What is the relationship between family life cycle and preferences?
c. What is the relationship between education and preferences?
d. What is the relationship between place of residency and preferences?
e. What is the relationship between gender and preferences?

3) What is the relationship between demographics and constraints to recreation?

a) What is the relationship between age and constraints?
b) What is the relationship between family life cycle and constraints?
c) What is the relationship between education and constraints?
d) What is the relationship between place of residency and constraints?
e) What is the relationship between gender and constraints?

Delimitations

Delimitations of this study are as follows:

1. Data were collected in the town center of Santa Elena, the central location of the Monteverde Zone.

2. Respondents were men and women Costa Rican residents aged 18 and up.

3. The study was based on self-reported perceived benefits of leisure, motivations for participation, recreational activity preferences, and constraints keeping respondents from participating.

4. The sample size was 343 respondents and the researcher self-administered the survey over a short period of time.

Limitations

Limitations of this study are as follows:

1. The survey was written in English and then translated into Spanish, therefore some words or questions may have been misinterpreted.
2. Interviewee fatigue was a possible limitation.
3. When participants read and responded to questions on their own more answers were left blank.
4. Occasionally, potential female respondents replied that they would, in fact, fill out a survey, but then preceded to hand it to their husbands and asked them to fill it out.

Definitions

Using interviews, observations, and survey data this cross-sectional study illustrated the motivations, preferences and constraints of adult members of the Monteverde Zone, Costa Rica and described the differences in their motivations, preferences and constraints based on age, family life cycle, education, place of residency and gender.

Recreation is defined as an activity that is organized for the attainment of personal and social benefits, while leisure is chosen primarily for the experience itself (Kelly, 1999). Dimensions of relative freedom of choice and intrinsic satisfaction are the central determinants of leisure.

Motivations are defined as internal factors that arouse and direct human behavior. Intrinsic motivation is the pursuit of internal rewards such as self-confidence. Intrinsic behaviors are autonomous and self-determined, facilitate an attempt to pursue and achieve optimum level of sensory arousal, are conducive to feelings of personal competence and result in enjoyment and satisfaction. Extrinsic motivation is the pursuit of external rewards such as money, awards, and fame (Iso-Ahola, 1989).

Constraints are defined as obstacles to leisure participation. They were once considered barriers that directly resulted in non-participation, but current research suggests it is possible to negotiate through constraints. They are believed to be broken down into three levels. The first level of constraints is intrapersonal, and involves individual psychological states and attributes, which interact with leisure preferences rather than intervening between preferences and participation. The second level is interpersonal, those constraints that occur when known co participants themselves are perceived to be prevented from participation because of structural constraints. The third level of constraints is structural, those intervening factors between leisure preference and participation (Crawford & Godbey, 1987).

Negotiate means to complete or accomplish, while negotiation is the action or process of negotiating (Samdahl, Hutchinson & Jacobson, 1999). This will not be analyzed in this study, but rather used as a framework for interpreting the data.

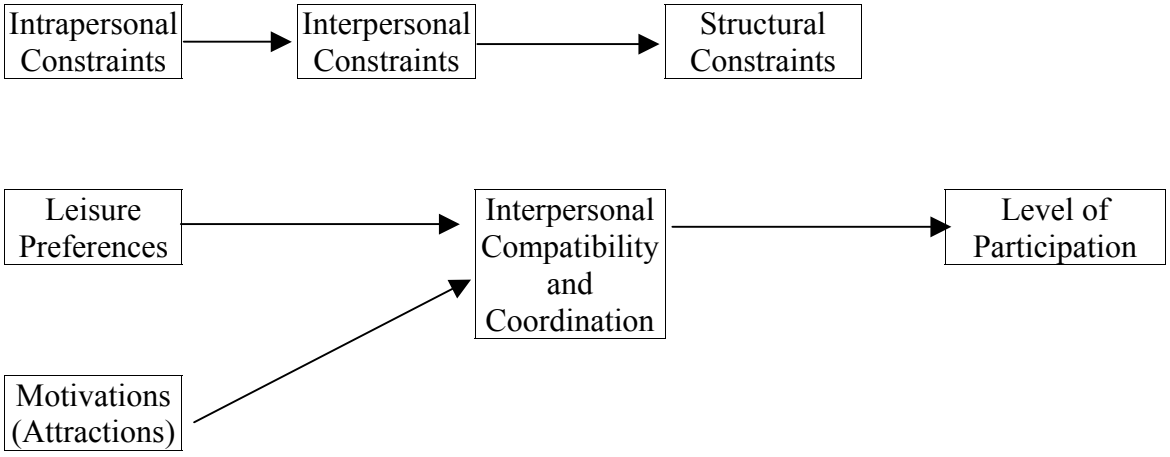

Figure 1-1. Leisure participation as the product of a balance between constraints and motivations.

CHAPTER 2
LITERATURE REVIEW

The literature review will cover the following sections:

- The area of motivations for recreation
- Preferences for recreation literature
- Preferences for recreation based on demographics
- Constraints to recreation literature
- Gender constraints to recreation

Motivations for Recreation

Understanding why people choose to participate in leisure is important in explaining and predicting recreation behaviors. The basic principles of leisure motivation can be applied in practical settings of recreation services. Often, motives are linked to expectations of leisure participation. Measuring the reasons why people do what they do is often a difficult task. This is especially true when determining why people participate in leisure activities, because there is no obvious external force compelling people to do one activity over another.

Motivation can be broken down into two categories, intrinsic and extrinsic. Extrinsic motivation is pursuing outside rewards or benefits as a reason for choosing o participate in an activity. This may include trophies, acceptance by others, or praise. Intrinsic motivation is doing something for the sake of doing something or just "for the fun of it." Intrinsic behaviors are autonomous and self-determined, facilitate an attempt to pursue and achieve optimum level of sensory arousal, are conducive to feelings of personal competence and result in enjoyment and satisfaction. There are no outside influences on the decision to participate. This is especially true for children, who often

play just for the sake of having a good time. An optimal level of arousal is sought to find a balance between being over stimulated and stressed, and being under stimulated and bored (Iso-Ahola, 1989). Intrinsic motivation facilitates the pursuit of an optimal level of arousal and these motivations are inherently pleasurable and satisfying. Iso-Ahola found that the freedom of choice at the onset of a behavior and feelings of competence are two main factors when defining leisure. In the pursuit of leisure people often seek intrinsic rewards and attempt to escape from their routine environment. More intrinsic motivators may include self-actualization, self-gratification and self-expression.

Subjectivity is necessary when determining the benefits of recreation, because what is beneficial to one may or may not be considered beneficial to another and may not be directly observed. Regular exercise can result in physical benefits that can be observed such as weight loss and cardiovascular health but stress reduction and sense of accomplishment are much more difficult to observe. Because it is difficult to observe all benefits of leisure, the theory of planned behavior was proposed to provide a conceptual framework for the study of leisure benefits.

> It involves identification of goals; assessment of perceived relations between leisure activities and those goals; assessment of other beliefs as well as attitudes, subjective norms, and perceived behavioral control; measurement of intentions to engage in leisure activities; and finally, assessment of actual performance of the behavior and of goal attainment. (Ajzen, 1991)

Learning in and of itself is also a benefit of leisure. Seven kinds of learning have been identified to be connected with leisure including behavior change and skill learning, direct visual memory, information, attitude and concept learning (Roggenbuck, Loomis & Dagostino, 1991). New behaviors and skills and/or modifying old ones during leisure can lead to self-actualization, another perceived benefit of leisure. Obtained when

individuals use their freedom to explore the limits of their potentialities and to expand the range of their mental, physical and social skills (Csikszentmihalyi & Kleiber, 1991).

According to Murray, a need is a stimulus, a force pushing an individual in a certain direction or to behave in a certain way. Needs such as achievement, power, affiliation, esteem, and equity, can serve as motivation for individuals and can be both emotional and physical. A need for physical fitness may motivate an individual to play sports or to work out. Often people participate in physical activity to feel healthy and keep in good shape. Physical activity can be an outlet to reduce physical tension and mental stress. Competition and the need for high self-esteem can be achieved through physical fitness activities like playing basketball against other players at a recreation center. Through direct competition, one can evaluate his or her ability against others and determine his or her skill level. The more success one achieves in various levels of competition the more competent one feels, therefore increasing self-esteem. Leadership skills in a competitive physical activity setting can also lead to higher self-esteem (Soucie, 1994).

One study which examined the intrinsic motivation of leisure was Wessinger and Bandalos (1995) 24-item Intrinsic Leisure Motivation Disposition Scale. This scale was created to measure self-determination, competence, commitment, and challenge as motivation for participation. Results using this scale suggested "individuals differ in the degree to which they desire intrinsic rewards, and that these differences influence behavioral choices," (p. 3). Differences dictate cognitive interpretations of perceived needs, or motives and it is these motives that energize goal selection and directed

behavior. If individuals have differing motives, then it is also possible for an entire community and culture to have differing motives.

When there are no recreational outlets for stress, energy and emotions such as anger, people may have to look elsewhere for a release. Unsupervised free time can be used to participate in negative behaviors. As noted by the Carnegie Council on Adolescent Development (1992), "time spent alone is not the crucial contributor to high risk. Rather it is what young people do during that time, where they do, and with whom that leads to positive or negative consequences," (p. 1). Negative or unhealthy alternatives may be sought in place of recreational and leisure activities. Boredom can lead to the pursuit of stimulation and when there is no legitimate recreation available, alcohol, drugs, sex and vandalism can all become possibilities.

Understanding motivations for leisure and recreation can help practitioners develop programs that have the greatest likelihood of minimizing conflicts between users and of yielding human benefits, because of this, much research has been conducted on determining motivations (Manfredo, Driver & Tarrant, 1996). An "experiential approach" was created in the late 1960s by Driver and Tocher to suggest that recreation should not be viewed merely as an activity such as swimming, jogging or camping. "Instead, it should be conceptualized as a psycho-physiological experience that is self-rewarding, occurs during non-obligated free time, and is the result of free choice" (Manfredo, Driver & Tarrant, 1996).

The Recreation Experience Preference (REP) scale was developed to illustrate the idea that people pursue recreation when a problem state exists, such as stress. Within the context of motivation theory, the REP scale suggests people pursue engagement in

recreation to attain certain psychological and physical goals (Manfredo, Driver, Tarrant, 1996). REP research has been used to describe and compare the experience preferences of participants in specific recreation activities since the 1970's. The scale works to establish relationships among experience, setting and activity preferences and also between non-leisure conditions and experience preferences. The REP scale offer one approach to understanding motivations for leisure by focusing on the desired goal states that are attained through participation. For example stress caused by a busy person might motivate that individual to choose a relaxing leisure pursuit because it may lead to temporary escape.

The REP scale is made up of 328 items. However, rarely are all 328 items used in a study. The scales are grouped by domains of conceptually and empirically related scales. The domains are goal states and include but are not limited to achievement/stimulation, autonomy/leadership, risk taking, family togetherness, similar people, learning, enjoying nature, and escape from personal/social pressures (p. 205). The escape from personal/social pressures domain consists of tension release, slow down mentally and escape role overloads, while the risk taking domain consists of only one-scale. When determining which domains and scales to use in an instrument, all items from each scale should be used, because the use of one item from each scale can increase the likelihood of item sampling error and weakens generalizations made to the concepts represented by the scale (p. 208). REP items should be dictated by theoretical concerns, for example, when the interest is on identifying motivations or desired outcomes, the survey should prompt the respondent to indicate the extent to which the items are important in their choice to visit an area or engage in a particular activity.

The purpose of the REP scale is to explain why people engage in recreation, give guidance in understanding what people want from their recreation experience, and offer insight into how it might benefit them. As well, the scale can help managers understand and meet the needs of residents.

Preferences for Recreation

Motives are linked to expected outcomes of recreation participation and can help explain why people prefer one type of leisure to another. Preferences are not limited to just activity preference but also may include environment selection as well. A study conducted by Cooksey, Dickinson, and Loomis in 1982 looked at psychological attributes and there affect on environment preference.

> Environments were conceptualized as providing a context within which valued psychological attributes could be experienced. Environmental preferences under this general theory were defined to be a function of evaluative and cognitive assessments of an environment's psychological attributes. (p. 19)

Their study compared four models for predicting environmental preferences, the optimal, direct-sum, reward-only and reward-cost models. All of the models were designed to allow paired comparisons between alternative environments. The direct-sum model employed cognitive assessments of amount as determinants of environmental preference. This model assumed a direct linear combination of the differences in amount of the psychological attributes in both environments. The reward-only model defined importance as a multiplier for differences in cognitive assessments. The reward-cost model suggested the "ratio of total rewards to total costs should provide a good index of an environment's psychological quality and preferability. Ratios greater than unity indicate a rewarding environment, while those less than unity indicated a costly

environment." Thus, the reward-cost model became the central model of interest in this particular study.

The researchers surveyed 17 female and 14 male college students, and designated ten environments and ten psychological attributes. The environments included roadless wilderness, developed wilderness, park, zoo, museum, theater, nightclub, gymnasium, student center and home. In the questionnaire, each of the environments were paired with every other environment and then the participants were asked to circle which environment they preferred and to rate their degree of preference ranging from 1 (hardly any preference) to 99 (complete preference). Ninety-nine meant they would completely and actively seek to experience the attribute during their leisure experience. Cost evaluations were measured for the ten attributes by rating how important it was for them to exclude that attribute from their leisure. For each participant, environmental preferences were derived based on the four models.

> The correlations among the direct-sum, reward-only, and reward-cost models were very high (.80 to .95), indicating these models ordered subjects in a similar by not identical manner. However, the correlations between each of the three models and the optimal model were substantially lower (.20 to .36), indicating that the optimal model ordered subjects very differently in terms of their preferences. (p. 29)

The researchers found the "optimal" model had the greatest predictive power for environmental preference, and while one may think of an environment for it's physical attributes, it is the person's preference for that environment that is controlled by the psychological aspect of humans. Preference for environment relies upon the outcomes that the person has learned about and expects to experience from the environment. Previous experience plays a role in determining preference for environment choice.

Other research has indicated that past experiences in a given recreation activity can affect preference for future recreation participation. In 1989, Hammitt, Knauf and Noe

collaborated on a research study on the measurement of past use-experience and its effect on recreation activity preference. Two measures of past experience were compared: "(1) an index value composed of four measures of frequency and years of participation, and (2) a user-declared classification of four experience-skill levels" (p. 202). This particular study looked at horseback riders previous experiences riding horses and their desire to choose to go horseback riding again. The researchers created a scale based on the frequency and number of years of experience to determine the individual's skill level, but also allowed each individual to report their perceived skill level as well. A multi-item index of past experience was found to be a more significant indicator of how past experience was related to recreation preference than the self-declared classifications. Ten of seventeen index variables were rated significant while just four of the self-reported variables were considered significant. After reporting experience level the participants then ranked the importance of the 17 variables on a 5-point Likert scale. Variables included horseback riding facilities such as stalls, and corrals, as well as organized recreation. Varying amounts of past activity experience impacted how a recreationist would perceive and evaluate a given activity. Results of this study found that past use-experience was an important variable expressed preferences of recreation users.

In 1992, Stewart conducted a study on experience and it's affect on experience preference. The primary purpose of this study was to provide an initial examination of onsite experience and experience preference. The study examined preference pre- and post experience. The sample was limited to women in order to rule out the possibility of gender influencing the results of the study. The women ranged in age from 16-69 and demographic characteristics included age, education and household income. The survey

was administered to the participants before entering and again as they were leaving the Maroon Lake Trailhead on the West River National Forest. Of the 72 women who participated in the pretest, 55 (76%) participated in the onsite posttest. The researcher examined the measurement of experience preference and actual experience. Six experience preference items were listed in a seven-point Likert Scale format listing, "how important each of the following experiences are (were) to you for your hike," with three questions each for the domains of "physical exercise" and "escaping civilization.".

The results of this study coincided with the predictions of dissonance theory. Participants who achieved a given experience placed more priority for that experience in their post-activity test. The opposite is true for those who did not achieve a given experience. They placed less priority on that experience when given the posttest. Recreationists are particular about the goals they wish to achieve. The participants who achieved the desired experience left feeling fulfilled because they thought they got what they wanted. For those participants who did not achieve a desired level, they were not satisfied. The results of this study suggested that preference may be experience dependent; in other words, preference could be a relic of participation in the recreation experience.

In a study conducted in 1996, Confer, Vogelsong, Graefe and Solan, they determined that people who have different activity preferences also have different motivations. Respondents ranked the importance of 22 reasons for visiting a state park and a factor analysis was used to reduce the 22 possibilities into five general motivation factors: Fun/Recreate, Escape/Solitude, Social/Interaction, Nature/Learning, and Nature/Harmony. Cluster analysis was then used to place respondents into activity

preference groups after reporting their preferences for 18 activities. Someone who preferred picnicking, bird watching, and taking walks could be considered more passive and be motivated to seek solitude. While someone who enjoyed dancing and playing softball could be considered active and be motivated to seek social interaction.

Preferences for Recreation: Based on Demographics

Leisure and recreation activities are related to culture. For instance, a group of boys from one culture may prefer to play basketball, while a group of boys from another culture may prefer to play soccer. Leisure and recreation choices represent a key part of the social life of subgroups within a given culture. Research has suggested that culture influences recreation participation both positively and negatively. In 1983, McMillen found culture had no influence on recreation participation. He conducted personal interviews with 130 Mexican-American households across 32 activities. Responses were compared to the "general" population. The list of activities consisted of watching television, listening to records, and reading newspapers, among other activities. Interestingly, the activities did not specify whether or not the television programs, music and reading material were in English or Spanish.

In contrast to the results of the McMillen project, Hutchison and Fidel conducted a follow-up study in 1984. They felt there were differences based on the type, size, age and sex composition of Mexican-American and Anglo activity groups. The Chicago based study consisted of over three-thousand observations of thirteen regional and neighborhood parks, recording the size, age, sex and social group of Mexican-Americans and Anglo-Americans.

Thirty categories of activities were created consisting of mobile activities (bicycling, walking, jogging) and stationary activities (picnicking, sitting, and lounging

on the grass) and sports activities (basketball, baseball, soccer, tennis, and other sports). More than half of all Anglo groups participated in mobile activities, where more than 45 percent of these activities consisting of jogging, walking and bicycling. The Mexican-American group was more involved in stationary and sport activities. A strong association existed between the type of activity, the size of group, and the type of social group. The Mexican-American groups were larger in number of persons, averaging 5.7 persons, while the Anglo group consisted of an average of 2.5 persons. The Anglo population is more likely to participate in individual activities such as jogging and bicycling. The Mexican-American group was more likely to participate in activities involving a larger number of people, often in multiple family groups. Family units would frequently go to the park in groups to watch younger family members participate in activities.

The results of the Hutchison and Fidel study vary greatly to those of the McMillen study. Hutchison and Fidel found differences in the size, type, age, and sex composition of recreation groups, showed a strong preference for stationary activities involving families or mixed social groupings requiring extensive use of park facilities by the Mexican-American group. Possibly, one reason for the difference in results may be that Hutchison and Fidel did not include indoor activities (watching television, reading newspapers), but rather focused on urban recreation activities in an outdoor setting.

In 1997, a study by Wallace and Smith, also found differences in the recreation activities of people based on ethnicity. In this study, the researchers looked at the motivations, preferred management actions and setting preferences among Costa Rican, North American and European visitors to five National parks in Costa Rica. They found

significant differences between the three visitor types on all 15 motivations, eighteen of twenty-two potential management actions, and preference for settings within a park or protected area. Traditions in Costa Rica differ from those of the United States, while the US has a longer tradition of outdoor recreation and more primitive forms of recreation; Costa Rica's protected areas are much more limited in what types of activities can be offered. Protected areas are limited to day hiking, nature observation, sun bathing/swimming, and picnicking, while camping, and backpacking have not traditionally been as popular.

All, North-Americans, Europeans and Costa Ricans, answered similarly to some questions, but significant differences were found in all fifteen-motivation questions. Forty-two percent of Costa Ricans reported that they would like to spend more time in more developed settings than North Americans (19%) and Europeans (18%). Costa Ricans also tended to be more highly motivated by social interactions (to be with friends/family, see/meet other people and support the development of additional infrastructure. Also, they demonstrated a wider array of needs when it came to recreation, wanting more developed areas for things like camping, picnicking, educational activities, socializing and opportunities to observe nature. It is interesting that Costa Ricans assigned more importance than international visitors on all motivations except "experiencing solitude" or "being adventurous."

Constraints to Recreation

Even if someone is motivated to participate in a recreational activity, they may experience particular constraints that make participation difficult. Three categories of constraints have been identified as intrapersonal, interpersonal and structural (Crawford & Godbey, 1987). Intrapersonal barriers interact with leisure preferences rather than

intervene with participation. Anxiety, stress, depression, perceived self-skill, religiosity, and social attitudes are all examples.

Early definitions of interpersonal constraints were conceived to be "the result of interpersonal interaction or the relationship between individuals' characteristics" (p. 101). But they are now better understood as occurring when individuals express a barrier to participate because of lack of another person to participate with. An example of an interpersonal constraint is the need for additional people to participate with; this is especially true for team sports such as soccer, baseball, basketball and football. Someone cannot pick up a football and play a game without others to participate with. interpersonal constraints interact with both preference for, and later participation in, leisure activities.

Structural barriers intervene between preference and participation. Family constraints such as financial resources, life-cycle stage, and the scheduling of work time effect participation. Also, external factors such as season, climate and availability of opportunity influence participation. While structural barriers can ultimately keep someone from participating in an activity, the elimination or absence of these structural constraints can result in participation.

A study by Kay and Jackson in 1990, not only studied the socioeconomic and activity based variations in barriers experienced, but also how people deal with the two most frequently reported constraints, cost and lack of time. Sixty percent of those surveyed said their participation decreased when they experienced financial constraints, while other solutions included saving money to participate, and the pursuit of cheaper opportunities. In regards to lack of time, 71% said they decreased participation, while

others reduced the amount of time they spent doing other activities including work and household chores. There are two types of negotiation strategies: behavioral and cognitive. The above studies are examples of behavioral strategies, where as cognitive may include changing your attitude about a perceived constraint and using that to negotiate.

Through the use of the Canada Fitness Survey in 1991 Shaw, Bonen and McCabe studied reported constraints compared to participation and demographics. Demographics include age, gender, marital status and the presence or absence of children, occupational status and household income. The survey included 35 different recreational activities, both team and individual sports and activities, such as soccer, tennis, and walking or cycling. Frequency of participation and length of time of participation formulated an acceptable measure of participation. The average participation time was 3.2 hours per week. To determine constraints to recreation participation, respondents who were looking to increase their level of activity were asked to report the presence of eleven barriers to participation. These barriers include, "lack of time," "lack of energy," "costs too much," and "ill health." Because these questions were asked of people who wanted to increase their participation, these barriers were considered intervening constraints. Of the eleven constraints, only two of them, ill-health and low energy, were associated with lower levels of participation for both men and women. Lack of time because of work was the highest rated response of both men and women but those who reported it showed significantly higher levels of participation than those who did not. The three most reported constraints actually showed positive relationships with participation. Some of the other barriers were shown to have almost no relationship to participation at all. This

contradicted previous research that found constraints to directly result in nonparticipation (Shaw, Bonen and McCabe, 1991).

Further research suggested that constraints may not be a barrier, but rather an obstacle that one can work through. According to a study conducted by Crawford, Jackson and Godbey in 1991, there is a hierarchical series of constraints that one goes through starting with intra and moving through inter and then structural. One must negotiate the social attitudes of a given activity before concerning themselves with the need for others to participate with them, once finding others to participate with, the need for a location is necessary. This study argues that it is not the lack of constraints, but the negotiation through them that results in participation. Previous studies were used to demonstrate evidence of negotiation through constraints.

Additionally Crawford, Jackson and Godbey identified 10 types of barriers and three strategies to adapt to or alleviate them. Those strategies include acquisition of information about limited opportunities; altered scheduling of games to adjust to reduced group membership and individuals' time commitments; and skill development to permit participation in advanced play. These are all examples of working through constraints to enable continued participation.

The structural constraint of lack of time seems to be a never-ending problem for those who have responsibilities, families, work and other obligations of time. According to a study conducted by Scott in 1993, time scarcity is the feeling that one lacks enough time to do all the things that one would like to do, and it has a significant impact on leisure behavior (p. 52). Free time is thought to be time away from work, in which one can choose what they would like to do and is often limited to the weekend when one does

not have to be at work. "We have come to believe that the experience of leisure is limited to specific activities, times, and spaces. This absence of fluidity between work and leisure necessarily creates in us a sense of urgency because we know that leisure time is limited," (p. 53).

Across a variety of studies, time constraints are generally the most frequently mentioned reasons for ceasing participation in a leisure activity (Jackson & Dunn, 1991), not participating in leisure activities (McGuire, Dottavio, & O'Leary, 1986; Mannell & Zuzanek, 1991) and not using park and recreation services (Godbey, 1985; Howard & Crompton, 1984, Godbey, Graefe, & James, 1992). Scott suggested that leisure service providers have much to lose if they fail to respond to people's need to save time. By allowing opportunities to make reservations, you minimize the risk of showing up but not being able to participate. Rather than to take this risk, some people would prefer just to stay home. Reservations for tee times for golf, reserving courts for racquetball, tennis and basketball as well as tours of national and state parks are considerations. Leisure service agencies must strive to insure convenience in program offerings by scheduling programs or services at times that are convenient for the visitors.

Shorter and more self-directed opportunities may also decrease the amount of time spent during an activity. Some people may not want to spend an entire day recreating, so by providing half-day tickets to theme parks or nine-hole rounds of golf at an adjusted rate, people with less free-time can still enjoy recreation. Park planners may accommodate shorter visits by restructuring their existing trail system by creating looping trails that are shorter in length and provide self-paced interpretive trails or displays rather than only providing ranger-led programs. Visitors can participate at their own pace and

do not have to be confined by specific start and finish dates and times. Also, providing complete information about time requirements in promotional literature can allow visitors to know the required amount of time for a specific activity before ever leaving the house. They can be prepared and plan to make enough time to engage and complete the desired activity, in a park setting, hikers can choose ahead of time the trail length that best suits their needs. The last recommendation Scott made was an improvement of the overall quality of life for the community and break down the boundaries between work and leisure.

In general, over time, leisure research has been dominated by the belief that leisure is a positive resource that people strive to pursue; therefore, nonparticipation in leisure is thus thought to be a passive reaction to barriers rather than active flight from problems that leisure itself may invoke. In 1995, Weinblat and Navon questioned this way of thought and looked to reexamine the view that leisure nonparticipation is a problem.

Results indicated all participants of the study reported having spent time and special resources in the pursuit of recreation. According to interviews, caregivers of people with disabilities were socially isolated. Time left over was used to run errands, and much of their previous leisure activities were eliminated.

While elderly caregivers may be shying away from leisure pursuits, their counterparts, adolescents, tend to view leisure differently and are in pursuit of something new to take part in. In 1999, Caldwell, Darling, Payne and Dowdy asked the question, "why are you bored?" to 8th grade students to examine the psychological and social control caused by boredom among adolescents. Because lack of recreation opportunities can lead to excessive amounts of free-time and even destructive behavior such as alcohol

and drug abuse, higher rates of dropping out of school, and vandalism it is important to try to understand the phenomenon of adolescent boredom and free time. The life period of adolescents can be a difficult time because of the development of autonomy, changing cognitive abilities, evolving relationships with parents, and the quality of behavioral demands, making boredom especially salient for youth. Adolescence is a period of life with more free-time and more control over this time compared to childhood. Providing new challenges to adolescences as they take on increasing responsibilities for structuring their own time is an important task for recreation providers.

Caldwell, Darling, Payne and Dowdy's research project required eighty-two students to complete two questionnaires, a face-to-face interview, and participation in a four-day activity diary over a two-week period of time. The sample was fifty one percent female, with an average age of 13 years old. The study used psychologically based and social control models to extend the understanding of adolescent boredom in leisure and had two levels of analysis, individual difference and situational. At the individual difference level, they examined two variables that reflected differences in responses to boredom across situations. Parental monitoring reflected the social control/resistance model of boredom, while level of intrinsic motivation reflected psychological theories of boredom. At the situational level, they examined factors associated with boredom within an individual by examining three possible reasons for participating in a particular activity: had to, wanted to, and had nothing else to do.

The researchers predicted that regardless of level of analysis, when adolescents felt as though they were autonomous and self-determined they would be less bored, and when they felt controlled, they would experience boredom. The "had to" situation reflected the

feeling that someone exerted influence on the adolescent producing a feeling of obligation. The researchers hypothesized that the "had to" reason for participation resulted in higher levels of boredom. The "wanted to" situation reflects self-determination and intrinsic motivation. Caldwell, Darling, Payne and Dowdy hypothesized that the higher the level of intrinsic motivation, the lower the level of boredom. And, the "had nothing else to do" situation suggests a lack of stimulation, optimal arousal, and/or lack of awareness of leisure opportunities. They were unable to specify a hypothesis for this particular situation. Level of boredom was designated as the dependent variable and was assessed through a single item that asked participants to respond to how bored versus how involved they were in their activity where 1 = very involved and into it and 5 = very bored.

The results of the research coincided with the researchers original hypotheses to the following relationships: when adolescents engage in activities because they want to they report lower levels of boredom during the activity. Also, higher levels of intrinsic motivation were reported compared to those adolescents who are participating in activities because they felt they had to or had nothing else to do.

Alexandris, Tsorbatzoudis, and Grouis (2002) conducted one of the most current research studies of constraints on recreation participation. They studied the influence of constraint dimensions on intrinsic motivation, extrinsic motivation and amotivation, using the self-determination theory and the hierarchical model of intrinsic and extrinsic motivation as the theoretical frameworks. According to the self-determination theory (Deci & Ryan, 1985), the needs for autonomy, competence, and relatedness are the psychological needs that are important in motivating human action. Based on 1993's

Jackson, Crawford and Godbey's negotiation and balance propositions, the researcher felt that constraints research "required a greater understanding of how perceived constraints, motives and motivation work in relation to each other, and how constraints can be removed and motivation enhanced," (p. 234). The proposed interactions between constraints, motivations, and participation are presented in Figure 2-1.

Two hundred fifty seven adult individuals, who reported participation in some type of sport and physical recreation activity, completed the Sport Motivation Scale and the leisure constraints questionnaire. Participants were given a list of recreational sports to give them a clear idea about which activities should be considered for purposes of the study. Team sports such as basketball, football, soccer and volleyball were included on the list as well as fitness related activities such as aerobics, weight training, dancing, jogging, swimming and hiking were all considered sport activities. Walking for exercise was also designated as a sport activity. Of the 450 total respondents surveyed, 257 individuals reported participating in at least one of the sport activities during the last twelve months, and therefore were the sample of the survey. Participants were asked to evaluate the importance of each of the 29 statements as limiting facets for their sport participation, ranging from very important (7) to not important (1) on a 7-point Likert scale. The Sport Motivation Scale was used to measure motivation. The SMS is composed of three subscales assessing intrinsic, extrinsic and amotivation ("it is not clear to me anymore"; "I do not really think my place is in sport", "I used to have good reasons for doing sports, but now I am asking myself if I should continue doing it") (p. 241). On a Likert-scale, participants were asked to evaluate each item ranging from strongly disagree (1) to strongly agree (7).

Three intrapersonal dimensions were identified, individual/psychological, lack of knowledge and lack of interest. The three intrapersonal dimensions and the time dimension contributed significantly to the prediction of amotivation. No significant relationship was found between interpersonal and structural constraints and amotivation, which is explained by the hierarchical model of constraints. The results indicated that intrapersonal constraints predicted (significantly but not strongly) intrinsic motivation. High levels of individual/ psychological and lack of interest-related constraints were associated with lower levels of intrinsic motivation. The results suggested that intrapersonal constraints act as de-motivating forces for individuals. The study also found that extrinsic motivation does have an influence on the frequency of participation. "External reasons, such as health and fitness, attractiveness, general appearance, and weight control, are important incentives towards sport and exercise participation," (p. 248). Alexandris, Tsorbatzoudis, and Grouios reported that individuals who invested a considerable amount of time in physical activity also placed a greater importance on external motives, such as health and fitness, and achievement-related issues, such as recognition and outcome.

While constraints had been considered to prevent participation, it is now thought that constraints may make participation more difficult, but they do not necessarily lead to non-participation. It is the negotiation of those constraints that lead to participation.

Gender Constraints to Recreation

Gender also plays a role in constraints to leisure participation. Kane (1990) found gender roles learned in childhood carry over into adulthood and effect leisure participation. "One consistent theme that has emerged from research on gender differences in play is that young girls learn skill, roles and attitudes that encourage

dependency, a lack of exploration and thus result in a deficit in self-expression and sense of mastery" (p. 53). Girls are taught to be dependent on adults for help and security, while boys on the other hand, are taught to be independent and competent. This leads to women being physically, socially and psychologically constrained in their opportunities to fully explore physical recreation experiences. Through use of the Bem Sex Role Inventory, Kane found that women with masculine and androgynous personalities perceived fewer barriers to recreation than women with feminine and undifferentiated personalities. Intrapersonal constraints such as lack of self-confidence, not feeling good about oneself, not being physically fit, and lacking the physical skills to participate were significantly greater constraints for women with feminine and undifferentiated personalities. By leisure service providers putting less emphasis on gender appropriate activities, both males and females will have more autonomy in choosing their recreation activity and therefore, get more enjoyment out of the experience.

An analysis of women's leisure, conducted by Shaw (1994) found most research on leisure constraints for women does not suggest that women have no leisure, but that they face more constraints than men. Structural constraints such as lower earning power, less time due to household obligations and family commitments and lack of transportation are common barriers to women's leisure participation (Horna, 1989; Searle & Jackson, 1985; Witt & Goodale, 1981), and (Deem, 1986; Hunter & Whitson, 1992; Searle & Jackson, 1985). Low income women, unemployed women, single parents and women of color are more likely to be constrained by economic factors than are white, middle-class women, (Dattilo, Dattilo & Kleiber, 1992; Green, Hebron & Woodward, 1990; Streather, 1989).

In a study conducted by Jackson and Henderson (1995), recreation constraints of men and women and between-gender and within-gender similarities and differences were examined. Jackson and Henderson used gender as a theoretical framework, not just as one's biological sex but the "social expectations and cultural definitions associated with one's biological sex," (p. 33). They used theoretical positions of patriarchy, feminism, and psychoanalysis (e.g., Bella, 1989; Glancy, 1991; Scott, 1986) as well as feminist gender perspectives.

Using the General Recreation Surveys administered by the Alberta, Canada government, two empirical questions were addressed: (1) "What constraints to leisure are experienced by women and men?" (2) "How does the context pertaining to personal and situational circumstances (e.g., age, income, and family structure) alter, reinforce, and perhaps even alleviate the effects of constraints among women and men?" (p. 34). Two separate mailings were conducted to effective random samples in 1988 and again in 1991 combining for a large sample size of 9,642 respondents. The majority of respondents, who disclosed their gender, were women (52.3%) while men made up 47.7% of the sample. Ages ranged from 18 to 91 years old. Five factors were replicated in terms of factor structure for men and six factors resulted for women: 'Social & Geographical Isolation', 'Lack of Skills', 'Facilities and Family & Work Commitments' resulted for both men and women. 'Costs of participating' resulted for women, while 'transportation and costs' resulted for men.

Results indicated that female respondents were slightly younger, had lower incomes, and the proportion of single parents was higher for women than men. Women reported the presence of all 15 constraints items statistically more than men. Women

reported higher levels of constraints for the intra- and interpersonal constraints: difficult to find others, too busy with family, no physical ability, don't know where to participate, don't know where to learn, not at ease in social situations, and physically unable to participate. They also scored significantly higher than men on social isolation and lack of skills dimensions. Men had higher scores on the cost of equipment and being too busy with work. Variables related to age, income, and family structure were also mediating factors that altered, reinforced or alleviated constraints for women, depending on the nature and type of constraint. Gender was not the only factor that created leisure constraints.

In this section we discussed the review of the literature on motivations for recreation participation, activity and environment preference, and constraints to participation. The "balance and negotiation" theory by Jackson, Crawford and Godbey (1993) integrates these concepts. The purpose of this study is to examine the motivations, preferences and constraints for recreation of a rural Costa Rican community and to determine if these factors were related to the demographics.

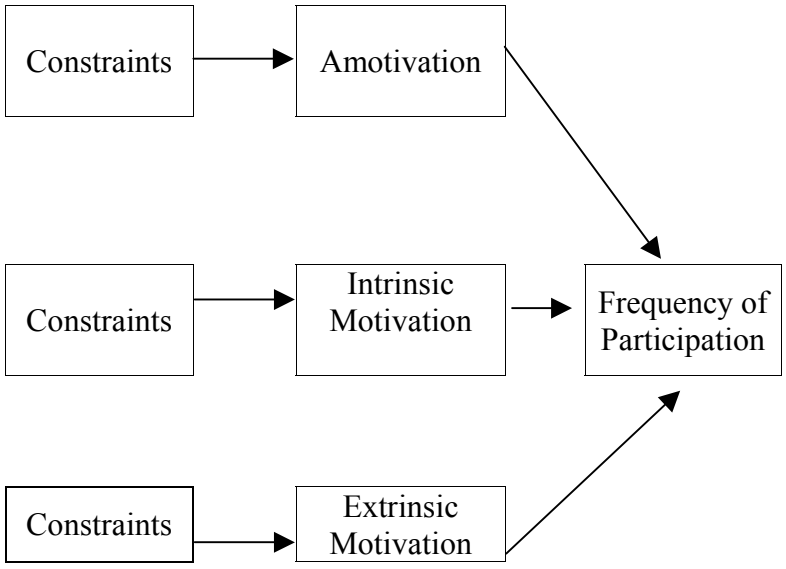

Figure 2-1. The proposed interactions between constraints, motivations, and participation.

CHAPTER 3
METHODOLOGY

Introduction

The research design is a cross-sectional, exploratory case study. There are several threats to validity in a one-shot case study, but care will be taken to minimize these weaknesses. History is a possible threat to this research design because the community being used is a frequently studied community. If a bad experience was had by any of the participants in the past with researchers, a biased opinion and unwillingness to participate could be the result. While it is possible, it is probably unlikely. This chapter discusses:

- Site description
- Pilot study
- Data collection
- Sampling procedures
- Selection of subjects
- Operationalization of constructs
- Analysis
- Description of the sample

Site Description

In the summer of 2002, the researcher participated in a pilot study in the Monteverde Zone of Costa Rica. The Zone is a rough geographical area that encompasses communities found within about a 15-Km (9 Miles) radius around the village of Monteverde (Figures 3-1 and 3-2). Communities within the Zone include Los Llanos, Cerro Plano, Monteverde, and Santa Elena (the community with the greatest concentration of people). At the time of the study, the population for the Zone was approximately 3,000 residents. The majority of people making up the Zone live in the village of Santa Elena. Many of the residents are dairy farmers and produce milk for the

locally run dairy plant, The Monteverde Cheese Factory. The Zone is sometimes referred to as the milk-shed of Costa Rica and it produces and markets several varieties of dairy products including cheese, milk and ice cream throughout the country.

Tourism is growing rapidly in Costa Rica and is contributing to a healthy economy throughout the country. Over one million travelers visit Costa Rica each year, with sixty-percent of those travelers coming from the United States. The Zone is a tourist attraction in Costa Rica, famous for the cloud forest. In Spanish, Monteverde means "green mountain". Monteverde is world famous for its role in creating the Monteverde Reserve Complex, a collection of private and public preserves protecting more than 100,000 acres of endangered tropical forest. The largest reserve is the Monteverde Cloud Forest Reserve, which was founded in 1972 due to the efforts of the Quakers, who decided they wanted to preserve one-third of their land in order to protect the watershed above Monteverde (Rachowiecki & Thompson, 2000). The Tropical Science Center, a Costa Rican non-profit association for education and scientific research, administers and manages the Reserve, along with a Monteverde staff. The Reserve rests atop the Cordillera de Tilaran extending down both slopes and including eight different ecological life zones. Currently, the biological reserve includes approximately 10,500 hectares. Lands have been purchased using donations from individuals and organizations worldwide. There is a visitor center and field station that includes simple laboratory facilities and dormitory-style lodging. It is called the Reserva Biológica Bosque Nuboso Monteverde (Monteverde Cloud Forest Reserve), and more land has been acquired over time with the help of organizations such as the World Wildlife Fund. The Monteverde

Reserve is a private enterprise that is not regulated by the government, and it relies on public donations.

The second largest forest is the Bosque Eterno de los Niños (Children's Eternal Forest). This is apart of the larger Monteverde Reserve and is managed by the Monteverde Conservation League, a non-profit association founded in 1986, dedicated to the preservation of the surrounding forest areas through environmental education, reforestation, land purchase, and other forms of protection. The League is a cooperative effort among strongly committed Costa Rican and North American biologists and landowners. Horseback riding and canopy walking tours and zip-line treks of the forest are popular tourist attractions in the area. There are more than thirty hotels available in the Zone, with new ones opening regularly (Rachowiecki & Thompson, 2000).

Pilot Study

The pilot study was a qualitative research study, in which the researcher conducted 25 structured interviews to determine the perceived recreational opportunities and the preferred recreational activities for the future. Participant observation, unstructured interviews, and structured interviews were all used in the pilot study.

Building on that pilot study a follow-up questionnaire was developed to determine whether or not there was a relationship between the motivations, preferences and constraints of residents in the Zone and demographic variables.

Data Collection

In April of 2003, data were collected by the researcher who administered surveys to people as they entered and exited various locations throughout communities in the Zone in Costa Rica. Research was conducted in the form of intercept interviews or self-administered surveys. A Lecturer on the University of Florida campus translated the

survey into Spanish. It was proof read and reviewed to ensure appropriate language. The option of taking the survey in English or Spanish was made available to participants. The survey consisted of three pages and was divided into four sections including motivations, activity and environment preferences, constraints, and demographics. The survey took approximately 15 minutes to complete. Before leaving for Costa Rica, the researched intended to allow respondents to read and fill-out surveys on their own to maximize time, but shortly after beginning the surveying process, the researcher found that when individuals were left on their own, they were not filling the surveys out completely. Therefore, the researcher decided to read the survey questions aloud and fill in their response. Over a three-week period, 343 completed surveys were collected. Seven surveys were not completed and were deducted from the total. A total of 350 surveys were handed out. One person refused to participate in the interview and survey process.

Sampling Procedures

The University of Florida Human Subject Institutional Review Board was used to approve the survey being used before leaving for Costa Rica. Informed consent was used to insure the safety of the individuals involved in the surveying process. The intent for use is in writing at the top of the survey and the researcher also informed the participants verbally aloud before beginning.

The Spanish version of the survey was administered to people as they entered and exited various locations throughout the community. Three hundred and forty-three (N=343) completed surveys were collected over a three-week period. The Cheese Factory, Down-town plaza, Soccer Field and Health Clinic were locations that were surveyed more than once during the three-week period, other locations were only

surveyed one time as to not survey the same people more than once. The downtown plaza consists of the Super market, mall and bus stop. Santa Elena is a central location for all four villages and houses the only super market and Catholic Church. This particular area is known as a meeting point for social interaction. On two occasions, the researcher approached people while going on a walk. The data collection schedule is listed in Table 3-1. The total number of surveys collected per location is listed in Table 3-2. A translator was present for some of the surveying.

Selection of Subjects

The study's population is made up of the residents of the Monteverde Zone, Costa Rica. It was expected that adults would answer the questionnaire because they are interested in recreation and leisure time. A random sample was used to help eliminate the selection bias, every fifth person was surveyed who walked in or out of the survey venues.

Operationalization of the Constructs

Motivations

Motivations were operationalized on a five-point Likert scale using Manfredo, Driver and Tarrant's Recreation Experience Preference Scales (1996). There were 20 items which represented six constructs (Table 3-3).

Preferences

Preferences were operationalized using four questions. Question one was an open-ended question which read "What do you do for fun in your free-time when you are not working." Question two was an also opened ended and read, "If a recreational center could be constructed in your community, where do you think it should be located?"

Question three read “What three activities would you MOST like to have available for recreation in your community?”

Question four asked about preferences for the environment based on work by Cooksey et. al. (1983). The question was “What environment would you prefer to participate in recreation in?” Choices for the environment included: wilderness areas, la Cancha, school yard, gymnasium, home, national park, La Plaza and church.

Constraints

Constraints were operationalized on a five-point likert scale ranging from strongly agree (1) to strongly disagree (5). Constraints were conceptualized using Crawford, Jackson and Godbey’s model of constraints. There were four items that represented interpersonal constraints, five items that represented interpersonal constraints and three items that were structural constraints (Table 3-4).

Demographics

Respondents were asked to indicate their age as an open-ended survey. Then, age was recoded into five groups, (1) 18-25, (2) 26-35, (3) 36-45, (4) 46-55 and (5) others over the age of 56. Gender was measured as a closed ended question with either male or female as the response.

Education was a closed ended question that asked the respondent their highest level of education: elementary school, high school, university/college or other.

The place of residence was measured by asking which of the following town’s the respondent lived in: Santa Elena, Cerro Plano, Los Llanos, or Monteverde.

Marital status was measured as four groups: single, married, divorced or widowed. The frequency distribution indicated that divorced group represented 9% of the sample

and widowed group represented 4% of the sample. Therefore these two categories were collapsed into one.

Number of children in the household was an open-ended question. The range of the number of children was zero to nine, with the mode being zero (32%) followed by two (19%) and one (18%). Therefore, the decision was made to recode the number of children into no children or presence of children.

Using the new recoded variables, life cycle was conceptualized as a combination of marital status and number of children. Computing a new variable resulted in five categories: married no children, single no children, married with children, single with children and divorced/widowed with children. Divorced/widowed without children was recoded as 'missing' due to a small sample size (N=4).

Analysis

In order to describe the population, descriptive statistics of mean, median, mode, standard deviation and variance were run on the demographics: age, gender and income. A frequency count and percentage was run on the town in which the participant lived. Descriptive statistics in the form of mean, median, mode, standard deviation and variance were run on the motivations variables in order to identify each of the motivations for the participants. Factor Analysis was used to examine the validity of the motivation domains. After the index was created, internal reliability was determined using Cronbach's Alpha. An independent sample t-test or ANOVA was conducted to compare gender, family life cycle, age, residency and education with motivational domains. Scheffe's post-hoc test were used to find where the differences lay along the variables.

Descriptive statistics in the form of mean, median, mode, standard deviation and variance were run on the constraints variables in order to identify each of the constraints

for the participants. Factor analysis was computed to validate the constraint domains. Internal reliability was examined using Cronbach's Alpha to determine if all of the variables in the index made up a valid index.

Description of the Sample

The demographic variables analyzed included gender, age, family life cycle (consisting of marital status, and number of children); education level and residency. The results are given in Table 3-5.

Gender

The respondent rate of male to female was fairly close in percentage. Approximately half the sample was male (54%) compared to 46% (157 actual respondents) who were female. One limitation of this study was the fact that often, the potential female respondents replied that they would, in fact, fill out and then preceded to hand it to their husbands and asked them to do it.

Age

The mean age of respondents was 34 years old with a range from 18 to 75 years of age. Age group categories were created. Over one-fourth of the sample were between the ages of 18 and 26, 109 respondents represented the largest percentage of ages between 25 and 35 years old (32%), 22% were between the ages of 36 and 45. Respondents between the ages of 46 and 55 made up 9% of the sample, and the oldest age group, 56+, represented 8% of respondents. A breakdown of the adults surveyed is shown in Table 3-6.

Family Life Cycle

Family life cycle consisted of both marital status and the presence of children. Categories consisted of Married without children 4%, Single without children 27%,

Married with children 45%, Single with children 11%, and Divorced/Widow with children 12%. The category of Divorced/Widow without children was removed because it was too small (N=4).

Education Level

Three hundred forty people reported having some education. Almost thirty percent of respondents had an elementary education, more than half of all respondents reported having a high school education (51%), while 16% of respondents had a college education, and 3% (11 actual responses) had some other degree. Some other degree consisted of technical or professional degrees.

Residency/Town and How Long

The largest town in the Monteverde Zone is Santa Elena. The majority of respondents were from Santa Elena at 42%, 25% of respondents reside in Cerro Plano, 18% of respondents were from Los Llanos, and 14% of respondents live in Monteverde. The mean amount of time respondents have lived in the Zone was 23 years. Time ranged from a few months to as long as 67 years.

Figure 3-1. Map of Costa Rica.

*map courtesy of Costa Rica Travel Network, 2003.
Note: The Monteverde Zone is outlined in black box

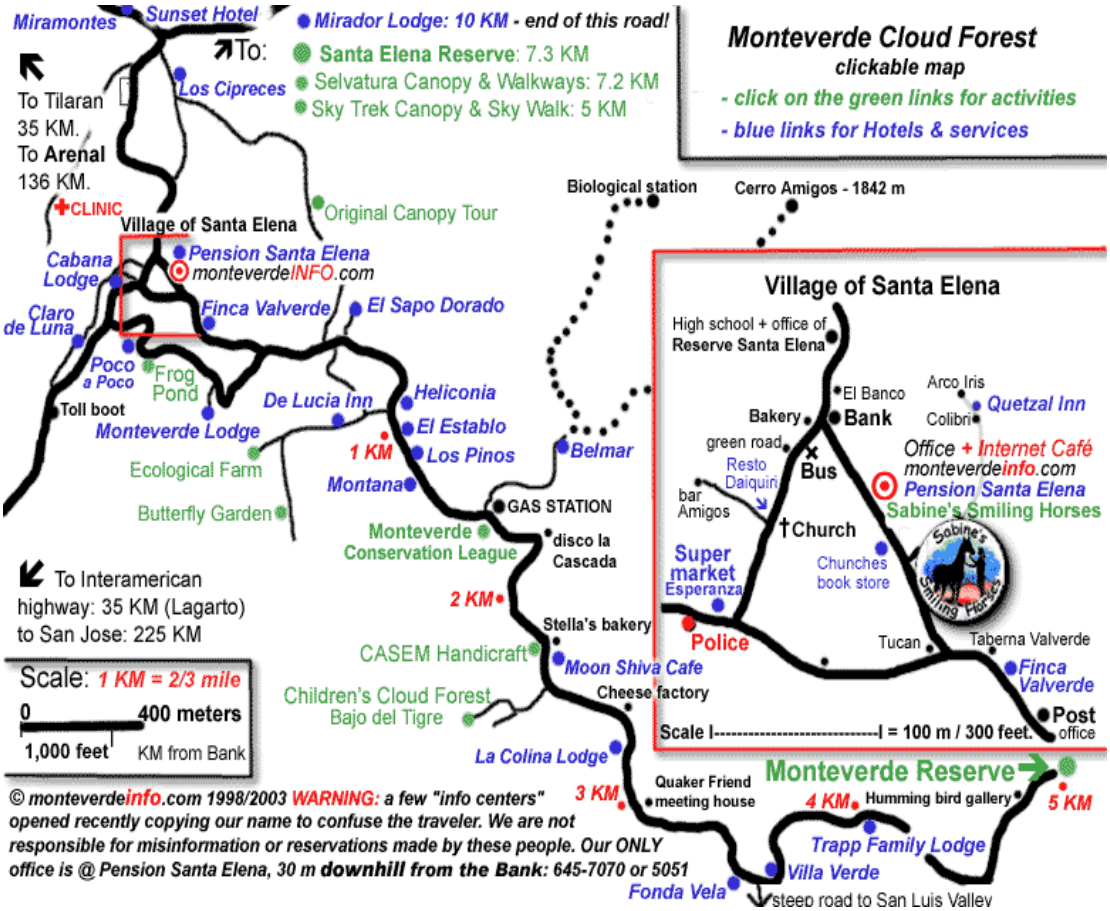

Figure 3-2. The Monteverde Zone: Santa Elena, Los Llanos, Cerro Plano and Monteverde

*Map courtesy of Monteverde Info, 2003.

Table 3-1 Data Collection Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Week 1	Plaza-Mall (10) Plaza-Grocery(15)	Conservation League(14)	Soccer Field (6)	Cheese Factory (16) Post Office (8)	Butterfly Garden(5) CASEM(10)	Soccer Field (20)	Church (20)	**124**
Week 2	Cheese Factory(19) Moto Shop (4)	Health Clinic(15) Morphos Restaurant (6) Sky Trek (5)	Soccer Field (18)	Chunches Bookstore(5)	Jungle Groove(5)	Plaza-Bus(22) Walking(3)	Church (21)	**118**
Week 3	OFF	Paradise Café(5) Art Center(5)	Cloud Forest(5) CASEM(8)	Plaza-Mall(20) Walking(4)	Plaza-Bank(19) Health Clinic (15)	Soccer Field(15)	OFF	**101**
Total	**48**	**50**	**37**	**53**	**54**	**55**	**46**	**343**

Table 3-2. Data Collection Totals

Location	Number of Surveys Collected (N)
Soccer Field-La Cancha	59
CASEM	18
Conservation League	14
Health Clinic	30
Moto Shop	4
Cheese Factory	35
Plaza- Mall	30
Plaza- Grocery Store	15
Plaza- Bus Station	22
Plaza- Bank	19
Catholic Church	41
Restaurants-Morphos Cafe/Jungle Groove Café/Paradise Cafe	16
Butterfly Garden/Cloud Forest	10
Walking	7
Post Office	8
Art Center/Chunches Book Store	10
Sky Trek	5
Total	**343**

Table 3-3. Operationalization of Motivation constructs

Label	English Version	Spanish Version
Excitement		
Excite	To experience excitement	Para experimentar entusiasmo
Fastpace	To experience the fast paced nature of things	Para experimentar la naturaleza rapidamente medida de cosas
Pleasure	To experience pleasure	Para sentir placer
Relax/Escape		
Tension	To relieve my tension	Para liberar o reducir alguna tensión
Beaway	To get away from other people	Para estar lejos de otra gente
Restmind	To rest my mind	Para descansar su mente
Demands	To escape the demands of everyday life	Para huir de las demandas de la vida
Alone	To be alone	
Nature		
Scenery	To enjoy the scenery	Para ver la belleza escenica
Beinnature	To be in nature	Para estar en la naturaleza
Smellsoun	To smell the sounds of nature	Para gozar los olores y los sonidos de la naturaleza
People		
New people	To meet new people	Para hablar con gente nueva
Family	To be with my family	Para estar con su familia
Friends	To be with my friends	Para estar con sus amigos
Learn		
Develop	To develop new skills	Para desarrollar mi conocimiento de información
Learn	To learn more about nature	Para aprender más acerca de la naturaleza
Newdiff	To do new and different things	Para tener experiencias nuevas y diferentes
Physical Fitness		
Active	To be active	Para estar activo
Exercise	To exercise	Para ser ejercicio físico
Feelgood	To feel good	Para sentirse bien

Table 3-4. Operationalization of Constraints Constructs

Label	English Version	Spanish Version
Interpersonal		
Ability	I don't have the ability to participate	No tengo las habilidades necesarias para participar
Timid	I am too timid to participate	Soy demasiado/a timido/a para participar en una nueva actividad
Newact	New activities make me uncomfortable	Las nuevas actividades me hacen sentir inquieto/a
Interest	I am not interested in the recreation available in this community	No me interesan las actividades de recreacíon de mi comunidad
Noimport	Recreation is not important	El recreo no es importante
Intrapersonal		
Frtime	My friends don't have the time	Mis amistades no tienen tiempo
Frimport	My friends don't think it is important	Mis amistades no aprecian tomar parte en las actividades de recreación
Nofriend	I have no friends to participate with	No tengo a nadie que quiera participar conmigo
Toofar	It is too far away for my friends to participate	Mis amistades viven muy lejos para comenzar una actividad nueva conmigo
Structural		
Time	I don't have the time	No tengo suficiente tiempo
Transport	I don't have transportation to get there	No tengo transporte
Cost	Recreation is too expensive	La recreacíon cuesta demasiado

Table 3-5. Demographic Profile for the Monteverde Zone

Socio-Demographic Characteristics	Frequency	Valid Percent
Gender (N=341)		
Male	184	54
Female	157	46
Age Groups (N=341)		
18-26	96	28
25-35	109	32
36-45	75	22
46-55	32	9
55+	29	8
Family Life Cycle (N=336)		
Married No Children	14	4
Single No Children	92	27
Married With Children	151	45
Single With Children	37	11
Divorced/Widow With Children	42	12
Education Level (N=340)		
Elementary	99	29
High School	174	51
College	56	16
Other Degree	11	3
Town (N=339)		
Santa Elena	143	42
Cerro Plano	86	25
Monteverde	37	14
Los Llanos	63	18

Table 3-6. Age of Respondents

	Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Age of participants surveyed	34	31	18	12.6	18	75

*(N=341)

CHAPTER 4
DATA ANALYSIS AND INTERPRETATION

The purpose of this exploratory study was to investigate the recreation motivations, preferences and constraints of the citizens living in the Monteverde Zone, a rural Costa Rican community. The Zone relies heavily on tourism dollars and therefore caters most of its recreation in the area to meeting the needs of travelers. This chapter contains the analysis of the data collected during the study. The chapter has been divided into the following sections:

- Analysis of Motivations
- Analysis of Preferences
- Analysis of Constraints
- Summary

Analysis of Motivations

The motivation statements were given on a five-point Likert scale. This scale ranged from "Strongly Disagree" to "Strongly Agree," and respondents were asked to rate how the given statements made them feel. The motivational statements which respondents indicated that they agreed were "not at all important" included: "to be away from other people" (M= 2.9), "to be alone" (M= 3.1), and "to experience excitement" (M=3.7). The motivational statements which respondents indicated that they agreed were "extremely important" included: "to feel good" (M= 4.3), "to experience new and different things" (M=4.3), and "to be with my friends" (M= 4.4). The means and standard deviations for each of the statements are listed in Table 4-1.

The frequency of the motivational statements rated by the respondents are shown in Table 4-2 in percentages. The bold numbers are indicative of the highest percent, or the most common rating applied by the respondents.

Question 1: What Is the Relationship between Demographics and Motivations for Recreation?

Analysis of Motivational Statements

The motivation statements were analyzed using Factor analysis in SPSS, v11.5 Factor analysis has been recognized as an accepted and useful test for grouping multiple variables together into factors to identify commonality. Varimax rotation was included because it explained the largest degree of variance among the multiple variables, and also allowed for more even distribution of the variables into the factors that resulted. According to Jeffreys, Massoni and Odonnell (1997), varimax rotation is the best way of determining the appropriate number of common factors to retain based on an analysis of the eigenvalues of the adjusted correlation matrix.

The Kaiser-Meyer Olkin (KMO) was also included to determine if indeed factor analysis was the most appropriate method of analysis for the research questions pertaining to motivations. According to Jeffreys, Massoni and Odonnell (1997), the KMO was an index, which compared the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. A small KMO (less than 0.5) suggests that perhaps a factor analysis is not a suitable approach, whereas a higher value indicates the appropriateness of factor analysis. The KMO found in these questions was 0.9; which proved factor analysis was an appropriate test for these questions.

The final outcomes of the factor analysis resulted in four factors (or domains) with Eigenvalues greater than 1.0 and explained 47.9% of the total variance. Grounded in prior research, items with factor loading scores of at least 0.4 were drawn for each factor, therefore, seventeen motivation statements loaded into one of four factors. The results of this factor analysis are shown in Table 4-3.

Factor 1- Relax

The factor analysis indicated that "Relax" was one factor. The motivation statements included in this factor were "to get away from the demands of life," "to release or reduce built up tension," "to develop my knowledge," "to feel pleasure," "to relax my mind," "to feel good." The researcher took out the statement "to be with my family," (.4) because it was double loaded. Only statements at .4 or higher were kept. The “Relax” factor had a mean of 4.3 and a Cronbach Alpha of 0.7 after removing the above dropped factor.

Factor 2- Nature

The second factor, "Nature," included four motivation statements: "to enjoy the smells and sounds of nature, "to be in nature," "to look at beautiful scenery," and "to learn more about nature." Factor 2 had a factor mean of 3.9 and a Cronbach Alpha of 0.72, which showed this factor is also reliable. This factor had an Eigenvalues of 2.4 and accounted for 12.1% of the variance.

Factor 3- Active

The third factor contained many items pertaining to being active including: "to get physical exercise," "to experience the fast paced nature of things," "to experience excitement," "to talk to new people," and "to be active." This factor had a mean of 3.9

and a Cronbach Alpha score of 0.61, which showed okay reliability. The Eigenvalues for this factor was 1.4 and it accounted for 7.3% of variance.

Factor 4- Alone/Away

The fourth factor included: "to be alone," and "to get away from other people." This factor had a mean of 3.0 and a Cronbach Alpha score of 0.69, which showed good reliability. The Eigenvalues for this factor was 1.3 and it accounted for the remaining 6.6% of variance.

What Is the Relationship between Age and Motivations?

In order to analyze the relationship between socio-demographic characteristics and motivations for recreation participation, analysis of variance (ANOVA) was implemented. The results indicated that none of the socio-demographic characteristics other than education were significantly related to the types of motivations for participation by members of the Monteverde Zone.

Tables 4-4 and 4-5 report the results of analysis of variance between motivations and age. Age groups were condensed into five categories, representing five different generations. The five categories were: (a) 18-25, (b) 26-35, (c) 36-45, (d) 46-55, and (e) 55+. The results suggested there were not significant relationships between age groups and motivations.

What Is the Relationship between Family Life Cycle and Motivation?

Tables 4-6 and 4-7 present the results of the analysis of variance for the family life cycle variable and motivation. Family life cycle included five categories: (a) Married with no children, (b) Single with no children, (c) Married with children, (d) Single with children, (e) Divorced/Widow with children. On the original questionnaire, Divorced or Widowed were individual choices, but were later condensed into one category because

the number of responses were too small. The Divorced/Widow without children was later removed, because of a small response rate. Thirty-one out of 343 (9 %) respondents reported being divorced, while fifteen of all respondents (4 %) reported being a widower. No significant differences were determined between family life cycle and motivation.

What Is the Relationship between Education level and Motivation?

Tables 4-8 and 4-9 present the results of the ANOVA procedure for motivations and education level. Respondents were asked to report their highest level of education completed. Choices consisted of (a) Elementary, (b) High School, (c) College, or (d) Other degree. The "Other" choice was made available for those who have more than a College education, or some type of technical/vocational trade school education. There were significantly different perceptions of the importance of Factor 2, Nature, between College educated respondents, and those reporting having an 'Other' degree. College educated respondents were more likely to indicate that nature was a motivation for participating in recreation than those indicating they had some other type of education, like technical school.

What Is the Relationship between Residency (Town) and Motivation?

Tables 4-10 and 4-11 present the results of the analysis of variance for the residency variable and motivation. Residency was indicated by the town in the Monteverde Zone where the respondent lived. Choices consisted of Santa Elena, Cerro Plano, Monteverde, and Los Llanos. Residents living in Santa Elena represented the largest percentage (42 %) of respondents. No significant differences were determined between residency and motivation.

What Is the Relationship between Gender and Motivation?

Tables 4-12 and 4-13present the results of the analysis of variance for the gender socio-demographic variable and motivation. Males represented a slightly larger percent of the sample (54%). No significant differences were determined between gender and motivation.

Question 2: What Is the Relationship between Demographics and Preferences for Recreation?

The preferences section consisted of three open-ended questions: (1) "What do you do for fun in your free time when you do not have to work?" (2) “If a recreational center could be constructed in your community, where do you think it should be located?” and (3) “What three activities would you MOST like to have available for recreation in your community?” Open-ended questions were recoded into meaningful categories and frequencies were run on the categories. Any items with a frequency less than 10 were recoded into existing categories or put in the "Other" category. The “Other” category consisted of items such as: playing computer/video games and using the Internet, playing cards, meditation and arts and crafts. Respondents were asked to list their top three choices. The rankings of choices were the same in all three categories, therefore; only the first response was reported. Frequency counts for the three open-ended questions are described in tables 4-14, 4-15, and 4-16.

Table 4-14 presents the results of descriptive statistics frequency counts for Preference question 1: “What do you do for fun in your free time when you do not work?” Participating in sports activities was the highest response, reported by those who were 18-25, 26-35; high school educated respondents; those who were married no

children, single no children, and single with children; and males. The second most frequent response was “Other” activities.

Table 4-15 presents the results of descriptive statistics for Question 2: “If a recreational center could be constructed in your community, where do you think it should be located?” The Salon/Bullring in Cerro Plano was the most frequently given response for those 18-25, 26-35, 46-55, and 56+. In addition, elementary and high school educated respondents; respondents who were single no children, married with children, and divorced/widowed with children; respondents living in Cerro Plano; and females were more likely to indicate that Salón/Bullring was the preferred location to construct a recreation center. The second most common response was the Sports Field (La Cancha).

Table 4-16 presents the results of descriptive statistics for Question 3: “What three activities would you MOST like to have available for recreation in your community?” Sports activities were the most frequently given responses for all age groups except 56+; all education levels (except College educated respondents); all categories of the family life cycle; and males. The response with the second highest frequency was cultural activities these respondents tended to be those living in Monteverde, college educated, and older than 56 years of age. Females chose “Other” activities, including a farmers market and park. The second highest response for females was cultural activities.

The preferences section also included a fourth question: “What environment would you prefer to participate in recreation in?” The preference choices were given on a five-point Likert scale. This scale ranged from "Strongly Disagree" to "Strongly Agree," and respondents were asked to rate how the given options made them feel. Environmental

choices included: wilderness areas, la Cancha, school yard, gymnasium, home, national park, La Plaza and church.

Table 4-17 shows the one-way analysis of variance (ANOVA) between environment preferences of the respondents by age group. The results indicated that there were some significant relationships between some of the environment preferences and respondents by age group.

Tables 4-17 and 4-18 present the results of the one-way analysis of variance between environment preferences and age groups. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree." Significant differences were found between some age groups and respondents' environment preference. Respondents who were 56 years of age or older were significantly different than 26-35 and 36-45 year olds. Older respondents were less likely to prefer sports fields as their environment choice. The 56+ age group were less likely to indicate sports field as their preferred recreational environment. Respondents who are 18-25 years of age were significantly different from 46-55 and 56+ year olds in their preference for church as their environment choice. The youngest group (18-25) year olds were less likely to prefer church as an environment for recreation. Those in the 56+ age group were also significantly different than 18-25 and 26-35 year olds in their preference for bars and discos. Those respondents in the 26-35 age group were the most likely to chose bars and discos for their recreation environment, while 56+ were less likely to chose bars and discos.

Tables 4-19and 4-20 present the results of the one-way analysis of variance between environment preferences and family life cycle. Responses were measured on a

scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree." Significant differences were found between some family life cycle groups and respondents environment preference. Respondents who were married with no children are significantly different than those who are single no children, married with children, single with children and divorced/widowed with children when preferring the forest as their environment choice. Respondents who were married with no children are also significantly different than those who were single with children and divorced/widowed with children when choosing the sports field as their environment preference. Single respondents with children were most likely to choose the sports field as their recreation environment preference. Respondents who are single with no children are significantly different than those who were married with children and divorced/widowed with children. Divorced/widowed respondents with children were most likely to choose church for their recreation environment.

Tables 4-21 and 4-22 present the results of the one-way analysis of variance between environment preferences and education level. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree." Significant differences were found between some education levels and respondents environment preference. Those with an Elementary, High School and College education indicated more preference for recreation at a sports field, whereas those with an “Other” degree indicated a lower preference for a sports field. Those with a High school education indicated more preference for the church environment, whereas those with a College degree or Elementary education indicated less preference for recreation in the church.

Tables 4-23 and 4-24 present the results of the one-way analysis of variance between environment preferences and residency (town). Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree." Significant differences were found between only one town and respondents environment preference. Respondents from Monteverde are significantly different from respondents from Santa Elena and Los Llanos when indicating sports field as their environment preference. Respondents living in Los Llanos were most likely to choose sports field as their recreation environment preference.

Tables 4-25 and 4-26 present the results of the one-way analysis of variance between environment preferences and gender. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Question 3: What Is the Relationship between Demographics and Constraints to Recreation?

The constraints statements were given on a five-point Likert scale. This scale ranged from “Strongly Agree,” to “Strongly Disagree,” and respondents were asked to rate how the given statements made them feel. The constraint statements which respondents indicated that they agreed most with included: “recreation is too expensive,” “I do not have enough time,” and “I do not have transportation.” The constraints statements which respondents indicated that they least agreed with included: “recreation is not important,” “I do not have enough skill to participate in a new activity,” and “the people I know live too far away to start a new activity with me.” The means and standard deviations for each of the statements are listed in Table 4-27. The most agreed with

statement was “recreation is too expensive,” while the least agreed with statement was “recreation is not important.”

A factor analysis was run on the constraints factors, but the results were not clean (no validity to the emerging factors), so reliability was run based on the theoretical domains. After running reliability, Factor 3 (Structural) was omitted because its Cronbach Alpha score was less than .50

The frequency of constraints statements rated by the respondents are shown in Table 4-28 in percentages. The bold numbers are indicative of the highest percent, or the most common rating applied by the respondents.

Analysis of Constraints

The following scales were determined by running reliability analyses in SPSS 11.5 (Table 4-29).

Intrapersonal (Intra)

The constraints statements included in this factor were "recreation is not important to me," "I am too shy to start a new activity," "I do not have enough skill to start a new activity," "new activities make me feel uncomfortable," and "I am not interested in the recreation activities available in this community." The Intrapersonal constraint scale had a mean of 2.9 and a Cronbach Alpha of 0.74.

Interpersonal (Inter)

The constraints statements included in this factor were "I do not have anyone to participate with me," "the people I know usually do not have time to start a new recreation activity with me," "the people I know live too far away to start a new activity

with me," and "my friends do not like to participate in recreation." The Interpersonal constraint scale had a mean of 3.3 and a Cronbach Alpha of 0.77.

What Is the Relationship between Age and Constraints?

Table 4-30 and 4-31 report the results of one-way analysis of variance between intrapersonal, interpersonal and individual structural constraint statements and age groups. The results suggested there were significant relationships between age groups and constraints. Age groups were condensed into five categories, representing five different age groups. The five categories were: (a) 18-25, (b) 26-35, (c) 36-45, (d) 46-55, and (e) 55+. The constraints statements were on a five-point Likert scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree). Thus, the higher the mean score, the less the respondents agreed with the constraint statement.

The 18-25 age group reported higher responses than all other age groups in both constraint factors. The 26-35 age group responded significantly different from age groups 18-25, 36-45, and 55+ in both intrapersonal and interpersonal constraints. Younger people indicated more intrapersonal and interpersonal constraints.

Table 4-32 reports the results of one-way analysis of variance between structural constraint statements and age groups. Age groups were condensed into five categories, representing five different age groups. The five categories were: (a) 18-25, (b) 26-35, (c) 36-45, (d) 46-55, and (e) 55+. The constraints statements were on a five-point Likert scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree). Thus, the higher the mean score, the less the respondents agreed with the constraint statement. With regards to structural constraints, all three individual structural constraints indicated significant differences (time, transportation and cost). With regards to time, younger individuals were less inclined to indicate time, transportation and cost constraints. Whereas, middle

aged (or family baring ages) were more likely to indicate time constraints, older individuals (those 46+ years) were more likely to indicate cost constraints and transportation constraints.

What Is the Relationship between Family Life Cycle and Constraints?

Tables 4-33 and 4-34 present the results of the one-way analysis of variance for the family life cycle variable and constraints. Family life cycle consisted of (a) Married with no children, (b) Single with no children, (c) Married with children, (d) Single with children, (e) Divorced/Widow with children.

Table 4-34 presents significant differences between intrapersonal and interpersonal constraints to recreation participation and family life cycle. Significant differences were found between several family life cycle groups and constraints to recreation participation. Respondents who were married with children were significantly different from those who are married with no children, single with no children and single with children when indicating the presence of intrapersonal constraints. Respondents who were married with children were most likely to express intrapersonal and interpersonal constraints. Respondents who were married with no children were least likely to express intrapersonal and interpersonal constraints. Also, respondents who were divorced/widowed with children were significantly different than those who were single with children. Divorced/widow with children respondents indicated less intrapersonal constraints than single respondents with no children.

With regards to interpersonal constraints, single with children were significantly different than divorced/widow with children. Divorced/widow with children expressed less interpersonal constraints than singles.

Table 4-35 presents the one-way analysis of variance for the family life cycle variable and structural constraints. Results of the one-way analysis of variance indicated significant differences in all three individual structural constraints. Findings suggested that married individuals with no children were less constrained by time, transportation and cost. Whereas, those family life cycle stages where individuals indicated they were single or married with children were more likely to indicate all three types of structural constraints.

What Is the Relationship between Education level and Constraints?

Tables 4-36 and 4-37 present the results of the analysis of variance for the education level socio-demographic variable and intrapersonal and interpersonal constraints to recreation participation. Respondents were asked to report their highest level of education completed. Choices consisted of (a) Elementary, (b) High School, (c) College, or (d) Other degree.

Table 4-37 presents significant differences between constraints to recreation participation and education level. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree." Respondents with an Elementary education were significantly different than those with a College education. College educated respondents were less likely to report the presence of both intra and interpersonal constraints, while those respondents with an elementary education expressed more intrapersonal and interpersonal constraints.

Table 4-38 presents the results of the analysis of variance for the education level socio-demographic variable and structural constraints to recreation participation. Results indicated only one significant difference between education and structural constraints and

that was with regards to the cost constraint. Individuals with elementary levels of education indicated less cost constraints than those with "other" types of degrees.

What Is the Relationship between Residency (Town) and Constraints?

Tables 4-39 and 4-40 present the results of the analysis of variance for the Residency variable and intrapersonal and interpersonal constraints. Residency consisted of Santa Elena, Cerro Plano, Monteverde, and Los Llanos. Residents living in Santa Elena represented the largest percentage (42 %) of respondents.

Table 4-40 presents significant differences between constraints to recreation participation and education level. Some significant differences were determined between constraints and residency. Respondents from Cerro Plano were significantly different from respondents from Los Llanos when indicating the presence of interpersonal constraints. Cerro Plano residents were more likely to report the presence of interpersonal constraints.

Table 4-41 presents the results of the analysis of variance for the Residency variable and structural constraints. With regards to residency, all three structural constraints indicated significant differences. Those living in Los Llanos were more likely to indicate more cost, transportation and time constraints than residents living in any of the other communities.

What Is the Relationship between Gender and Constraints?

Tables 4-42 and 4-43 present the results of the t-test for the Gender variable and constraints. Significant differences were found between gender and participation constraints, with females reporting slightly higher levels of both intrapersonal and interpersonal constraints than males. Males reported more neutral responses.

Table 4-44 presents the results of the analysis of variance for the gender variable and structural constraints. Only transportation constraints indicated significant differences by gender. Females were more likely to indicate more transportation constraints than males.

Summary

Through statistical analysis, there were some expected outcomes that are consistent with previous studies in the fields of motivations, preferences and constraints to leisure participation.

Motivation

The only significant difference found for motivations for recreation participation were of the perceptions of the importance of Factor 2, Nature, between College educated respondents, and those reporting having an Other degree. College educated respondents were more likely to indicate that nature was a motivation for participating in recreation than those indicating they had some other type of education, such as a trade or technical school. This is consistent with previous research, which has found that the motivation for nature is related to higher education levels.

Preferences

When asked, "What do you do for fun in your free time when you do not work?" the majority of people ages 18-35, who have a high school education, who are single with and without children and married without children, and male chose participating in sports as their recreation preference. Whereas, people who were older than 56 years of age prefer to walk in their free time. Women between the ages of 36-55, with an elementary or "other" degree education prefer social activities. People 46 years of age or older, with

elementary, college or "other" degree education, who were married or divorced/widowed with children prefer other activities such as computers or meditation (Table 4-45).

When asked "If a recreational center could be constructed in your community, where do you think it should be located?" the salon/bullring was the most popular response for both younger and older females ages 18-35 and 46-56+, with an elementary and high school education, who were single without children, married and divorced/widowed with children, living in Cerro Plano. The sports field was the most popular response for males aged 36-45, with an "other" degree education, who were single with children and living in either Santa Elena or Los Llanos. The CASEM was a popular response for older females aged 56+, living in Monteverde (Table 4-46).

When asked "What three activities would you MOST like to have available for recreation in your community?" Sports activities were the most popular response for all males younger than 56 years of age, elementary, high school or "other" degree educated living in Santa Elena, Cerro Plano and Los Llanos. Cultural activities were a popular response for females older than 56 years of age, with a college education, living in Monteverde. Other activities, including a farmers market or a park, were most popular for females ages 36-45 and older than 56 years of age (Table 4-47).

Environmental Preference

Participating in recreational activities in the forest was most likely a response for males between the ages of 25-35 and older than 56 years of age, people who are single with children and/or divorced/widowed with children, people living in Santa Elena and Los Llanos. While recreating at the sports field (la cancha) was important to the majority of respondents. Males and females who were 25-45 years old, single with children, and had a high school education, prefer to participate in recreation at the sports field. Home

is a popular environment for recreation for females older than 45 years of age, divorced/widowed with children, and college educated. While both males and females prefer participating in recreation downtown, those who were single with children, with a high school education and living in Cerro Plano and Los Llanos had more preference for downtown. Church was popular for people ages 45-55. Bars and discos were popular environments for males ages 25-35, and singles with children (Table 4-48).

Constraints

People who were 18-25 years old, who were married without children, with a college or "other" degree education, living in Cerro Plano reported the highest responses for the presence of both intra and interpersonal constraints. Females reported more intrapersonal, interpersonal and structural constraints (Table 4-49).

Table 4-1. Mean and Standard Deviation of Motivation Items

Motivation Items	Mean	Standard Deviation
To be away from other people	2.9	1.2
To be alone	3.1	1.2
To experience excitement	3.7	.9
To learn more about nature	3.8	.8
To be in nature	3.9	.8
To look at beautiful scenery	4.0	.8
To talk to new people	4.0	.8
To enjoy the smells and sights of nature	4.0	.8
To get physical exercise	4.1	.9
To have pleasure	4.2	.7
To develop my knowledge	4.2	.7
To release or reduce built up tension	4.2	.7
To get away from the demands of life	4.2	.9
To be active	4.3	.7
To be with my family	4.3	.8
To relax my mind	4.3	.7
To feel good	4.3	.7
To experience new and different things	4.3	.7
To be with my friends	4.4	.7

Number (N) may vary due to missing values or responses. Means ranged from "1" to "5", "1" indicating "not important" and "5" being "extremely important"

Table 4-2. Frequency of Motivation Items (in Percentages)

Motivation Items	1 Not at all Important	2 Somewhat Important	3 No Opinion	4 Very Important	5 Extremely Important
To experience excitement	0.3	14.6	11.4	**55.7**	16.9
To release or reduce built up tension	0.0	3.2	3.2	**61.5**	31.5
To look at beautiful scenery	0.6	6.1	6.7	**64.7**	20.7
To talk to new people	0.6	8.5	5.8	**59.2**	25.1
To develop my knowledge of information	0.3	3.5	5.2	**56.3**	34.1
To be active	0.6	3.2	3.8	**52.5**	39.7
To be away from other people	9.6	**34.1**	19.5	25.4	9.0
To experience the fast paced nature of things	2.0	15.2	26.2	**41.7**	14.3
To relax my mind	0.3	2.0	4.7	**53.6**	38.8
To be in nature	0.6	7.6	6.1	**68.2**	17.2
To be with my family	0.6	4.4	5.0	**46.1**	43.7
To experience new and different things	0.9	1.7	3.2	**52.5**	40.8
To get exercise	1.2	5.5	4.7	**62.1**	26.2
To feel good	0.0	2.6	6.7	**47.8**	42.0
To feel pleasure	0.3	4.1	6.4	**57.1**	31.2
To get away from the demands of life	1.5	4.4	5.8	**46.9**	40.8
To enjoy the smells and sights of nature	0.6	6.7	6.1	**62.7**	23.6
To be with friends	0.0	2.6	2.9	45.8	**48.4**
To learn more about nature	0.9	10.8	9.6	**64.1**	14.3
To be alone	11.7	26.5	12.2	**38.2**	10.5

Number (N) may vary due to missing values or responses.
Bold numbers indicate the highest response (in percentages) for each group.

Table 4-3. Factor Analysis Results of Motivation Statements

Motivation Statements	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1-Relax & Enjoy				
To get away from the demands of life.	**0.7**	-0.1	0.0	0.2
To release or reduce built up tension	**0.7**	0.1	0.19	0.1
To develop my knowledge	**0.6**	0.3	-0.0	-0.0
To feel pleasure	**0.5**	0.0	0.4	-0.1
To relax my mind	**0.5**	0.2	-0.1	-0.2
To feel good	**0.5**	0.0	0.3	-0.3
Factor 2- Nature				
To enjoy the sights and smells of nature	0.1	**0.8**	0.1	0.1
To be in nature	0.1	**0.7**	0.1	-0.0
To look at beautiful scenery	0.1	**0.7**	0.3	0.0
To learn more about nature	0.1	**0.6**	0.2	0.1
Factor 3- Active				
To get physical exercise	0.1	0.3	**0.6**	-0.2
To experience the fast paced nature of things	-0.1	0.0	**0.6**	0.3
To experience excitement	0.1	0.1	**0.6**	0.1
To talk to new people	0.1	0.4	**0.5**	-0.1
To be active	0.4	0.1	**0.4**	-0.3
Factor 4- Alone or Away				
To be alone	-0.0	0.1	0.1	**0.8**
To be away from other people	-0.1	0.1	0.0	**0.8**
Eigenvalues	4.4	2.4	1.4	1.3
Cronbach Alpha	0.7	0.7	0.6	0.7
Factor Means	4.3	3.9	3.9	3.0
Percentage of variance explained	21.9	12.1	7.3	6.6
Cumulative variance explained	21.9	34.1	41.3	47.9

Table 4-4. ANOVA for Motivations by Age

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Relax					
Between SS	4	0.6	0.1	0.8	0.5
Within SS	324	56.7	0.2		
2. Nature					
Between SS	4	1.5	0.4	1.1	0.3
Within SS	329	110.8	0.3		
3. Active					
Between SS	4	1.2	0.3	1.0	0.4
Within SS	327	93.8	0.3		
4. Alone					
Between SS	4	2.2	0.6	0.5	0.7
Within SS	327	364.5	1.1		

Table 4-5. Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Age Groups

	Factor 1-Relax		Factor 2- Nature		Factor 3-Active		Factor 4- Alone	
	M	SD	M	SD	M	SD	M	SD
18-25	4.3	0.4	3.9	0.7	4.0	0.6	2.9	1.1
26-35	4.2	0.4	4.0	0.5	3.9	0.5	3.19	1.0
36-45	4.2	0.5	3.8	0.6	3.8	0.6	3.0	1.0
46-55	4.2	0.4	4.0	0.4	3.9	0.5	3.0	1.1
56+	4.3	0.3	4.0	0.4	4.0	0.4	2.8	1.2

Means ranged from "1" to "5", "1" indicating "not important" and "5" being "extremely important"

Table 4-6. ANOVA for Motivations by Family Life Cycle

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Relax					
Between SS	4	1.1	0.3	1.6	0.2
Within SS	319	55.0	0.2		
2. Nature					
Between SS	4	0.7	0.2	0.5	0.1
Within SS	324	111.9	0.3		
3. Active					
Between SS	4	1.8	0.5	1.6	0.2
Within SS	323	92.5	0.3		
4. Alone					
Between SS	4	9.3	2.3	2.1	0.1
Within SS	322	351.2	1.1		

Table 4-7. Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Family Life Cycle

Family Life Cycle	Factor 1-Relax		Factor 2- Nature		Factor 3-Active		Factor 4- Alone	
	M	SD	M	SD	M	SD	M	SD
Married No Child	4.0	0.5	3.8	0.9	3.9	0.6	3.2	1.2
Single No Child	4.3	0.4	3.9	0.6	4.0	0.5	3.0	1.0
Married W/ Child	4.3	0.4	4.0	0.5	3.9	0.5	3.1	1.0
Single W/ Child	4.3	0.4	3.9	0.7	4.1	0.5	2.6	1.1
Divorced/Widowed With Children	4.3	0.4	3.9	0.7	3.8	0.6	2.9	1.1

Means ranged from "1" to "5", "1" indicating "not important" and "5" being "extremely important"

Table 4-8. ANOVA for Motivations by Education

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Relax					
Between SS	3	0.3	0.1	0.7	0.6
Within SS	324	56.5	0.2		
2. Nature					
Between SS	3	3.1	1.1	3.1	0.0
Within SS	329	110.3	0.3		
3. Active					
Between SS	3	0.1	0.0	0.1	1.0
Within SS	327	94.7	0.3		
4. Alone					
Between SS	3	2.8	0.9	0.8	0.5
Within SS	327	362.9	1.1		

Table 4-9. Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Education

Education	Factor 1-Relax		Factor 2- Nature		Factor 3-Active		Factor 4- Alone	
	M	SD	M	SD	M	SD	M	SD
Elementary	4.2	0.4	3.9	0.4	3.9	0.6	3.0	1.0
High School	4.3	0.4	3.9	0.6	3.9	0.5	2.9	1.0
College	4.2	0.5	4.1[a]	0.5	3.9	0.4	3.2	1.1
Other Degree	4.3	0.5	3.5[b]	1.0	3.9	0.9	3.2	1.2

Superscripts indicate where significant differences exist. For example, with the Nature dimension, those with a "College Degree" significantly differ from those with an "Other Degree."

Table 4-10. ANOVA for Motivations by Residency (Town)

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Relax					
Between SS	3	0.5	0.2	1.0.	0.4
Within SS	323	56.2	0.2		
2. Nature					
Between SS	3	2.5	0.8	2.5	0.1
Within SS	329	109.8	0.3		
3. Active					
Between SS	3	1.0	0.3	1.2	0.3
Within SS	326	93.0	0.3		
4. Alone					
Between SS	3	7.8	2.6	2.4	0.1
Within SS	326	357.9	1.1		

Table 4-11. Means (M) and Standard Deviations (SD) for Significant Relationships Between Motivations and Residency (Town)

Education	Factor 1-Relax		Factor 2- Nature		Factor 3-Active		Factor 4- Alone	
	M	SD	M	SD	M	SD	M	SD
Santa Elena	4.3	0.4	3.9	0.5	4.0	0.5	2.9	1.1
Cerro Plano	4.3	0.4	3.9	0.7	3.9	0.6	2.9	1.0
Monteverde	4.3	0.4	4.1	0.5	3.9	0.4	3.4	1.0
Los Llanos	4.2	0.4	3.8	0.6	3.8	0.6	3.0	1.1

Means ranged from "1" to "5", "1" indicating "not important" and "5" being "extremely important"

Table 4-12. Means and Standard Deviations for Significant Relationships between Gender and Motivations

Factors	Number	Mean	Standard Deviation
Factor 1- Social			
Males	179	4.3	0.0
Females	150	4.4	0.0
Factor 2- Nature			
Males	180	3.9	0.0
Females	154	4.0	0.0
Factor 3- Active			
Males	177	4.0	0.0
Females	155	3.9	0.0
Factor 4- Alone			
Males	178	3.0	0.1
Females	154	3.0	0.1

Means ranged from "1" to "5", "1" indicating "not important" and "5" being "extremely important"

Table 4-13. Independent T-Test Results for Gender and Motivations

Factors	t	df	Sig. (2 tailed)
Factor 1- Social	-0.0	327	1.0
Factor 2- Nature	-1.1	332	0.3
Factor 3- Active	1.5	330	0.1
Factor 4- Alone	-0.6	330	0.5

Equal variances assumed.

Table 4-14. Frequency Counts (in Percentages) for Preference Question 1:"What do you do for fun in your free time when you do not work?"

Group	No Answer %	Sports %	TV/ Music %	Walk %	Social %	Read/ Study %	Leave/ Travel %	Bars/Clubs Drink/Dance %	Other %
Age*									
18-25	3	**46**	12	0	6	7	5	8	13
26-35	1	**28**	6	8	16	10	3	11	17
36-45	1	16	12	9	**21**	7	1	11	21
46-55	0	6	19	19	**22**	6	6	0	**22**
56+	0	0	10	**31**	7	7	0	3	**41**
Education*									
Elementary	1	16	11	13	17	5	4	7	**25**
High School	2	**35**	12	6	14	5	2	7	15
College	0	18	7	13	7	21	7	7	20
Other Degree	0	11	0	0	**18**	**18**	0	18	18
FLC*									
Married No Children	7	**43**	14	0	14	0	0	0	0
Single No Children	2	**35**	10	5	8	12	5	11	12
Married With Children	1	20	12	10	19	18	2	5	24
Single With Children	0	**43**	3	3	14	0	5	16	11
Divorced/Widow With Children	2	10	19	19	12	7	2	12	26
Town									
Santa Elena	1	27	15	7	10	7	4	13	17
Cerro Plano	1	33	12	8	20	4	2	2	19
Monteverde	2	9	4	19	11	15	2	2	36
Los Llanos	3	27	5	8	19	10	5	11	13
Gender*									
Male	3	**41**	10	7	5	9	3	8	17
Female	0	9	11	12	**24**	7	3	10	10

Bold numbers indicate the highest response (in percentages) for each group.
*Significant at the 0.05 level

Table 4-15. Frequency Counts (in Percentages) for Preference Question 2: "If a recreational center could be constructed in your community, where do you think it should be located?"

Group	No Answer	Salón/ Bullring	Sports Field	CASEM	Downtown/ Center	Santa Elena	Cerro Plano	Other	Don't Know
Age	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
18-25	15	**20**	15	7	9	10	4	13	7
26-35	13	**23**	22	5	7	9	1	17	3
36-45	13	12	**20**	8	12	11	3	17	3
46-55	13	**25**	6	9	6	22	0	9	9
56+	3	**28**	0	24	10	7	7	14	7
Education									
Elementary	14	**19**	14	8	10	10	4	11	9
High School	12	**24**	18	6	8	12	2	14	3
College	13	13	11	13	13	11	2	**23**	4
Other Degree	18	9	**27**	18	9	0	0	18	0
FLC									
Married No Children	**36**	7	7	7	14	7	7	14	0
Single No Children	14	**19**	13	5	13	13	2	15	5
Married With Children	9	**24**	19	9	9	9	2	16	5
Single With Children	11	16	**32**	5	3	11	3	11	8
Divorced/Widow With Children	19	**21**	5	12	10	14	5	12	2
Town*									
Santa Elena	17	12	**23**	0	14	15	0	14	5
Cerro Plano	5	**48**	8	11	6	2	8	7	6
Monteverde	9	13	0	**40**	0	0	4	28	6
Los Llanos	16	8	**25**	0	11	21	0	16	3
Gender*									
Male	16	6	**21**	5	7	9	4	15	5
Female	8	**24**	11	12	12	12	1	15	5

Bold numbers indicate the highest response (in percentages) for each group.
* Significant at the 0.05 level

Table 4-16. Frequency Counts (in Percentages) for Preference Question 3: "What three activities would you MOST like to have available for recreation in your community?"

Group	No Answer	Sports	Movie Theater	Cultural	Swimming Pool	Computer/ Internet	Library	Concerts/ Dances	Meeting Place	Other
Age*	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
18-25	7	**36**	5	12	9	4	1	9	3	14
26-35	3	**29**	8	19	5	5	7	6	2	17
36-45	1	**30**	5	11	1	1	8	7	5	29
46-55	0	**22**	9	13	0	3	6	13	13	22
56+	0	7	10	**24**	3	3	3	10	14	24
Education*										
Elementary	1	**29**	8	12	4	3	3	7	11	21
High School	4	**32**	6	12	5	4	4	9	3	21
College	6	15	11	**25**	5	15	15	6	2	11
Other Degree	0	**46**	0	18	0	0	0	9	0	27
FLC*										
Married No Children	21	**29**	14	0	7	0	0	14	0	14
Single No Children	4	**31**	8	17	6	7	4	8	3	12
Married With Children	1	**27**	7	13	4	1	8	7	9	23
Single With Children	3	**35**	5	19	8	5	0	3	0	22
Divorced/ Widow With Children	5	**26**	7	14	0	5	5	12	0	26
Town*										
Santa Elena	2	**34**	9	12	5	4	6	6	6	16
Cerro Plano	2	**29**	6	16	5	1	4	13	4	21
Monteverde	4	13	6	**32**	2	2	9	4	6	21
Los Llanos	5	**30**	5	8	3	6	5	8	6	25
Gender*										
Male	4	**38**	8	10	3	4	5	6	4	18
Female	2	19	6	21	6	3	6	9	7	**22**

Bold numbers indicate the highest response (in percentages) for each group.
* Significant at the 0.05 level

Table 4-17. ONE-WAY for Environment Preferences by Age Group

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Forest					
Between SS	4	5.4	1.3	1.4	0.2
Within SS	102	99.5	1.0		
2. Sports Field					
Between SS	4	10.5	2.6	3.3	0.0
Within SS	102	82.0	0.8		
3. School					
Between SS	4	3.9	1.0	0.8	0.6
Within SS	102	131.3	1.3		
4. Gym					
Between SS	4	4.1	1.0	0.9	0.4
Within SS	102	112.7	1.11		
5. Home					
Between SS	4	13.0	3.2	3.8	0.0
Within SS	102	87.6	0.9		
6. Nat Park					
Between SS	4	0.8	0.2	0.3	0.9
Within SS	102	75.0	0.7		
7. Downtown					
Between SS	4	0.9	0.2	0.3	0.9
Within SS	102	75.3	0.7		
8. Church					
Between SS	4	6.2	1.5	1.3	0.3
Within SS	102	124.8	1.2		
9. Bar/Disco					
Between SS	4	15.5	3.9	2.9	0.0
Within SS	102	137.3	1.3		
10. Other					
Between SS	4	5.1	1.3	1.0	0.4
Within SS	102	122.9	1.2		

Table 4-18. Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Age Group

	Forest	Sports Field	School	Gym	Home	National Park	Down-town	Church	Bar/ Disco	Other
Age Group	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**
18-25	2.1 (1.4)	2.0 (.9)	2.8 (1.0)	2.3 (1.0)	2.5[a] (1.2)	2.1 (.8)	1.9 (1.1)	2.6 (1.2)	1.9[b] (1.2)	2.0 (1.1)
26-35	1.6 (.6)	1.7[b] (.8)	3.0 (1.3)	2.7 (1.2)	1.9 (.7)	2.1 (.9)	1.7 (.7)	2.4 (1.1)	1.8[b] (.9)	1.8 (.8)
36-45	1.8 (.8)	1.7[b] (.7)	2.5 (.9)	2.4 (.8)	1.7 (.6)	1.9 (.9)	1.9 (.6)	2.4 (1.1)	2.4 (1.2)	2.2 (1.3)
46-55	2.0 (1.2)	2.1 (1.0)	2.4 (1.1)	1.2 (.5)	1.7[b] (.9)	2.1 (.9)	1.9 (1.1)	1.7 (.8)	2.3 (.9)	2.6 (1.5)
56+	1.7 (.5)	2.7[a] (1.3)	2.8 (1.2)	1.2 (.4)	1.9[b] (.7)	2.3 (.9)	2.0 (.8)	2.0 (1.0)	3.1[a] (1.5)	1.8 (.7)

Superscripts indicate where significant differences exist. For example, respondents who are 56 years of age or older are significantly different than 26-35 and 36-45 year olds in their preference for sports field as their environment choice. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-19. ONE-WAY for Environment Preferences by Family Life Cycle (FLC) Group

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Forest					
Between SS	4	19.8	5.0	6.0	0.0
Within SS	101	83.7	0.8		
2. Sports Field					
Between SS	4	9.8	2.4	3.0	0.0
Within SS	101	82.0	0.8		
3. School					
Between SS	4	3.6	0.9	0.7	0.6
Within SS	101	130.0	1.3		
4. Gym					
Between SS	4	5.7	1.4	1.3	0.3
Within SS	101	108.8	1.1		
5. Home					
Between SS	4	9.6	2.4	2.7	0.1
Within SS	101	91.0	0.9		
6. Nat Park					
Between SS	4	4.1	1.0	1.5	0.2
Within SS	101	124.1	1.2		
7. Downtown					
Between SS	4	5.2	1.3	1.9	0.1
Within SS	101	70.9	0.7		
8. Church					
Between SS	4	6.8	1.7	1.4	0.2
Within SS	101	124.1	1.2		
9. Bar/Disco					
Between SS	4	19.7	4.9	3.7	0.0
Within SS	101	133.2	1.3		
10. Other					
Between SS	4	8.9	2.2	1.9	0.1
Within SS	101	119.1	1.2		

Table 4-20. Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Family Life Cycle

	Forest	Sports Field	School	Gym	Home	National Park	Down-town	Church	Bar/ Disco	Other
FLC	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**
Married No Children	3.2[a] (1.6)	2.2 (.7)	3.1 (1.3)	2.1 (.6)	2.7[a] (1.6)	2.7 (1.3)	2.2 (1.2)	2.9 (1.7)	2.1 (1.3)	2.2 (1.0)
Single No Children	1.9 (1.1)	2.0 (1.0)	2.9 (1.1)	2.2 (1.0)	2.3 (1.1)	2.1 (.7)	1.9 (.9)	2.6 (1.1)	2.0 (1.1)	1.8 (1.0)
Married With Children	1.7 (.7)	1.8 (.9)	2.6 (1.1)	2.6 (1.0)	1.8 (.7)	2.0 (.9)	2.0 (.8)	2.2 (1.1)	2.3 (1.2)	2.3 (1.3)
Single With Children	1.5[b] (.6)	1.5[b] (.5)	2.8 (1.1)	2.8 (1.2)	2.2 (.90)	2.0 (.8)	1.4 (.6)	2.1 (.8)	1.5[b] (.8)	1.6 (.8)
Divorced/ Widowed With Children	1.7 (.5)	2.7[a] (1.4)	2.6 (1.2)	2.8 (1.2)	1.6[b] (.5)	1.8 (.4)	1.8 (.4)	2.1 (1.2)	3.2[a] (1.3)	1.7 (.7)

Superscripts indicate where significant differences exist. For example, respondents who are married with no children are significantly different than single no children, married with children, single with children and divorced/widowed with children when preferring the forest as their environment choice. Respondents who are married without children are least likely to choose to participate in recreation in the forest. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-21. ONE-WAY for Environment Preferences by Education Level

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Forest					
Between SS	3	4.6	1.5	1.6	0.2
Within SS	103	1.0			
2. Sports Field					
Between SS	3	6.7	2.2	2.7	0.0
Within SS	103	85.9	0.8		
3. School					
Between SS	3	4.2	1.4	1.1	0.3
Within SS	103	131.0	1.3		
4. Gym					
Between SS	3	2.3	0.8	0.7	0.6
Within SS	103	114.5	1.1		
5. Home					
Between SS	3	4.7	1.6	1.7	0.2
Within SS	103	95.8	0.9		
6. Nat Park					
Between SS	3	1.8	0.6	0.8	0.5
Within SS	103	74.1	0.7		
7. Downtown					
Between SS	3	2.3	0.8	1.1	0.4
Within SS	103	73.8	0.7		
8. Church					
Between SS	3	11.7	3.9	3.3	0.0
Within SS	103	119.4	1.2		
9. Bar/Disco					
Between SS	3	0.6	0.2	0.1	0.9
Within SS	103	152.3	1.5		
10. Other					
Between SS	3	2.0	0.7	0.6	0.6
Within SS	103	126.0	1.2		

Table 4-22. Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Education Level

	Forest	Sports Field	School	Gym	Home	National Park	Down-town	Church	Bar/ Disco	Other
Education Level	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**
Elementary	1.8 (.9)	2.0[b] (.9)	2.6 (1.1)	2.5 (.9)	2.0 (1.0)	2.3 (1.0)	1.9 (.9)	2.0[b] (.8)	2.2 (1.4)	2.1 (1.2)
High School	1.8 (1.0)	1.7[b] (.8)	2.9 (1.1)	2.6 (1.0)	2.2 (1.0)	2.0 (.7)	1.7 (.6)	2.7[b] (1.2)	2.1 (1.2)	2.0 (1.2)
College	1.8 (1.0)	2.3[b] (1.1)	2.5 (1.2)	2.4 (1.2)	1.7 (.8)	2.0 (1.0)	2.1 (1.1)	2.0[a] (.9)	2.2 (1.1)	1.8 (.9)
Other Degree	2.8 (1.3)	1.8[a] (.8)	3.0 (1.4)	2.0 (1.2)	2.0 (.7)	2.2 (.8)	1.8 (.4)	2.2 (1.1)	2.0 (.7)	2.2 (.4)

Superscripts indicate where significant differences exist. For example, respondents reporting they have an “other degree” are significantly different than elementary, high school and college educated respondents when indicating the sports field as their recreation environment preference. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-23. ONE-WAY for Environment Preferences by Residency (Town)

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Forest					
Between SS	3	5.7	1.9	2.0	0.1
Within SS	101	98.4	1.0		
2. Sports Field					
Between SS	3	16.9	5.6	7.6	0.0
Within SS	101	74.8	0.7		
3. School					
Between SS	3	6.3	2.1	1.7	0.2
Within SS	101	125.6	1.2		
4. Gym					
Between SS	3	4.7	1.6	1.5	0.2
Within SS	101	107.4	1.1		
5. Home					
Between SS	3	0.4	0.1	0.1	1.0
Within SS	101	99.3	1.0		
6. Nat Park					
Between SS	3	1.9	0.6	0.9	0.4
Within SS	101	73.9	0.7		
7. Downtown					
Between SS	3	2.6	0.9	1.2	0.3
Within SS	101	72.2	0.72		
8. Church					
Between SS	3	1.5	0.5	0.4	0.8
Within SS	101	144.9	1.3		
9. Bar/Disco					
Between SS	3	7.9	2.6	1.8	0.1
Within SS	101	144.9	1.4		
10. Other					
Between SS	3	0.6	0.2	0.1	0.9
Within SS	101	125.4	1.2		

Table 4-24. Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Residency (Town)

	Forest	Sports Field	School	Gym	Home	National Park	Down-town	Church	Bar/ Disco	Other
Town	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**
Santa Elena	1.7 (.6)	1.9[b] (.8)	2.7 (1.1)	2.4 (1.0)	2.1 (1.0)	2.1 (.8)	2.0 (.9)	2.4 (1.1)	2.0 (1.1)	2.1 (1.1)
Cerro Plano	2.1 (1.3)	1.9 (.9)	3.1 (1.2)	2.9 (1.1)	2.1 (1.2)	1.9 (.7)	1.7 (.5)	2.5 (1.2)	2.1 (1.3)	2.0 (1.0)
Monteverde	2.2 (1.3)	2.7[a] (1.2)	2.4 (.9)	2.5 (1.1)	1.9 (.7)	2.3 (.9)	1.9 (1.0)	2.2 (1.2)	2.8 (1.3)	1.9 (1.2)
Los Llanos	1.7 (.8)	1.3[b] (.5)	2.7 (1.3)	2.3 (1.0)	2.0 (.7)	2.1 (1.1)	1.7 (.9)	2.2 (1.0)	2.0 (1.2)	2.0 (1.2)

Superscripts indicate where significant differences exist. For example, respondents from Monteverde are significantly different from respondents from Santa Elena and Los Llanos when indicating sports field as their environment preference. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-25. T-test for Environment Preferences by Gender

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Forest					
Between SS	1	4.1	4.1	4.3	0.0
Within SS	337	323.6	1.0		
2. Sports Field					
Between SS	1	8.6	8.6	12.2	0.0
Within SS	337	239.9	0.7		
3. School					
Between SS	1	1.6	1.6	1.3	0.2
Within SS	337	401.1	1.2		
4. Gym					
Between SS	1	0.7	0.7	0.7	0.4
Within SS	337	311.8	0.9		
5. Home					
Between SS	1	1.0	1.0	1.3	0.3
Within SS	337	267.8	0.8		
6. Nat Park					
Between SS	1	1.9	1.9	2.2	0.1
Within SS	337	288.9	0.9		
7. Downtown					
Between SS	1	0.1	0.1	0.2	0.6
Within SS	337	212.4	0.6		
8. Church					
Between SS	1	28.6	28.6	23.4	0.0
Within SS	337	409.6	1.2		
9. Bar/Disco					
Between SS	1	14.2	14.2	10.7	0.0
Within SS	337	444.3	1.3		
10. Other					
Between SS	1	0.2	0.2	0.2	0.7
Within SS	337	130.8	1.2		

Table 4-26. Means (M) and Standard Deviations (SD) for Significant Relationships Between Environment Preferences and Gender

	Forest	Sports Field	School	Gym	Home	National Park	Down-town	Church	Bar/ Disco	Other
Gender	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**	**M (SD)**
Male	1.8 (.9)	1.7 (.8)	2.8 (1.1)	2.5 (.9)	2.1 (.9)	2.3 (.9)	1.8 (.8)	2.8 (1.2)	1.9 (1.0)	2.0 (1.2)
Female	2.1 (1.1)	2.0 (.9)	2.7 (1.0)	2.5 (1.0)	2.0 (.8)	2.4 (.9)	1.7 (.8)	2.2 (1.0)	2.3 (1.3)	1.9 (1.0)

Means ranged from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-27. Mean and Standard Deviation for Constraint Items

Constraint Items	Mean	Standard Deviation
Recreation is too expensive	2.1	1.1
I do not have enough time	2.1	1.2
I am not interested in the recreational activities available in this community	2.4	1.2
The people I know usually do not have time to start a new activity with me	2.7	1.2
I do not have transportation	2.7	1.2
I am too shy (timid) to start a new activity	2.9	1.3
New activities make me feel uncomfortable	2.9	1.2
My friends do not like to participate in recreation	3.1	1.2
I do not have anyone to participate with me	3.2	1.2
The people I know live too far away to start a new activity with me	3.3	1.2
I do not have enough skill to start a new activity	3.4	1.2
Recreation is not important to me	4.0	0.9

Number (N) may vary due to missing values or responses. Means ranged from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-28. Frequency of Constraint Items (in Percentages)

Constraint Items	1 Strongly Agree	2 Agree	3 No Opinion	4 Disagree	5 Strongly Disagree
	%	%	%	%	%
I do not have transportation	16	**40**	9	30	5
I do not have enough time	32	**44**	6	15	3
Recreation is not important to me	2	5	16	**50**	27
Recreation is too expensive	29	**53**	5	8	5
I am too shy to start a new activity	12	**41**	8	25	13
I do not have anyone to participate with me	11	24	12	**42**	11
I do not have enough skill to start a new activity	7	25	9	**42**	16
The people I know usually do not have time to start a new activity with me	16	**43**	6	27	8
New activities make me feel uncomfortable	7	**46**	8	31	9
The people I know live too far away to start a new activity with me	7	24	11	**46**	11
I am not interested in the recreation available in this community	21	**48**	5	17	8
My friends do not like to participate in recreation	8	29	11	**43**	8

Number (N) may vary due to missing values or responses. Bold numbers are indicative of the most common rating (in percentages) applied by the respondents.

Table 4-29. Mean and Cronbach Alpha of Constraints Items

Constraints Items	Mean	Cronbach Alpha
Structural		---
Transpor	2.7	
Time	2.1	
Cost	2.1	
Intrapersonal	2.9	.74
Timid	2.8	
Ability	3.3	
Newact	2.9	
Interest	2.4	
Interpersonal	3.3	.77
Nofriend	4.0	
Nomport	3.2	
Frtime	2.7	
Toofar	3.3	
Frinfo	3.1	

Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-30. ONE-WAY for Constraints by Age Group

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Intra					
Between SS	4	36.5	9.1	12.4	0.0
Within SS	323	238.6	0.7		
2. Inter					
Between SS	4	28.4	7.1	11.9	0.0
Within SS	323	192.0	0.6		

Table 4-31. Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Age Groups

Age Groups	Intra		Inter		Time		Cost		Transportation	
	M	SD	M	SD	M	SD	M	SD	M	SD
18-25	3.3^{a}	1.0	3.7^{a}	0.8	2.5^{a}	1.2	2.3^{a}	1.3	3.0^{a}	1.2
26-35	2.9^{bc}	0.8	3.2^{a}	0.8	1.9^{b}	1.0	1.9	0.9	2.7	1.2
36-45	2.5^{bc}	0.9	3.0^{a}	0.7	1.9^{b}	0.8	2.0	0.9	2.6	1.2
46-55	2.7^{b}	0.9	3.1^{a}	0.8	2.0	1.0	1.7^{b}	0.7	2.6	1.2
56+	2.4^{bc}	0.6	2.9^{a}	0.7	2.5	1.4	2.1	1.1	2.3^{b}	1.0

Superscripts indicate where significant differences exist. For example, with the age group dimension, the 18-25 group significantly differ in their response from those representing all other age groups for both Factor 1 and Factor 2. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-32. ONE-WAY for Structural Constraints by Age Group

Item	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
TIME					
Between SS	4	27.5	6.9	5.9	0.0
Within SS	334	387.7	1.2		
TRANSPOR					
Between SS	4	17.5	4.4	3.1	0.0
Within SS	334	470.5	1.4		
COST					
Between SS	4	12.3	3.1	2.8	0.0
Within SS	334	362.0	1.1		

Table 4-33. ONE-WAY for Constraints by Family Life Cycle

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Intra					
Between SS	4	39.5	9.9	13.4	0.0
Within SS	318	233.9	0.7		
2. Inter					
Between SS	4	24.1	6.0	10.0	0.0
Within SS	318	191.8	0.6		

Table 4-34. Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Family Life Cycle

Family Life Cycle	Intra		Inter		Time		Cost		Transportation	
	M	SD	M	SD	M	SD	M	SD	M	SD
Married No Child	3.7 [b]	1.0	4.0[b]	0.5	2.9 [a]	1.5	3.1[a]	1.6	3.4[a]	1.3
Single No Child	3.2 [b, d]	0.9	3.4[b]	0.8	2.2	1.1	2.2	1.1	2.8 [b]	1.2
Married W/ Child	2.6 [a]	0.8	3.0[a]	0.7	2.0[b]	0.9	1.9[b]	0.8	2.5 [b]	1.1
Single W/ Child	3.3 [b, a]	1.0	3.6[b, d]	0.9	2.2	1.2	2.3	1.4	3.1	1.3
Divorced/Widowed With Children	2.7[c]	0.7	3.1[c]	0.7	2.1	1.3	2.0	1.1	2.6	1.3

Superscripts indicate where significant differences exist. For example, respondents who are married with children are significantly different from those who are married with no children, single with no children and single with children when indicating the presence of intrapersonal constraints. Also, divorced/widowed with children is significantly different than single with children and single with no children when indicating the presence of intrapersonal constraints. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-35 ONE-WAY for Structural Constraints by FLC

Item	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
TIME					
Between SS	4	14.3	3.6	2.9	0.0
Within SS	329	404.4	1.2		
TRANSPOR					
Between SS	4	15.9	4.0	2.8	0.0
Within SS	329	461.3	1.4		
COST					
Between SS	4	23.9	6.0	5.6	0.0
Within SS	329	354.1	1.1		

Table 4-36. ONE-WAY for Constraints by Education

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Intra					
Between SS	3	12.2	4.0	4.9	>0.0*
Within SS	323	267.2	0.8		
2. Inter					
Between SS	3	8.9	3.0	4.5	>0.0*
Within SS	323	214.1	0.7		

*>0.01= .001

Table 4-37. Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Education

Education	Intra		Inter		Time		Cost		Transportation	
	M	SD	M	SD	M	SD	M	SD	M	SD
Elementary	2.7[a]	0.8	3.0[a]	0.8	2.1	1.1	1.9[a]	0.9	2.5	1.1
High School	2.9	0.9	3.3	0.8	2.1	1.1	2.0	1.1	2.7	1.2
College	3.2[b]	1.1	3.5[b]	0.9	2.2	1.2	2.3	1.0	2.8	1.3
Other Degree	3.4	1.3	3.6	0.8	2.5	1.4	3.0[b]	1.5	3.0	1.0

Superscripts indicate where significant differences exist. For example, respondents with an elementary education are significantly different than those with a college education when indicating the presence of intrapersonal constraints. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-38 ONE-WAY for Structural Constraints by Education

Item	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
TIME					
Between SS	4	1.4	.5	0.4	0.8
Within SS	334	416.1	1.2		
TRANSPOR					
Between SS	4	4.2	1.4	1.0	0.4
Within SS	334	483.4	1.4		
COST					
Between SS	4	14.2	4.4	4.0	0.0
Within SS	334	368.4	1.1		

Table 4-39. ONE-WAY for Constraints by Residency (Town)

Factors	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
1. Intra					
Between SS	3	4.6	1.5	1.8	0.1
Within SS	322	267.5	0.8		
2. Inter					
Between SS	3	6.1	2.0	3.1	0.0
Within SS	322	211.9	0.7		

Table 4-40. Means (M) and Standard Deviations (SD) for Significant Relationships Between Constraints and Residency (Town)

Education	Intra		Inter		Cost		Time		Transportation	
	M	SD	M	SD	M	SD	M	SD	M	SD
Santa Elena	2.9	0.9	3.3	0.8	2.1	1.1	1.9	1.0	2.9[a]	1.2
Cerro Plano	2.9	1.0	3.4[a]	0.9	2.1	1.2	2.4[b]	1.2	2.7	1.3
Monteverde	2.9	1.0	3.2	0.9	2.3[a]	1.0	2.4[b]	1.2	2.8	1.3
Los Llanos	2.6	0.7	3.0[b]	0.7	1.7[b]	0.7	1.8[a]	0.9	2.5[b]	1.0

Matching superscripts indicate where significant differences exist. For example, respondents from Cerro Plano were significantly different from respondents from Los Llanos when indicating the presence of interpersonal constraints. Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-41 ONE-WAY for Structural Constraints by Residency (Town)

Item	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
TIME					
Between SS	4	18.7	6.2	5.22	0.0
Within SS	333	398.0	1.2		
TRANSPOR					
Between SS	4	3.1	1.0	.72	0.5
Within SS	333	480.4	1.4		
COST					
Between SS	4	9.2	3.1	2.8	0.0
Within SS	333	365.0	1.1		

Table 4-42. Independent T-Test Results for Gender and Constraints

Factors	t	df	Sig. (2 tailed)
Factor 1- Intra	4.9	333	0.0
Factor 2- Inter	2.7	332	>0.0*

Equal variances assumed
*>0.01= .001

Table 4-43. Means and Standard Deviations for Significant Relationships between Gender and Constraints

Factors	Number	Mean	Standard Deviation
Intrapersonal			
Males	182	3.1	0.9
Females	153	2.6	0.8
Interpersonal			
Males	182	3.4	0.8
Females	152	3.1	0.8
Cost			
Males	183	2.1	1.1
Females	156	2.1	1.1
Time			
Males	183	2.2	1.2
Females	156	2.1	1.1
Transportation			
Males	183	3.0	1.3
Females	156	2.4	1.1

Responses were measured on a scale ranging from "1" to "5", "1" indicating "strongly agree" and "5" being "strongly disagree."

Table 4-44 ONE-WAY for Structural Constraints by Gender

Item	Degrees of Freedom	Sum of Squares	Mean Squares	F Ratio	F Prob.
TIME					
Between SS	1	1.0	1.0	0.9	0.4
Within SS	337	414.2	1.2		
TRANSPOR					
Between SS	1	27.3	27.3	19.9	0.0
Within SS	337	463.2	1.4		
COST					
Between SS	1	0.0	.0	0.0	0.9
Within SS	337	382.8	1.1		

Table 4-45. Overview of Responses to: "What do you do for fun in your free time when you do not work?"

Sports	Walk	Social	Other
18-35 year olds	Older than 56 years of age	36-55 year olds	Older adults 46-56+
High School educated		Elementary and "Other" educated	Elementary, College and "Other" educated
Single with and without children		Females	Married
Married without children			Divorced/Widow with children
Males			

Table 4-46. Overview of Responses to: "If a recreational center could be constructed in your community, where do you think it should be located?"

Salon/Bullring	Sports Field	CASEM
Younger and older adults: 18-35 & 46-56+	Middle age group: 36-45	Oldest age group: 56+
Elementary and High School education	"Other" degree education	People from Monteverde
Single without children	Single with children	Females
Married	People from Santa Elena and Los Llanos	
Divorced/Widow with children	Males	
People from Cerro Plano		
Females		

Table 4-47. Overview of Responses to: "What three activities would you MOST like to have available for recreation in your community?"

Sports	Cultural Activities	Other Activities
All age groups younger than 56 years of age: 18-55	Older than 56 years of age	36-45 year olds (2nd highest response) and older than 56 years of age
Elementary, High School and "Other" degree education	College education	Females
People living in Santa Elena, Cerro Plano and Los Llanos	People living in Monteverde	
Males	Females	

Table 4-48. Overview of Responses for Environmental Preference.

Forest	Sports Field	Home	Downtown	Church	Bar/Disco
People ages 25-35 and older than 56	People in the 25-45 age groups	Older people ages 45- 56+	People ages 18-25	People ages 45-55	People ages 26-35
Single with Children	Single with Children	Divorced/Widow with Children	Single with Children		Single with Children
Divorced/Widow with Children	High School educated	College educated	High School educated		Males
People living in Santa Elena and Los Llanos	People living in Los Llanos	Females	People living in Cerro Plano and Los Llanos		
Males	Males and Females		Males and Females		

Table 4-49. Overview of Responses for Intra and Interpersonal Constraints.

Intrapersonal Constraints	Interpersonal Constraints
Youngest age group: 18-25 years old	Youngest age group: 18-25 years old
Married without children	Married without children
College and "Other" degree education	College and "Other" degree education
People living in Cerro Plano	People living in Cerro Plano
Females	Females

CHAPTER 5
DISCUSSION AND CONCLUSION

The purpose of this study was to identify the motivations, preferences and constraints to recreation participation of the community members of the Monteverde Zone. This chapter sought to discuss the results and their relevance regarding motivations, preferences and constraints and their implications on the members of the Zone. The organization of this chapter is as follows:

- Summary of Procedures and Treatment of the Data
- Discussion of Findings
- Implications
- Recommendations for Future Research

Summary of Procedures and Treatment of the Data

A sample of 343 members of the Monteverde Zone, Costa Rica was randomly selected for this study. The instrument used for this study was a self-administered questionnaire comprised of four sections: (a) Motivations; (b) Preferences; (c) Constraints: and (d) Demographic variables. Research was conducted in the form of intercept interviews and self-administered surveys. Data collection began on April 13, 2003 and surveys were collected over a three-week period.

Discussion of Findings

The following section summarizes the original research questions followed by test results. Areas discussed include: motivations, activity preference, environment preference, participation constraints and the relationships between demographics and each of these factors. Participants of this study were highly motivated to participate in

recreation for socialization. The majority of participants of this study expressed the most importance for relaxation. When examining the relationship between demographics and motivations for recreation, results indicated that the education variable was significantly related to the types of motivations for participation. College educated respondents were more likely to indicate that nature was a motivation for participating in recreation than respondents with "other" types of degrees (i.e., technical degrees).

The greatest preference for recreation activities was for sports. Across all life cycle groups and in particular for males, sports were an expressed need. The second most popular activity was social activities. Results indicated that women preferred social activities. When asked about the environment for recreation participation, the majority of the respondents chose the salón and bullring in Cerro Plano or the sports field (la cancha) in Santa Elena as their preferred locations for a recreational center. With regards to gender, females reported higher levels of both intrapersonal and interpersonal constraints. Community members would prefer to have a recreation center located in the salón and bullring in Cerro Plano that could be used for sports and social activities. It is recommended that the current structures be used to increase recreation opportunities for the citizens of La Zona de Monteverde.

Research Question 1: What Is the Relationship between Demographics and Motivations for Recreation?

Results indicated that seventeen items loaded on four factors (or domains) with eigenvalues greater than 1.0. The four motivational factors included: relax, nature, active, and alone/away. Reliability coefficients (Cronbach Alpha) and mean scores were calculated for items in each factor. This is different than what was hypothesized (six factors); however, perhaps may make sense. One explanation of why this may have

occurred is in regards to translation issues. With regards to the item "to experience the fast paced nature of things," the researcher found that Costa Ricans were interpreting this differently than was intended. The literal Spanish translation was confusing. Therefore, the researcher had to use different words to explain this phrase. As a result, the hypothesized domain labeled nature loaded on items related to relax.

In addition, the resultant factors all included a social element rather than falling out as a separate domain. This may indicate that socializing is at the core of the domains, not something thought of as a separate motivation. Perhaps this makes sense given that research has indicated Latin Americans express a greater motivation to socialize (c.f. McMillen, 1983; Hutchinson & Fidel, 1984; Molina, 1995; Wallace & Smith, 1997).

When examining the relationship between demographics and motivations for recreation, results indicated that only the education variable was significantly related to the types of motivations for participation. This study documented that college educated respondents were more likely to indicate that nature was a motivation for participating in recreation than respondents with "other" types of degrees (i.e., technical degrees). Perhaps it is not surprising that one's education level is related to the motivation to participate in recreation. In fact, significant research in the past has documented the relationship between education level and participation in nature (c.f., Jones & Dunlap; 1992; Lucas, 1990). According to Lucas (1990), the most distinguishing characteristic of wilderness visitors is high education levels, where between 60-85% of visitors to wilderness areas have attended college and 20% to 30% have a graduate degree.

Research Question 2: What Is the Relationship between Demographics and Preferences for Recreation?

Preferences for recreation were measured two ways. The first way used three open ended questions and asked questions related to what and where one would prefer to participate. The second way that preference was measured in this study was by examining preference for the location (based on work by Cooksey et. al). In the first measure of preference, respondents were asked to list their top three choices. The rankings of choices were the same in all three categories, therefore; only the first response was reported.

Results indicated that sports was the greatest preference for recreation activities. Those who were more likely to report wanting to participate in sports were male, younger (18-35 years), high school educated, either married or single with no children or single with children. This is consistent with Hutchinson and Fidel's (1984) study of Mexican Americans recreation trends. In their study, Mexican-Americans were more involved in-group sport activities, such as soccer than individual sports.

Moreover, the finding that people older than 56 years of age indicated that they preferred to walk in their free time is also consistent with American recreation research. Kelly and Warnick (1999) indicated that walking is the primary recreation activity for Americans over the age of 45 and that the fastest growth market is the "boomers." In addition, Robinson and Godbey (1997) found that sports and hobbies represent 12% of American's free time, where walking is the primary activity.

Women between the ages of 36-55, with an elementary or "other" degree indicated that they preferred social activities. Similar to findings in Hutchinson and Fidel's (1984) study on Mexican-Americans, Mexican-Americans were more likely to participate in

activities involving a larger number of people, often in multiple family groups. Family units would frequently go to the park in groups to watch younger family members participate in activities. In a study conducted by Wallace and Smith (1997), Costa Ricans tended to prefer to participating in social interactions (to be with friends/family, see/meet other people) during their leisure and expressed a need for more socializing opportunities. Relative to other international visitors, Costa Ricans assigned less importance to the motivation of solitude or adventure (Wallace & Smith, 1997). Anecdotal evidence indicates that both the soccer field (la cancha) and downtown areas were social meeting places. Typically, families would meet at the soccer field to watch the games, and "hang out" with friends and family. In addition to the soccer field, trips downtown to the supermarket by females were much more than a necessity, they served as a time to visit and chat with friends.

Another study conducted by Stodolska and Yi (2003) also found that Mexican-Americans possess strong family values and can be characterized by warm interpersonal relations, valuing the role of the community in their lives. This is also true in other cultures as well, as indicated in a study conducted by Martin and Mason (2003) that found socializing and sharing food with family and friends as well as participating in traditional, often religious, festivals and events are also important in Middle Eastern cultures.

Findings from the environmental questions related to preference indicated that females older than 45 years of age, with children expressed the preference to participate in recreation in their home. It is very common in the Zone for friends and family to "drop by" and visit with each other in the home. This "drop by" philosophy serves as a

form of home-based recreation. During these social times, it is not uncommon that women prepare meals, snacks, coffee, talk about friends, family and life, and perhaps even listen to music and play cards or other activities together. Family ties are very strong in Costa Rican households. "Traditions revolve around the family from the moment of birth to that of death. Some immensely important family traditions are: baptisms, first communions, engagement parties, weddings and funerals" (www.infocostarica.com/culture/traditions.html). Therefore, one opportunity for recreation in the home might be to have a grassroots movement organize rotating recreational programs. For example, perhaps a "Card" group or a "Cooking" group could be organized. These groups would rotate from one person's home to the next each week. The social component as well as the environmental component would be addressed by minimal cost and effort.

In regards to the preference for the location of a recreation center, the salón /bullring was the most frequently given response for all age groups except for those who were 35-45 years of age. Those who expressed that the recreation center should be located in the salón/bullring were most likely to be females with children, with lower education levels. The salón and bullring are owned by the local elementary school and are used primarily once a year for a festival. The rest of the year both facilities virtually go unused. The bullring is an open stadium structure with a dirt floor and arena seating. There is about fifty yards of land surrounding the structure. The salón is a large one room building about ten yards from the bullring. Given that these areas go unused most of the time, it is not surprising that residents noticed the potential for their recreation use.

Perhaps, this is one inexpensive solution for a location for future recreation activities in the Zone.

Moreover, single people with children expressed the need to participate in recreation activities downtown. One of the expressed locations or environments for recreation was in the bars and discos. Similar to most cultures, this particular life stage is looking to interact with other single people.

In addition, women older than 56, living in Monteverde proposed the CASEM as a location for recreation activities. CASEM is a store that is located in Monteverde, it houses artwork and crafts by area women and is run by older women. The CASEM has open space around it and houses picnic tables, a seesaw (playground equipment) and is often used by children to play "pick up" sports and games. Therefore, in combination with the finding that women expressed more preference for a place to do social activities, the CASEM provides this opportunity.

When asked about residents' preference for activities, sports were the most reported activity. Typically, males younger than 56 years of age, at a variety of education levels, living in the majority of communities expressed this preference. Similar to other findings of Latin American cultures, men under 55 are likely to want to participate in sports for social as well as physical fitness reasons (Hutchinson and Fidel, 1984). In addition to sports, males also expressed an interest in participating in recreation activities in the forest.

This may provide an opportunity for recreation planners to meet the needs of this group. The Zone is surrounded by over 100,000 acres of forest. Creating programs such

as field trips, scavenger hunts and perhaps even sporting events in the forest could address both sets of preferences.

Research Question 3: What Is the Relationship between Demographics and Constraints to Recreation?

A factor analysis was run on the constraints factors, but the results were not clean (no validity to the emerging factors), so reliability was run based on the theoretical domains. In order to make the data more manageable, after running reliability the researcher found that three items loaded into two factors. The researcher reduced the number of items from three down to two (based on work by Crawford, Jackson & Godbey), because its Cronbach Alpha score was less than .50. Respondents reported the highest levels of constraints as being structural (too expensive and lack of time). These items were analyzed individually.

One reason the structural constraint domain may not have emerged might have been because respondents did not conceptually link the items together as one dimension of constraints. One explanation for this might be that the conceptualization of the domain might have been lost in the translation, particularly with the item related to transportation, since most people do not use vehicles but rather walk as a form of transportation, this item may have been confusing. In addition, this finding is consistent with more recent literature on constraints, which indicated that structural constraints might not hold together well (Thapa, Pennington-Gray, & Holland, 2002; Pennington-Gray, Thapa, & Holland, 2002).

Time scarcity is the feeling that one lacks enough time to do all the things that one would like to do (Scott, 1993). Therefore, the finding that time was the greatest constraint for Costa Ricans is consistent with findings around the world (Finn, K.L. &

Loomis, D.K., 1997; Oh, S., Caldwell, L. & Sei-Yi, O., 2001; Stodolska, M. & Yi, J., 2003.) Moreover, this study found that the cost of participation was the second greatest constraint to participation. Previous research has also documented that time and money are the two top constraints to leisure (Howard & Crompton, 1984; Godbey, 1985; McGuire, Dottavio, & O'Leary, 1986; Jackson & Dunn, 1991).

An additional interesting finding was that younger adults with children reported a high degree of intrapersonal and interpersonal constraints, while those who were married with children expressed fewer constraints. This is interesting and perhaps may be explained because mothers are reflecting on their children's involvement in recreation rather than their own. This is related to what Henderson, Bialeschki, Shaw and Freysinger (1989) refer to as the "ethic of care." The ethic of care evolves from the belief that taking care of others is always first in a woman's life, this focus on relationships often becomes a constraint to leisure fulfillment. Women have to negotiate through and balance their family responsibilities while in pursuit of their own leisure activities.

With regards to gender, females reported high levels of both intrapersonal and interpersonal constraints. Jackson and Henderson (1995) reported that women indeed reported higher levels of intrapersonal and interpersonal constraints. Main constraints for women mentioned in that study were: difficultly in finding others to recreate with, too busy with family, not having the physical ability, not knowing where to participate, not knowing how to get the skills necessary to participate, not feeling comfortable in social situations and physically unable to participate. Likewise, Samdahl and Jekubovich (1997), found women were most likely to report the presence of interpersonal constraints then men.

Implications

Considerable research has studied the motivations, preferences and constraints as separate entities. This study sought to find and understand the recreational needs of the members of La Zona de Monteverde, through determining their motivations, preferences and constraints to recreation participation. Understanding the needs of the community is important because the members of the community have expressed a lack of recreation as a problem in the Zone. The lack of safe, healthy and inexpensive recreation, in the opinions of the community members, has lead to unhealthy alternatives such as experimenting with drugs, alcohol and sex (Witt & Crompton, 1996). Finding a way to meet the recreational needs of the community is the objective of this study.

Results of this study support the Balance/Negotiation theory proposed by Jackson, Crawford and Godbey. Most of the findings suggest that although constraints are present, most individuals participate in some form of recreation and indicate the desire to participate in different types of recreation. Females indicated the highest levels of constraints, however, they still indicated preferences for recreation, mainly recreation that is centered on the home and church. In addition, females indicated more preferences for social activities. The majority of their day-to-day activities include some form of socialization. The perception that they are working (going to the supermarket or cooking in the home) is balanced by the desire to interact with others.

One of the first findings of this study indicated that participants were highly motivated to participate in recreation for socialization. This corresponds with previous research of the Hispanic culture (c.f. McMillen, 1983; Hutchinson & Fidel, 1984; Molina, 1995; Wallace & Smith, 1997). Based on observations made by the researcher, most activities throughout daily life were social. Walking to the supermarket consisted of

chatting with friends, family members and tourists along the way. Being at the supermarket itself was also social. Rather than doing all of the grocery shopping at one time, single trips to the market would be made several times in one week. Once at the supermarket, again this was social time to talk and "hang out" with friends and meet new people, as well as looking and admiring merchandise. The majority of participants of this study indicated relaxation was most important for recreation participation. Given the pace of life in the 21st century, it is not surprising that residents of a developing country are also indicating that the motivation for relaxation is tremendous. In conjunction with the preference for social activities, La Zone de Monteverde government officials need to consider the preference for relaxing in addition to providing opportunities to socialize during recreation.

The greatest preference for recreation activities was for sports. Across all life cycle groups and in particular for males, sports were an expressed need. Soccer is the most popular sport in the country. According to a column in the newspaper *La República* in Costa Rica: "Soccer is not the sport of Costa Ricans. It is the motor of their existence. Soccer in Costa Rica is escape, pastime, purification, ecstasy, mania, bread, and necessary illusion. And since ours is a people frustrated in many areas, it seeks in soccer the consummation of its longings, the kingdom of happiness, success" (Zona Latina, 2003).

When asked where a recreational center could be constructed, the majority of the respondents chose the salón and bullring in Cerro Plano or the sports field (la cancha) in Santa Elena. The salón and bullring are structures that are owned by the nearby elementary school and are used, for the most part, one time a year for a festival. The rest

of the year, they go unused. The sports field is also a preexisting area that is used frequently by members of the community for soccer, basketball and as a hang out. The outside area surrounding the bullring could be used for more sports, a farmers market, and/or a park to just sit and relax. The salón is an enclosed structure that can be used for indoor activities such as a social gathering place for parents and their children to play games, listen to music, use the Internet, play ping-pong, and participate in arts and crafts.

The presence of this facility provides a perfect opportunity for government officials or special interest groups to work with the elementary school officials to accommodate recreation activities for the community throughout the year. It is recommended that at first a few activities be planned to take advantage of the available "space." Perhaps these activities could be family-oriented activities, focused directly on the needs of the locals of the Zone. A few tables and decks of cards would allow groups of people to play card games together. In addition, festivals might be planned for the open area, these festivals could occur during Easter Week, Semana Santa , Christmas Week or during the celebration of the Virgin of the Angels. Another recreation activity for residents might include a picnic event where everyone brings their own food. Entertainment could be provided by the locals for the locals.

In addition, the existing sports field (la cancha) could be improved by reconstructing the basketball rims and maintaining the soccer field. This area can be used for more than just soccer, but needs community members and/or officials to plan for activities and events. The area surrounding the sports field could also be used as a park. By utilizing these two areas, the salón and bullring in Cerro Plano and the sports field in Santa Elena, a great deal of money would not be needed to construct a facility. Some of

the activities might include a baseball diamond, basketball games/competitions or picnics. Obviously, the cost of construction for some of these ideas is more expensive than others. It is recommended that the lower cost ideas be implemented first with plans on how to secure funding for the more expensive plans (perhaps through grants and/or sponsorships). One possible idea is that currently in the United States there is a movement by the National Recreation and Parks Association to build parks in developing countries. One example of this is a group of volunteer American recreation professionals are traveling to South Africa to build a park for the children. A similar arrangement could be made to build a park in Costa Rica.

Similar to people in the United States, people in the Monteverde Zone are also constrained when it comes to recreation participation. This also shadows previous research (c.f. Howard & Crompton, 1984; Godbey, 1985; McGuire, Dottavio, & O'Leary, 1986; Jackson & Dunn, 1991; Mannell & Zuzanek, 1991; Shaw, Bonen and McCabe, 1991 and Godbey, Graefe, & James, 1992). While the constraints of lack of time, expenses, and transportation were the most reported constraints, they were not conceptualized as one dimension of constraints. What is interesting is that they independently counted for the top two constraints to participation. Given this finding, recreation or government officials need to be considerate of time and money constraints when providing new recreation opportunities for the locals. After examining the preferences relative to these constraints, it is recommended that the scheduling of events or activities consider time constraints. In addition, the cost of the event is critical to participation. If people are going to participate the cost needs to be minimal.

The other interesting finding relative to constraints was that women indicated more constraints in general. Given that intrapersonal constraints consisted of lack of skills and feeling too shy to start a new activity and interpersonal constraints consist of relying on other people to participate with, it is recommended that future recreation opportunities consider who can participate and how to participate in the overall provision of the activity. For example, if the goal is to increase recreation opportunities for men and women, activities geared towards women need to involve other people (this addresses the social motivation) as well as lessons on how to participate if necessary (this addresses the intrapersonal constraint). Therefore, it is recommended that activities for women focus on a broad base of activities ranging from sports to leisure pursuits (such as quilting and cards).

This study came about due to an expressed concern by community members for the lack of recreation and the unhealthy alternatives the youth of the Zone were turning to. Research has shown that providing youth with recreational activities results in positive outcomes among youth (Baker & Witt, 1996; Posner & Vandell, 1994). It has also been found that developing protective factors such as intelligence, confidence, and value on achievement and health help youth to avoid negative behaviors such as drug and alcohol use, violence and sex (Jessor, 1992; Masten & Garmezy, 1985). Furthermore, benefits identified from participating in an after-school arts center where children were involved in activities including dance, painting, drawing, singing and playing musical instruments included: (a) creativity, (b) self-confidence, (c) enjoyment, (d) knowledge and appreciation of art, (e) a place to shine, (f) learning to get along, and (g) development of friendships (Scott, Witt & Foss, 1996). These life skills lead to the development of the

protective factors and the activities help to structure the free time that is being used to participate in the negative activities. Implementing a recreation center that children and youth can attend after school can be instrumental in alleviating some of the concerns the community members of the Monteverde Zone have.

Recommendations for Future Research

The following recommendations are made in regard to the need for more recreation based studies to be conducted in Costa Rica. The recommendations are based on the assumption that the travel and tourism market will continue to grow in Costa Rica and this growth will continue to widen the gap between recreation available to tourists and to the members of the Monteverde Zone.

It is recommended that research be conducted to thoroughly examine the needs of the youth in the Zone. This study came about by a voiced need for recreation by the community due to a concern about the alternatives the youth were choosing to participate in, such as drugs, alcohol and sexual activities. By understanding the needs of the youth themselves, recreation providers can cater to them, giving them healthy alternatives to the undesired behavior.

Further research is necessary to explore the extent by which people of the Zone are constrained by structural factors. It would be beneficial to know how people perceive these structural constraints. Are they all considered structural constraints? or Are they independent dimensions of constraints? Further research with more items would allow us to answer this question.

In addition, it is recommended that research be conducted on the community members of the Monteverde Zone willingness to pay for recreation. What do they

consider to be too expensive? What is a reasonable amount to charge, so a recreation center can provide as many activities as possible, along with a properly trained staff.

Investigation into whether income level effects the motivations, preferences and constraints to recreation participation. Also, investigation into whether employment status effects the motivations, preferences and constraints to recreation participation. And, based on observations made by the researcher, perhaps future research should consider including "homemaker" as a category when asking about employment status.

Additional research should be done to determine how much money is coming into community businesses from tourism, and how much of those tourism dollars are in turn going back into the community. Perhaps a tourism tax could be implemented, where a percentage of the money generated by tourism could be used to facilitate a recreation center.

More research is needed in Costa Rica and other Latin American countries. It is difficult to represent an entire culture while using previous research that was conducted on Hispanics living in the United States.

In addition, it is recommended that additional qualitative research be conducted to thoroughly examine the motivations, preferences and constraints to recreation participation. Although many of the expected dimensions fell out in this study, it would be invaluable to give the members of the community the opportunity to openly discuss what they are looking for in their pursuit of leisure and recreation. Many of the participants of this study wanted to sit and talk after completing the survey, because this is an important issue to them.

APPENDIX A
PHOTOS OF THE SALÓN, BULLRING AND SOCCER FIELD

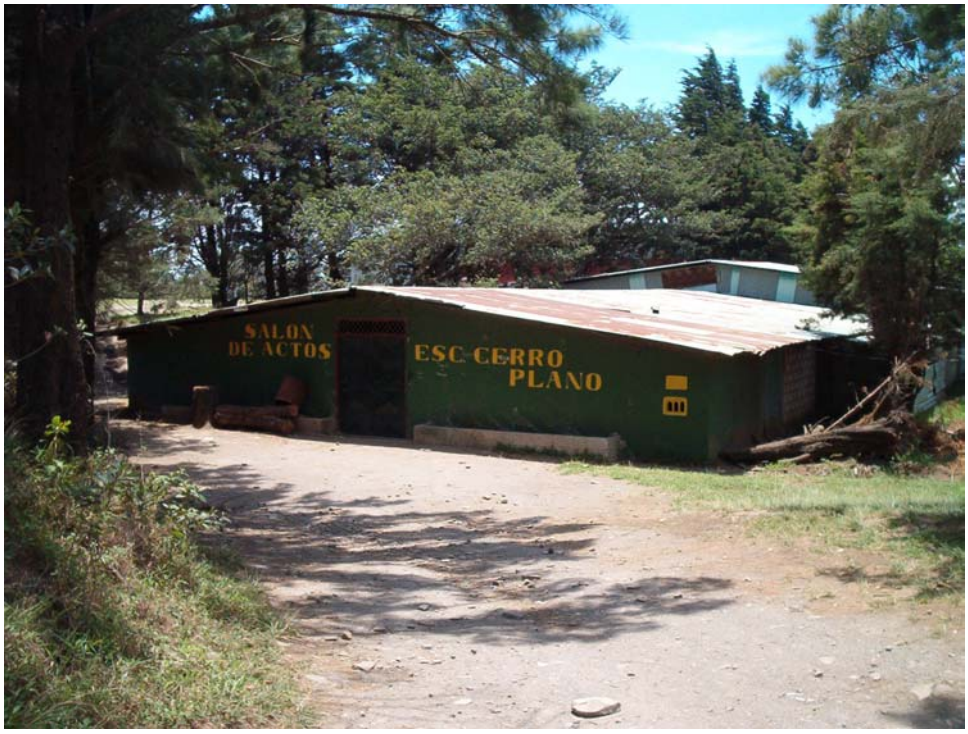

Figure A-1. The salón in Cerro Plano

Figure A-2. An outside view of the bullring in Cerro Plano.

Figure A-3. An inside view of the bullring in Cerro Plano.

Figure A-4. The soccer field in Santa Elena.

APPENDIX B
MOTIVATIONS, PREFERENCES AND CONSTRAINTS QUESTIONNAIRE

Do you live in La Zona de Monteverde? You are a part of a select group of residents chosen to participate in a research study. The purpose of this study is to examine the motivations for participation in recreation, preferences for recreation, and the constraints keeping you from participating in recreational activities. Your participation in this study is completely voluntary and confidential. You have the right not to answer any specific questions. Thank you for participating in this study!

Motivations for participation in recreation. How important are the following statements to you when it comes to recreation? Please **circle** the number that corresponds to the statement that best describes your opinion.

	Para nada importante	Poco importante	No tengo opinión	Muy importante	Sumamente importante
To experience excitement	1	2	3	4	5
To relieve or reduce tension	1	2	3	4	5
To look at the beautiful scenery	1	2	3	4	5
To meet new people	1	2	3	4	5
To develop my knowledge of information	1	2	3	4	5
To be active	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience the fast paced nature of things	1	2	3	4	5
To relax my mind	1	2	3	4	5
To be in nature	1	2	3	4	5
To be with my family	1	2	3	4	5
To have new and different experiences	1	2	3	4	5
To physical exercise	1	2	3	4	5
To feel good	1	2	3	4	5
To feel pleasure	1	2	3	4	5
To get away from the demands of life	1	2	3	4	5
To enjoy the sights and smells of nature	1	2	3	4	5
To be with my friends	1	2	3	4	5
To learn more about nature	1	2	3	4	5
To be alone	1	2	3	4	5

Explain in your own words why recreation is important to you.

Preference for Activities

What do you do for fun in your free-time when you are not working?

If a recreational center could be constructed in your community, where do you think it should be located? (Exact town or location)

What three activities would you MOST like to have available for recreation in your community?

Environment Preferences for Participation.

What environment would you prefer to participate in recreation in? Please **circle** the number that corresponds to the statement that best describes your opinion.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Wilderness areas (forest)	1	2	3	4	5
2. La Cancha	1	2	3	4	5
3. School yard	1	2	3	4	5
4. Gymnasium	1	2	3	4	5
5. Home	1	2	3	4	5
6. National Park	1	2	3	4	5
7. La Plaza	1	2	3	4	5
8. Church	1	2	3	4	5
9. Other	1	2	3	4	5

Constraints to recreation participation.

Please circle the number that corresponds to the statement that best describes the reasons you do not participate in recreation

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. I do not have transportation.	1	2	3	4	5
2. I do not have enough time	1	2	3	4	5
3. Recreation is not important to me	1	2	3	4	5
4. Recreation is too expensive	1	2	3	4	5
5. I am too shy to start a new activity	1	2	3	4	5
6. I do not have anyone to participate with me	1	2	3	4	5
7. I do not have enough skill to start a new activity	1	2	3	4	5
8. The people I know usually don't have time to start a new recreation activity with me	1	2	3	4	5
9. New activities make me feel uncomfortable available in this community	1	2	3	4	5
10. The people I know live too far away to start a new activity with me	1	2	3	4	5
11. I am not interested in the recreation activities available in this community	1	2	3	4	5
12. My friends don't like to participate in recreation	1	2	3	4	5

In your own words, please describe why you do <u>not</u> participate in recreational activities.

Demographics

Please check one Male_____ Female____
How old are you? Age_____
Please indicate with a circle: Single Married
Divorced Widowed
How many children do you have? _____

What is the highest level of education you have completed?
Please indicate with a circle: Elementary High School
College Other Degree

Please indicate with a circle which town you live in:
Santa Elena Cerro Plano
Monteverde Los Llanos
For how long have you lived here?

¿Vive usted en la zona de Monteverde? Ud. será parte de un grupo de residentes escogidos para participar en un proyecto de investigación. El propósito de este proyecto es explorar los motivos para la participación en actividades de recreacíon, las preferencias para actividades de recreacíon, y los factores que prohiben que Ud. participe en actividades de recreacíon.

Su participacion en este proyecto es completamente voluntario y confidencial. Ud. tiene el derecho de no contestar algunas preguntas. Gracias por su participación en este proyecto.

Las ventajas de participar en actividades de recreo. ¿Cuánta importancia le da Ud. a los siguientes factores en cuanto a actividades de recreación? Por favor indique con un **círculo** el número de la frase que mejor describe su opinión.

	Para nada importante	Poco importante	No tengo opinión	Muy importante	Sumamente importante
Para experimentar entusiasmo	1	2	3	4	5
Para liberar o reducir alguna tensión	1	2	3	4	5
Para ver la belleza escenica	1	2	3	4	5
Para hablar con gente nueva	1	2	3	4	5
Para desarrollar mi conocimiento de información	1	2	3	4	5
Para estar activo	1	2	3	4	5
Para estar lejos de otra gente	1	2	3	4	5
Para experimentar la naturaleza rapidamente medida de cosas	1	2	3	4	5
Para descansar su mente	1	2	3	4	5
Para estar en la naturaleza	1	2	3	4	5
Para estar con su familia	1	2	3	4	5
Para tener experiencias nuevas y diferentes	1	2	3	4	5
Para ser ejercicio físico	1	2	3	4	5
Para sentirse bien	1	2	3	4	5
Para sentir placer	1	2	3	4	5
Para huir de las demandas de la vida	1	2	3	4	5
Para gozar los olores y los sonidos de la naturaleza	1	2	3	4	5
Para estar con sus amigos	1	2	3	4	5
Para aprender más acerca de la naturaleza	1	2	3	4	5
Para estar solo	1	2	3	4	5

2. En sus propias palabras, explique porqué a Ud. le es importante las actividades de recreacíon.

Preferencias para Actividades
¿Qué hace Ud. en su tiempo libre para divertirse? (Cuándo Ud. no trabaja)
1,
2.
3.

¿Si hubiera una area de recreo, donde prefería Ud. que se encontraria?
El pueblo y/o ubicación exacta.

Por favor, haga una lista de las tres actividades que a Ud. más le gustaría tener en un centro de recreacíon.
1.
2.
3.

Preferencias para Actividades. ¿En qué ambiente preferiría usted tomar parte en la recreación?
Por favor **circule** el número que corresponde a la declaración que describe mejor su opinión.

	Completamente de Acuerdo	De Acuerdo	No Tengo Opinión	No Estoy de Acuerdo	Para Nada de Acuerdo
1. El área del desierto (el bosque)	1	2	3	4	5
2. La Cancha	1	2	3	4	5
3. La Escuela	1	2	3	4	5
4. El Gimnasio	1	2	3	4	5
5. Su Casa	1	2	3	4	5
6. Parque Nacional	1	2	3	4	5
7. La Plaza	1	2	3	4	5
8. La Iglesia	1	2	3	4	5
9. El Bar o La Discoteca	1	2	3	4	5
10. Otra actividad: Especifique	1	2	3	4	5

Los factores que prohiben que Ud. participe en actividades de recreación. Para las siguientes frases, por favor indique con un círculo el número de la categoría que mejor indica su opinión.

	Completamente de Acuerdo	De Acuerdo	No Tengo Opinión	No Estoy de Acuerdo	Para Nada de Acuerdo
1. No tengo transporte	1	2	3	4	5
2. No tengo suficiente tiempo	1	2	3	4	5
3. El recreo no es importante	1	2	3	4	5
4. La recreacíon cuesta demasiado	1	2	3	4	5
5. Soy demasiado/a timido/a para participar en una nueva actividad	1	2	3	4	5
6. No tengo a nadie que quiera participar conmigo	1	2	3	4	5
7. No tengo las habilidades necesarias para participar	1	2	3	4	5
8. Mis amistades no tienen tiempo de comenzar una actividad de recreación nueva conmigo.	1	2	3	4	5
9. Las nuevas actividades me hacen sentir inquieto/a	1	2	3	4	5
10. Mis amistades viven muy lejos para comenzar una actividad nueva conmigo	1	2	3	4	5
11. No me interesan las actividades de recreacíon de mi comunidad	1	2	3	4	5
12. Mis amistades no aprecian tomar parte en las actividades de recreación	1	2	3	4	5

Si Ud. no participa en actividades de recreación, por favor explique porqué no.

Dators Demográficos

Por favor indique con un círculo. Sexo: Varón Hembra
¿Cuantos años tiene? Edad_____

Por favor indique con un círculo: Casado/a Soltero/a
Divorciado/a Viudo/a

¿Cuantos hijos tiene Ud.?_____

¿Cuál es su nivel de educación? Primaria Secundaria
Universidad Otro grado

Por favor indique con un círculo el pueblo en qué Ud. vive:

Santa Elena Cerro Plano
Monteverde Los Llanos

¿Hace cuantos años vive Ud. aquí?

APPENDIX C
INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF FLORIDA

Institutional Review Board

98A Psychology Bldg.
PO Box 112250
Gainesville, FL 32611-2250
Phone: (352) 392-0433
Fax: (352) 392-9234
E-mail: irb2@ufl.edu
http://rgp.ufl.edu/irb/irb02

DATE: March 27, 2003

TO: Allison Hayes
PO Box 118208
Campus

FROM: C. Michael Levy, PhD, Chair CML/TF
University of Florida
Institutional Review Board 02

SUBJECT: **Approval of Protocol #2003-U-325**

TITLE: The Recreational Needs of a Costa Rican Rural Community Dominated by Tourism

SPONSOR: Unfunded

I am pleased to advise you that the University of Florida Institutional Review Board has recommended approval of this protocol. Based on its review, the UFIRB determined that this research presents no more than minimal risk to participants. Given your protocol, it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for the research.

> It is essential that each of your participants sign a copy of your approved informed consent that bears the IRB stamp and expiration date.

If you wish to make any changes to this protocol, including the need to increase the number of participants authorized, you must disclose your plans before you implement them so that the Board can assess their impact on your protocol. In addition, you must report to the Board any unexpected complications that affect your participants.

If you have not completed this protocol by March 25, 2004, please telephone our office (392-0433), and we will discuss the renewal process with you. It is important that you keep your Department Chair informed about the status of this research protocol.

CML:dl/tf

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BIOGRAPHICAL SKETCH

Allison Hayes was born in Niles, Michigan, in 1978, and after graduating from high school, moved to Florida in 1996. In 2000, she graduated with a bachelor's degree in telecomunication news with a concentration in sports management from the University of Florida. After graduation she worked for Major League Baseball's Cleveland Indians, and took a sabbatical in Europe to improve her language skills and develop an appreciation for foreign culture.

While working on her master's degree, Allison participated in a study abroad program in Monteverde, Costa Rica, where this project evolved. She worked as a graduate research and teaching assistant in the Department of Recreation, Parks and Tourism. She also worked as a reporter at WCJB TV 20 in Gainesville, working on stories exploring sports and recreation in North Central Florida. Allison is now graduating with her Master of Science in Recreational Studies from the Department of Recreation, Parks and Tourism.